

Sanjari, Melodie (MRO)

From: Nobui, Jennifer, EMNRD <Jennifer.Nobui@state.nm.us>
Sent: Monday, January 31, 2022 11:29 AM
To: Sanjari, Melodie (MRO)
Cc: Bratcher, Mike, EMNRD; Billings, Bradford, EMNRD; Hamlet, Robert, EMNRD
Subject: [External] nAPP2129255688 - Sterling State 23 27 20 TB #004H - Closure Report Status

Beware of links/attachments.

Hello Melodie,

nAPP2129255688
Sterling State 23 27 20 TB #004H

The Closure Report, dated 12/21/21, can be approved, however, OCD requests the liner be repaired and a photo be included. Please resubmit Closure Report as a tag. Please note special consideration will be needed in and around boring BH01 during pad P&A.

Please let me know if you have any questions or concerns.

Jennifer Nobui • Environmental Specialist A
Environmental Bureau
EMNRD - Oil Conservation Division
5200 Oakland Avenue N.E Suite 100 | Albuquerque, NM 87113
505.470-3407 | Jennifer.Nobui@state.nm.us
<http://www.emnrd.state.nm.us/OCD/>







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	nAPP2129255688
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Marathon Oil Permian LLC	OGRID 372098
Contact Name Melodie Sanjari	Contact Telephone 575-988-8753
Contact email msanjari@marathonoil.com	Incident # (assigned by OCD)
Contact mailing address 4111 S. Tidwell Rd., Carlsbad, NM 8220	

Location of Release Source

Latitude 32.28465704 Longitude -104.2082717
(NAD 83 in decimal degrees to 5 decimal places)

Site Name STERLING STATE 23 27 20 TB #004H	Site Type Oil & Gas Facility
Date Release Discovered: 10/19/2021	API# (if applicable) 30-015-44619

Unit Letter	Section	Township	Range	County
O	20	23S	27E	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) 2044	Volume Recovered (bbls) 2040
	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

A pinhole in the water leg, just upstream of the water transfer pump resulted in the release of approx. 2044 bbl. of produced water. The source was immediately isolated and all standing fluid was recovered. After inspecting the facility, it was found that there were two areas where the liner failed and resulted in approx. 4.6 bbl. of produced water to leach onto the engineered pad. The failure are scheduled for repair and a remediation plan will be submitted detailing the scope of work.

State of New Mexico
Oil Conservation Division

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Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? Volume
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, NM OCD NOR and email to SLO was submitted 10/19/2021	

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 <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Melodie Sanjari</u>	Title: <u>Environmental Professional</u>
Signature: <u>Melodie Sanjari</u>	Date: 10/21/2021
email: <u>msanjari@marathonoil.com</u>	Telephone: <u>575-988-8753</u>
<u>OCD Only</u>	
Received by: _____	Date: _____

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

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

CONDITIONS

Action 57258

CONDITIONS

Operator: MARATHON OIL PERMIAN LLC 990 Town & Country Blvd. Houston, TX 77024	OGRID: 372098
	Action Number: 57258
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
marcus	None	10/25/2021

Incident ID	nAPP2129255688
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

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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: Melodie Sanjari Title: Environmental ProfessionalSignature: Melodie Sanjari Date: 12/21/2021email: msanjari@marathonoil.com Telephone: 575-988-8753**OCD Only**

Received by: _____ Date: _____

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Closure

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

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

- ☒ A scaled site 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: Melodie Sanjari

Title: Environmental Professional

Signature: Melodie Sanjari

Date: 12/21/2021

email: Melodie Sanjari

Telephone: 575-988-8753

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: Jennifer Nobui

Date: 02/02/2022

Printed Name: Jennifer Nobui

Title: Environmental Specialist A



WSP USA

508 West Stevens Street
Carlsbad, NM 88220
575.887.0101

December 21, 2021

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

**RE: Closure Request
Sterling State 23 27 20 TB #004H
Incident Number nAPP2129255688
Eddy County, New Mexico**

To Whom It May Concern:

WSP USA Inc. (WSP), on behalf of Marathon Oil Permian, LLC. (Marathon), is pleased to present the following Closure Request detailing site assessment, soil sampling, and excavation activities at the Sterling State 23 27 20 TB #004H (Site) located in Unit O, Section 20, Township 23 South, Range 27 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment, soil sampling and excavation activities was to address impacts to soil following a release of produced water at the Site. Based on field activities, delineation and excavation activities, and results of soil sampling events, Marathon is submitting this Closure Request, describing remediation and delineation activities that have occurred and requesting no further action (NFA) for Incident Number nAPP2129255688.

