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

nHmP1411836637 260737

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P.	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

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? ☒ Yes ☐ No ☐ 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? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

RECEIVED
APR 24 2014
NMOCD ARTESIA

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: Tony Savoie

Printed Name: Tony Savoie

Title: Waste Management and Remediation Specialist

E-mail Address: tasavoie@basspet.com

Date:4/24/14 Phone: 432-556-8730

OIL CONSERVATION DIVISION

Approved by Environmental Specialist:

Approval Date: 7/28/14 Expiration Date: NA

Conditions of Approval:
Remediation per OCD Rule & Guidelines, & like approval by BLM. SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 5/28/14

Attached ☐

2RP-2267

* Attach Additional Sheets If Necessary

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	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: Adrian Baker 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: Adrian Baker 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
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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

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

nHMP1416331258

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

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? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

NM OIL CONSERVATION
ARTESIA DISTRICT
JUN 09 2014
RECEIVED

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.

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: 6/9/14 Phone: 432-556-8730

OIL CONSERVATION DIVISION

Approved by Environmental Specialist:

Approval Date: 6/12/14 Expiration Date: NA

Conditions of Approval:
Remediation per OCD Rule & Guidelines, & like approval by BLM. SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 7/12/14

Attached ☐

2RP-2334

* Attach Additional Sheets If Necessary

State of New Mexico
Oil Conservation Division

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

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: Adrian Baker Date: 7/29/2021

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

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

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: Adrian Baker 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
AUG 13 2014
RECEIVED

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
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District IV
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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

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

nAB1422639350 2RP-737

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P.	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

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: 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? ☒ 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 ☒ 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: 2RP-2440

Attached ☐

* Attach Additional Sheets If Necessary

State of New Mexico
Oil Conservation Division

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

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

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

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

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

Form C-141
Page 4

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: 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

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: Adrian Baker 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
FEB 2 2015
RECEIVED

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

nAB1503439598

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-DI-1-JRU-21 SWD Pump	Facility Type: Exploration and Production

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

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? ☒ Yes ☐ No ☐ 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? ☐ Yes ☒ 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: Tony Savoie

Printed Name: Tony Savoie

Title: Waste Management and Remediation Specialist

E-mail Address: tasavoie@basspet.com

Date: 2/2/15 Phone: 432-556-8730

OIL CONSERVATION DIVISION

Approved by Environmental Specialist:

Approval Date: 2/3/15 Expiration Date: N/A

Conditions of Approval: Attached ☐
Remediation per O.C.D. Rules & Guidelines
SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 3/3/15

2RP-2782

* Attach Additional Sheets If Necessary

State of New Mexico
Oil Conservation Division

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

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: Adrian Baker Date: 07/29/2021

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

OCD Only

Received by: _____ Date: _____

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

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: Adrian Baker 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
JUN 12 2015
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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
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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

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

nAB1516052299 2RP-737

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P.	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? ☒ Yes ☐ No ☐ 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 6/8/15 @ 9:37am (according to notification)	
Was a Watercourse Reached? ☐ Yes ☒ 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.*
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:
Printed Name: Amy Ruth
Title: Assistant Remediation Foreman
E-mail Address: ACRuth@basspet.com
Date: 6/10/2015 Phone: 432-661-0571

OIL CONSERVATION DIVISION

Approved by Environmental Specialist: Signed By Mike Bratcher

Approval Date: 6/16/15 Expiration Date: N/A

Conditions of Approval: Attached ☐

Remediation per O.C.D. Rules & Guidelines
SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 7/17/15

2RP-3046

* Attach Additional Sheets If Necessary

State of New Mexico
Oil Conservation Division

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

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

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

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

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

Form C-141
Page 4

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: Adrian Baker Date: 07/29/2021

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

OCD Only

Received by: _____ Date: _____

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

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

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: _____ 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
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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

nAB1620256930 — 2RP-3143

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-12H on the JRU-DI-Well pad	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 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? ☒ Yes ☐ No ☐ 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? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

NM OIL CONSERVATION
ARTESIA DISTRICT
JUL 21 2015
RECEIVED

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: Tony Savoie

Printed Name: Tony Savoie

Title: Waste Management and Remediation Specialist

E-mail Address: tasavoie@basspet.com

Date: 7/21/15 Phone: 432-556-8730

OIL CONSERVATION DIVISION

Approved by Environmental Specialist:

Approval Date: 7/21/15 Expiration Date: N/A

Conditions of Approval: Attached ☐

Remediation per O.C.D. Rules & Guidelines
SUBMIT REMEDIATION PROPOSAL NO
LATER THAN: 8/22/15

* Attach Additional Sheets If Necessary

State of New Mexico
Oil Conservation Division

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

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

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

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

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

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Page 4

State of New Mexico
Oil Conservation Division

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

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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: _____

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

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: Adrian Baker 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
RECEIVED

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

nAB1602952102

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P. 260737	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: 22 bbls pw	Volume Recovered: 5 bbls pw
Source of Release: Discharge flow line	Date and Hour of Occurrence: 1/18/2016 time unknown	Date and Hour of Discovery: 1/18/2016 4:30 pm
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher/Heather Patterson (NMOCD)	
By Whom? Amy Ruth	Date and Hour 1/19/2016 at 8:21 am	
Was a Watercourse Reached? ☐ Yes ☒ 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 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:

Printed Name: Amy C. Ruth

Title: EHS Remediation Specialist

E-mail Address: ACRuth@basspet.com

Date: 1/27/2016 Phone: 432-661-0571

OIL CONSERVATION DIVISION

Approved by Environmental Specialist: Signed By

Approval Date: 1/29/16 Expiration Date: N/A

Conditions of Approval: Attached ☐
Remediation per O.C.D. Rules & Guidelines
SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 3/1/16

2RP-3524

* Attach Additional Sheets If Necessary

State of New Mexico
Oil Conservation Division

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

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

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

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

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

Form C-141
Page 4

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: 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

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: Adrian Baker 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. 260737	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? ☐ Yes ☐ No ☒ Not Required		If YES, To Whom? N/A	
By Whom? N/A		Date and Hour N/A	
Was a Watercourse Reached? ☐ Yes ☒ No.		If YES, Volume Impacting the Watercourse. N/A	

NM OIL CONSERVATION
ARTESIA DISTRICT
APR 27 2016
RECEIVED

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.

Signature:
Printed Name: Amy C. Ruth
Title: EHS Remediation Specialist
E-mail Address: ACRuth@basspet.com
Date: 4/27/2016 Phone: 432-661-0571

OIL CONSERVATION DIVISION

Approved by Environmental Specialist:
Approval Date: 4/28/16 Expiration Date: N/A
Conditions of Approval: Attached ☐
Remediation per O.C.D. Rules & Guidelines
SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 5/28/16

2RP-3662

* Attach Additional Sheets If Necessary

State of New Mexico
Oil Conservation Division

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	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: Adrian Baker Date: 07/29/2021

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

OCD Only

Received by: _____ Date: _____

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

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

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: _____ 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
SEP 06 2016
RECEIVED

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

nAB1625130938 210737

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P.	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? ☒ Yes ☐ No ☐ 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? ☐ Yes ☒ 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: Amy C. Ruth

Printed Name: Amy C. Ruth

Title: EHS Remediation Specialist

E-mail Address: ACRuth@basspet.com

Date: 9/1/2016 Phone: 432-661-0571

OIL CONSERVATION DIVISION

Signed By Mike Bratcher

Approved by Environmental Specialist:

Approval Date: 9/6/16 Expiration Date: N/A

Conditions of Approval: Remediation per O.C.D. Rules & Guidelines SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 10/8/16 Attached ☐

2RP-3804

* Attach Additional Sheets If Necessary

State of New Mexico
Oil Conservation Division

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

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: Adrian Baker Date: 07/29/2021

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

OCD Only

Received by: _____ Date: _____

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

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: Adrian Baker 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
DEC 18 2017
RECEIVED

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 April 3, 2017

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

Release Notification and Corrective Action

nAB1736044200 BOPCO 200737

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company XTO Energy	Contact Kyle Littrell
Address522 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? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom? N/A	
By Whom? N/A	Date and Hour N/A	
Was a Watercourse Reached? ☐ Yes ☒ 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:

Printed Name: Kyle Littrell

Title: Environmental Coordinator

E-mail Address: Kyle_Littrell@xtoenergy.com

Date: 12/15/2017 Phone: 432-221-7331

OIL CONSERVATION DIVISION

Approved by Environmental Specialist:

Approval Date: 12/26/17 Expiration Date: N/A

Conditions of Approval: See attached

Attached ☒ 2RP-4518

* Attach Additional Sheets If Necessary

12/22/1248

State of New Mexico
Oil Conservation Division

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

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: Adrian Baker Date: 07/29/2021

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

OCD Only

Received by: _____ Date: _____

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

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: _____ 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
FEB 15 2018
RECEIVED

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 April 3, 2017

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

Release Notification and Corrective Action

nAB1805036031 — 149710 — 210237

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: XTO Energy	Contact: Kyle Littrell
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No: 432-221-7331
Facility Name: JRU DI 1 #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? ☒ Yes ☐ No ☐ 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? ☐ Yes ☒ 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: Kyle Littrell

Printed Name: Kyle Littrell

Title: Environmental Coordinator

E-mail Address: Kyle_Littrell@xtoenergy.com

Date: 2/15/2018 Phone: 432-221-7331

OIL CONSERVATION DIVISION

Approved by Environmental Specialist: Signed By

Approval Date: 2/16/18 Expiration Date: N/A

Conditions of Approval: See attached Attached ☐ 2RP-4625

* Attach Additional Sheets If Necessary

State of New Mexico
Oil Conservation Division

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	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: Adrian Baker Date: 07/29/2021

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

OCD Only

Received by: _____ Date: _____

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	NAB1805036031
District RP	2RP-4625
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: _____ 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: _____

MAY 17 2018

DISTRICT II-ARTESIA O.C.D.

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 April 3, 2017

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

Release Notification and Corrective Action

nAB1814128830 BOPD 260737

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: XTO Energy	Contact: Amy C. Ruth
Address: 3104 E. Greene St., Carlsbad, N.M. 88220	Telephone No: 575-689-3380
Facility Name: James Ranch Unit DI1 #157H	Facility Type: Exploration and Production

Surface Owner: Federal	Mineral Owner: Federal	API No: 30-015-42607

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? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom? N/A	
By Whom? N/A	Date and Hour: N/A	
Was a Watercourse Reached? ☐ Yes ☒ 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: Amy Ruth

Printed Name: Amy C. Ruth

Title: Environmental Coordinator

E-mail Address: Amy_Ruth@xtoenergy.com

Date: 5/17/2018 Phone: 575-689-3380

OIL CONSERVATION DIVISION

Approved by Environmental Specialist: Signed By Mike Bratcher

Approval Date: 5/17/18 Expiration Date: N/A

Conditions of Approval: See attached

Attached ☐ 2RP-4756

* Attach Additional Sheets If Necessary

State of New Mexico
Oil Conservation Division

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

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: 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

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: Adrian Baker 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)

☒ Crude Oil	Volume Released (bbls) 0.41	Volume Recovered (bbls) 0.10
☒ 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?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: 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
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NRM1935433078
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release? 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

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

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

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: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 11/1/2019

email: Kyle_Littrell@xtoenergy.com Telephone:

OCD Only

Received by: Ramona Marcus Date: 12/20/2019

State of New Mexico
Oil Conservation Division

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	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: 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

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: Adrian Baker 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
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	NRM2002747253
District RP	
Facility ID	
Application ID	

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)

☐ Crude Oil	Volume Released (bbls) 0.0	Volume Recovered (bbls) 0.0
☒ 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?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: 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
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NRM2002747253
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? 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

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

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

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

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

Printed Name: Adrian Baker Title: SH&E Coordinator

Signature: [signature] Date: 12/11/2019

email: Adrian_Baker@xtoenergy.com Telephone: 4322363808

OCD Only

Received by: Ramona Marcus Date: 01/27/2020

State of New Mexico
Oil Conservation Division

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	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: 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

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: Adrian Baker 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

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	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)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ 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?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: 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.

Received by OCD: 7/30/2021 2:38:34 PM

State of New Mexico
Oil Conservation Division

Incident ID	NRM2006[illegible]
District RP	
Facility ID	
Application ID	

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

Initial Response

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

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

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

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: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 3/3/2020

email: Kyle_Littrell@xtoenergy.com Telephone:

OCD Only

Received by: Ramona Marcus Date: 3/4/2020

Released to Imaging: 10/22/2021 3:19:47 PM

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**

State of New Mexico
Oil Conservation Division

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

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: _____

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

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

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: _____ 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)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ 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?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release	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

Incident ID	NRM2011445697
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? 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

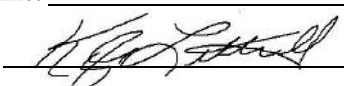
- ☒ The source of the release has been stopped.
- ☒ The impacted area has been secured to protect human health and the environment.
- ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- ☒ All free liquids and recoverable materials have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

If all the actions described above have not been undertaken, explain why:
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: Kyle Littrell Title: SH&E Supervisor

Signature:  Date: 4-21-20

email: Kyle_Littrell@xtoenergy.com Telephone: 432-221-7331

OCD Only

Received by: Ramona Marcus Date: 4/23/2020

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**

State of New Mexico
Oil Conservation Division

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

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: Adrian Baker 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)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ 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?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release	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.

Form C-141
Page 2

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? ☐ Yes ☐ 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

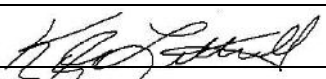
- ☒ The source of the release has been stopped.
- ☒ The impacted area has been secured to protect human health and the environment.
- ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- ☒ All free liquids and recoverable materials have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

If all the actions described above have not been undertaken, explain why:
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: Kyle Littrell Title: SH&E Supervisor

Signature:  Date: 4-23-20

email: Kyle_Littrell@xtoenergy.com Telephone: 432-221-7331

OCD Only

Received by: Ramona Marcus Date: 4/24/2020

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**

State of New Mexico
Oil Conservation Division

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

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: _____

State of New Mexico
Oil Conservation Division

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: Adrian Baker 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)

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

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? ☐ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

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

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

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

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

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

Printed Name: _____ 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**

State of New Mexico
Oil Conservation Division

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

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: _____

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

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

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: _____ 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: _____

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

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: Adrian Baker Date: 07/29/2021

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

OCD Only

Received by: Robert Hamlet Date: 10/22/2021

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

Closure Approved by: Robert Hamlet Date: 10/22/2021

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

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

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.	Date
11	May 19, 2021

Northwestern view of the excavation extent for nAB1805036031.



Photo No.	Date
12	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

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

eurofins | 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 DI1
Revision: 1

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

Attn: Dan Moir

JKramer

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 TotalAccess
Have a Question? Ask The Expert
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.

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

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

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Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-504-1
Project/Site: JRU DI1 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.
¤	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: 890-504-1
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 DI1

Job ID: 890-504-1
SDG: Eddy

Client Sample ID: LDP01-NE
Date Collected: 04/07/21 14:39
Date Received: 04/08/21 10:00
Sample Depth: - 5'

Lab Sample ID: 890-504-1
Matrix: Solid

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
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: 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*

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
OII 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 DI1

Job 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 (70-130)	DFBZ1 (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 (70-130)	OTPH1 (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

QC Sample Results

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

Job ID: 890-504-1
SDG: Eddy

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-1477/5-A
Matrix: Solid
Analysis Batch: 1603

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 1477

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
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 %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
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: 1603

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 1599

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
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 %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
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: 1603

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.09652		mg/Kg		97	70 - 130		
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 %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

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*	*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*	*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*	*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

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 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 2025 — **Prep Batch: 2024**

Analyte			Spike Added	LCSD Result	LCSD 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

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*

Lab Sample ID: 890-504-5 MS — **Client Sample ID: LDP01D-NE**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 2025 — **Prep Batch: 2024**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
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

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 890-504-5 MSD — **Client Sample ID: LDP01D-NE**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 2025 — **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

Surrogate	*MSD %Recovery*	*MSD 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 — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 1499 — **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

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
OII 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*

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 %Recovery	MS Qualifier	Limits
o-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 Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
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 %Recovery	MSD Qualifier	Limits
1-Chlorooctane	98		70 - 130
o-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 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
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 %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

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		

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

QC Association Summary

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

Job 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	

QC Association Summary

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

Job 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

Lab Chronicle

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

Job ID: 890-504-1
SDG: Eddy

Client Sample ID: LDP01-NE
Date Collected: 04/07/21 14:39
Date Received: 04/08/21 10:00

Lab Sample ID: 890-504-1
Matrix: Solid

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
Date Collected: 04/07/21 15:12
Date Received: 04/08/21 10:00

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

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

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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Chain of Custody

Work Order No: _____

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)
www.xenco.com Page (of 1

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

Work Order Comments

Program: UST/PST ☐ RP ☐ Brownfields ☐ RC ☐ Superfund ☐

State of Project:

Reporting:Level II ☐ Level III ☐ ST/UST ☐ RP ☐ Level IV ☐

Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	JRU DI1	Turn Around	
Project Number:	TE012919259	Routine	X
P.O. Number:	Eddy	Rush:	24 HR
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	
Received Intact:	(Yes) No		NM-007
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
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

890-504 Chain of Custody

Work Order Notes

AFE EW.2021.01559.EXP.01

Cost center 1082151001

TAT starts the day recevied 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 Tl Sn U V Zn

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time		Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			0949 / 4/8/21	2			4.8.21 1000
3				4			
5				6			

Revised Date 051418 Rev. 2018 1

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4/20/2021 (Rev. 1)

Received by OCD: 7/30/2021 2:38:34 PM

Released to Imaging: 10/22/2021 3:19:47 PM

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 890-155 1
Client Contact: Shipping/Receiving	Phone	E-Mail: jessica.kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-504-1
Address: 1211 W Florida Ave	Due Date Requested: 4/9/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: JRU DI1	Project #: 89000004			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
LDP01-NE (890-504-1)	4/7/21	14 39 Mountain		Solid			X	X	X	1	
LDP01A-NE (890-504-2)	4/7/21	14 45 Mountain		Solid			X	X	X	1	
LDP01B-NE (890-504-3)	4/7/21	14 52 Mountain		Solid			X	X	X	1	
LDP01C-NE (890-504-4)	4/7/21	15 01 Mountain		Solid			X	X	X	1	
LDP01D-NE (890-504-5)	4/7/21	15 12 Mountain		Solid			X	X	X	1	

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment:

Relinquished by	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by: Joe Cuta 4-8-21	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver 11/01/2020

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Bottle Order Information

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

Order Completion Information

Creator Cloe Clifton
Filled by
Sent Date
Sent Via
Tracking #

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

Notes to Field Staff:

Scan QR code for field sampler instructions

Health and Safety Notes:

Preservative | Comment

Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:
Cloe Clifton	4.8.21					
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.

Received by OCD: 7/30/2021 2:38:34 PM

4/20/2021 (Rev. 1)

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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: Kramer, Jessica	Carrier Tracking No(s):	COC No: 890-155 1
Client Contact: Shipping/Receiving	Phone	E-Mail: jessica.kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-504-1
Address: 1211 W Florida Ave, ,	Due Date Requested: 4/9/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: JRU DI1	Project #: 89000004			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
LDP01-NE (890-504-1)	4/7/21	14 39 Mountain		Solid			X	X	X	1	
LDP01A-NE (890-504-2)	4/7/21	14 45 Mountain		Solid			X	X	X	1	
LDP01B-NE (890-504-3)	4/7/21	14 52 Mountain		Solid			X	X	X	1	
LDP01C-NE (890-504-4)	4/7/21	15 01 Mountain		Solid			X	X	X	1	
LDP01D-NE (890-504-5)	4/7/21	15 12 Mountain		Solid			X	X	X	1	

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment

Relinquished by: Chloe Cuffe 4.8.21	Date/Time:	Company	Received by:	Date/Time: 4-8-21 2:40pm	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 11/01/2020

Received by OCD: 7/30/2021 2:38:34 PM

Released to Imaging: 10/22/2021 3:19:47 PM

4/20/2021 (Rev. 1)

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	

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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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 DI1

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

Attn: Dan Moir

JKramer

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

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

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

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.

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. Job ID: 890-505-1
Project/Site: JRU DI1 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.
¤	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.

Client Sample Results

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

Job ID: 890-505-1
SDG: Eddy

Client Sample ID: LDP01-SW

Lab Sample ID: 890-505-1
Matrix: Solid
Date Collected: 04/07/21 09:50
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
Matrix: Solid
Date Collected: 04/07/21 11:00
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*

Client Sample Results

Client: WSP USA Inc. Job ID: 890-505-1
Project/Site: JRU DI1 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
OII 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
OII 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

Client Sample Results

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

Job ID: 890-505-1
SDG: Eddy

Client Sample ID: LD02 B-SW

Lab Sample ID: 890-505-6
Matrix: Solid
Date Collected: 04/07/21 13:05
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
Matrix: Solid
Date Collected: 04/07/21 13:37
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*

Client Sample Results

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
Matrix: Solid
Date Collected: 04/07/21 13:37
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
OII 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
Matrix: Solid
Date Collected: 04/07/21 13:52
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
OII 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

Surrogate Summary

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

Job 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	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	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

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

QC Sample Results

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

Job 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*

QC Sample Results

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

Job 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: 1638

Client 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: 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
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

Eurofins Xenco, Carlsbad

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 DI1

Job 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

QC Association Summary

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

Job 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

Lab Chronicle

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

Job ID: 890-505-1
SDG: Eddy

Client Sample ID: LDP01-SW
Date Collected: 04/07/21 09:50
Date Received: 04/08/21 10:00

Lab Sample ID: 890-505-1
Matrix: Solid

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
Date Collected: 04/07/21 11:00
Date Received: 04/08/21 10:00

Lab Sample ID: 890-505-3
Matrix: Solid

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
Date Collected: 04/07/21 12:50
Date Received: 04/08/21 10:00

Lab Sample ID: 890-505-4
Matrix: Solid

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
Date Collected: 04/07/21 13:05
Date Received: 04/08/21 10:00

Lab Sample ID: 890-505-6
Matrix: Solid

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

Lab Chronicle

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

Job ID: 890-505-1
SDG: Eddy

Client Sample ID: LD03-SW
Date Collected: 04/07/21 13:37
Date Received: 04/08/21 10:00

Lab Sample ID: 890-505-7
Matrix: Solid

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
Date Collected: 04/07/21 13:52
Date Received: 04/08/21 10:00

Lab Sample ID: 890-505-9
Matrix: Solid

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

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

XENCO LABORATORIES

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

Work Order No: _____

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4/13/2021

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

Work Order Comments

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

Project Name:	JRU DI1	Turn Around	
Project Number:	TE012919259	Routine	X
P.O. Number:	Eddy	Rush:	24 HR
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	CNM-007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

ANALYSIS REQUEST

890-505 Chain of Custody

Work Order Notes

AFE EW.2021.01559.EXP.01
Cost center 1082151001

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
LDP01-SW	s	4/7/2021	9:50	5'	1	x	x	x	Discrete
LDP01A-SW	s	4/7/2021	10:39	10'	1	x	x	x	Discrete
LDP01B-SW	s	4/7/2021	11:00	13'	1	x	x	x	Discrete
LDP02-SW	s	4/7/2021	12:50	5'	1	x	x	x	Discrete
LDP02A-SW	s	4/7/2021	12:58	10'	1	x	x	x	Discrete
LDP02B-SW	s	4/7/2021	13:05	13'	1	x	x	x	Discrete
LDP03-SW	s	4/7/2021	13:37	5'	1	x	x	x	Discrete
LDP03A-SW	s	4/7/2021	13:45	10'	1	x	x	x	Discrete
LDP03B-SW	s	4/7/2021	13:52	13'	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 Tl Sn U V Zn

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		0948 / 4/8/21	2		4.8.21 1000
3			4		
5			6		

Revised Date 051418 Rev. 2018 1

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Received by OCD: 7/30/2021 2:38:34 PM

Released to Imaging: 10/22/2021 3:19:47 PM

Released to Imaging: 10/22/2021 3:19:47 PM
Received by OCD: 7/30/2021 2:38:34 PM

Chain of Custody

Work Order No: _____

XENCO LABORATORIES

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

www.xenco.com Page 1 of 1

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

Work Order Comments

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

Project Name:	JRU DI1	Turn Around	
Project Number:	TE012919259	Routine	☒
P.O. Number:	Eddy	Rush:	24 HR
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	
Received Intact:	Yes No	CM-007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Total Containers:	

ANALYSIS REQUEST

Work Order Notes

AFE EW.2021.01559.EXP.01
Cost center 1082151001

890-505 Chain of Custody

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
LDP01-SW	s	4/7/2021	9:50	5'	1	x	x	x	Discrete
LDP01A-SW	s	4/7/2021	10:39	10'	1	x	x	x	Discrete
LDP01B-SW	s	4/7/2021	11:00	13'	1	x	x	x	Discrete
LDP02-SW	s	4/7/2021	12:50	5'	1	x	x	x	Discrete
LDP02A-SW	s	4/7/2021	12:58	10'	1	x	x	x	Discrete
LDP02B-SW	s	4/7/2021	13:05	13'	1	x	x	x	Discrete
LDP03-SW	s	4/7/2021	13:37	5'	1	x	x	x	Discrete
LDP03A-SW	s	4/7/2021	13:45	10'	1	x	x	x	Discrete
LDP03B-SW	s	4/7/2021	13:52	13'	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 Tl Sn U V Zn

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		0448 / 4/8/21	2		4.8.21 1000
3			4		
5			6		

Revised Date 051418 Rev. 2018 1

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer, Jessica	Carrier Tracking No(s):	COC No: 890-155 1
Client Contact: Shipping/Receiving	Phone	E-Mail: jessica kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-505-1
Address: 1211 W Florida Ave	Due Date Requested: 4/9/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: JRU DI1	Project #: 89000004			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total Number of containers	Special Instructions/Note:
Preservation Code:											
LDP01-SW (890-505-1)	4/7/21	09 50 Mountain		Solid			X	X	X	1	
LDP01 A-SW (890-505-2)	4/7/21	10 39 Mountain		Solid			X	X	X	1	
LDP01 B-SW (890-505-3)	4/7/21	11 00 Mountain		Solid			X	X	X	1	
LDP02-SW (890-505-4)	4/7/21	12 50 Mountain		Solid			X	X	X	1	
LDP02 A-SW (890-505-5)	4/7/21	12 58 Mountain		Solid			X	X	X	1	
LD02 B-SW (890-505-6)	4/7/21	13 05 Mountain		Solid			X	X	X	1	
LD03-SW (890-505-7)	4/7/21	13 37 Mountain		Solid			X	X	X	1	
LD03 A-SW (890-505-8)	4/7/21	13 45 Mountain		Solid			X	X	X	1	
LD03 B-SW (890-505-9)	4/7/21	13 52 Mountain		Solid			X	X	X	1	

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by: Cloe Cuffo 4.8.21					
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 11/01/2020

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Received by OCD: 7/30/2021 2:38:34 PM
4/13/2021
Page 23 of 26
Released to Imaging: 10/22/2021 3:19:47 PM

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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: Kramer, Jessica	Carrier Tracking No(s):	COC No: 890-155 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jessica kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-505-1
Address: 1211 W Florida Ave	Due Date Requested: 4/9/2021			
City: Midland	TAT Requested (days):			
State Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: JRU DI1	Project #: 89000004			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
LDP01-SW (890-505-1)	4/7/21	09 50 Mountain		Solid			X	X	X	1	
LDP01 A-SW (890-505-2)	4/7/21	10 39 Mountain		Solid			X	X	X	1	
LDP01 B-SW (890-505-3)	4/7/21	11 00 Mountain		Solid			X	X	X	1	
LDP02-SW (890-505-4)	4/7/21	12 50 Mountain		Solid			X	X	X	1	
LDP02 A-SW (890-505-5)	4/7/21	12 58 Mountain		Solid			X	X	X	1	
LD02 B-SW (890-505-6)	4/7/21	13 05 Mountain		Solid			X	X	X	1	
LD03-SW (890-505-7)	4/7/21	13 37 Mountain		Solid			X	X	X	1	
LD03 A-SW (890-505-8)	4/7/21	13 45 Mountain		Solid			X	X	X	1	
LD03 B-SW (890-505-9)	4/7/21	13 52 Mountain		Solid			X	X	X	1	

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Cloe Cuello 4.8.21				4-9-21 3:40 pm	
2						
3						

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

Ver: 11/01/2020

Received by OCD: 7/30/2021 2:38:34 PM

Released to Imaging: 10/22/2021 3:19:47 PM

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	

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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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 DI1

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

Attn: Dan Moir

JKramer

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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www.eurofinsus.com/Env

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

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

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

Laboratory Job ID: 890-510-1
SDG: TE012919259

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Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-510-1
Project/Site: JRU DI1 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.
¤	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.

Client Sample Results

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

Job ID: 890-510-1
SDG: TE012919259

Client Sample ID: LDP02-NE

Lab Sample ID: 890-510-1
Matrix: Solid
Date Collected: 04/08/21 08:35
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
Matrix: Solid
Date Collected: 04/08/21 08:42
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*

Client Sample Results

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

Job ID: 890-510-1
SDG: TE012919259

Client Sample ID: LDP02A-NE

Lab Sample ID: 890-510-2
Matrix: Solid
Date Collected: 04/08/21 08:42
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
Matrix: Solid
Date Collected: 04/08/21 08:47
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

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
Matrix: Solid
Date Collected: 04/08/21 09:10
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
Matrix: Solid
Date Collected: 04/08/21 10:33
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*

Client Sample Results

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

Job ID: 890-510-1
SDG: TE012919259

Client Sample ID: LDP02D-NE

Lab Sample ID: 890-510-5
Matrix: Solid
Date Collected: 04/08/21 10:33
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
Matrix: Solid
Date Collected: 04/08/21 11:14
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

Client Sample Results

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

Job ID: 890-510-1
SDG: TE012919259

Client Sample ID: LDP03A-NE

Lab Sample ID: 890-510-7
Matrix: Solid
Date Collected: 04/08/21 11:32
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
Matrix: Solid
Date Collected: 04/08/21 12:14
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*

Client Sample Results

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

Job ID: 890-510-1
SDG: TE012919259

Client Sample ID: LDP03B-NE

Date Collected: 04/08/21 12:14
Date Received: 04/09/21 11:36
Sample Depth: - 15

Lab Sample ID: 890-510-8

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		04/12/21 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 DI1

Job ID: 890-510-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)											
		BFB1	DFBZ1										
Lab Sample ID	Client Sample ID	(70-130)	(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**

		Percent Surrogate Recovery (Acceptance Limits)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(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

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 Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
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 %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
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 Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
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 %Recovery*	*LCS Qualifier*	*Limits*
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 Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	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 %Recovery*	*LCSD Qualifier*	*Limits*
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 Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00200	U	0.0994	0.09273		mg/Kg		93	70 - 130		

QC Sample Results

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

Job ID: 890-510-1
SDG: TE012919259

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

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 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
Matrix: Solid
Analysis Batch: 1641

Client Sample ID: LDP02-NE
Prep Type: Total/NA
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
Matrix: Solid
Analysis Batch: 1642

Client Sample ID: Method Blank
Prep Type: Total/NA
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
Matrix: Solid
Analysis Batch: 1642

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

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QC Sample Results

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

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 Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
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 %Recovery*	*LCS Qualifier*	*Limits*
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 Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
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 %Recovery*	*LCSD Qualifier*	*Limits*
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 Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
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 %Recovery*	*MS Qualifier*	*Limits*
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 Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
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

QC Sample Results

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

Job ID: 890-510-1
SDG: TE012919259

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

Surrogate	MSD %Recovery	MSD Qualifier	Limits
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 — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 1662 — **Prep Batch: 1660**

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		04/12/21 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
OII 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 %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
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 — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 1662 — **Prep Batch: 1660**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1182		mg/Kg		118	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1199		mg/Kg		120	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	114		70 - 130
o-Terphenyl	112		70 - 130

Lab Sample ID: LCSD 880-1660/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 1662 — **Prep Batch: 1660**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1186		mg/Kg		119	70 - 130	0	20
Diesel Range Organics (Over C10-C28)			1000	1170		mg/Kg		117	70 - 130	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	110		70 - 130
o-Terphenyl	107		70 - 130

QC Sample Results

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

Job ID: 890-510-1
SDG: TE012919259

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

Lab Sample ID: 890-510-1 MS
Matrix: Solid
Analysis Batch: 1662

Client Sample ID: LDP02-NE
Prep Type: Total/NA
Prep Batch: 1660

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1	998	1305		mg/Kg		129	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U F1	998	1345	F1	mg/Kg		135	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*115*		*70 - 130*
o-Terphenyl	*114*		*70 - 130*

Lab Sample ID: 890-510-1 MSD
Matrix: Solid
Analysis Batch: 1662

Client Sample ID: LDP02-NE
Prep Type: Total/NA
Prep Batch: 1660

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1	998	1347	F1	mg/Kg		133	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1	998	1297		mg/Kg		130	70 - 130	4	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*113*		*70 - 130*
o-Terphenyl	*112*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-1661/1-A
Matrix: Solid
Analysis Batch: 1670

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			04/12/21 17:00	1

Lab Sample ID: LCS 880-1661/2-A
Matrix: Solid
Analysis Batch: 1670

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride			250	256.7		mg/Kg		103	90 - 110

Lab Sample ID: LCSD 880-1661/3-A
Matrix: Solid
Analysis Batch: 1670

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	257.0		mg/Kg		103	90 - 110	0	20

QC Association Summary

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

Job 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	

QC Association Summary

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

Job 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

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

Lab Chronicle

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

Job 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

Lab Chronicle

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

Job 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

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

Method Summary

Client: WSP USA Inc. Job ID: 890-510-1
Project/Site: JRU DI1 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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Chain of Custody

Work Order No: _____

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)
www.xenco.com Page 1 of 1

4/12/2021

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
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

Work Order Comments

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

Project Name:	JRU D11	Turn Around	
Project Number:	TE612919259	Routine ☐	
P.O. Number:	Eddy	Rush: 24hr	
Sampler's Name:	Will Mather	Due Date: 4/12/21	

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Temperature (°C):		Thermometer ID		
Received Intact:	(Yes) No	TNM-007		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	0.0	
Sample Custody Seals:	Yes (No) N/A	Total Containers:	5.8	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
LDP00-NE	S	4/8/21	0835	5'	1	X	X	X
LDP00A-NE			0842	10'				
LDP00B-NE			0847	15'				
LDP00C-NE			0910	20'				
LDP00D-NE			1033	24'				
LDP03-NE			1114	5'				
LDP03A-NE			1132	10'				
LDP03B-NE			1214	15'				

890-510 Chain of Custody

Work Order Notes

AFE
EW 2021.01554.EXP.01
CC:
10821510CC

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

Sample Comments

Discrete

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

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		4/9/21 1118	2		4.9.21 1130
3			4		
5			6		

Revised Date 051418 Rev. 2018 1

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Released to Imaging: 10/22/2021 3:19:47 PM

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 890-157 1
Client Contact: Shipping/Receiving	Phone	E-Mail: jessica kramer@eurofinset com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-510-1
Address: 1211 W Florida Ave	Due Date Requested: 4/12/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: JRU DI1	Project #: 89000004			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
LDP02-NE (890-510-1)	4/8/21	08 35 Mountain		Solid			X	X	X	1	
LDP02A-NE (890-510-2)	4/8/21	08 42 Mountain		Solid			X	X	X	1	
LDP02B-NE (890-510-3)	4/8/21	08 47 Mountain		Solid			X	X	X	1	
LDP02C-NE (890-510-4)	4/8/21	09 10 Mountain		Solid			X	X	X	1	
LDP02D-NE (890-510-5)	4/8/21	10 33 Mountain		Solid			X	X	X	1	
LDP03-NE (890-510-6)	4/8/21	11 14 Mountain		Solid			X	X	X	1	
LDP03A-NE (890-510-7)	4/8/21	11 32 Mountain		Solid			X	X	X	1	
LDP03B-NE (890-510-8)	4/8/21	12 14 Mountain		Solid			X	X	X	1	

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment.

Relinquished by: Cloe Cuffo 4.9.21	Date/Time:	Company	Received by:	Date/Time: 4-9-21 11:00am	Company
Relinquished by	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 11/01/2020

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4/12/2021
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Released to Imaging: 10/22/2021 3:19:47 PM

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	

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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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 DI1 TE012919259

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

Attn: Dan Moir

JKramer

Authorized for release by:
4/14/2021 4:48:23 PM

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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.

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. Job ID: 890-513-1
Project/Site: JRU DI1 TE012919259 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.
¤	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.

Client Sample Results

Client: WSP USA Inc. Job ID: 890-513-1
Project/Site: JRU DI1 TE012919259 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*

Client Sample Results

Client: WSP USA Inc. Job ID: 890-513-1
Project/Site: JRU DI1 TE012919259 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. Job ID: 890-513-1
Project/Site: JRU DI1 TE012919259 SDG: Eddy

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(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**

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(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. Job ID: 890-513-1
Project/Site: JRU DI1 TE012919259 SDG: Eddy

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

Lab Sample ID: MB 880-1739/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 1732 **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
OII 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 **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 1732 **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 **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 1732 **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 **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 1753

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

QC Sample Results

Client: WSP USA Inc. Job ID: 890-513-1
Project/Site: JRU DI1 TE012919259 SDG: Eddy

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-1722/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 1753

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 **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 1753

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 **Client Sample ID: FS02**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 1753

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. Job ID: 890-513-1
Project/Site: JRU DI1 TE012919259 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

QC Association Summary

Client: WSP USA Inc. Job ID: 890-513-1
Project/Site: JRU DI1 TE012919259 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

Lab Chronicle

Client: WSP USA Inc. Job ID: 890-513-1
Project/Site: JRU DI1 TE012919259 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. Job ID: 890-513-1
Project/Site: JRU DI1 TE012919259 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

Method Summary

Client: WSP USA Inc. Job ID: 890-513-1
Project/Site: JRU DI1 TE012919259 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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Chain of Custody

Work Order No: _____

XENCO LABORATORIES

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

www.xenco.com Page 1 of 1

4/14/2021

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

Work Order Comments

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

Project Name:	JRU DI1	Turn Around	
Project Number:	TE012919259	Routine ☐	
P.O. Number:	Eddy	Rush: 24H	
Sampler's Name:	William Mather	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	1.4/1.2	Thermometer ID	IWM-007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
FS01	s	4/9/2021	12:50	4'	1	x	x	x	Composite
FS02	s	4/9/2021	13:29	4'	1	x	x	x	Composite

890-513 Chain of Custody

Work Order Notes

AFE EW.2021.01559.EXP.01
Cost center 1082151001

TAT starts the day recevied 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 Tl Sn U V Zn

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		4-13-21/4:15pm	2 Clue Cutt 4.13.21 0830		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Received by OCD: 7/30/2021 2:38:34 PM

Released to Imaging: 10/22/2021 3:19:47 PM

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s).	COC No: 890-161 1
Client Contact: Shipping/Receiving	Phone	E-Mail: jessica kramer@eurofinset com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-513-1
Address: 1211 W Florida Ave	Due Date Requested: 4/14/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: JRU DI1	Project #: 89000004			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8016MOD_NM/8016NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/6036FP_Calc BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FS01 (890-513-1)	4/9/21	12 50 Mountain		Solid			X	X	X	1	
FS02 (890-513-2)	4/9/21	13 29 Mountain		Solid			X	X	X	1	

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment.

Relinquished by	Date/Time:	Company	Received by	Date/Time:	Company
Clue Cuff 4.13.21				4-13-21 2:30PM	
Relinquished by	Date/Time:	Company	Received by	Date/Time:	Company
Relinquished by	Date/Time:	Company	Received by	Date/Time:	Company

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

Ver 11/01/2020

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Received by OCD: 7/30/2021 2:38:34 PM
4/14/2021
Page 18 of 20
Released to Imaging: 10/22/2021 3:19:47 PM

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	

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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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 DI1 TE012919259
Revision: 1

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

Attn: Dan Moir

JKramer

Authorized for release by:
4/19/2021 10:31:24 AM

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

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

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.

Client: WSP USA Inc.
Project/Site: JRU DI1 TE012919259

Laboratory Job ID: 890-521-1
SDG: Eddy County

Table of Contents

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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.
¤	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: 890-521-1
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 1.0º 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 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
Sample Depth: 0 - 4

Lab Sample ID: 890-521-1

Matrix: Solid

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

Date Collected: 04/13/21 11:00
Date Received: 04/14/21 09:55
Sample Depth: 0 - 4

Lab Sample ID: 890-521-2

Matrix: Solid

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*

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1 TE012919259

Job ID: 890-521-1
SDG: Eddy County

Client Sample ID: SW03

Date Collected: 04/13/21 11:00
Date Received: 04/14/21 09:55
Sample Depth: 0 - 4

Lab Sample ID: 890-521-2

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 *+ *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
OII 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

Date Collected: 04/13/21 10:00
Date Received: 04/14/21 09:55
Sample Depth: 0 - 4

Lab Sample ID: 890-521-3

Matrix: Solid

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
OII 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

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
Matrix: Solid
Date Collected: 04/13/21 13:42
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
Matrix: Solid
Date Collected: 04/13/21 13:51
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*

Client Sample Results

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
Sample Depth: 2 - 5

Lab Sample ID: 890-521-5

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	**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
OII 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

Date Collected: 04/13/21 11:18
Date Received: 04/14/21 09:55
Sample Depth: - 4

Lab Sample ID: 890-521-6

Matrix: Solid

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
OII 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

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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: FS08

Lab Sample ID: 890-521-7
Matrix: Solid
Date Collected: 04/13/21 11:20
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
Matrix: Solid
Date Collected: 04/13/21 11:23
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*

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI1 TE012919259

Job ID: 890-521-1
SDG: Eddy County

Client Sample ID: FS09

Date Collected: 04/13/21 11:23
Date Received: 04/14/21 09:55
Sample Depth: - 4

Lab Sample ID: 890-521-8
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	<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
OII 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

Date Collected: 04/13/21 11:26
Date Received: 04/14/21 09:55
Sample Depth: - 4

Lab Sample ID: 890-521-9
Matrix: Solid

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
OII 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

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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: FS11

Date Collected: 04/13/21 11:28
Date Received: 04/14/21 09:55
Sample Depth: - 4

Lab Sample ID: 890-521-10
Matrix: Solid

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

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: 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*

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**

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(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**

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID		
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**

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(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

Surrogate Summary

Client: WSP USA Inc. Job ID: 890-521-1
Project/Site: JRU DI1 TE012919259 SDG: Eddy County

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

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

		Percent Surrogate Recovery (Acceptance Limits)									
		1CO1	OTPH1								
Lab Sample ID	Client Sample ID	(70-130)	(70-130)								
LCS 880-1802/2-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

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	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		

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

Surrogate	*MS %Recovery*	*MS 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

Surrogate	*MSD %Recovery*	*MSD 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

Surrogate	*MB %Recovery*	*MB 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

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: 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		
Diesel Range Organics (Over C10-C28)			1000	1188		mg/Kg		119	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*119*		*70 - 130*
o-Terphenyl	*108*		*70 - 130*

Lab Sample ID: LCSD 880-1802/3-A
Matrix: Solid
Analysis Batch: 1775

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 1802

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1220	*1	mg/Kg		122	70 - 130	23	20
Diesel Range Organics (Over C10-C28)			1000	1067		mg/Kg		107	70 - 130	11	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*113*		*70 - 130*
o-Terphenyl	*99*		*70 - 130*

Lab Sample ID: 890-521-1 MS
Matrix: Solid
Analysis Batch: 1775

Client Sample ID: SW02
Prep Type: Total/NA
Prep Batch: 1802

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	112	*+ *1 F1	998	1383		mg/Kg		127	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	998	1218		mg/Kg		122	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*114*		*70 - 130*
o-Terphenyl	*104*		*70 - 130*

Lab Sample ID: 890-521-1 MSD
Matrix: Solid
Analysis Batch: 1775

Client Sample ID: SW02
Prep Type: Total/NA
Prep Batch: 1802

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	112	*+ *1 F1	998	1418	F1	mg/Kg		131	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	1260		mg/Kg		126	70 - 130	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*121*		*70 - 130*
o-Terphenyl	*105*		*70 - 130*

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

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 TE012919259

Job 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
LCSD 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	
LCSD 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

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	

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

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

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

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI1 TE012919259

Job ID: 890-521-1
SDG: Eddy County

Client Sample ID: FS10
Date Collected: 04/13/21 11:26
Date Received: 04/14/21 09:55

Lab Sample ID: 890-521-9
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 20:48	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
Date Collected: 04/13/21 11:28
Date Received: 04/14/21 09:55

Lab Sample ID: 890-521-10
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 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
Date Collected: 04/13/21 11:29
Date Received: 04/14/21 09:55

Lab Sample ID: 890-521-11
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 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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-521-1
Project/Site: JRU DI1 TE012919259 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

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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Chain of Custody

Work Order No: _____

XENCO LABORATORIES

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

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

Work Order Comments

Program: UST/PST ☐ RP ☐ Brownfields ☐ RC ☐ Superfund ☐

State of Project:

Reporting:Level II ☐ Level III ☐ ST/UST ☐ TRRP ☐ Level IV ☐

Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	JRU DI1	Turn Around	
Project Number:	TE012919259	Routine ☐	
P.O. Number:	Eddy	Rush: 24hr	
Sampler's Name:	William Mather	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	1.2/1.0	Thermometer ID	
Received Intact:	(Yes) No	IR-009	
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
SW02	s	4/13/2021	10:30	0-4'	1	x	x	x	Composite
SW03	s	4/13/2021	11:00	0-4'	1	x	x	x	Composite
SW04	s	4/13/2021	10:00	0-4'	1	x	x	x	Composite
FS03	s	4/13/2021	13:42	4-7'	1	x	x	x	Composite
FS06	s	4/13/2021	13:51	2-5'	1	x	x	x	Composite
FS07	s	4/13/2021	11:18	4'	1	x	x	x	Composite
FS08	s	4/13/2021	11:20	4'	1	x	x	x	Composite
FS09	s	4/13/2021	11:23	4'	1	x	x	x	Composite
FS10	s	4/13/2021	11:26	4'	1	x	x	x	Composite
FS11	s	4/13/2021	11:28	4'	1	x	x	x	Composite



Work Order Notes

AFE EW.2021.01559.EXP.01

Cost center 1082151001

TAT starts the day recevied 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 Tl Sn U V Zn

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time		Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			4/14/21 9:00am	2			4-15-21 0955
3				4			4.14.21
5				6			

Revised Date 051418 Rev. 2018.1

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4/19/2021 (Rev. 1)

Received by OCD: 7/30/2021 2:38:34 PM

Released to Imaging: 10/22/2021 3:19:47 PM

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Chain of Custody

Work Order No: _____

XENCO LABORATORIES

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

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

Work Order Comments

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

Project Name:	JRU DI1	Turn Around	
Project Number:	TE012919259	Routine ☐	
P.O. Number:	Eddy	Rush: 24hr	
Sampler's Name:	William Mather	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Temperature (°C):		Thermometer ID		
Received Intact:	Yes No	CNM007		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	Pg 1	
Sample Custody Seals:	Yes No N/A	Total Containers:		

ANALYSIS REQUEST

Work Order Notes

AFE EW.2021.01559.EXP.01
Cost center 1082151001

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
FS12	s	4/13/2021	11:29	4'	1	x	x	x	Composite

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

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			4/14/21 9:00am	2	Cioe Cuff	4.14.21 0955
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

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4/19/2021 (Rev. 1)

Received by OCD: 7/30/2021 2:38:34 PM

Released to Imaging: 10/22/2021 3:19:47 PM

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	

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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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 DI1 - TE012919259

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

Attn: Dan Moir

JKramer

Authorized for release by:
4/21/2021 7:46:11 PM

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

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

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.

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. Job ID: 890-538-1
Project/Site: JRU DI1 - TE012919259 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.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: WSP USA Inc. Job ID: 890-538-1
Project/Site: JRU DI1 - TE012919259 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.

Client Sample Results

Client: WSP USA Inc. Job ID: 890-538-1
Project/Site: JRU DI1 - TE012919259 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*

Client Sample Results

Client: WSP USA Inc. Job ID: 890-538-1
Project/Site: JRU DI1 - TE012919259 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

Surrogate Summary

Client: WSP USA Inc. Job ID: 890-538-1
Project/Site: JRU DI1 - TE012919259 SDG: Eddy

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)									
		BFB1	DFBZ1								
Lab Sample ID	Client Sample ID	(70-130)	(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**

		Percent Surrogate Recovery (Acceptance Limits)									
		1CO1	OTPH1								
Lab Sample ID	Client Sample ID	(70-130)	(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 DI1 - 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
OII 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		

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 %Recovery	MS Qualifier	Limits
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 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	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 %Recovery	MSD Qualifier	Limits
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 Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
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 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: 890-538-1 MS
Matrix: Solid
Analysis Batch: 2094

Client Sample ID: LN-SW01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	321	F1	250	1525	F1	mg/Kg		481	90 - 110		

QC Sample Results

Client: WSP USA Inc. Job ID: 890-538-1
Project/Site: JRU DI1 - TE012919259 SDG: Eddy

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-538-1 MSD **Client Sample ID: LN-SW01**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 2094

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

QC Association Summary

Client: WSP USA Inc. Job ID: 890-538-1
Project/Site: JRU DI1 - TE012919259 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

QC Association Summary

Client: WSP USA Inc. Job ID: 890-538-1
Project/Site: JRU DI1 - TE012919259 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

Lab Chronicle

Client: WSP USA Inc. Job ID: 890-538-1
Project/Site: JRU DI1 - TE012919259 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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-538-1
Project/Site: JRU DI1 - TE012919259 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

Method Summary

Client: WSP USA Inc. Job ID: 890-538-1
Project/Site: JRU DI1 - TE012919259 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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Chain of Custody

Work Order No: _____

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)
www.xenco.com Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
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:	Jeremy.Hill@wsp.com, Dan.Moir@wsp.com

Work Order Comments

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

Project Name:	JRU DI 1	Turn Around	
Project Number:	TE61919059	Routine ☐	
P.O. Number:	Eddy	Rush: 24 hr	
Sampler's Name:	Jeremy Hill	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	7.2/7.0	Thermometer ID	
Received Intact:	(Yes) No		ENM-007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
LN-SW01	S	4/16/21	1535	0-4'	1	X	X	X
LN-SW02	↓	↓	1540	↓	↓	↓	↓	↓
LN-SW03	↓	↓	1530	↓	↓	↓	↓	↓

890-538 Chain of Custody

Work Order Notes

AFE EW.2021.01559.EXP.01
Cost Center:
1082151001

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

Sample Comments

Composite ↓

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

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Cloe Cuff	4.19.21	4		08:00
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

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4/21/2021
Received by OCD: 7/30/2021 2:38:34 PM
Released to Imaging: 10/22/2021 3:19:47 PM

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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

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer, Jessica	Carrier Tracking No(s).	COC No: 890-172 1
Client Contact: Shipping/Receiving	Phone	E-Mail: jessica kramer@eurofinset com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-538-1
Address: 1211 W Florida Ave,	Due Date Requested: 4/20/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701	PO #:			
Phone: 432-704-5440(Tel)	WO #:			
Email	Project #: 89000004			
Project Name: JRU DI1	SSOW#:			
Site:				

Preservation Codes

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

Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total Number of containers	Special Instructions/Note.
			Preservation Code:								
LN-SW01 (890-538-1)	4/16/21	15 35 Mountain		Solid			X	X	X	1	
LN-SW02 (890-538-2)	4/16/21	15 40 Mountain		Solid			X	X	X	1	
LN-SW03 (890-538-3)	4/16/21	15 30 Mountain		Solid			X	X	X	1	

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by: Cloe Cuffo 4 19 21				4-19-21 1100pm	
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

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

Ver: 11/01/2020

Received by OCD: 7/30/2021 2:38:34 PM

Released to Imaging: 10/22/2021 3:19:47 PM

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	

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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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

JKramer

Authorized for release by:
4/21/2021 7:48:35 PM

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

LINKS
Review your project results through TotalAccess
Have a Question? Ask The Expert
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.

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. Job ID: 890-542-1
Project/Site: JRU DI 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.
¤	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 2.8º 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.

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-542-1
SDG: TE012919259

Client Sample ID: LN-SW04

Date Collected: 04/19/21 13:00
Date Received: 04/20/21 11:05
Sample Depth: 0 - 4

Lab Sample ID: 890-542-1
Matrix: Solid

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
OII 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

Date Collected: 04/19/21 14:00
Date Received: 04/20/21 11:05
Sample Depth: 0 - 4

Lab Sample ID: 890-542-2
Matrix: Solid

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*

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
Matrix: Solid
Date Collected: 04/19/21 14:00
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
Matrix: Solid
Date Collected: 04/19/21 15:50
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

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-542-1
SDG: TE012919259

Client Sample ID: LN-SW07

Date Collected: 04/19/21 16:00
Date Received: 04/20/21 11:05
Sample Depth: 0 - 4

Lab Sample ID: 890-542-4

Matrix: Solid

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
OII 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 1

Job ID: 890-542-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)											
		BFB1	DFBZ1										
Lab Sample ID	Client Sample ID	(70-130)	(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**

		Percent Surrogate Recovery (Acceptance Limits)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(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 Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/21/21 10:10	04/21/21 13:15	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 %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
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 Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
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 %Recovery*	*LCS Qualifier*	*Limits*
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 Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	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 %Recovery*	*LCSD Qualifier*	*Limits*
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

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 1

Job 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

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 1

Job 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

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

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

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Chain of Custody

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432) 704-5440 EL Paso,TX (915) 585-3443 Lubbock,TX (806) 794-1296 Crasbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701
www.xenco.com

Work Order No: _____

Page 1 of 1

4/21/2021

Project Manager:	Joseph Hernandez	Bill to: (If different)	Kyle Littrell
Company Name:	WSP Global	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) 797-2329	Email:	joseph.hernandez@wsp.com

Work Order Comments

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

Project Name:	JRU DE 1	Turn Around	
Project Number:	TE012919259	Routine ☐	
Project Location	Eddy	Rush: 24HR	
Sampler's Name:	Ben Belill	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	3.0/2.8	Thermometer ID	IR-007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Total Containers:	

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
	LN - SW04	S	4/19/21	1300	0-4'	1		X	X	X
	LN - SW05			1400				X	X	X
	LN - SW06			1550				X	X	X
	LN - SW07			1600				X	X	X

SB 4/19/21

890-542 Chain of Custody

Preservative Codes

MeOH: Me
None: NO
HNO3: HN
H2S04: H2
HCL: HL
NaOH: Na
Zn Acetate+ NaOH: Zn

TAT starts the day recevied by the lab, if received by 4:00pm

Sample Comments

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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

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			4/20/21 1057	2		4-20-21 1105
3				4		
5				6		

Revised Date 022619 Rev 2019.1

Received by OCD: 7/30/2021 2:38:34 PM
Released to Imaging: 10/22/2021 3:19:47 PM

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 890-175 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jessica.kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-542-1
Address: 1211 W Florida Ave	Due Date Requested: 4/21/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: JRU DI 1	Project #: 89000004			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total Number of containers	Special Instructions/Note.
			Preservation Code:								
LN-SW04 (890-542-1)	4/19/21	13 00 Mountain		Solid			X	X	X	1	
LN-SW05 (890-542-2)	4/19/21	14 00 Mountain		Solid			X	X	X	1	
LN-SW06 (890-542-3)	4/19/21	15 50 Mountain		Solid			X	X	X	1	
LN-SW07 (890-542-4)	4/19/21	16 00 Mountain		Solid			X	X	X	1	

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment:

Relinquished by: Gabby Dranez	Date/Time: 4/20/21	Company	Received by:	Date/Time: 4-21-21 11:00 a.m	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 11/01/2020

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Received by OCD: 7/30/2021 2:38:34 PM
4/21/2021
Page 19 of 21
Released to Imaging: 10/22/2021 3:19:47 PM

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	

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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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

JKramer

Authorized for release by:
4/26/2021 6:41:19 PM

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

LINKS

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Have a Question? Ask The Expert

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.

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. Job ID: 890-560-1
Project/Site: JRU DI 1 Combined 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.
¤	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.

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

Date Collected: 04/22/21 11:30
Date Received: 04/23/21 10:07
Sample Depth: 0 - 4

Lab Sample ID: 890-560-1

Matrix: Solid

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
OII 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**

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(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**

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(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 Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
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 %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
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		
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 %Recovery*	*LCS Qualifier*	*Limits*
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 %Recovery*	*LCSD Qualifier*	*Limits*
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

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

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

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-560-1
SDG: TE012919259

Client Sample ID: LW-SW01
Date Collected: 04/22/21 11:30
Date Received: 04/23/21 10:07

Lab Sample ID: 890-560-1
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 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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-560-1
Project/Site: JRU DI 1 Combined 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

Method Summary

Client: WSP USA Inc. Job ID: 890-560-1
Project/Site: JRU DI 1 Combined 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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Chain of Custody

Work Order No: _____

XENCO LABORATORIES

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

www.xenco.com Page 1 of 1

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:	bbelill@ltenv.com	

Work Order Comments

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

Project Name:	JRU DI I Combined	Turn Around	
Project Number:	TF0129192559	Routine ☐	
P.O. Number:	Eddy	Rush: 24HR	
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Temperature (°C):	3.4 / 3.4	Thermometer ID		
Received Intact:	(Yes) No		2NM-007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No (N/A)	Total Containers:		

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
LW-SW01	S	4/22/21	1130	0-4	1	X	X	X

890-560 Chain of Custody

BB 4/22/21

Work Order Notes

AFE EW 2021.01559.
EXP 01
Cost Center:
1082151001

TAT starts the day recevied 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 Tl Sn U V Zn

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		4/23/21 10:00	2		4.23.21 1009
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

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4/26/2021

Received by OCD: 7/30/2021 2:38:34 PM

Released to Imaging: 10/22/2021 3:19:47 PM

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	

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	

eurofins | 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

JKramer

Authorized for release by:
4/28/2021 7:49:49 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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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.
¤	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
Matrix: Solid
Date Collected: 04/22/21 14:45
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
Matrix: Solid
Date Collected: 04/22/21 12:00
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*

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
Matrix: Solid
Date Collected: 04/22/21 12:00
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
OII 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
Matrix: Solid
Date Collected: 04/22/21 13:20
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
OII 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

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

Date Collected: 04/22/21 13:50
Date Received: 04/23/21 10:07
Sample Depth: 0 - 4

Lab Sample ID: 890-561-4

Matrix: Solid

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

Date Collected: 04/22/21 14:20
Date Received: 04/23/21 10:07
Sample Depth: 0 - 4

Lab Sample ID: 890-561-5

Matrix: Solid

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*

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

Date Collected: 04/22/21 14:20
Date Received: 04/23/21 10:07
Sample Depth: 0 - 4

Lab Sample ID: 890-561-5

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		04/23/21 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
OII 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)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(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)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(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

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 Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
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 %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
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		
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 %Recovery*	*LCS Qualifier*	*Limits*
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 %Recovery*	*LCSD Qualifier*	*Limits*
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: 890-561-1
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 — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 2304 — **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 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 2304 — **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 — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 2425 — **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

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		

Surrogate	*LCS %Recovery*	*LCS 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

Surrogate	*LCSD %Recovery*	*LCSD 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

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

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

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

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI 1 Combined

Job ID: 890-561-1
SDG: TE012919259

Client Sample ID: LW-SW03
Date Collected: 04/22/21 14:45
Date Received: 04/23/21 10:07

Lab Sample ID: 890-561-1
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 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
Date Collected: 04/22/21 12:00
Date Received: 04/23/21 10:07

Lab Sample ID: 890-561-2
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 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
Date Collected: 04/22/21 13:20
Date Received: 04/23/21 10:07

Lab Sample ID: 890-561-3
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 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
Date Collected: 04/22/21 13:50
Date Received: 04/23/21 10:07

Lab Sample ID: 890-561-4
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 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

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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-561-1
Project/Site: JRU DI 1 Combined 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

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

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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Chain of Custody

XENCO LABORATORIES

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

Work Order No: _____

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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:	bbelill@ltenv.com

Work Order Comments

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

Project Name:	JRU DI 1 Combined	Turn Around	
Project Number:	TE012919259	Routine ☐	
P.O. Number:	Eddy	Rush: 24HR	
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	3.6/3.4	Thermometer ID	
Received Intact:	(Yes) No	IR-007	
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
LW-SW03	S	4/22/21	1445	0-4'	1	X	X	X
LW-SW04			1200	0-4'		X	X	X
LW-SW05			1320	0-4'		X	X	X
LW-SW06			1350	0-4'		X	X	X
LW-SW07	↓	↓	1420	0-4'	↓	X	X	X

ANALYSIS REQUEST

890-561 Chain of Custody

Work Order Notes

AFE EW.7021.01559.EXP.01

Cost Center: 1082151001

TAT starts the day recevied 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 Tl Sn U V Zn

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		4/23/21 10:00	2		4.23.21 1007
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

4/28/2021 (Rev. 1)

Received by OCD: 7/30/2021 2:38:34 PM

Released to Imaging: 10/22/2021 3:19:47 PM

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	

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	

eurofins | 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 DI1

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

Attn: Dan Moir

JKramer

Authorized for release by:
4/27/2021 12:54:05 PM

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

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

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

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

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

Laboratory Job ID: 890-571-1
SDG: TE012919259

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Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-571-1
Project/Site: JRU DI1 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.
¤	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.

Client Sample Results

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

Job ID: 890-571-1
SDG: TE012919259

Client Sample ID: LW-SW02

Date Collected: 04/23/21 12:00
Date Received: 04/23/21 16:50
Sample Depth: 0 - 4

Lab Sample ID: 890-571-1

Matrix: Solid

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
OII 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

Surrogate Summary

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

Job ID: 890-571-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)											
		BFB1	DFBZ1										
Lab Sample ID	Client Sample ID	(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)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(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 Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
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 %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
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 Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
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 %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
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 Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
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 %Recovery*	*LCS Qualifier*	*Limits*
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 %Recovery*	*LCSD Qualifier*	*Limits*
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
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 %Recovery*	*MS Qualifier*	*Limits*
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 %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*

QC Sample Results

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

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
OII 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

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

QC Association Summary

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

Job 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

Lab Chronicle

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

Job ID: 890-571-1
SDG: TE012919259

Client Sample ID: LW-SW02

Date Collected: 04/23/21 12:00
Date Received: 04/23/21 16:50

Lab Sample ID: 890-571-1

Matrix: Solid

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

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

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: _____

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)
www.xenco.com Page 1 of 1

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:	bbelill@ltenv.com

Work Order Comments

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

Project Name:	JRU DI 1	Turn Around	
Project Number:	TE02419259	Routine ☐	
P.O. Number:	Eddy	Rush: 24 HR	
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Temperature (°C):	3.8/3.6	Thermometer ID		
Received Intact:	(Yes) No	LWM-007		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes (No) N/A	Total Containers:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
LW-SW02	S	4/23/21	1200	0-4'	1	X	X	X

ANALYSIS REQUEST

890-571 Chain of Custody

Work Order Notes

AFE EW.2021.01559.EXP.01
Cost Center: 108215001

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		4-23-21 16:43	2		4-23-21 1644
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Received by OCD: 7/30/2021 2:38:34 PM
Released to Imaging: 10/22/2021 3:19:47 PM

4/27/2021

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 890-183 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jessica.kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana, NELAP - Texas		Job #: 890-571-1
Address: 1211 W Florida Ave	Due Date Requested: 4/27/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: JRU DI1	Project #: 89000004			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
LW-SW02 (890-571-1)	4/23/21	12 00 Mountain		Solid			X	X	X	1	

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment:

Relinquished by: Clue Cuff 4-26-21	Date/Time:	Company	Received by:	Date/Time: 4-26-21 3:00 pm	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 11/01/2020

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Received by OCD: 7/30/2021 2:38:34 PM
4/27/2021
Page 17 of 19
Released to Imaging: 10/22/2021 3:19:47 PM

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	

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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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 DI1
Revision: 1

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

Attn: Dan Moir

JKramer

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 TotalAccess

Have a Question? Ask The Expert

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.

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

Laboratory Job ID: 890-582-1
SDG: TE012919259

Table of Contents

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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.
¤	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 3.8º 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 DI1

Job ID: 890-582-1
SDG: TE012919259

Client Sample ID: FS01

Lab Sample ID: 890-582-1
Matrix: Solid
Date Collected: 04/26/21 10:30
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
Matrix: Solid
Date Collected: 04/26/21 11:00
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*

Client Sample Results

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

Job ID: 890-582-1
SDG: TE012919259

Client Sample ID: FS02
Date Collected: 04/26/21 11:00
Date Received: 04/27/21 11:31
Sample Depth: - 2

Lab Sample ID: 890-582-2
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		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
Date Collected: 04/26/21 11:30
Date Received: 04/27/21 11:31
Sample Depth: - 3

Lab Sample ID: 890-582-3
Matrix: Solid

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

Client Sample Results

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

Job ID: 890-582-1
SDG: TE012919259

Client Sample ID: FS04

Lab Sample ID: 890-582-4
Matrix: Solid
Date Collected: 04/26/21 12:00
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
Matrix: Solid
Date Collected: 04/26/21 12:30
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*

Client Sample Results

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

Job ID: 890-582-1
SDG: TE012919259

Client Sample ID: SW01
Date Collected: 04/26/21 12:30
Date Received: 04/27/21 11:31
Sample Depth: 0 - 3

Lab Sample ID: 890-582-5
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		04/28/21 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
OII 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
Date Collected: 04/26/21 13:00
Date Received: 04/27/21 11:31
Sample Depth: 0 - 3

Lab Sample ID: 890-582-6
Matrix: Solid

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
OII 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

Surrogate Summary

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

Job ID: 890-582-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(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)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(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

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 Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
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 %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
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 Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
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 %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
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 %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

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

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

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 DI1

Job 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	

QC Association Summary

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

Job 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

Lab Chronicle

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

Job 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

Lab Chronicle

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

Job ID: 890-582-1
SDG: TE012919259

Client Sample ID: SW01
Date Collected: 04/26/21 12:30
Date Received: 04/27/21 11:31

Lab Sample ID: 890-582-5
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 14:30	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
Date Collected: 04/26/21 13:00
Date Received: 04/27/21 11:31

Lab Sample ID: 890-582-6
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 14:50	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

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

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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Chain of Custody

XENCO LABORATORIES

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

Work Order No: _____

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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:	bbelill@ltenv.com

Work Order Comments

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

Project Name:	JRU DI I	Turn Around	
Project Number:	TEO12919259	Routine ☐	
P.O. Number:	NRM2002747253	Rush: 24HR	
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Temperature (°C):	4.0	Thermometer ID		
Received Intact:	(Yes) No	T-NM-007		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	3.8	
Sample Custody Seals:	Yes (No) N/A	Total Containers:		

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
FS01	S	4/26/21	1030	3'	1	X	X	X
FS02			1100	2'		X	X	X
FS03			1130	3'		X	X	X
FS04			1200	2'		X	X	X
SW01			1230	0-3		X	X	X
SW02	↓	↓	1300	0-3	↓	X	X	X

890-582 Chain of Custody

Work Order Notes

AFE EW, 2021.01559.EXP.01
Cost Center 1082151001

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Anna Byers	1115 04/27/21	2 Anna Byers	Gabby Ordonez	4/27/21 11:31
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

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5/5/2021 (Rev. 1)

Received by OCD: 7/30/2021 2:38:34 PM

Released to Imaging: 10/22/2021 3:19:47 PM

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 890-187 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jessica.kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-582-1
Address: 1211 W Florida Ave	Due Date Requested: 4/28/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: JRU DI1	Project #: 89000004			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8016MOD_NM/8016NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FS01 (890-582-1)	4/26/21	10 30 Mountain		Solid			X	X	X	1	
FS02 (890-582-2)	4/26/21	11 00 Mountain		Solid			X	X	X	1	
FS03 (890-582-3)	4/26/21	11 30 Mountain		Solid			X	X	X	1	
FS04 (890-582-4)	4/26/21	12 00 Mountain		Solid			X	X	X	1	
SW01 (890-582-5)	4/26/21	12 30 Mountain		Solid			X	X	X	1	
SW02 (890-582-6)	4/26/21	13 00 Mountain		Solid			X	X	X	1	

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

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

Empty Kit Relinquished by:	Date	Time	Method of Shipment:		
Relinquished by: Cloe Cuff	Date/Time: 4.27.21	Company	Received by:	Date/Time: 4-28-21 1:00pm	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 11/01/2020

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Received by OCD: 7/30/2021 2:38:34 PM
5/5/2021 (Rev. 1)
Page 22 of 24
Released to Imaging: 10/22/2021 3:19:47 PM

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").		

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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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 DI1

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

Attn: Dan Moir

JKramer

Authorized for release by:
4/30/2021 7:12:16 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.

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.
¤	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.

Client Sample Results

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

Job ID: 890-590-1
SDG: TE012919259

Client Sample ID: LDPO4-NE
Date Collected: 04/27/21 10:15
Date Received: 04/28/21 15:44
Sample Depth: - 5

Lab Sample ID: 890-590-1
Matrix: Solid

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
Date Collected: 04/27/21 11:30
Date Received: 04/28/21 15:44
Sample Depth: - 24

Lab Sample ID: 890-590-2
Matrix: Solid

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*

Client Sample Results

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

Job ID: 890-590-1
SDG: TE012919259

Client Sample ID: LDPO4D-NE
Date Collected: 04/27/21 11:30
Date Received: 04/28/21 15:44
Sample Depth: - 24

Lab Sample ID: 890-590-2
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	<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
OII 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 DI1

Job ID: 890-590-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(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)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(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 Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
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 %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
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 %Recovery*	*LCS Qualifier*	*Limits*
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 %Recovery*	*LCSD Qualifier*	*Limits*
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 Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/28/21 14:55	04/29/21 13:58	1

QC Sample Results

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

Job 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: 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	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: 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	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*

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 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 2468 — **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 — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 2513

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 — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 2513

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 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 2513

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 — **Client Sample ID: LDPO4-NE**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 2513

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 — **Client Sample ID: LDPO4-NE**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 2513

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

QC Association Summary

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

Job 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

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

Lab Chronicle

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

Job ID: 890-590-1
SDG: TE012919259

Client Sample ID: LDPO4-NE
Date Collected: 04/27/21 10:15
Date Received: 04/28/21 15:44

Lab Sample ID: 890-590-1
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 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
Date Collected: 04/27/21 11:30
Date Received: 04/28/21 15:44

Lab Sample ID: 890-590-2
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 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

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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Chain of Custody

Work Order No: _____

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)
www.xenco.com Page 1 of 1

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:	bbelill@ltenv.com	

Work Order Comments

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

Project Name:	ERU DI 1	Turn Around	
Project Number:	TE012919259	Routine ☐	
P.O. Number:		Rush: 24HR	
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	2.2/2.0	Thermometer ID	
Received Intact:	(Yes) No		IR-007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
LDP04-NE	S	4/27/21	1015	5'	1	X	X	X
LDP04D-NE	↓	↓	1130	24'	1	X	X	X

890-590 Chain of Custody

Work Order Notes

AFE EW.2021.01559.ERU.01
Cost Center:
1082151021

TAT starts the day recevied 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 Tl Sn U V Zn

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		4.28.21 15:42	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Received by OCD: 7/30/2021 2:38:34 PM

Released to Imaging: 10/22/2021 3:19:47 PM

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 890-190 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jessica kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-590-1
Address: 1211 W Florida Ave	Due Date Requested: 4/30/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: JRU DI1	Project #: 89000004			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/6035FP_Calc BTEX	Total Number of containers	Special Instructions/Note.
			Preservation Code:								
LDPO4-NE (890-590-1)	4/27/21	10 15 Mountain		Solid			X	X	X	1	
LDPO4D-NE (890-590-2)	4/27/21	11 30 Mountain		Solid			X	X	X	1	

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment:

	Relinquished by:	Date/Time: 4.29.21	Company	Received by:	Date/Time: 4-29-21 1100	Company
	Relinquished by	Date/Time:	Company	Received by	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company

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

Ver: 11/01/2020

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Received by OCD: 7/30/2021 2:38:34 PM
4/30/2021
Page 18 of 20
Released to Imaging: 10/22/2021 3:19:47 PM

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	

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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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

JKramer

Authorized for release by:
5/4/2021 11:26:10 AM

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

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

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.

Client: WSP USA Inc.
Project/Site: JRU DI 1

Laboratory Job ID: 890-592-1
SDG: TE012919259

Table of Contents

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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.
¤	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: 890-592-1
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 2.0º 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 1

Job ID: 890-592-1
SDG: TE012919259

Client Sample ID: SW01

Lab Sample ID: 890-592-1
Matrix: Solid
Date Collected: 04/27/21 15:00
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
Matrix: Solid
Date Collected: 04/27/21 15:15
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*

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-592-1
SDG: TE012919259

Client Sample ID: SW02

Lab Sample ID: 890-592-2
Matrix: Solid
Date Collected: 04/27/21 15:15
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
OII 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
Matrix: Solid
Date Collected: 04/27/21 15:30
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
OII 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

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-592-1
SDG: TE012919259

Client Sample ID: FS02

Lab Sample ID: 890-592-4
Matrix: Solid
Date Collected: 04/27/21 15:45
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
Matrix: Solid
Date Collected: 04/27/21 16:00
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*

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 1

Job ID: 890-592-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(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)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(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

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 Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
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 %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
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 %Recovery*	*LCS Qualifier*	*Limits*
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 %Recovery*	*LCSD Qualifier*	*Limits*
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 Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/28/21 14:55	04/29/21 13:58	1

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
OII 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*

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					

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job 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	

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job 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

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-592-1
SDG: TE012919259

Client Sample ID: SW01
Date Collected: 04/27/21 15:00
Date Received: 04/28/21 15:44

Lab Sample ID: 890-592-1
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 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
Date Collected: 04/27/21 15:15
Date Received: 04/28/21 15:44

Lab Sample ID: 890-592-2
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 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
Date Collected: 04/27/21 15:30
Date Received: 04/28/21 15:44

Lab Sample ID: 890-592-3
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 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
Date Collected: 04/27/21 15:45
Date Received: 04/28/21 15:44

Lab Sample ID: 890-592-4
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 07:09	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

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

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

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

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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Chain of Custody

XENCO LABORATORIES

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

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Work Order No: _____

Project Manager:	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:	bbelill@ltenv.com

Work Order Comments

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

Project Name:	JRU 01 I	Turn Around	
Project Number:	TE012919259	Routine ☐	
P.O. Number:	NRM2011445697 & NRM2011535196	Rush: 24HR	
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	2.2/2.0	Thermometer ID	IR-007	
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes No N/A	Correction Factor:		
Sample Custody Seals:	Yes No N/A	Total Containers:		

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SW01	S	4/27/21	1500	0-4'	1	X	X	X
SW02			1515	0-4'				
FS01			1530	4'				
FS02			1545	4'				
FS03			1600	4'				

890-592 Chain of Custody

Work Order Notes

NEE EW.2021.01559.EXP.01

Cost Center: 1082151001

TAT starts the day recevied 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 Tl Sn U V Zn

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		4.28.21 15:4	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

5/4/2021 (Rev. 2)

Received by OCD: 7/30/2021 2:38:34 PM

Released to Imaging: 10/22/2021 3:19:47 PM

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 890-190 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jessica.kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-592-1
Address: 1211 W Florida Ave	Due Date Requested: 4/30/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: PLU 15 TWR 901H	Project #: 89000004			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total Number of containers	Special Instructions/Note.
			Preservation Code:								
SW01 (890-592-1)	4/27/21	15 00 Mountain		Solid			X	X	X	1	
SW02 (890-592-2)	4/27/21	15 15 Mountain		Solid			X	X	X	1	
FS01 (890-592-3)	4/27/21	15 30 Mountain		Solid			X	X	X	1	
FS02 (890-592-4)	4/27/21	15 45 Mountain		Solid			X	X	X	1	
FS03 (890-592-5)	4/27/21	16 00 Mountain		Solid			X	X	X	1	

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment

Relinquished by:	Date/Time: 4-29-21	Company	Received by:	Date/Time: 4-29-21 4:00 PM	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 11/01/2020

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Received by OCD: 7/30/2021 2:38:34 PM
5/4/2021 (Rev. 2)
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Released to Imaging: 10/22/2021 3:19:47 PM

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	

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	

eurofins | 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

JKramer

Authorized for release by:
4/30/2021 7:03:05 PM

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

LINKS

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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.

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.
¤	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.

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-593-1
SDG: TE012919259

Client Sample ID: LDPO4-SW

Lab Sample ID: 890-593-1
Matrix: Solid
Date Collected: 04/26/21 15:25
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
Matrix: Solid
Date Collected: 04/26/21 15:25
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*

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-593-1
SDG: TE012919259

Client Sample ID: LDPO4B-SW

Lab Sample ID: 890-593-2
Matrix: Solid
Date Collected: 04/26/21 15:25
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
OII 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
Matrix: Solid
Date Collected: 04/26/21 14:00
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
OII 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

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-593-1
SDG: TE012919259

Client Sample ID: LDPO6-SW

Lab Sample ID: 890-593-4
Matrix: Solid
Date Collected: 04/27/21 09:40
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
Matrix: Solid
Date Collected: 04/27/21 10:00
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*

Client Sample Results

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
Matrix: Solid
Date Collected: 04/27/21 10:00
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
OII 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
Matrix: Solid
Date Collected: 04/27/21 09:00
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
OII 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

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-593-1
SDG: TE012919259

Client Sample ID: LDP07B-SW

Date Collected: 04/27/21 09:20
Date Received: 04/28/21 15:44
Sample Depth: - 13

Lab Sample ID: 890-593-7

Matrix: Solid

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 1

Job 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	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	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

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 Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
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 %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
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 %Recovery*	*LCS Qualifier*	*Limits*
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 %Recovery*	*LCSD Qualifier*	*Limits*
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 Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/28/21 14:55	04/29/21 13:58	1

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) (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	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
OII 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: 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	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*

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 1

Job 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	

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job 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

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-593-1
SDG: TE012919259

Client Sample ID: LDPO4-SW
Date Collected: 04/26/21 15:25
Date Received: 04/28/21 15:44

Lab Sample ID: 890-593-1
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 07:50	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
Date Collected: 04/26/21 15:25
Date Received: 04/28/21 15:44

Lab Sample ID: 890-593-2
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 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
Date Collected: 04/26/21 14:00
Date Received: 04/28/21 15:44

Lab Sample ID: 890-593-3
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 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
Date Collected: 04/27/21 09:40
Date Received: 04/28/21 15:44

Lab Sample ID: 890-593-4
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 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

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-593-1
SDG: TE012919259

Client Sample ID: LDP06B-SW
Date Collected: 04/27/21 10:00
Date Received: 04/28/21 15:44

Lab Sample ID: 890-593-5
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 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
Date Collected: 04/27/21 09:00
Date Received: 04/28/21 15:44

Lab Sample ID: 890-593-6
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 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
Date Collected: 04/27/21 09:20
Date Received: 04/28/21 15:44

Lab Sample ID: 890-593-7
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 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

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

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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Chain of Custody

XENCO LABORATORIES

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

Work Order No: _____

www.xenco.com Page 1 of 1

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:	bbelill@ltenv.com

Work Order Comments

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

Project Name:	JED DI 1	Turn Around	
Project Number:	FED1291929	Routine ☐	
P.O. Number:		Rush: 24 HR	
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT			
Temp Blank: (Yes) No	Wet Ice: (Yes) No		
Temperature (°C):	2.2/2.0	Thermometer ID	TNM-007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
LDP04-SW	S	4/26/21	1525	5'	1	X	X	X
LDP04B-SW			1625	13'				
LDP05-SW			1400	5'				
LDP06-SW		4/27/21	0940	5'				
LDP06B-SW			1000	13'				
LDP07-SW			0900	5'				
LDP07B-SW			0920	13'				

890-593 Chain of Custody

Work Order Notes

AFE FW.2021.01559.EXP.01

Cost Center:
1082151001

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

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

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

Revised Date 051418 Rev. 2018.1

Received by OCD: 7/30/2021 2:38:34 PM

Released to Imaging: 10/22/2021 3:19:47 PM

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 890-190 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jessica kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-593-1
Address: 1211 W Florida Ave	Due Date Requested: 4/30/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: JRU DI 1	Project #: 89000004			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total Number of containers	Special Instructions/Note.
			Preservation Code:								
LDPO4-SW (890-593-1)	4/26/21	15 25 Mountain		Solid			X	X	X	1	
LDPO4B-SW (890-593-2)	4/26/21	15 25 Mountain		Solid			X	X	X	1	
LDPO5-SW (890-593-3)	4/26/21	14 00 Mountain		Solid			X	X	X	1	
LDPO6-SW (890-593-4)	4/27/21	09 40 Mountain		Solid			X	X	X	1	
LDP06B-SW (890-593-5)	4/27/21	10 00 Mountain		Solid			X	X	X	1	
LDP07-SW (890-593-6)	4/27/21	09 00 Mountain		Solid			X	X	X	1	
LDP07B-SW (890-593-7)	4/27/21	09 20 Mountain		Solid			X	X	X	1	

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	N. Otte	4-29-21			4-29-21 4:00 PM	
2	Relinquished by	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 11/01/2020

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Received by OCD: 7/30/2021 2:38:34 PM
4/30/2021
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Released to Imaging: 10/22/2021 3:19:47 PM

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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 DI1

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

Attn: Dan Moir

JKramer

Authorized for release by:
5/4/2021 4:09:41 PM

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

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

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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Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-612-1
Project/Site: JRU DI1 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.

Client Sample Results

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

Job ID: 890-612-1
SDG: TE012919259

Client Sample ID: FS05

Lab Sample ID: 890-612-1
Matrix: Solid
Date Collected: 04/30/21 09:30
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
Matrix: Solid
Date Collected: 04/30/21 09:45
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*

Client Sample Results

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

Job ID: 890-612-1
SDG: TE012919259

Client Sample ID: FS06

Lab Sample ID: 890-612-2
Matrix: Solid
Date Collected: 04/30/21 09:45
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
Matrix: Solid
Date Collected: 04/30/21 10:00
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

Client Sample Results

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

Job ID: 890-612-1
SDG: TE012919259

Client Sample ID: FS08

Lab Sample ID: 890-612-4
Matrix: Solid
Date Collected: 04/30/21 10:20
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
Matrix: Solid
Date Collected: 04/30/21 10:30
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*

Client Sample Results

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

Job ID: 890-612-1
SDG: TE012919259

Client Sample ID: FS09

Lab Sample ID: 890-612-5
Matrix: Solid
Date Collected: 04/30/21 10:30
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
Matrix: Solid
Date Collected: 04/30/21 11:00
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

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
Matrix: Solid
Date Collected: 04/30/21 11:30
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
Matrix: Solid
Date Collected: 04/30/21 12:00
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*

Client Sample Results

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

Job ID: 890-612-1
SDG: TE012919259

Client Sample ID: SW05

Lab Sample ID: 890-612-8
Matrix: Solid
Date Collected: 04/30/21 12:00
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
Matrix: Solid
Date Collected: 04/30/21 13:00
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

Client Sample Results

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

Job ID: 890-612-1
SDG: TE012919259

Client Sample ID: SW07

Lab Sample ID: 890-612-10
Matrix: Solid
Date Collected: 04/30/21 13:30
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
Matrix: Solid
Date Collected: 04/30/21 14:00
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*

Client Sample Results

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

Job ID: 890-612-1
SDG: TE012919259

Client Sample ID: SW08

Date Collected: 04/30/21 14:00
Date Received: 05/03/21 09:37
Sample Depth: 0 - 4.5

Lab Sample ID: 890-612-11

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	<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 DI1

Job ID: 890-612-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)											
		BFB1	DFBZ1										
Lab Sample ID	Client Sample ID	(70-130)	(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**

		Percent Surrogate Recovery (Acceptance Limits)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(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

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

QC Sample Results

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

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 Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
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 %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
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 Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
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 %Recovery*	*LCS Qualifier*	*Limits*
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 Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
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 %Recovery*	*LCSD Qualifier*	*Limits*
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 Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
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 DI1

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*	*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*	*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
OII 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*	*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
OII 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*

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
o-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
o-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		

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

QC Association Summary

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

Job 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

QC Association Summary

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

Job 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	

QC Association Summary

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

Job 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 DI1

Job ID: 890-612-1
SDG: TE012919259

Client Sample ID: FS05
Date Collected: 04/30/21 09:30
Date Received: 05/03/21 09:37

Lab Sample ID: 890-612-1
Matrix: Solid

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
Date Collected: 04/30/21 09:45
Date Received: 05/03/21 09:37

Lab Sample ID: 890-612-2
Matrix: Solid

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
Date Collected: 04/30/21 10:00
Date Received: 05/03/21 09:37

Lab Sample ID: 890-612-3
Matrix: Solid

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
Date Collected: 04/30/21 10:20
Date Received: 05/03/21 09:37

Lab Sample ID: 890-612-4
Matrix: Solid

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

Lab Chronicle

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

Job ID: 890-612-1
SDG: TE012919259

Client Sample ID: FS09
Date Collected: 04/30/21 10:30
Date Received: 05/03/21 09:37

Lab Sample ID: 890-612-5
Matrix: Solid

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
Date Collected: 04/30/21 11:00
Date Received: 05/03/21 09:37

Lab Sample ID: 890-612-6
Matrix: Solid

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
Date Collected: 04/30/21 11:30
Date Received: 05/03/21 09:37

Lab Sample ID: 890-612-7
Matrix: Solid

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
Date Collected: 04/30/21 12:00
Date Received: 05/03/21 09:37

Lab Sample ID: 890-612-8
Matrix: Solid

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

Lab Chronicle

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

Job ID: 890-612-1
SDG: TE012919259

Client Sample ID: SW06

Lab Sample ID: 890-612-9
Matrix: Solid
Date Collected: 04/30/21 13:00
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
Matrix: Solid
Date Collected: 04/30/21 13:30
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
Matrix: Solid
Date Collected: 04/30/21 14:00
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. Job ID: 890-612-1
Project/Site: JRU DI1 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

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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Chain of Custody

XENCO LABORATORIES

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

Work Order No: _____

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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:	bbelill@ltenv.com

Work Order Comments

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

Project Name:	JRU DI 1	Turn Around	
Project Number:	TE012919259	Routine ☐	
P.O. Number:	NRM2007747253	Rush: 24HR	
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	1.8	Thermometer ID	
Received Intact:	(Yes) No	T-NM-007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	1.6
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

ANALYSIS REQUEST

890-612 Chain of Custody

Work Order Notes

AFE EM.2021.01559.EXP.01
Cost Center
1082151001

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
FS05	S	4/30/21	0930	2'	1	X	X	X	
FS06			0945	2'					
FS07			1000	2'					
FS08			1020	4.5'					
FS09			1030	4.5'					
SW03			1100	0-2'					
SW04			1130	0-2'					
SW05			1200	0-2					
SW06			1300	0-2'					
SW07	↓	↓	1330	0-4.5'	↓	↓	↓	↓	

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Anna Byers	5/3/21 @ 0900	2		
3		5.3.21 / 9:37	4		
5			6		

Revised Date 051418 Rev. 2018.1

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5/4/2021

Received by OCD: 7/30/2021 2:38:34 PM

Released to Imaging: 10/22/2021 3:19:47 PM

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Chain of Custody

XENCO LABORATORIES

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

Work Order No: _____

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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:	bbelill@ltenv.com

Work Order Comments

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

Project Name:	JRV DI 1	Turn Around	
Project Number:	TE0124 14259	Routine ☐	
P.O. Number:	NRM2002742 53	Rush: 24HR	
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Temperature (°C):	1.8	Thermometer ID		
Received Intact:	(Yes) No	T-NM-007		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	1.6	
Sample Custody Seals:	Yes (No) N/A	Total Containers:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SW08	S	4/30/21	1400	0-4.5'	1	X	X	X

ANALYSIS REQUEST

Work Order Notes

AFE EW.2021.01559.EXP.01

Cost Center: 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 Tl Sn U V Zn

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			2		
3		5/3/21 @ 8900	4		
5		5.3.21 / 9:39	6		

Revised Date 051418 Rev. 2018.1

Received by OCD: 7/30/2021 2:38:34 PM

Released to Imaging: 10/22/2021 3:19:47 PM

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	

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	

eurofins | 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

JKramer

Authorized for release by:
5/5/2021 5:39:31 PM

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

LINKS
Review your project results through TotalAccess
Have a Question? Ask The Expert
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.

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. Job ID: 890-626-1
Project/Site: JRU DI 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.
¤	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.

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-626-1
SDG: TE012919259

Client Sample ID: LDP05B-SW

Date Collected: 05/04/21 14:30
Date Received: 05/04/21 16:31
Sample Depth: - 13

Lab Sample ID: 890-626-1

Matrix: Solid

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
OII 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)											
		BFB1	DFBZ1										
Lab Sample ID	Client Sample ID	(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)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(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

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 1

Job 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

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-626-1
SDG: TE012919259

Client Sample ID: LDP05B-SW

Date Collected: 05/04/21 14:30
Date Received: 05/04/21 16:31

Lab Sample ID: 890-626-1

Matrix: Solid

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

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

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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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	JOSEPH HERNANDEZ	Bill to: (if different)	KYLE LITTRELL
Company Name:	WSP USA	Company Name:	XTO ENERGY
Address:	3300 North A Street	Address:	3104 E GREENE ST
City, State ZIP:	MIDLAND, TX 79705	City, State ZIP:	CARLSBAD, NM 88220
Phone:	(281) 782-7329	Email:	anna.byers@wsp.com

Work Order Comments

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

Project Name:	JRU DI 1	Turn Around	
Project Number:	TE0129197559	☐ Routine ☒ 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 #:			

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Samples Received Intact:	(Yes) No	Thermometer ID:	T-NM-007	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	1.4	
Total Containers:		Corrected Temperature:	1.2	

Preservative Codes

None: NO; DI Water: H_2O; Cool: Cool; MeOH: Me; HCL: HC; HNO_3: HN; H_2SO_4: H_2; NaOH: Na; H_3PO_4: HP; $NaHSO_4$: NABIS; $Na_2S_2O_3$: $NaSO_3$; Zn Acetate+NaOH: Zn; NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	TPH (EPA 8015 Mod)	BTEX (EPA 8021B)	Chloride (EPA 300.0)	Sample Comments
LDP05B - SW	S	5/4/21	1430	13'	Comp	1		X	X	X	AFE: EW.2021.01559.EXP.01
											COST CENTRE: 4082151.001

890-626 Chain of Custody

5/4/21

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn

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 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
1 Anna Byers		5/4/21 16:31	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Received by OCD: 7/30/2021 2:38:34 PM

Released to Imaging: 10/22/2021 3:19:47 PM

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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

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5/5/2021

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 890-200 1
Client Contact: Shipping/Receiving	Phone	E-Mail: jessica kramer@eurofinset com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-626-1
Address: 1211 W Florida Ave	Due Date Requested: 5/6/2021			
City: Midland	TAT Requested (days):			
State Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: JRU DI 1	Project #: 89000004			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
LDP05B-SW (890-626-1)	5/4/21	14 30 Mountain		Solid			X	X	X	1	

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment:

	Relinquished by	Date/Time:	Company	Received by	Date/Time:	Company
	Relinquished by: Joe Cuffe 5-5-21	Date/Time:	Company	Received by:	Date/Time: 5-5-21 1.30pm	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver 11/01/2020

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Received by OCD: 7/30/2021 2:38:34 PM

Released to Imaging: 10/22/2021 3:19:47 PM

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	

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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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

JKramer

Authorized for release by:
5/10/2021 9:10:00 AM

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

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

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.

Client: WSP USA Inc.
Project/Site: JRU DI 1

Laboratory Job ID: 890-634-1
SDG: TE012919259

Table of Contents

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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.
¤	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 0.4º 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 1

Job ID: 890-634-1
SDG: TE012919259

Client Sample ID: FS10

Lab Sample ID: 890-634-1
Matrix: Solid
Date Collected: 05/05/21 11:10
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
Matrix: Solid
Date Collected: 05/05/21 12:05
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*

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-634-1
SDG: TE012919259

Client Sample ID: FS11

Date Collected: 05/05/21 12:05
Date Received: 05/06/21 10:35
Sample Depth: - 1

Lab Sample ID: 890-634-2

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	<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
OII 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 1

Job ID: 890-634-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(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)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(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*

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) (Continued)

Lab Sample ID: LCSD 880-2765/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 2758 — **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*

Lab Sample ID: 890-634-1 MS — **Client Sample ID: FS10**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 2758 — **Prep Batch: 2765**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
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 %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: 890-634-1 MSD — **Client Sample ID: FS10**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 2758 — **Prep Batch: 2765**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
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 %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

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

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 1

Job 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	

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

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
Matrix: Solid
Date Collected: 05/05/21 11:10
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
Matrix: Solid
Date Collected: 05/05/21 12:05
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

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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5/10/2021

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Chain of Custody

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

Work Order No: _____

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Project Manager:	JOSEPH HERNANDEZ	Bill to: (if different)	KYLE LITTRELL
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) 782-2329 Email:		anna.byers@wsp.com

Work Order Comments

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

Project Name:	JRU DI 1	Turn Around	
Project Number:	TE012919259	☐ Routine ☒ Rush	
Project Location:	EDDY COUNTY	Due Date:	24 HRS
Sampler's Name:	ANNA BYERS	TAT starts the day received by the lab, if received by 4:30pm	
PO #:	NRM2008274253		

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	3.4
Cooler Custody Seals:	Yes No N/A	Correction Factor:	0.4
Sample Custody Seals:	Yes No N/A	Temperature Reading:	
Total Containers:		Corrected Temperature:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	TPH (EPA 8015 Mod)	BTEX (EPA 8021B)	Chloride (EPA 300.0)
FS10	S	5/5/21	1110	1'	Comp	1		X	X	X
FS11	S	5/5/21	1205	1'	Comp	1		X	X	X

890-634 Chain of Custody

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2SO_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Comments

AFE:
EW.2021.9559.EXP.01
Cost Centre:
1082151001

5/6/21

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn

~~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 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
1 Anna Byers		5.6.21 1035			
3			4		
5			6		

Revised Date 08/25/2020 Rev. 2020.2

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Received by OCD: 7/30/2021 2:38:34 PM

Released to Imaging: 10/22/2021 3:19:47 PM

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	

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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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 DI1

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

Attn: Dan Moir

JKramer

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.

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.
¤	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 DI1

Job ID: 890-635-1
SDG: TE012919259

Client Sample ID: SW09

Date Collected: 05/04/21 09:30
Date Received: 05/06/21 10:52
Sample Depth: 0 - 3

Lab Sample ID: 890-635-1

Matrix: Solid

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

Surrogate Summary

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

Job 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 (70-130)	DFBZ1 (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 (70-130)	OTPH1 (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 Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/06/21 12:54	05/06/21 19:49	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/06/21 12:54	05/06/21 19:49	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/06/21 12:54	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	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/06/21 12:54	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	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		05/06/21 12:54	05/06/21 19:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*05/06/21 12:54*	*05/06/21 19:49*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*05/06/21 12:54*	*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 %Recovery*	*LCS Qualifier*	*Limits*
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 %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

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		

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 %Recovery	MS Qualifier	Limits
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 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	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 %Recovery	MSD Qualifier	Limits
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 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

QC Association Summary

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

Job 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

Lab Chronicle

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

Job ID: 890-635-1
SDG: TE012919259

Client Sample ID: SW09
Date Collected: 05/04/21 09:30
Date Received: 05/06/21 10:52

Lab Sample ID: 890-635-1
Matrix: Solid

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

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

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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Chain of Custody

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

Work Order No: _____

Page 1 of 1

5/10/2021

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:	bbelill@ltenv.com

Work Order Comments

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

Project Name:	JRU DI I	Turn Around	
Project Number:	TE01291259	Routine ☐	
P.O. Number:	NRM200274 7253	Rush: 24HR	
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	1.0/0.8	Thermometer ID	
Received Intact:	(Yes) No	T-NM-007	
Cooler Custody Seals:	Yes No ~~N/A~~	Correction Factor:	
Sample Custody Seals:	Yes No (N/A)	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
SW07	S	5/4/21	0930	0-3'	1	X	X	X

890-635 Chain of Custody

Work Order Notes

AFE EM2021.01559.EXP.01

Cost Center:
1082151001

TAT starts the day recevied 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 Tl Sn U V Zn

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		5/6/21 @ 1045	2		
3		5/6/21 10:32	4		
5			6		

Revised Date 051418 Rev. 2018.1

Received by OCD: 7/30/2021 2:38:34 PM
Released to Imaging: 10/22/2021 3:19:47 PM

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	

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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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 DI1

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

Attn: Dan Moir

JKramer

Authorized for release by:
5/10/2021 10:20:18 AM

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

LINKS

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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.

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.
¤	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 0.8º 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 DI1

Job ID: 890-636-1
SDG: TE012919259

Client Sample ID: FS01
Date Collected: 05/03/21 11:00
Date Received: 05/06/21 10:50
Sample Depth: - 1

Lab Sample ID: 890-636-1
Matrix: Solid

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
Date Collected: 05/03/21 11:20
Date Received: 05/06/21 10:50
Sample Depth: - 1

Lab Sample ID: 890-636-2
Matrix: Solid

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*

Client Sample Results

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

Job ID: 890-636-1
SDG: TE012919259

Client Sample ID: FS02

Lab Sample ID: 890-636-2
Matrix: Solid
Date Collected: 05/03/21 11:20
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
OII 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
Matrix: Solid
Date Collected: 05/03/21 11:30
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
OII 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

Client Sample Results

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

Job ID: 890-636-1
SDG: TE012919259

Client Sample ID: FS04

Lab Sample ID: 890-636-4
Matrix: Solid
Date Collected: 05/03/21 11:45
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
Matrix: Solid
Date Collected: 05/03/21 12:00
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*

Client Sample Results

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

Job ID: 890-636-1
SDG: TE012919259

Client Sample ID: FS05
Date Collected: 05/03/21 12:00
Date Received: 05/06/21 10:50
Sample Depth: - 1

Lab Sample ID: 890-636-5
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	<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
OII 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
Date Collected: 05/03/21 12:30
Date Received: 05/06/21 10:50
Sample Depth: - 1

Lab Sample ID: 890-636-6
Matrix: Solid

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
OII 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

Client Sample Results

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

Job ID: 890-636-1
SDG: TE012919259

Client Sample ID: FS07

Lab Sample ID: 890-636-7
Matrix: Solid
Date Collected: 05/03/21 12:45
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
Matrix: Solid
Date Collected: 05/03/21 13:00
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*

Client Sample Results

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

Job ID: 890-636-1
SDG: TE012919259

Client Sample ID: FS08

Lab Sample ID: 890-636-8
Matrix: Solid
Date Collected: 05/03/21 13:00
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
OII 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
Matrix: Solid
Date Collected: 05/03/21 13:20
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
OII 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

Client Sample Results

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

Job ID: 890-636-1
SDG: TE012919259

Client Sample ID: FS10

Date Collected: 05/03/21 13:40
Date Received: 05/06/21 10:50
Sample Depth: - 1

Lab Sample ID: 890-636-10

Matrix: Solid

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

Date Collected: 05/03/21 14:00
Date Received: 05/06/21 10:50
Sample Depth: - 1

Lab Sample ID: 890-636-11

Matrix: Solid

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*

Client Sample Results

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

Job ID: 890-636-1
SDG: TE012919259

Client Sample ID: FS11

Lab Sample ID: 890-636-11
Matrix: Solid
Date Collected: 05/03/21 14:00
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
OII 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
Matrix: Solid
Date Collected: 05/03/21 14:15
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
OII 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

Client Sample Results

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

Job ID: 890-636-1
SDG: TE012919259

Client Sample ID: FS13

Date Collected: 05/03/21 14:35
Date Received: 05/06/21 10:50
Sample Depth: - 1

Lab Sample ID: 890-636-13

Matrix: Solid

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

Date Collected: 05/03/21 14:50
Date Received: 05/06/21 10:50
Sample Depth: - 4.5

Lab Sample ID: 890-636-14

Matrix: Solid

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*

Client Sample Results

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

Job ID: 890-636-1
SDG: TE012919259

Client Sample ID: FS14

Lab Sample ID: 890-636-14
Matrix: Solid
Date Collected: 05/03/21 14:50
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
OII 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
Matrix: Solid
Date Collected: 05/03/21 15:10
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
OII 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

Client Sample Results

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

Job ID: 890-636-1
SDG: TE012919259

Client Sample ID: FS16
Date Collected: 05/03/21 15:30
Date Received: 05/06/21 10:50
Sample Depth: - 4.5

Lab Sample ID: 890-636-16
Matrix: Solid

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
Date Collected: 05/03/21 15:45
Date Received: 05/06/21 10:50
Sample Depth: - 4.5

Lab Sample ID: 890-636-17
Matrix: Solid

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*

Client Sample Results

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
Matrix: Solid
Date Collected: 05/03/21 15:45
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
Matrix: Solid
Date Collected: 05/03/21 16:00
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

Surrogate Summary

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

Job 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	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
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 (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

Surrogate Summary

Client: WSP USA Inc. Job ID: 890-636-1
Project/Site: JRU DI1 SDG: TE012919259

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

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

		Percent Surrogate Recovery (Acceptance Limits)									
		1CO1	OTPH1								
Lab Sample ID	Client Sample ID	(70-130)	(70-130)								
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

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*

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

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		
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 DI1

Job 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	

QC Association Summary

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

Job 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

QC Association Summary

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

Job 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

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

Lab Chronicle

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

Job ID: 890-636-1
SDG: TE012919259

Client Sample ID: FS01
Date Collected: 05/03/21 11:00
Date Received: 05/06/21 10:50

Lab Sample ID: 890-636-1
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	05/06/21 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
Date Collected: 05/03/21 11:20
Date Received: 05/06/21 10:50

Lab Sample ID: 890-636-2
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 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
Date Collected: 05/03/21 11:30
Date Received: 05/06/21 10:50

Lab Sample ID: 890-636-3
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 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
Date Collected: 05/03/21 11:45
Date Received: 05/06/21 10:50

Lab Sample ID: 890-636-4
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 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

Lab Chronicle

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

Job ID: 890-636-1
SDG: TE012919259

Client Sample ID: FS05
Date Collected: 05/03/21 12:00
Date Received: 05/06/21 10:50

Lab Sample ID: 890-636-5
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 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
Date Collected: 05/03/21 12:30
Date Received: 05/06/21 10:50

Lab Sample ID: 890-636-6
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 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
Date Collected: 05/03/21 12:45
Date Received: 05/06/21 10:50

Lab Sample ID: 890-636-7
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 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
Date Collected: 05/03/21 13:00
Date Received: 05/06/21 10:50

Lab Sample ID: 890-636-8
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 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

Lab Chronicle

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

Job ID: 890-636-1
SDG: TE012919259

Client Sample ID: FS09
Date Collected: 05/03/21 13:20
Date Received: 05/06/21 10:50

Lab Sample ID: 890-636-9
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 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
Date Collected: 05/03/21 13:40
Date Received: 05/06/21 10:50

Lab Sample ID: 890-636-10
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 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
Date Collected: 05/03/21 14:00
Date Received: 05/06/21 10:50

Lab Sample ID: 890-636-11
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 04:14	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
Date Collected: 05/03/21 14:15
Date Received: 05/06/21 10:50

Lab Sample ID: 890-636-12
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 04:34	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

Lab Chronicle

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

Job 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

Lab Chronicle

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

Job ID: 890-636-1
SDG: TE012919259

Client Sample ID: FS17
Date Collected: 05/03/21 15:45
Date Received: 05/06/21 10:50

Lab Sample ID: 890-636-17
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 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
Date Collected: 05/03/21 16:00
Date Received: 05/06/21 10:50

Lab Sample ID: 890-636-18
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 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

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

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Chain of Custody

XENCO LABORATORIES

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

Work Order No: _____

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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:	bbelill@ltenv.com

Work Order Comments

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

Project Name:	JRU DI 1	Turn Around	
Project Number:	TE012919259	Routine ☐	
P.O. Number:	ZRP-4625	Rush: 24HR	
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Temperature (°C):	1.0 / 0.8	Thermometer ID		
Received Intact:	(Yes) No	T-NM-007		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:		
Sample Custody Seals:	Yes No (N/A)	Total Containers:		

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
FS01	S	5/3/21	1100	1'	1	X	X	X
FS02			1120	1'				
FS03			1130	1'				
FS04			1145	1'				
FS05			1200	1'				
FS06			1230	1'				
FS07			1245	1'				
FS08			1300	1'				
FS09			1320	1'				
FS10	↓	↓	1340	1'	↓	↓	↓	↓

890-636 Chain of Custody

Work Order Notes

AFE EW2021.01559.EXPL
Cost Center:
1082151001

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

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

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

Revised Date 051418 Rev. 2018.1

Received by OCD: 7/30/2021 2:38:34 PM

Released to Imaging: 10/22/2021 3:19:47 PM

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Chain of Custody

XENCO LABORATORIES

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

Work Order No: _____

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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:	bbelill@ltenv.com

Work Order Comments

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

Project Name:	JRU QEI	Turn Around	
Project Number:	TE012919259	Routine ☐	
P.O. Number:	ZRP-4625	Rush: 24HR	
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Temperature (°C):	1.0/0.8	Thermometer ID		
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:		
Sample Custody Seals:	Yes No (N/A)	Total Containers:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
FS11	S	5/3/21	1400	1'	1	X	X	X
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'	↓	↓	↓	↓

ANALYSIS REQUEST

Work Order Notes

AFE EV.2021.01559EXP.01
Cost Center:
1082151001

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		5/6/21 @ 1045	2		
3		5/6/21 / 10:50	4		
5			6		

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5/10/2021

Received by OCD: 7/30/2021 2:38:34 PM

Released to Imaging: 10/22/2021 3:19:47 PM

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	

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	

eurofins | 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

JKramer

Authorized for release by:
5/10/2021 8:11:01 PM

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

LINKS

Review your project results through TotalAccess

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

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

Client: WSP USA Inc.
Project/Site: JRU DI 1

Laboratory Job ID: 890-645-1
SDG: TE012919259

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Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-645-1
Project/Site: JRU DI 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.
¤	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.

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-645-1
SDG: TE012919259

Client Sample ID: FS12

Lab Sample ID: 890-645-1
Matrix: Solid
Date Collected: 05/06/21 11:00
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
Matrix: Solid
Date Collected: 05/06/21 11:45
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*

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-645-1
SDG: TE012919259

Client Sample ID: FS13

Lab Sample ID: 890-645-2
Matrix: Solid
Date Collected: 05/06/21 11:45
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
Matrix: Solid
Date Collected: 05/06/21 12:30
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

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-645-1
SDG: TE012919259

Client Sample ID: FS15

Lab Sample ID: 890-645-4
Matrix: Solid
Date Collected: 05/06/21 13:30
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
Matrix: Solid
Date Collected: 05/06/21 14:30
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*

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-645-1
SDG: TE012919259

Client Sample ID: FS16

Lab Sample ID: 890-645-5
Matrix: Solid
Date Collected: 05/06/21 14:30
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
Matrix: Solid
Date Collected: 05/06/21 15:15
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

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-645-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(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**

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(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	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		

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	MS %Recovery	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 Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	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	MSD %Recovery	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	RPD Limit
Chloride			250	245.3		mg/Kg		98	90 - 110	2	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job 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	

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job 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 1

Job ID: 890-645-1
SDG: TE012919259

Client Sample ID: FS12
Date Collected: 05/06/21 11:00
Date Received: 05/07/21 10:47

Lab Sample ID: 890-645-1
Matrix: Solid

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
Date Collected: 05/06/21 11:45
Date Received: 05/07/21 10:47

Lab Sample ID: 890-645-2
Matrix: Solid

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
Date Collected: 05/06/21 12:30
Date Received: 05/07/21 10:47

Lab Sample ID: 890-645-3
Matrix: Solid

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
Date Collected: 05/06/21 13:30
Date Received: 05/07/21 10:47

Lab Sample ID: 890-645-4
Matrix: Solid

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

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-645-1
SDG: TE012919259

Client Sample ID: FS16

Lab Sample ID: 890-645-5
Matrix: Solid
Date Collected: 05/06/21 14:30
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
Matrix: Solid
Date Collected: 05/06/21 15:15
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. Job ID: 890-645-1
Project/Site: JRU DI 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

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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Chain of Custody

XENCO LABORATORIES

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

Work Order No: _____ Page 1 of 1

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:	bbelill@ltenv.com

Work Order Comments

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

Project Name:	JRU DI1	Turn Around	
Project Number:	TE01219259	Routine ☐	
P.O. Number:	NRM2002747253	Rush: 24HR	
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	5.6	Thermometer ID	T-NM-007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	5.4
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
FS12	S	5/6/21	1100	1'-4'	1	X	X	X
FS13			1145	4'				
FS14			1230	4'				
FS15			1330	1'				
FS16			1430	1'				
SW10	↓	↓	1515	0-4'	↓	↓	↓	↓

890-645 Chain of Custody

Work Order Notes

AFE EW.2021.01559 Exp.01

Cost Center: 1082151001

TAT starts the day recevied 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 Tl Sn U V Zn

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 BJ Belill		5/7/21 1038	2	Gabriel Ordonez	5/7/21 10:47
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

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5/10/2021

Received by OCD: 7/30/2021 2:38:34 PM

Released to Imaging: 10/22/2021 3:19:47 PM

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s)	COC No: 890-208 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jessica.kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana, NELAP - Texas		Job #: 890-645-1
Address: 1211 W Florida Ave	Due Date Requested: 5/10/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: JRU DI 1	Project #: 89000004			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FS12 (890-645-1)	5/6/21	11 00 Mountain		Solid			X	X	X	1	
FS13 (890-645-2)	5/6/21	11 45 Mountain		Solid			X	X	X	1	
FS14 (890-645-3)	5/6/21	12 30 Mountain		Solid			X	X	X	1	
FS15 (890-645-4)	5/6/21	13 30 Mountain		Solid			X	X	X	1	
FS16 (890-645-5)	5/6/21	14 30 Mountain		Solid			X	X	X	1	
SW10 (890-645-6)	5/6/21	15 15 Mountain		Solid			X	X	X	1	

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment:

Relinquished by: Cloé Cuttaro 5-1 21	Date/Time:	Company	Received by:	Date/Time: 5-11-21 11:30am	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 11/01/2020

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Received by OCD: 7/30/2021 2:38:34 PM
5/10/2021
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Released to Imaging: 10/22/2021 3:19:47 PM

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	

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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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

JKramer

Authorized for release by:
5/10/2021 8:29:00 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.

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.
¤	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 5.4º 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 1

Job ID: 890-646-1
SDG: TE012919259

Client Sample ID: SW01

Date Collected: 05/05/21 14:10
Date Received: 05/07/21 10:47
Sample Depth: 0 - 4.5

Lab Sample ID: 890-646-1
Matrix: Solid

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

Date Collected: 05/05/21 14:25
Date Received: 05/07/21 10:47
Sample Depth: 0 - 4.5

Lab Sample ID: 890-646-2
Matrix: Solid

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*

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-646-1
SDG: TE012919259

Client Sample ID: SW02

Lab Sample ID: 890-646-2
Matrix: Solid
Date Collected: 05/05/21 14:25
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
OII 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
Matrix: Solid
Date Collected: 05/05/21 14:30
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
OII 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

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-646-1
SDG: TE012919259

Client Sample ID: FS19

Lab Sample ID: 890-646-4
Matrix: Solid
Date Collected: 05/05/21 14:35
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
Matrix: Solid
Date Collected: 05/05/21 15:00
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*

Client Sample Results

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
Matrix: Solid
Date Collected: 05/05/21 15:00
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
OII 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
Matrix: Solid
Date Collected: 05/05/21 15:10
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
OII 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

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job 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	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	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

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 Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
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 %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
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 Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
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 %Recovery*	*LCS Qualifier*	*Limits*
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 Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	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 %Recovery*	*LCSD Qualifier*	*Limits*
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 Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00200	U F2 F1	0.0998	0.08838		mg/Kg		89	70 - 130		

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

Surrogate	*MS %Recovery*	*MS 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	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

Surrogate	*MSD %Recovery*	*MSD 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

Surrogate	*MB %Recovery*	*MB 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

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	*MS %Recovery*	*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	*MSD %Recovery*	*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

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 1

Job 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	

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job 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 1

Job ID: 890-646-1
SDG: TE012919259

Client Sample ID: SW01
Date Collected: 05/05/21 14:10
Date Received: 05/07/21 10:47

Lab Sample ID: 890-646-1
Matrix: Solid

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
Date Collected: 05/05/21 14:25
Date Received: 05/07/21 10:47

Lab Sample ID: 890-646-2
Matrix: Solid

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
Date Collected: 05/05/21 14:30
Date Received: 05/07/21 10:47

Lab Sample ID: 890-646-3
Matrix: Solid

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
Date Collected: 05/05/21 14:35
Date Received: 05/07/21 10:47

Lab Sample ID: 890-646-4
Matrix: Solid

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

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-646-1
SDG: TE012919259

Client Sample ID: FS20

Date Collected: 05/05/21 15:00
Date Received: 05/07/21 10:47

Lab Sample ID: 890-646-5

Matrix: Solid

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

Date Collected: 05/05/21 15:10
Date Received: 05/07/21 10:47

Lab Sample ID: 890-646-6

Matrix: Solid

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

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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Chain of Custody

XENCO LABORATORIES

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

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Work Order No: _____

Project Manager:	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:	bbelill@ltenv.com

Work Order Comments

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

Project Name:	TRU DTL	Turn Around	
Project Number:	TE012919259	Routine ☐	
P.O. Number:	2RP-4625	Rush: 24HR	
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	5.6	Thermometer ID	
Received Intact:	(Yes) No	T-NM-007	
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	5.4
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

ANALYSIS REQUEST

890-646 Chain of Custody

Work Order Notes

AFE EW2021.01559 EXP.01
Post Penter
10821S1001

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

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	5/5/21	1410	0-4.5'	1	X	X	X	
SW02			1425	0-4.5'					
SW03			1430	0-4.5'					
FS19			1435	4.5'					
FS20			1500	1'					
FS21	↓	↓	1510	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 Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471 : Hg**

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		5/7/21 1038	2	Gaby Ordonez	5/7/21 10:47
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

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5/10/2021

Received by OCD: 7/30/2021 2:38:34 PM

Released to Imaging: 10/22/2021 3:19:47 PM

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 890-208 1
Client Contact: Shipping/Receiving	Phone	E-Mail: jessica kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-646-1
Address: 1211 W Florida Ave	Due Date Requested: 5/10/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: JRU DI 1	Project #: 89000004			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
SW01 (890-646-1)	5/5/21	14 10 Mountain		Solid			X	X	X	1	
SW02 (890-646-2)	5/5/21	14 25 Mountain		Solid			X	X	X	1	
SW03 (890-646-3)	5/5/21	14 30 Mountain		Solid			X	X	X	1	
FS19 (890-646-4)	5/5/21	14 35 Mountain		Solid			X	X	X	1	
FS20 (890-646-5)	5/5/21	15 00 Mountain		Solid			X	X	X	1	
FS21 (890-646-6)	5/5/21	15 10 Mountain		Solid			X	X	X	1	

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment:

Relinquished by: Cloé Cuffe 5.7.21	Date/Time:	Company	Received by:	Date/Time: 5-10-21 11:30a.m	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 11/01/2020

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Received by OCD: 7/30/2021 2:38:34 PM
5/10/2021
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Released to Imaging: 10/22/2021 3:19:47 PM

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Bottle Order Information

Bottle Order
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

Order Completion Information

Creator Cloe Clifton
Filled by
Sent Date
Sent Via
Tracking #

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

Notes to Field Staff:

Scan QR code for field sampler instructions

Health and Safety Notes:

Preservative | Comment

Relinquished By	Company	Date	Time	Received By	Company	Seal # Seal # Seal #:
Relinquished By	Company	Date	Time	Received By	Company	Seal # Seal # Seal #

Cloé Clifton 5.7.21

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

Received by OCD: 7/30/2021 2:38:34 PM

Released to Imaging: 10/22/2021 3:19:47 PM

eurofins | 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

JKramer

Authorized for release by:
5/12/2021 5:50:38 PM

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

LINKS
Review your project results through TotalAccess
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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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Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-655-1
Project/Site: JRU DI 1 Combined 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.
¤	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: 890-655-1
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

Date Collected: 05/11/21 09:55
Date Received: 05/11/21 12:48
Sample Depth: 8'

Lab Sample ID: 890-655-1

Matrix: Solid

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

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: 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*

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
OII 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)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(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)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(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

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*

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

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

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

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. Job ID: 890-655-1
Project/Site: JRU DI 1 Combined 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

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'

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	JOSEPH HERNANDEZ	Bill to: (if different)	KYLE LITTRELL
Company Name:	WSP USA	Company Name:	XTO ENERGY
Address:	3300 N A Street	Address:	3104 E. GREENE ST
City, State ZIP:	MIDLAND, TX 79705	City, State ZIP:	CARLSBAD, NM 88220
Phone:	(281) 702-2329	Email:	anna.byers@wsp.com

Work Order Comments

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

Project Name:	JRU DI 1 Combined	Turn Around	
Project Number:	TE012919259	☐ Routine ☒ 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 #:	NRM1935433878		

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	IR Mud 07
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Temperature Reading:	1.4
Total Containers:		Corrected Temperature:	1.2

Preservative Codes

None: NO | DI Water: H_2O
Cool: Cool | MeOH: Me
HCL: HC | HNO_3: HN
H_2SO_4: H_2 | NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

ANALYSIS REQUEST

Parameters: TPH (EPA 8015 Mod) | BTEX (EPA 8021 B) | Chloride (EPA 300.0)

890-655 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code
BH01 C	S	5/11/21	09:55	8'	grab	1	
BH02 C	S	5/11/21	10:20	8'	grab	1	

Sample Comments

AFE:
EW.2021.01559.EXP.01
Cost Centre:
1082151001

5/11/21

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn

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 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
1 Anna Byers		5-11-21 1248	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020 2

Received by OCD: 7/30/2021 2:38:34 PM
Released to Imaging: 10/22/2021 3:19:47 PM
5/12/2021 (Rev. 1)

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s).	COC No: 890-213 1
Client Contact: Shipping/Receiving	Phone	E-Mail: jessica kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-655-1
Address: 1211 W Florida Ave	Due Date Requested: 5/12/2021			
City: Midland	TAT Requested (days):			
State Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: JRU DI 1 Combined	Project #: 89000004			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total Number of containers	Special Instructions/Note:
Preservation Code:											
BH01 C (890-655-1)	5/11/21	09 55 Mountain		Solid			X	X	X	1	
BH02 C (890-655-2)	5/11/21	10 20 Mountain		Solid			X	X	X	1	

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment:

Relinquished by: Clive Cuello 5 11 21	Date/Time: 1402	Company	Received by:	Date/Time: 5-12-21 1130a.m	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 11/01/2020

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Received by OCD: 7/30/2021 2:38:34 PM
5/12/2021 (Rev. 1)
Page 18 of 20
Released to Imaging: 10/22/2021 3:19:47 PM

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-655-1
SDG Number: Eddy County NM

Login Number: 655
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	

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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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 DI1

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

Attn: Dan Moir

JKramer

Authorized for release by:
5/13/2021 9:00:12 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.

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.
¤	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: 890-663-1
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.

Client Sample Results

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

Job ID: 890-663-1
SDG: TE012919259

Client Sample ID: BH01

Date Collected: 05/11/21 15:10
Date Received: 05/12/21 16:55
Sample Depth: 1'

Lab Sample ID: 890-663-1

Matrix: Solid

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

Date Collected: 05/11/21 15:20
Date Received: 05/12/21 16:55
Sample Depth: 4'

Lab Sample ID: 890-663-2

Matrix: Solid

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*

Client Sample Results

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

Job ID: 890-663-1
SDG: TE012919259

Client Sample ID: BH01A
Date Collected: 05/11/21 15:20
Date Received: 05/12/21 16:55
Sample Depth: 4'

Lab Sample ID: 890-663-2
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	<49.8	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
OII 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
Date Collected: 05/11/21 14:20
Date Received: 05/12/21 16:55
Sample Depth: 1'

Lab Sample ID: 890-663-3
Matrix: Solid

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
OII 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

Client Sample Results

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

Job ID: 890-663-1
SDG: TE012919259

Client Sample ID: BH02A

Date Collected: 05/11/21 14:30
Date Received: 05/12/21 16:55
Sample Depth: 4'

Lab Sample ID: 890-663-4
Matrix: Solid

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

Date Collected: 05/11/21 13:45
Date Received: 05/12/21 16:55
Sample Depth: 1'

Lab Sample ID: 890-663-5
Matrix: Solid

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*

Client Sample Results

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

Job ID: 890-663-1
SDG: TE012919259

Client Sample ID: BH03

Date Collected: 05/11/21 13:45
Date Received: 05/12/21 16:55
Sample Depth: 1'

Lab Sample ID: 890-663-5
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		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

Date Collected: 05/11/21 14:00
Date Received: 05/12/21 16:55
Sample Depth: 4'

Lab Sample ID: 890-663-6
Matrix: Solid

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

Client Sample Results

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

Job ID: 890-663-1
SDG: TE012919259

Client Sample ID: BH04
Date Collected: 05/10/21 12:45
Date Received: 05/12/21 16:55
Sample Depth: 1'

Lab Sample ID: 890-663-7
Matrix: Solid

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
Date Collected: 05/10/21 13:00
Date Received: 05/12/21 16:55
Sample Depth: 4'

Lab Sample ID: 890-663-8
Matrix: Solid

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*

Client Sample Results

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

Job ID: 890-663-1
SDG: TE012919259

Client Sample ID: BH04A

Date Collected: 05/10/21 13:00
Date Received: 05/12/21 16:55
Sample Depth: 4'

Lab Sample ID: 890-663-8

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	<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
OII 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 DI1

Job 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 (70-130)	DFBZ1 (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 (70-130)	OTPH1 (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

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

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	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

Eurofins Xenco, Carlsbad

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 — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 3067 — **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 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 3067 — **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 — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 3078

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 — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 3078

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 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 3078

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

QC Association Summary

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

Job 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

QC Association Summary

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

Job 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

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

Lab Chronicle

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

Job ID: 890-663-1
SDG: TE012919259

Client Sample ID: BH01
Date Collected: 05/11/21 15:10
Date Received: 05/12/21 16:55

Lab Sample ID: 890-663-1
Matrix: Solid

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
Date Collected: 05/11/21 15:20
Date Received: 05/12/21 16:55

Lab Sample ID: 890-663-2
Matrix: Solid

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
Date Collected: 05/11/21 14:20
Date Received: 05/12/21 16:55

Lab Sample ID: 890-663-3
Matrix: Solid

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
Date Collected: 05/11/21 14:30
Date Received: 05/12/21 16:55

Lab Sample ID: 890-663-4
Matrix: Solid

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

Lab Chronicle

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

Job ID: 890-663-1
SDG: TE012919259

Client Sample ID: BH03
Date Collected: 05/11/21 13:45
Date Received: 05/12/21 16:55

Lab Sample ID: 890-663-5
Matrix: Solid

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
Date Collected: 05/11/21 14:00
Date Received: 05/12/21 16:55

Lab Sample ID: 890-663-6
Matrix: Solid

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
Date Collected: 05/10/21 12:45
Date Received: 05/12/21 16:55

Lab Sample ID: 890-663-7
Matrix: Solid

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
Date Collected: 05/10/21 13:00
Date Received: 05/12/21 16:55

Lab Sample ID: 890-663-8
Matrix: Solid

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

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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Chain of Custody

Work Order No: _____

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

5/13/2021

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:	bbelill@ltenv.com

Work Order Comments

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

Project Name:	JRU DI 1	Turn Around	
Project Number:	TE012919259	Routine	☐
P.O. Number:	2RP-2440	Rush:	24HR
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	3.6/3.4	Thermometer ID	IR#507
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
BH01	S	5/10/21	1510	1'	1	X	X	X
BH01A			1520	4'				
BH02			1420	1'				
BH02A			1430	4'				
BH03			1345	1'				
BH03A			1400	4'				
BH04		5/10/21	1245	1'				
BH04A			1300	4'				

890-663 Chain of Custody

Work Order Notes

AFE EV.2021.01559.EXP.01
Post Penn:
10821501

TAT starts the day recevied 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 Tl Sn U V Zn

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		5-12-21 16:55	2		5.12.21 1655
3			4		
5			6		

Received by OCD: 7/30/2021 2:38:34 PM
Released to Imaging: 10/22/2021 3:19:47 PM

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer, Jessica	Carrier Tracking No(s):	COC No: 890-216 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jessica.kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-663-1
Address: 1211 W Florida Ave	Due Date Requested: 5/14/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: JRU DI1	Project #: 89000004			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
BH01 (890-663-1)	5/11/21	15 10 Mountain		Solid			X	X	X	1	
BH01A (890-663-2)	5/11/21	15 20 Mountain		Solid			X	X	X	1	
BH02 (890-663-3)	5/11/21	14 20 Mountain		Solid			X	X	X	1	
BH02A (890-663-4)	5/11/21	14 30 Mountain		Solid			X	X	X	1	
BH03 (890-663-5)	5/11/21	13 45 Mountain		Solid			X	X	X	1	
BH03A (890-663-6)	5/11/21	14 00 Mountain		Solid			X	X	X	1	
BH04 (890-663-7)	5/10/21	12 45 Mountain		Solid			X	X	X	1	
BH04A (890-663-8)	5/10/21	13 00 Mountain		Solid			X	X	X	1	

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment:

Relinquished by: Cruz Cuff 5.13.21	Date/Time:	Company	Received by:	Date/Time: 5.13.21 2100 pm	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 11/01/2020

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5/13/2021
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Released to Imaging: 10/22/2021 3:19:47 PM

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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

JKramer

Authorized for release by:
5/19/2021 8:06:58 PM

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

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

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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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.
¤	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 3.8º 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 1

Job ID: 890-680-1
SDG: TE012919259

Client Sample ID: SS07A

Date Collected: 05/14/21 09:30
Date Received: 05/17/21 16:40
Sample Depth: - 1

Lab Sample ID: 890-680-1
Matrix: Solid

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

Date Collected: 05/14/21 09:45
Date Received: 05/17/21 16:40
Sample Depth: - 4

Lab Sample ID: 890-680-2
Matrix: Solid

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*

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-680-1
SDG: TE012919259

Client Sample ID: SS07B

Date Collected: 05/14/21 09:45
Date Received: 05/17/21 16:40
Sample Depth: - 4

Lab Sample ID: 890-680-2
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		05/18/21 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

Date Collected: 05/14/21 10:00
Date Received: 05/17/21 16:40
Sample Depth: - 1

Lab Sample ID: 890-680-3
Matrix: Solid

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

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-680-1
SDG: TE012919259

Client Sample ID: SS09B
Date Collected: 05/14/21 10:20
Date Received: 05/17/21 16:40
Sample Depth: - 4

Lab Sample ID: 890-680-4
Matrix: Solid

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

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI 1

Job ID: 890-680-1
SDG: TE012919259

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(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)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(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*

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

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 1

Job 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	

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 1

Job 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

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

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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Chain of Custody

XENCO LABORATORIES

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

Work Order No: _____

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5/19/2021

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:	bbelill@ltenv.com

Work Order Comments

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

Project Name:	JRU DI 1	Turn Around	
Project Number:	TE0129 19259	Routine	☐
P.O. Number:	NBM2002747253	Rush:	24 HR
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Temperature (°C):	3.0/3.8	Thermometer ID		
Received Intact:	(Yes) No	T-NM-007		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Total Containers:		

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SS07A	S	5/14/21	0930	1'	1	X	X	X
SS07B			0945	4'				
SS09A			1000	1'				
SS09B	↓	↓	1020	4'	↓	↓	↓	↓

890-680 Chain of Custody

Work Order Notes

AFE EN.2021.01559.EXP.01

Cost Center:
1082151001

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

Sample Comments

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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

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	J.J. Belill	N. Otero	5/17/21@1640	2		
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

Received by OCD: 7/30/2021 2:38:34 PM

Released to Imaging: 10/22/2021 3:19:47 PM

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer, Jessica	Carrier Tracking No(s):	COC No: 890-220 1
Client Contact: Shipping/Receiving	Phone	E-Mail: jessica kramer@eurofinset com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-680-1
Address: 1211 W Florida Ave	Due Date Requested: 5/19/2021			
City: Midland	TAT Requested (days)			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: JRU DI 1	Project #: 89000004			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
SS07A (890-680-1)	5/14/21	09 30 Mountain		Solid			X	X	X	1	
SS07B (890-680-2)	5/14/21	09 45 Mountain		Solid			X	X	X	1	
SS09A (890-680-3)	5/14/21	10 00 Mountain		Solid			X	X	X	1	
SS09B (890-680-4)	5/14/21	10 20 Mountain		Solid			X	X	X	1	

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment

Relinquished by: Clue Cuffman 5-18-21	Date/Time:	Company	Received by:	Date/Time: 5-18-21 6:20PM	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver 11/01/2020

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Received by OCD: 7/30/2021 2:38:34 PM
5/19/2021
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Released to Imaging: 10/22/2021 3:19:47 PM

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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

JKramer

Authorized for release by:
5/19/2021 8:08:33 PM

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

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

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.

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. Job ID: 890-683-1
Project/Site: JRU DI I Combined 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.
¤	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.

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-683-1
SDG: TE012919259

Client Sample ID: FS03

Date Collected: 05/17/21 11:30
Date Received: 05/18/21 15:04
Sample Depth: 8'

Lab Sample ID: 890-683-1

Matrix: Solid

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
OII 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)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(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)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID		
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)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(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 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: 890-683-1
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
OII 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

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

QC Association Summary

Client: WSP USA Inc. Job ID: 890-683-1
Project/Site: JRU DI I Combined 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

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-683-1
SDG: TE012919259

Client Sample ID: FS03

Date Collected: 05/17/21 11:30
Date Received: 05/18/21 15:04

Lab Sample ID: 890-683-1

Matrix: Solid

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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-683-1
Project/Site: JRU DI I Combined 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

Method Summary

Client: WSP USA Inc. Job ID: 890-683-1
Project/Site: JRU DI I Combined 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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Chain of Custody

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

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Work Order No: _____

Project Manager:	JOSEPH HERNANDEZ	Bill to: (if different)	KYLE LITTRELL
Company Name:	WSP USA	Company Name:	XTO ENERGY
Address:	3300 N 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.byers@wsp.com

Work Order Comments

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

Project Name:	JRU DI 1 Combined	Turn Around	☐ Routine ☑ Rush
Project Number:	TE0129192559	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 BYERS		
PO #:	JRP-2267		

SAMPLE RECEIPT					
Temp Blank:	Yes No	Wet Ice:	Yes No		
Samples Received Intact:	Yes No	Thermometer ID:	IR-607		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.3		
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.4/1.2		
Total Containers:		Corrected Temperature:			

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: TPH (EPA 8015 Mod)	BTEX (EPA 8021B)	Chloride (EPA 300.0)
FS03	S	5/17/21	1130	8'	Comp	1		X	X	X

ANALYSIS REQUEST

890-683 Chain of Custody

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2SO_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Comments

AFE:
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 SiO_2 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 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
1		5-18-21 1504	2		
3			4		
5			6		

Revised Date 08/25/2020 Rev 2020 2

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Received by OCD: 7/30/2021 2:38:34 PM

Released to Imaging: 10/22/2021 3:19:47 PM

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer, Jessica	Carrier Tracking No(s)	COC No: 890-223 1
Client Contact: Shipping/Receiving	Phone	E-Mail: jessica kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-683-1
Address: 1211 W Florida Ave	Due Date Requested: 5/20/2021			
City: Midland	TAT Requested (days)			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #			
Email	WO #:			
Project Name: JRO DI Combined	Project #: 89000004			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total Number of containers	Special Instructions/Note.
			Preservation Code:								
FS03 (890-683-1)	5/17/21	11 30 Mountain		Solid			X	X	X	1	

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment:

Relinquished by: Cive Cupt 5-19-21	Date/Time:	Company	Received by:	Date/Time: 5-19-21 2:30PM	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 11/01/2020

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5/19/2021
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Released to Imaging: 10/22/2021 3:19:47 PM

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	

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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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

JKramer

Authorized for release by:
5/19/2021 8:38:29 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.

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. Job ID: 890-687-1
Project/Site: JRU DI I Combined 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.
¤	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 1.2º 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.

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-687-1
SDG: TE012919259

Client Sample ID: SW06

Date Collected: 05/17/21 11:00
Date Received: 05/18/21 15:04
Sample Depth: 0 - 8'

Lab Sample ID: 890-687-1

Matrix: Solid

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
OII 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)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(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)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID		
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)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(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 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: 890-687-1
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
OII 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

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

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

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-687-1
SDG: TE012919259

Client Sample ID: SW06

Date Collected: 05/17/21 11:00
Date Received: 05/18/21 15:04

Lab Sample ID: 890-687-1

Matrix: Solid

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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-687-1
Project/Site: JRU DI I Combined 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

Method Summary

Client: WSP USA Inc. Job ID: 890-687-1
Project/Site: JRU DI I Combined 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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5/19/2021

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	JOSEPH HERNANDEZ	Bill to: (if different)	KYLE LITTRELL
Company Name:	WSP USA	Company Name:	XTO ENERGY
Address:	3300 N A ST	Address:	3104 E. GREENE ST
City, State ZIP:	MIDLAND, TX 79705	City, State ZIP:	CARLSBAD, NM 88220
Phone:	(281) 782-2329	Email:	anna.byers@wsp.com

Work Order Comments

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

Project Name:	JRU DI 1 Combined	Turn Around	☐ Routine ☑ Rush
Project Number:	TE0129192559	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 BYERS		
PO #:	2RP-2267		

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Samples Received Intact:	(Yes) No	Thermometer ID:	NM-007	
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	1.4/1.2	
Sample Custody Seals:	Yes (No) N/A	Temperature Reading:	0.2	
Total Containers:		Corrected Temperature:		

Preservative Codes

None: NO | DI Water: H_2O
Cool: Cool | MeOH: Me
HCL: HC | HNO_3: HN
H_2SO_4: H_2 | NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: TPH (EPA 8015 mod)	BTEX (EPA 8021B)	Chloride (EPA 300.0)	Sample Comments
SW06	S	5/17/21	1100	0-8'	Comp	1		X	X	X	AFE: EW.2021.01559.EXP.01
											COST CENTRE: 1082151001

890-687 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 SiO_2 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 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
1		5.18.21 1507	2		
3			4		
5			6		

Revised Date 08/25/2020 Rev 2020 2

Received by OCD: 7/30/2021 2:38:34 PM

Released to Imaging: 10/22/2021 3:19:47 PM

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 890-223 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jessica kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana, NELAP - Texas		Job #: 890-687-1
Address: 1211 W Florida Ave	Due Date Requested: 5/20/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: JRO DI Combined	Project #: 89000004			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX										Total Number of containers	Special Instructions/Note:
			Preservation Code:																	
SW06 (890-687-1)	5/17/21	11 00 Mountain		Solid			X	X	X										4	

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment:

Relinquished by: Clee Cupto 5.19.21	Date/Time:	Company	Received by:	Date/Time: 5-19-21 2:30 PM	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 11/01/2020

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Received by OCD: 7/30/2021 2:38:34 PM
5/19/2021
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Released to Imaging: 10/22/2021 3:19:47 PM

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	

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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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

JKramer

Authorized for release by:
5/19/2021 8:15:48 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.

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. Job ID: 890-688-1
Project/Site: JRU DI I Combined 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.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: WSP USA Inc. Job ID: 890-688-1
Project/Site: JRU DI I Combined 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

Date Collected: 05/17/21 10:55
Date Received: 05/18/21 15:04
Sample Depth: 0 - 8

Lab Sample ID: 890-688-1

Matrix: Solid

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
OII 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)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(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)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID		
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)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(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
OII 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

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

QC Association Summary

Client: WSP USA Inc. Job ID: 890-688-1
Project/Site: JRU DI I Combined 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

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-688-1
SDG: TE012919259

Client Sample ID: SW05

Date Collected: 05/17/21 10:55
Date Received: 05/18/21 15:04

Lab Sample ID: 890-688-1

Matrix: Solid

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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-688-1
Project/Site: JRU DI I Combined 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

Method Summary

Client: WSP USA Inc. Job ID: 890-688-1
Project/Site: JRU DI I Combined 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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5/19/2021

eurofins | Environment Testing Xenco

Chain of Custody

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

www.xenco.com Page 1 of 1

Work Order No: _____

Project Manager:	JOSEPH HERNANDEZ	Bill to: (if different)	KYLE LITTRELL
Company Name:	WSP USA	Company Name:	XTO ENERGY
Address:	3300 N 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.byers@wsp.com

Work Order Comments

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

Project Name:	JRU DI 1 Combined	Turn Around	☐ Routine ☑ Rush
Project Number:	TE0129192559	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 BYERS		
PO #:	2RP-2267		

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Samples Received Intact:	(Yes) No	Thermometer ID:	TNM-257	
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	1.1/1.2	
Sample Custody Seals:	Yes (No) N/A	Temperature Reading:	0.2	
Total Containers:		Corrected Temperature:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	TPH (EPA 8015 Mod)	BTEX (EPA 8021B)	Chlorides (EPA 300.0)
SW05	S	5/17/21	1055	0-8'	Comp	1		X	X	X

890-688 Chain of Custody

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2SO_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Comments

AFE:
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 SiO_2 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 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
1		5.18.21 1507	4		
3			6		
5					

Revised Date 08/25/2020 Rev 2020 2

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Received by OCD: 7/30/2021 2:38:34 PM

Released to Imaging: 10/22/2021 3:19:47 PM

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s)	COC No: 890-223 1
Client Contact: Shipping/Receiving	Phone	E-Mail: jessica kramer@eurofinset com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-688-1
Address: 1211 W Florida Ave	Due Date Requested: 5/20/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: JRO DI Combined	Project #: 89000004			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
SW05 (890-688-1)	5/17/21	10 55 Mountain		Solid			X	X	X	1	

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Cloe Cuff 5.19.21				5-19-21 2301 PM	
2	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
3	Relinquished by	Date/Time	Company	Received by	Date/Time	Company

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

Ver: 11/01/2020

Page 703 of 857
Received by OCD: 7/30/2021 2:38:34 PM
5/19/2021
Page 16 of 18
Released to Imaging: 10/22/2021 3:19:47 PM

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	

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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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

JKramer

Authorized for release by:
5/19/2021 8:18:47 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.

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. Job ID: 890-689-1
Project/Site: JRU DI I Combined 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.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: WSP USA Inc. Job ID: 890-689-1
Project/Site: JRU DI I Combined 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

Date Collected: 05/17/21 10:50
Date Received: 05/18/21 15:04
Sample Depth: 0 - 8

Lab Sample ID: 890-689-1

Matrix: Solid

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
OII 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)									
		BFB1	DFBZ1								
Lab Sample ID	Client Sample ID	(70-130)	(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)									
		1CO1	OTPH1								
Lab Sample ID	Client Sample ID	(70-130)	(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 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: 890-689-1
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 Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
OII 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: 890-689-1
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

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

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-689-1
SDG: TE012919259

Client Sample ID: SW04

Date Collected: 05/17/21 10:50
Date Received: 05/18/21 15:04

Lab Sample ID: 890-689-1

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 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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-689-1
Project/Site: JRU DI I Combined 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

Method Summary

Client: WSP USA Inc. Job ID: 890-689-1
Project/Site: JRU DI I Combined 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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5/19/2021

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Chain of Custody

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

Work Order No: _____

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Project Manager:	JOSEPH HERNANDEZ	Bill to: (if different)	KYLE LITTRELL
Company Name:	WSP USA	Company Name:	XTO ENERGY
Address:	3300 N A ST	Address:	3104 E. GREENE ST
City, State ZIP:	MIDLAND, TX 79705	City, State ZIP:	CARLSBAD, NM 88220
Phone:	(281) 782-3259	Email:	anna.byers@wsp.com

Work Order Comments

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

Project Name:	JRU DI 1 Combined	Turn Around	☐ Routine ☒ Rush
Project Number:	TE0129192559	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 BYERS		
PO #:	2RP-2267		

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	IR#007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.4/1.2	
Total Containers:		Corrected Temperature:		

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	TPH (EPA 8015 mod.)	BTEX (EPA 8021B)	Chloride (EPA 300.0)
SW04	S	5/17/21	1050	0.8'	Comp	1		X	X	X

Parameters

890-689 Chain of Custody

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2SO_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Comments

AFE:
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 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 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
1		5.18.21 1524			
3			4		
5			6		

Revised Date 08/25/2020 Rev 2020 2

Received by OCD: 7/30/2021 2:38:34 PM

Released to Imaging: 10/22/2021 3:19:47 PM

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s)	COC No: 890-223 1
Client Contact: Shipping/Receiving	Phone	E-Mail: jessica kramer@eurofinset com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-689-1
Address: 1211 W Florida Ave	Due Date Requested: 5/20/2021			
City: Midland	TAT Requested (days):			
State Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: JRO DI Combined	Project #: 89000004			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
SW04 (890-689-1)	5/17/21	10 50 Mountain		Solid			X	X	X	1	

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Clee Carter 5.19.2				5-19-21 2:30 P.M	
2	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
3	Relinquished by	Date/Time	Company	Received by	Date/Time	Company

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

Ver 11/01/2020

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Received by OCD: 7/30/2021 2:38:34 PM
5/19/2021
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Released to Imaging: 10/22/2021 3:19:47 PM

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").		

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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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

JKramer

Authorized for release by:
5/19/2021 8:19:55 PM

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

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

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.

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. Job ID: 890-690-1
Project/Site: JRU DI I Combined 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.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: WSP USA Inc. Job ID: 890-690-1
Project/Site: JRU DI I Combined 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.

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-690-1
SDG: TE012919259

Client Sample ID: SW03

Date Collected: 05/17/21 09:40
Date Received: 05/18/21 15:04
Sample Depth: 0 - 8

Lab Sample ID: 890-690-1

Matrix: Solid

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
OII 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

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)											
		BFB1	DFBZ1										
Lab Sample ID	Client Sample ID	(70-130)	(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)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(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 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: 890-690-1
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 Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
OII 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: 890-690-1
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

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-690-1
SDG: TE012919259

Client Sample ID: SW03

Date Collected: 05/17/21 09:40
Date Received: 05/18/21 15:04

Lab Sample ID: 890-690-1

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 15:09	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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-690-1
Project/Site: JRU DI I Combined 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

Method Summary

Client: WSP USA Inc. Job ID: 890-690-1
Project/Site: JRU DI I Combined 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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5/19/2021

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	JOSEPH HERNANDEZ	Bill to: (if different)	KYLE LITTRELL
Company Name:	WSP USA	Company Name:	XTO ENERGY
Address:	3300 N A ST	Address:	3104 E. GREENE ST
City, State ZIP:	MIDLAND, TX 79705	City, State ZIP:	CARLSBAD, NM 88220
Phone:	(281) 782-2329	Email:	anna.byers@wsp.com

Work Order Comments

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

Project Name:	JRU DI 1 Combined	Turn Around	☐ Routine ☒ Rush
Project Number:	TE0129192559	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 BYERS		
PO #:	22RP-2267		

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Samples Received Intact:	(Yes) No	Thermometer ID:	IR#007	
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes (No) N/A	Temperature Reading:		
Total Containers:		Corrected Temperature:		

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	TPH (EPA 8015 Mod)	BTEX (EPA 8021B)	Chloride (EPA 300.0)
SW03	S	5/17/21	0940	0-8'	Comp	1		X	X	X

890-690 Chain of Custody

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2SO_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Comments

AFE:
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 SiO_2 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 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
1		5-18-21 1504	4		
3			6		
5					

Revised Date 08/25/2020 Rev 2020 2

Received by OCD: 7/30/2021 2:38:34 PM

Released to Imaging: 10/22/2021 3:19:47 PM

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 890-223 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jessica kramer@eurofinset com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-690-1
Address: 1211 W Florida Ave	Due Date Requested: 5/20/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: JRO DI Combined	Project #: 89000004			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8016NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
SW03 (890-690-1)	5/17/21	09 40 Mountain		Solid			X	X	X	1	

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment:

	Relinquished by	Date/Time:	Company	Received by	Date/Time:	Company
1	Cia Cuffs 5.19.21					
2					5-19-21 2:30 PM	
3						

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

Ver: 11/01/2020

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Received by OCD: 7/30/2021 2:38:34 PM
5/19/2021
Page 16 of 18
Released to Imaging: 10/22/2021 3:19:47 PM

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	

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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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

JKramer

Authorized for release by:
5/19/2021 8:44:58 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.

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.
¤	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 1.2º 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.

Released to Imaging: 10/22/2021 3:19:47 PM

Client Sample Results

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
Sample Depth: 0 - 8

Lab Sample ID: 890-691-1

Matrix: Solid

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

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)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(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)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(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

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

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

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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-691-1
Project/Site: JRU DI I Combined 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

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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5/19/2021

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Chain of Custody

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

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Work Order No: _____

Project Manager:	JOSEPH HERNANDEZ	Bill to: (if different)	KYLE LITTRELL
Company Name:	WSP USA	Company Name:	XTO ENERGY
Address:	3300 N 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.byers@wsp.com

Work Order Comments
Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	JRU DI 1 Combined	Turn Around	☐ Routine ☑ Rush
Project Number:	TE01291959	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 BYERS		
PO #:	2RP-2267		

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	IR#007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.4 / 1.2	
Total Containers:		Corrected Temperature:		

Preservative Codes
None: NO | DI Water: H_2O
Cool: Cool | MeOH: Me
HCL: HC | HNO_3: HN
H_2SO_4: H_2 | NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	TPH (EPA 8015 mod)	BTEX (EPA 8021B)	Chloride (EPA 300.0)
SW02	S	5/17/21	0915	0-8'	comp	1		X	X	X

890-691 Chain of Custody

Sample Comments
AFE:
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 SiO_2 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 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
1		5.18.21 1507	4		
3			6		
5					

Revised Date 08/25/2020 Rev. 2020.2

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Received by OCD: 7/30/2021 2:38:34 PM

Released to Imaging: 10/22/2021 3:19:47 PM

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 890-223 1
Client Contact: Shipping/Receiving	Phone	E-Mail: jessica kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana, NELAP - Texas		Job #: 890-691-1
Address: 1211 W Florida Ave	Due Date Requested: 5/20/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: JRO DI Combined	Project #: 89000004			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5036FP_Calc BTEX	Total Number of containers	Special Instructions/Note.
			Preservation Code:								
SW02 (890-691-1)	5/17/21	09 15 Mountain		Solid			X	X	X	1	

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment:

Relinquished by: Cloe Cuffo 5-19-21	Date/Time:	Company	Received by:	Date/Time: 5-19-21 2130	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 11/01/2020

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5/19/2021
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Released to Imaging: 10/22/2021 3:19:47 PM

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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

JKramer

Authorized for release by:
5/19/2021 8:21:11 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.

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. Job ID: 890-692-1
Project/Site: JRU DI I Combined 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.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: WSP USA Inc. Job ID: 890-692-1
Project/Site: JRU DI I Combined 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

Date Collected: 05/17/21 09:10
Date Received: 05/18/21 15:04
Sample Depth: 0 - 8

Lab Sample ID: 890-692-1

Matrix: Solid

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
OII 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)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(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)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID		
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)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(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
OII 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: 890-692-1
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

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

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-692-1
SDG: TE012919259

Client Sample ID: SW01

Date Collected: 05/17/21 09:10
Date Received: 05/18/21 15:04

Lab Sample ID: 890-692-1

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 15:51	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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-692-1
Project/Site: JRU DI I Combined 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

Method Summary

Client: WSP USA Inc. Job ID: 890-692-1
Project/Site: JRU DI I Combined 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: 890-692-1
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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5/19/2021

eurofins | Environment Testing Xenco

Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	JOSEPH HERNANDEZ	Bill to: (if different)	KYLE LITTRELL
Company Name:	WSP USA	Company Name:	XTO ENERGY
Address:	3300 N A ST	Address:	3104 E. GREENE ST
City, State ZIP:	MIDLAND, TX 79705	City, State ZIP:	CARLSBAD, NM 88220
Phone:	(281) 782-2329	Email:	anna.byers@wsp.com

Work Order Comments

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

Project Name:	JRU DI 1 Combined	Turn Around	☐ Routine ☑ Rush
Project Number:	TE0129192S9	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 BYERS		
PO #:	2RP-2267		

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	TNM-007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.4/1.2	
Total Containers:		Corrected Temperature:		

ANALYSIS REQUEST

Pres. Code

Parameters: TPH (EPA 8015 mod), BTEX (EPA 8021B), Chloride (EPA 300.0)

890-692 Chain of Custody

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
~~HCL: HC~~ ~~HNO_3: HN~~
H_2SO_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	TPH (EPA 8015 mod)	BTEX (EPA 8021B)	Chloride (EPA 300.0)	Sample Comments
SW01	S	5/17/21	0910	0-8	Comp	1	X	X	X	AFE: 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 SiO_2 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~~ 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
1		5.18.21 1504			
3			4		
5			6		

Revised Date: 08/25/2020 Rev: 2020.2

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Received by OCD: 7/30/2021 2:38:34 PM

Released to Imaging: 10/22/2021 3:19:47 PM

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 890-223 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jessica kramer@eurofinset com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-692-1
Address: 1211 W Florida Ave	Due Date Requested: 5/20/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: JRO DI Combined	Project #: 89000004			
Site	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total Number of containers	Special Instructions/Note:
Preservation Code:					X	X				X	
SW01 (890-692-1)	5/17/21	09 10 Mountain		Solid			X	X	X	1	

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment:

Relinquished by: Clae Carlo 5.19.21	Date/Time:	Company	Received by:	Date/Time: 5-19-21 2:30 p.m	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 11/01/2020

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Received by OCD: 7/30/2021 2:38:34 PM
5/19/2021
Page 16 of 18
Released to Imaging: 10/22/2021 3:19:47 PM

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	

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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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

JKramer

Authorized for release by:
5/21/2021 2:29:07 PM

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

LINKS
Review your project results through TotalAccess
Have a Question? Ask The Expert
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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Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-693-1
Project/Site: JRU DI I Combined 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.
¤	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: 890-693-1
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 1.2º 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

Date Collected: 05/17/21 15:10
Date Received: 05/18/21 15:04
Sample Depth: 1 - 1.5

Lab Sample ID: 890-693-1
Matrix: Solid

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

Date Collected: 05/17/21 15:15
Date Received: 05/18/21 15:04
Sample Depth: - 1.5

Lab Sample ID: 890-693-2
Matrix: Solid

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*

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-693-1
SDG: TE012919259

Client Sample ID: FS23

Date Collected: 05/17/21 15:15
Date Received: 05/18/21 15:04
Sample Depth: - 1.5

Lab Sample ID: 890-693-2
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	<49.8	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
OII 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

Date Collected: 05/17/21 15:20
Date Received: 05/18/21 15:04
Sample Depth: 1 - 1.5

Lab Sample ID: 890-693-3
Matrix: Solid

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
OII 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

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-693-1
SDG: TE012919259

Client Sample ID: FS25

Date Collected: 05/17/21 15:25
Date Received: 05/18/21 15:04
Sample Depth: - 1

Lab Sample ID: 890-693-4
Matrix: Solid

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

Date Collected: 05/17/21 15:30
Date Received: 05/18/21 15:04
Sample Depth: 1 - 3

Lab Sample ID: 890-693-5
Matrix: Solid

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*

Client Sample Results

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
Matrix: Solid
Date Collected: 05/17/21 15:30
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
OII 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
Matrix: Solid
Date Collected: 05/17/21 15:32
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
OII 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

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-693-1
SDG: TE012919259

Client Sample ID: FS28

Date Collected: 05/17/21 15:38
Date Received: 05/18/21 15:04
Sample Depth: 3 - 4

Lab Sample ID: 890-693-7
Matrix: Solid

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

Date Collected: 05/17/21 15:40
Date Received: 05/18/21 15:04
Sample Depth: 1 - 3

Lab Sample ID: 890-693-8
Matrix: Solid

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*

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-693-1
SDG: TE012919259

Client Sample ID: FS29

Lab Sample ID: 890-693-8
Matrix: Solid
Date Collected: 05/17/21 15:40
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
OII 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
Matrix: Solid
Date Collected: 05/17/21 15:45
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
OII 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

Client Sample Results

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-693-1
SDG: TE012919259

Client Sample ID: FS31

Date Collected: 05/18/21 11:20
Date Received: 05/18/21 15:04
Sample Depth: - 1

Lab Sample ID: 890-693-10
Matrix: Solid

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

Date Collected: 05/18/21 11:15
Date Received: 05/18/21 15:04
Sample Depth: - 1

Lab Sample ID: 890-693-11
Matrix: Solid

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*

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
Matrix: Solid
Date Collected: 05/18/21 11:15
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
OII 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
Matrix: Solid
Date Collected: 05/18/21 11:55
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
OII 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

Client Sample Results

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
Sample Depth: - 1

Lab Sample ID: 890-693-13

Matrix: Solid

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

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	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	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

Surrogate Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-693-1
SDG: TE012919259

OTPH = o-Terphenyl

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

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*

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		

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	MS %Recovery	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	MSD %Recovery	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

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

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

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-693-1
SDG: TE012919259

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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

QC Association Summary

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-693-1
SDG: TE012919259

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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
LCSD 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	
LCSD 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	

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

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

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-693-1
SDG: TE012919259

Client Sample ID: FS26
Date Collected: 05/17/21 15:30
Date Received: 05/18/21 15:04

Lab Sample ID: 890-693-5
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 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
Date Collected: 05/17/21 15:32
Date Received: 05/18/21 15:04

Lab Sample ID: 890-693-6
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 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
Date Collected: 05/17/21 15:38
Date Received: 05/18/21 15:04

Lab Sample ID: 890-693-7
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 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
Date Collected: 05/17/21 15:40
Date Received: 05/18/21 15:04

Lab Sample ID: 890-693-8
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 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

Lab Chronicle

Client: WSP USA Inc.
Project/Site: JRU DI I Combined

Job ID: 890-693-1
SDG: TE012919259

Client Sample ID: FS30
Date Collected: 05/17/21 15:45
Date Received: 05/18/21 15:04

Lab Sample ID: 890-693-9
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 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
Date Collected: 05/18/21 11:20
Date Received: 05/18/21 15:04

Lab Sample ID: 890-693-10
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 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
Date Collected: 05/18/21 11:15
Date Received: 05/18/21 15:04

Lab Sample ID: 890-693-11
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 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
Date Collected: 05/18/21 11:55
Date Received: 05/18/21 15:04

Lab Sample ID: 890-693-12
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 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

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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-693-1
Project/Site: JRU DI I Combined 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

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

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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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 2

Project Manager:	JOSEPH HERNANDEZ	Bill to: (if different)	KYLE LITTRELL
Company Name:	WSP USA	Company Name:	XTO ENERGY
Address:	3300 N 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.byers@wsp.com

Work Order Comments

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

Project Name:	JRU DI 1 Combined	Turn Around	☐ Routine ☒ Rush
Project Number:	TE01291259	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 BYERS		
PO #:	2RP-4625		

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Samples Received Intact:	(Yes) No	Thermometer ID:	1.4 / 1.2	
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes (No) N/A	Temperature Reading:		
Total Containers:		Corrected Temperature:		

Preservative Codes

None: NO; DI Water: H_2O; Cool: Cool; MeOH: Me; HCL: HC; HNO_3: HN; H_2SO_4: H_2; NaOH: Na; H_3PO_4: HP; $NaHSO_4$: NABIS; $Na_2S_2O_3$: $NaSO_3$; Zn Acetate+NaOH: Zn; NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: TPH (EPA 8015 mod.)	BTEX (EPA 8021B)	Chloride (EPA 300.0)	Sample Comments
FS22	S	5/17/21	1510	1-1.5'	Comp	1					AFE:
FS23			1515	1.5'		1					EW.2021.01559.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'		1					

890-693 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 SiO_2 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 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
1	Anna Byers	Cole Clay	5.18.21 1502			
3				4		
5				6		

Revised Date 08/25/2020 Rev 2020 2

Received by OCD: 7/30/2021 2:38:34 PM

Released to Imaging: 10/22/2021 3:19:47 PM

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Chain of Custody

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

Work Order No: _____

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Project Manager:	JOSEPH HERNANDEZ	Bill to: (if different)	KYLE LITTRELL
Company Name:	WSP USA	Company Name:	XTO ENERGY
Address:	3300 N 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.byers@wsp.com

Work Order Comments

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

Project Name:	JRU DI 1 Combined	Turn Around	☐ Routine ☒ Rush
Project Number:	TE129192S9	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 BYERS		
PO #:	ZRP-4625		

SAMPLE RECEIPT	Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No		Thermometer ID:	
Cooler Custody Seals:	Yes No N/A		Correction Factor:	0
Sample Custody Seals:	Yes No N/A		Temperature Reading:	
Total Containers:			Corrected Temperature:	

Preservative Codes

None: NO | DI Water: H_2O
Cool: Cool | MeOH: Me
HCL: HC | HNO_3: HN
H_2SO_4: H_2 | NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Parameters: TPH (EPA 8015 Mod)	BTEX (EPA 8021B)	Chloride (EPA 300.0)	Sample Comments
FS32	S	5/18/21	1115	1'	Comp	1	X	X	X	AFE:
FS33	↓	↓	1155	1'	↓	1				EW.2021.01559.EXP.01
FS34	↓	↓	1150	1'	↓	1				
										COST CENTRE:
										1088151001

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn

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 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
1	Anna Byers	Clar Cuff	5.18.21 1504	2		
3				4		
5				6		

Revised Date 08/25/2020 Rev 2020 2

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Released to Imaging: 10/22/2021 3:19:47 PM

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 890-223.1
Client Contact: Shipping/Receiving	Phone	E-Mail: jessica kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 2
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana, NELAP - Texas		Job #: 890-693-1
Address: 1211 W Florida Ave	Due Date Requested: 5/20/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #			
Project Name: JRO DI Combined	Project #: 89000004			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total Number of containers	Special Instructions/Note:
Preservation Code:											
FS22 (890-693-1)	5/17/21	15 10 Mountain		Solid			X	X	X	1	
FS23 (890-693-2)	5/17/21	15 15 Mountain		Solid			X	X	X	1	
FS24 (890-693-3)	5/17/21	15 20 Mountain		Solid			X	X	X	1	
FS25 (890-693-4)	5/17/21	15 25 Mountain		Solid			X	X	X	1	
FS26 (890-693-5)	5/17/21	15 30 Mountain		Solid			X	X	X	1	
FS27 (890-693-6)	5/17/21	15 32 Mountain		Solid			X	X	X	1	
FS28 (890-693-7)	5/17/21	15 38 Mountain		Solid			X	X	X	1	
FS29 (890-693-8)	5/17/21	15 40 Mountain		Solid			X	X	X	1	
FS30 (890-693-9)	5/17/21	15 45 Mountain		Solid			X	X	X	1	

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment:

Relinquished by: Cruz Cuello 5.19.21	Date/Time:	Company	Received by:	Date/Time: 5-19-21 2130 hr	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 11/01/2020

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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: 1
Creator: Clifton, Cloe

List Source: Eurofins Xenco, Carlsbad

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

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-693-1
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	

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 exent 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.

Joseph S. Hernandez
Associate Consultant, Geologist

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

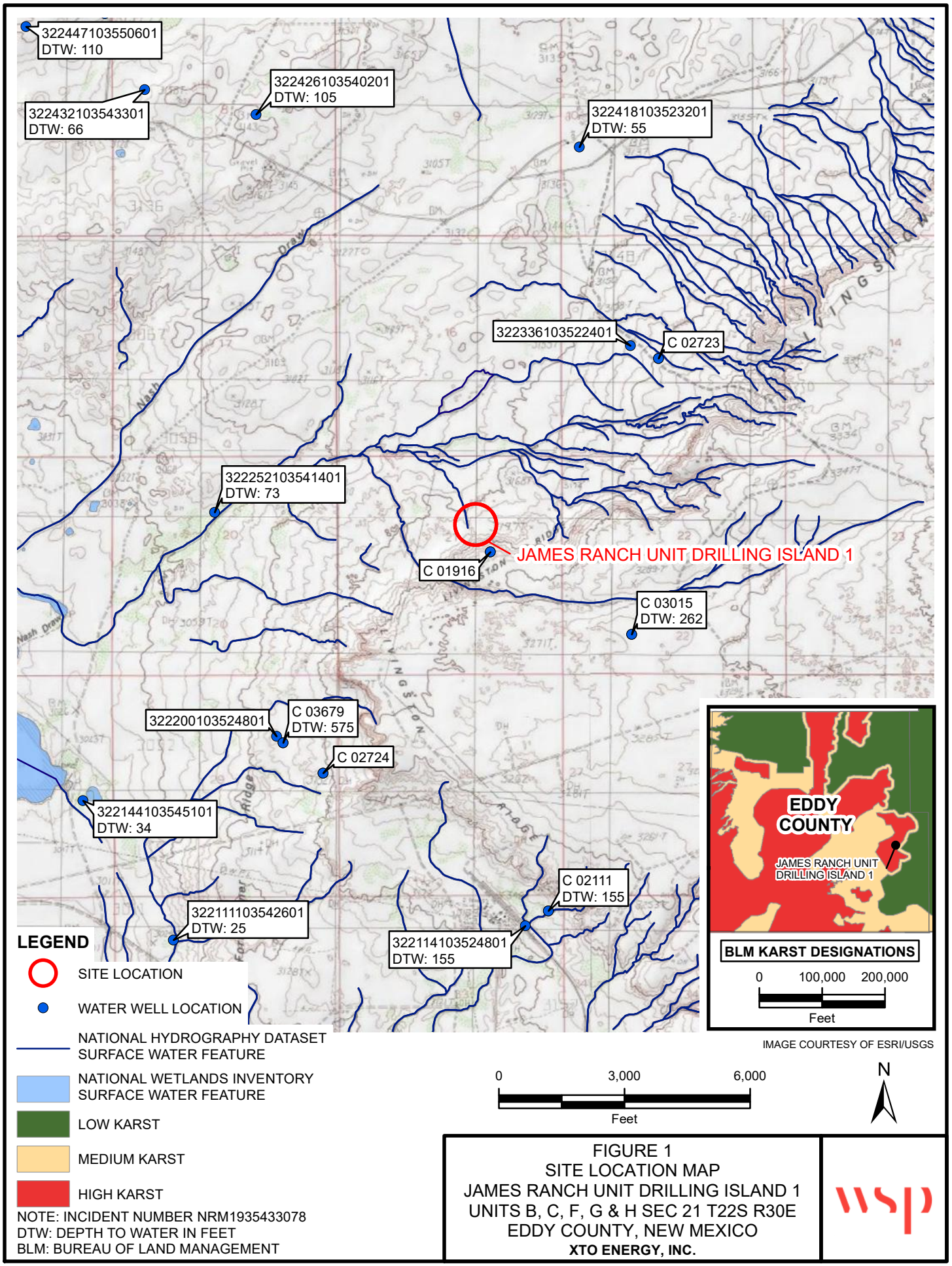
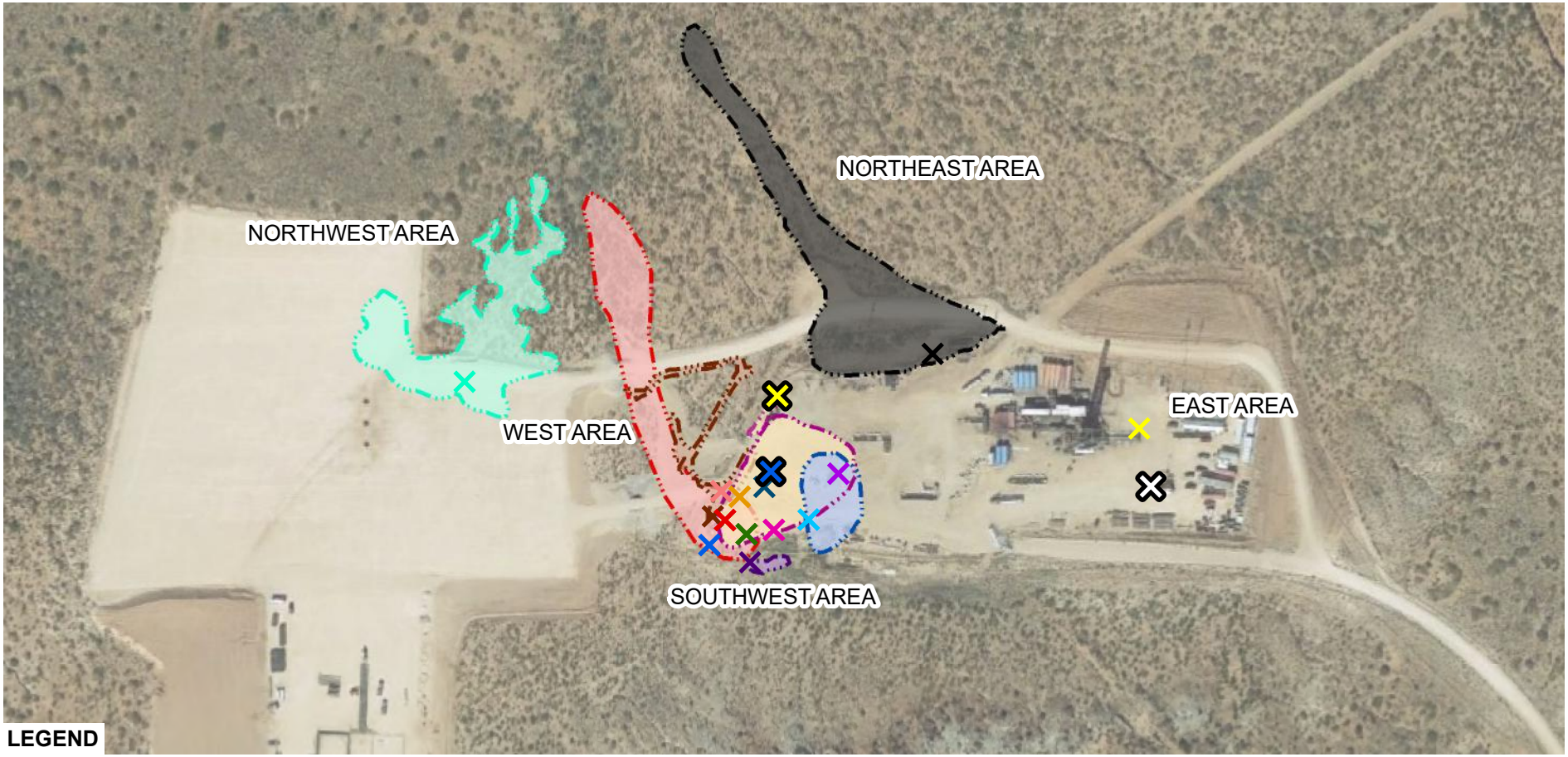


FIGURE 1
SITE LOCATION MAP
JAMES RANCH UNIT DRILLING ISLAND 1
UNITS B, C, F, G & H SEC 21 T22S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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LEGEND

- RELEASE LOCATION (NRM2002747253)
- RELEASE LOCATION (NRM1935433078)
- RELEASE LOCATION (nHMP1411836637)
- RELEASE LOCATION (nHMP1416331258)
- RELEASE LOCATION (nAB1422639350)
- RELEASE LOCATION (nAB1503439598)
- RELEASE LOCATION (nAB1516652299)
- RELEASE LOCATION (nAB1520256930)
- RELEASE LOCATION (nAB1602952102)
- RELEASE EXTENT (nAB1611933379)
- RELEASE LOCATION (nAB1625130938)
- RELEASE LOCATION (nAB1736044200)
- RELEASE LOCATION (nAB1805036031)
- RELEASE LOCATION (nAB1814128830)
- RELEASE LOCATION (NRM2006432204)
- RELEASE LOCATION (NRM2011445697/ NRM2011535196)
- RELEASE LOCATION (NRM2011559899)
- RELEASE EXTENT (NRM2002747253)
- RELEASE EXTENT (NRM1935433078)
- RELEASE EXTENT (nAB1805036031)
- RELEASE EXTENT (nHMP1411836637)
- RELEASE EXTENT (nAB1422639350)
- RELEASE EXTENT (nAB1602952102, nAB1814128830)
- RELEASE EXTENT (nAB1503439598, nAB1516652299, nAB1520256930, nAB1611933379, nAB1625130938, nAB1736044200)

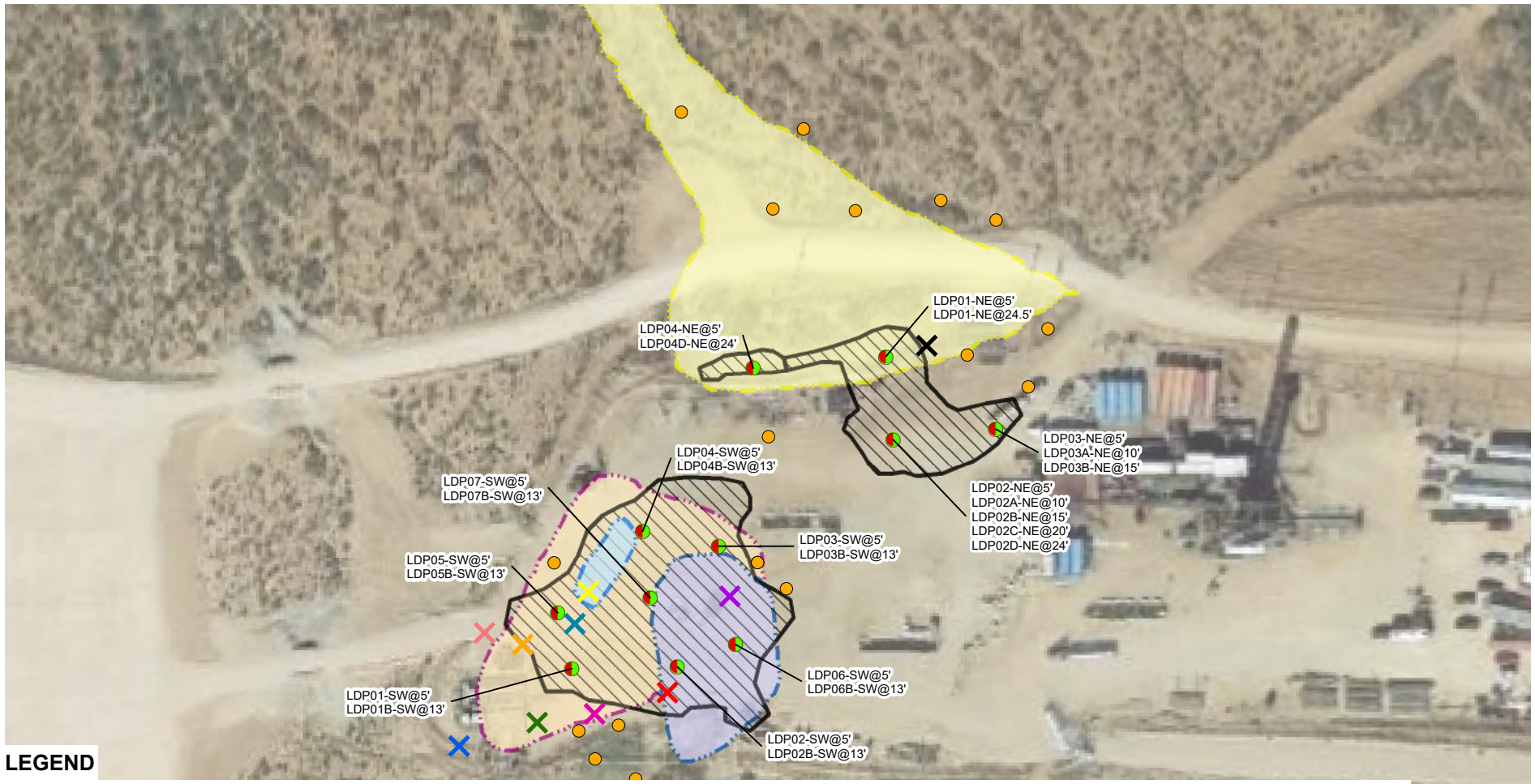
IMAGE COURTESY OF GOOGLE EARTH 2017

0 300 600
Feet

N

FIGURE 2
RELEASE AREAS
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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LEGEND

- RELEASE LOCATION (nHMP1411836637)
- RELEASE EXTENT (nAB1611933379)
- RELEASE LOCATION (nAB1503439598)
- RELEASE LOCATION (nAB1516652299)
- RELEASE LOCATION (nAB1520256930)
- RELEASE LOCATION (nAB1602952102)
- RELEASE LOCATION (nAB1625130938)
- RELEASE LOCATION (nAB1736044200)
- RELEASE LOCATION (nAB1814128830)
- RELEASE LOCATION (NRM2011559899)
- LINER DELINEATION SOIL SAMPLE WITH FINAL DEPTH CONCENTRATIONS IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- PREVIOUSLY COLLECTED DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- RELEASE EXTENT (nAB1602952102, nAB1814128830)
- RELEASE EXTENT (nAB1503439598, nAB1516652299, nAB1520256930, nAB1611933379, nAB1625130938, nAB1736044200)
- RELEASE EXTENT (nHMP1411836637)
- RELEASE EXTENT (NRM2011559899)
- LINER EXCAVATION EXTENT

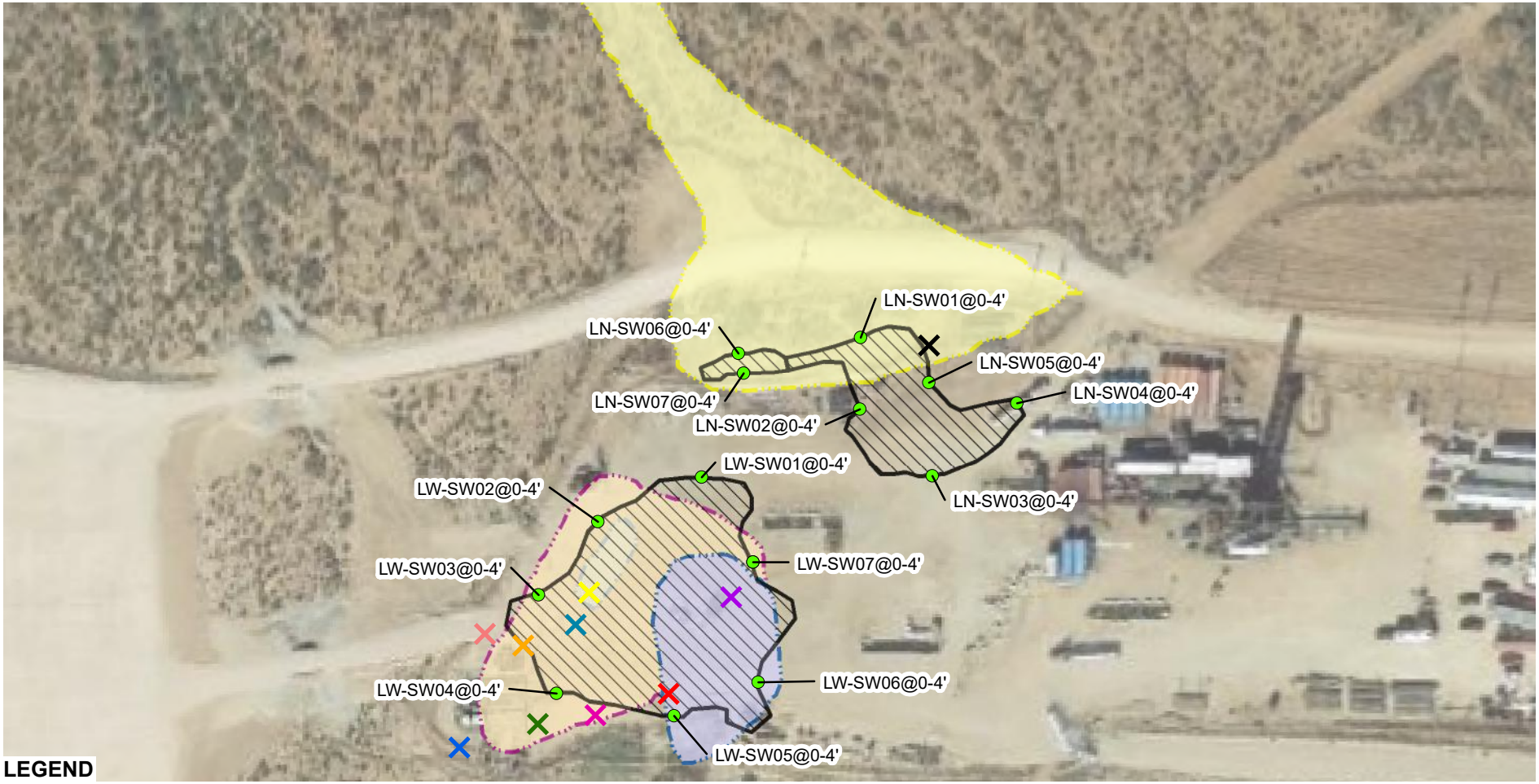
IMAGE COURTESY OF GOOGLE EARTH 2017

0 140 280
Feet

N

FIGURE 3
LINER DELINEATION SOIL SAMPLE LOCATIONS
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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LEGEND

- EXCAVATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- RELEASE LOCATION (nHMP1411836637)
- RELEASE EXTENT (nAB1611933379)
- RELEASE LOCATION (nAB1503439598)
- RELEASE LOCATION (nAB1516652299)
- RELEASE LOCATION (nAB1520256930)
- RELEASE LOCATION (nAB1602952102)
- RELEASE LOCATION (nAB1625130938)
- RELEASE LOCATION (nAB1736044200)
- RELEASE LOCATION (nAB1814128830)
- RELEASE LOCATION (NRM2011559899)
- RELEASE EXTENT (nAB1602952102, nAB1814128830)
- RELEASE EXTENT (nAB1503439598, nAB1516652299, nAB1520256930, nAB1611933379, nAB1625130938, nAB1736044200)
- RELEASE EXTENT (nHMP1411836637)
- RELEASE EXTENT (NRM2011559899)
- LINER EXCAVATION EXTENT

IMAGE COURTESY OF GOOGLE EARTH 2017

0 140 280

Feet

N

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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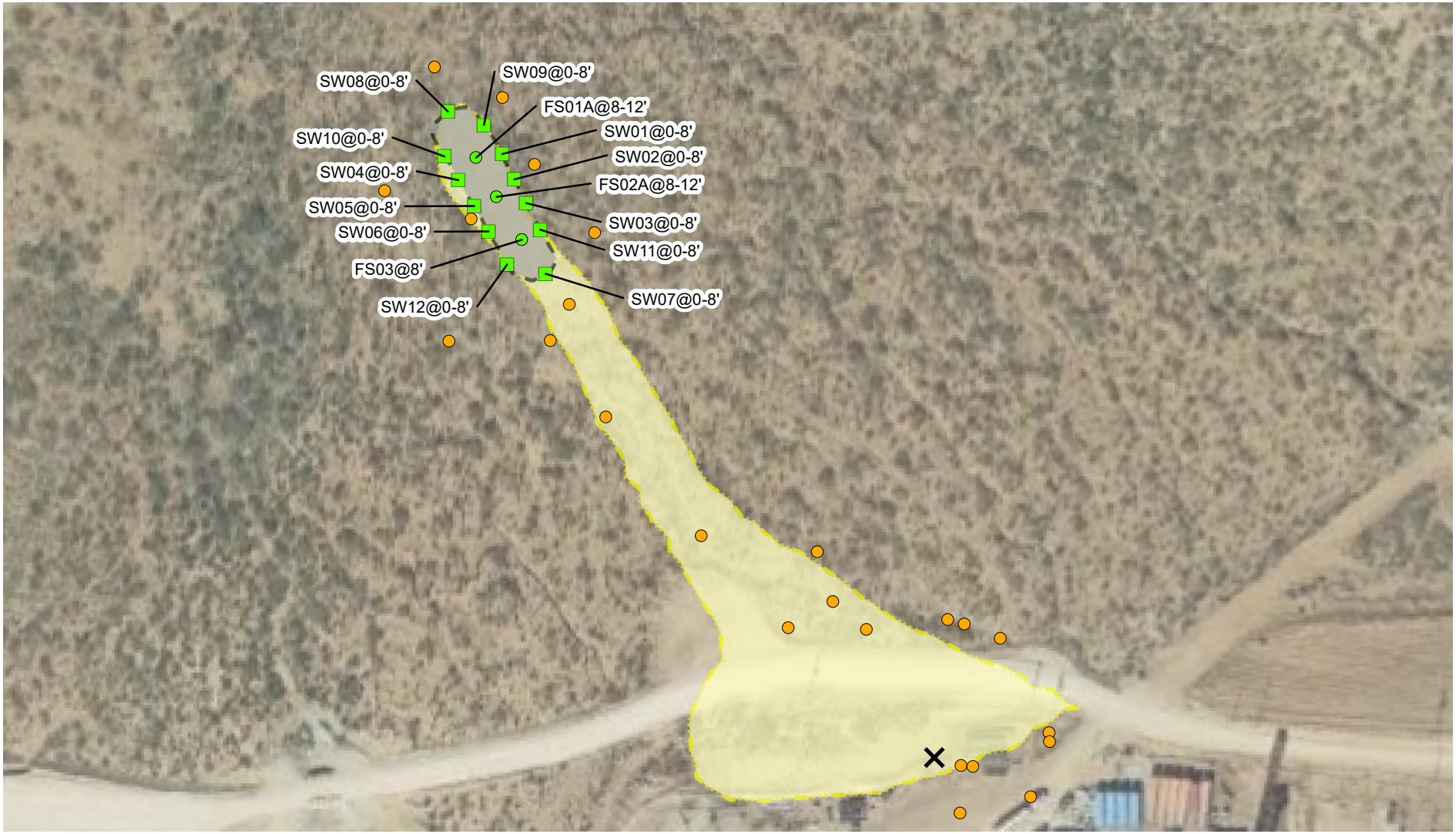


IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND

- FLOOR SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- SIDEWALL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- RELEASE LOCATION (nHMP1411836637)
- PREVIOUSLY COLLECTED DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- RELEASE EXTENT (nHMP1411836637)
- EXCAVATION EXTENT

0 140 280

Feet

N

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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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.

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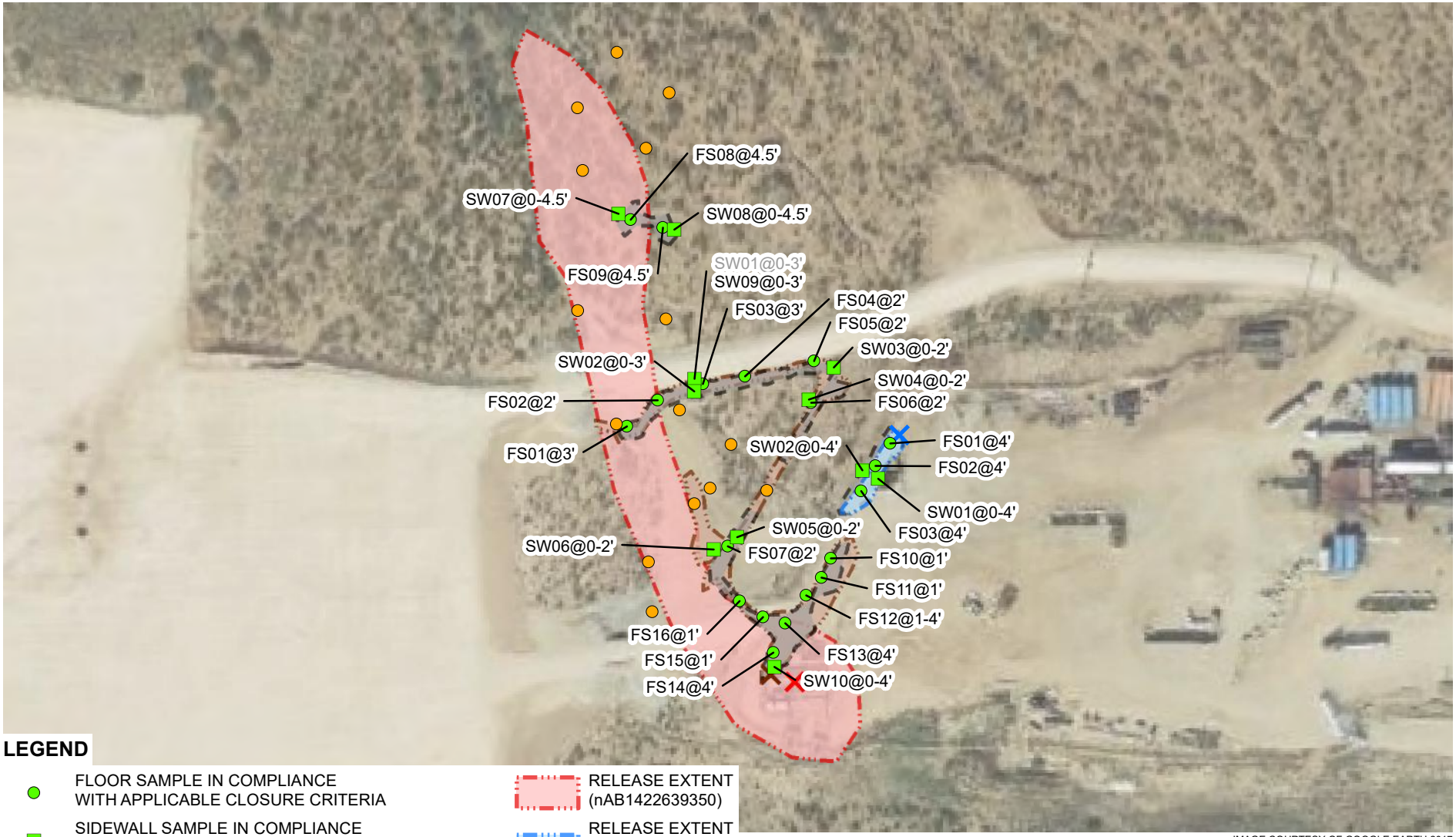


IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND

- FLOOR SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- SIDEWALL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- PREVIOUSLY COLLECTED SURFACE OR DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- RELEASE LOCATION (nAB1422639350)
- RELEASE LOCATION (NRM2002747253)
- RELEASE LOCATION (NRM2011445697/ NRM2011535196)
- RELEASE EXTENT (nAB1422639350)
- RELEASE EXTENT (NRM2011445697/ NRM2011535196)
- RELEASE EXTENT (NRM2002747253)
- EXCAVATION EXTENT

TEXT: INDICATES SOIL REPRESENTED BY SAMPLE THAT WAS REMOVED

0 140 280
Feet

N

FIGURE 7
WESTERN EXCAVATIONS
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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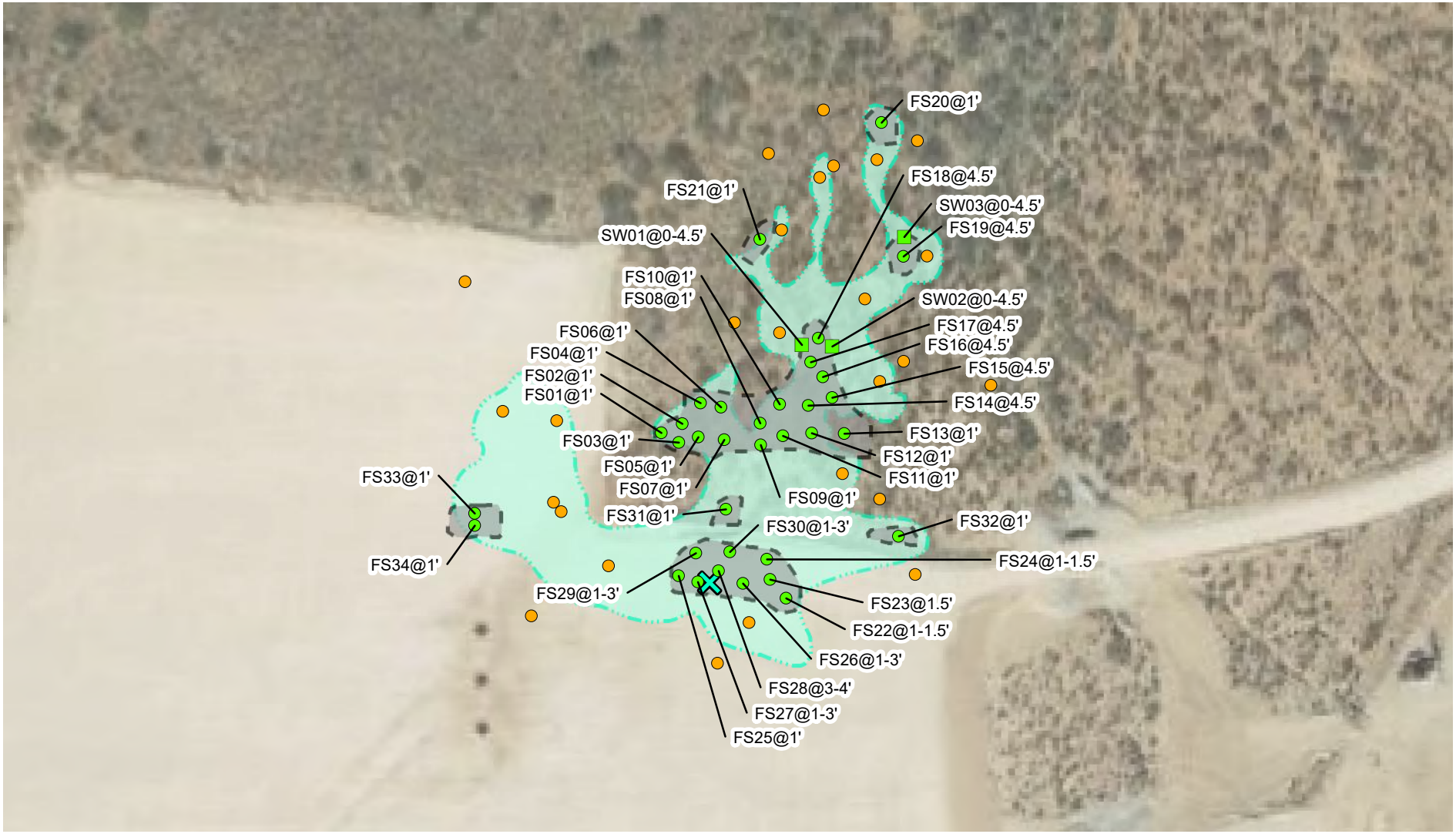


IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND

- 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

0 120 240
Feet

N

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.

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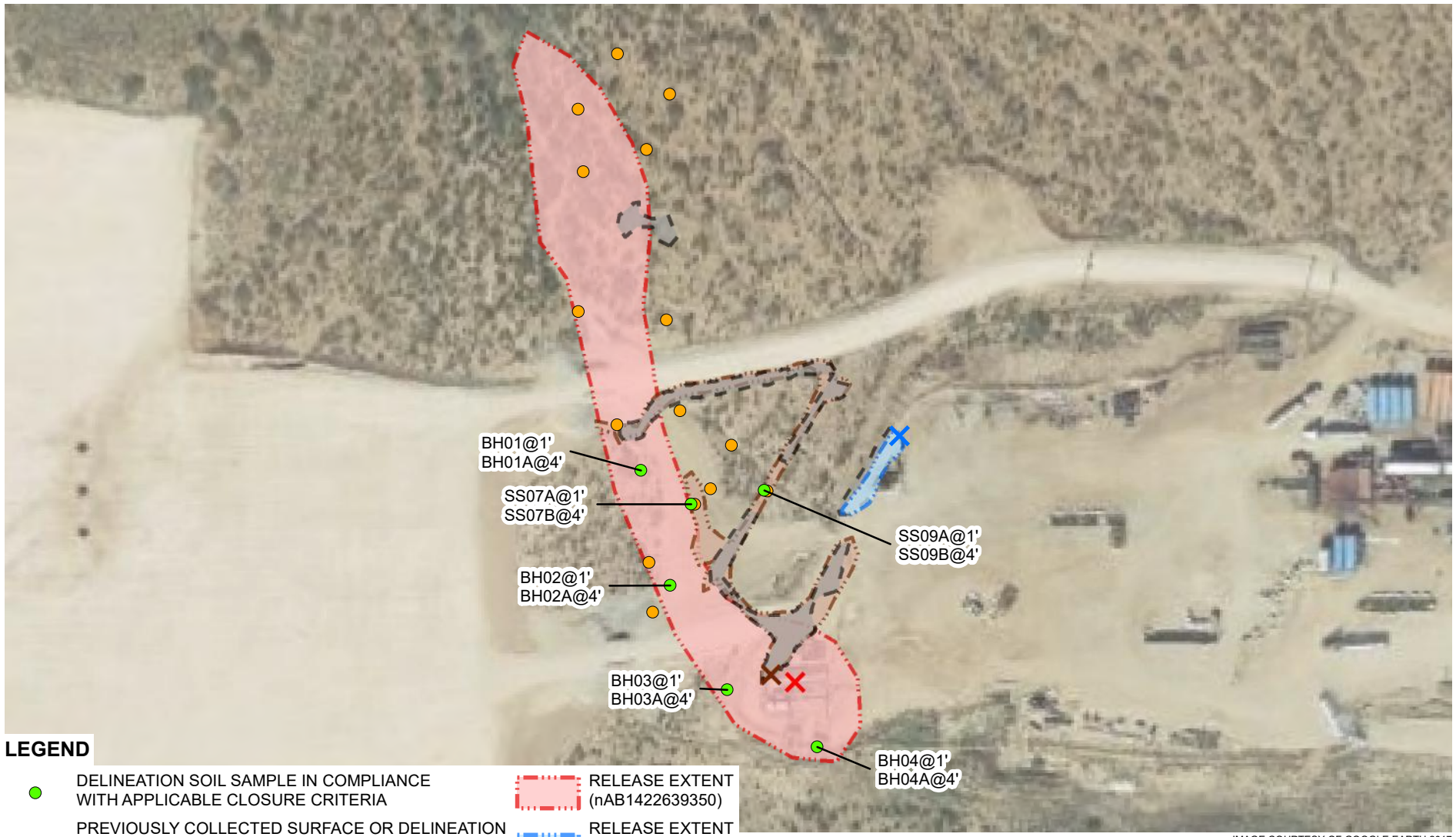


FIGURE 9
WESTERN RELEASE DELINEATION
JAMES RANCH UNIT DRILLING ISLAND 1
UNITS B, C, F, G & H SEC 21 T22S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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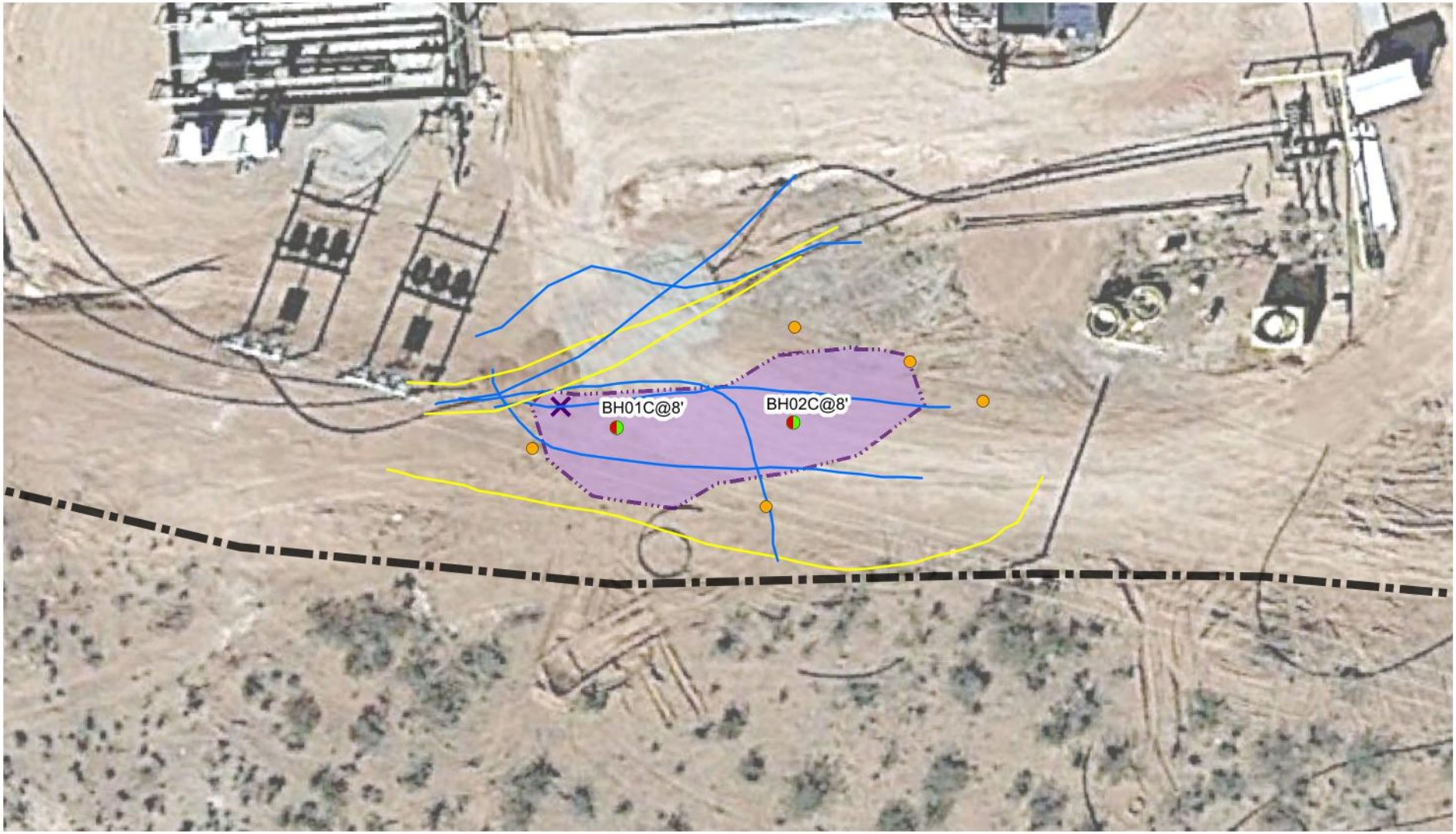


IMAGE COURTESY OF GOOGLE EARTH 2014

LEGEND

- 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)

0 30 60

Feet

N

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.

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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
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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

WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220	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

WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220	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

WSP USA
508 West Stevens Street
Carlsbad, New Mexico 88220

PH Name:	Date:
LDP02-NE	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

WSP USA
508 West Stevens Street
Carlsbad, New Mexico 88220

PH Name:	Date:
LDP02-SW	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

WSP USA
508 West Stevens Street
Carlsbad, New Mexico 88220

PH Name:	Date:
LDP03-NE	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

WSP USA
508 West Stevens Street
Carlsbad, New Mexico 88220

PH Name:	Date:
LDP03-SW	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:	Date:
LDP04-NE	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

WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220	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, poory 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 consolidatation
Dry	<124	0.5	N	LDP04B-SW	13		SP	poorly consolidated

TD @ 13 feet bgs

WSP USA
508 West Stevens Street
Carlsbad, New Mexico 88220

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

WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220	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

WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220	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

WSP USA
508 West Stevens Street
Carlsbad, New Mexico 88220

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
						0		
Moist	6,568	1,068	N	BH01	0.5		SW	0.5-7.5' SAND, moist, brown sand, well-graded, sine to medium grain some silt, odor, no stain
						1		
Moist	7,708	881.2	N	BH01A	2	2	SW	
						3		
Moist	6,060	485.2	N			4	SW	
						5		
Moist	3,176	74.1	N			6	SW	
						7		
Moist	1,800	421.5	N	BH01B	7.5		SW	auger refusal
							SP	7.5-8' SAND, moist, reddish brown, poorly graded, fine grain,
Moist	BDL	0	N	BH01C	8	8	SP	well consolidated, no stain, no odor

TD @ 8 feet bgs

WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220	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
						0		
Moist	7,708	665.2	N	BH02	0.5		SW	0.5-6.5' SAND, moist, brown, well graded, fine-medium grain, some silt, no stain, odor
						1		
Moist	10,784	345.6	N	BH02A	2	2	SW	
						3		
Moist	1,612	289.3	N			4	SW	
						5		
Moist	988	46.1	N			6	SW	
Moist	424	31.1	N	BH02B	6.5		SW	auger refusal
						7		
							SP	6.5-8' SAND, moist, reddish brown, poorly graded, medium grain, well consolidated, no stain, no odor
Moist	BDL	0	N	BH02C	8	8	SP	

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
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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 38981

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 38981
	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 #NHMP1416331258 JAMES RANCH UNIT DI 1 #135H, thank you. This closure is approved.	10/22/2021