RELEASE BACKGROUND

On October 19, 2021, a pinhole developed on a water leg, resulted in the release of approximately 2,044 barrels (bbls) of produced water into the lined, secondary containment and well pad. Approximately 2,040 bbls of produced water were recovered via vacuum truck. Marathon reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Form C-141 on October 21, 2021 and was assigned Incident Number nAPP2129255688.

SITE CHARACTERIZATION

WSP characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be greater than 101 feet below ground surface (bgs) based on the nearest groundwater well data. The nearest permitted water well with depth to water data and reported coordinates in an application file is New Mexico Office of the State Engineer (NMOSE) file number C-02453, located approximately 1/2-miles southeast of the Site. The NMOSE water well has a reported depth to groundwater of 175 feet bgs and a total depth of 210 feet bgs. The referenced well record is included as Attachment 1.



The closest continuously flowing or significant watercourse to the Site is a stream/river, located approximately 979 feet north of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (medium potential karst designation area). Site receptors are identified on Figure 1.

CLOSURE CRITERIA

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

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

SITE ASSESSMENT AND LINER INSPECTION

On October 25, 2021, WSP personnel visited the Site to conduct site assessment activities and evaluate the release extent based on information provided on the Form C-141 and visual observations. WSP reviewed and verified the Form C-141 incident description (release source and release location) with visual soil impacts and confirmed that the release impacted areas to the southeast and southwest of the containment. WSP visually inspected the lined secondary containment for any signs of holes or tears that would act as a conduit to subsurface soil. The subsequent visual inspection of liner integrity determined the liner was not in working condition. Based on the site assessment and visual observations, delineation activities appeared to be warranted to investigate potential soil impacts. Photographic documentation of the release and liner assessment is provided in Attachment 2.

DELINEATION AND SOIL SAMPLING ACTIVITIES

On November 2, 2021, WSP personnel conducted delineation activities to confirm the presence or absence of impacted soils as a result of the impaired liner. Utilizing a hand auger, WSP installed one delineation soil sample within the breach area (BH01), areas where fluids escaped outside containment (BH02 and BH03), and additional areas outside of the containment to investigate lithology and confirm lateral delineation outside containment (BH04 through BH09). Delineation activities were directed by field screening soil samples for volatile aromatic hydrocarbons using



a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. A total of two soil samples were collected from each of the borehole locations: the sample with the highest observed field screening concentrations (approximately 1 foot bgs) and the greatest depth (approximately 4 feet bgs). The delineation soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler initials, method of analysis, and immediately placed on ice. The soil samples were transported at or below 4 degrees Celsius (°C), under strict chain-of-custody (COC) procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH following EPA Method 8015M/D; and chloride following EPA Method 300.0. The delineation sample locations were mapped utilizing a handheld GPS unit and are presented on Figure 2. Field screening results and observations for the boreholes were recorded on lithologic/soil sampling logs and are presented in Attachment 3.

EXCAVATION AND SOIL SAMPLING ACTIVITIES

On December 14, 2021, utilizing heavy equipment, the southeast impacted area outside containment was excavated to remove visual staining to approximately 2.5 feet bgs. Excavation continued laterally until sidewall samples were compliant with the Closure Criteria. A total of 50 cubic yards was removed during excavation activities and disposed at an R360 disposal facility under Marathon approved manifests.

Following removal of impacted soil, WSP collected 5-point composite soil samples every 200 square feet. 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. Confirmation soil samples SW01 through SW04 and FS01 and FS02 were collected from the excavation. The excavation sample locations were mapped utilizing a GPS unit and are depicted on Figure 3.

The excavation soil samples were collected, handled, and analyzed as previously described.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results indicated benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria in all delineation samples and excavation samples collected from the southeast excavation. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are provided in Attachment 4.

CLOSURE REQUEST

Site assessment, delineation and excavation activities were conducted at the Site to address the October 19, 2021 release of produced water. Laboratory analytical results for delineation soil samples indicated benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria. Additional efforts to remove visual staining were conducted in the area

District II
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associated with BH02. Laboratory analytical results indicated benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria in all excavation samples collected from the southeast excavation. Based on the soil sample analytical results, no further remediation appears required.

WSP and Marathon believe these remedial actions are protective of human health, the environment, and groundwater. As such, Marathon respectfully requests NFA for Incident Number nAPP2129255688.

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

Sincerely,

WSP USA Inc.

A handwritten signature in black ink, appearing to read 'Joseph S. Hernandez'.

Joseph S. Hernandez
Associate Consultant, Geologist

A handwritten signature in black ink, appearing to read 'Daniel R. Moir'.

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

cc: Melodie Sanjari, Marathon

Attachments:

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

FIGURES

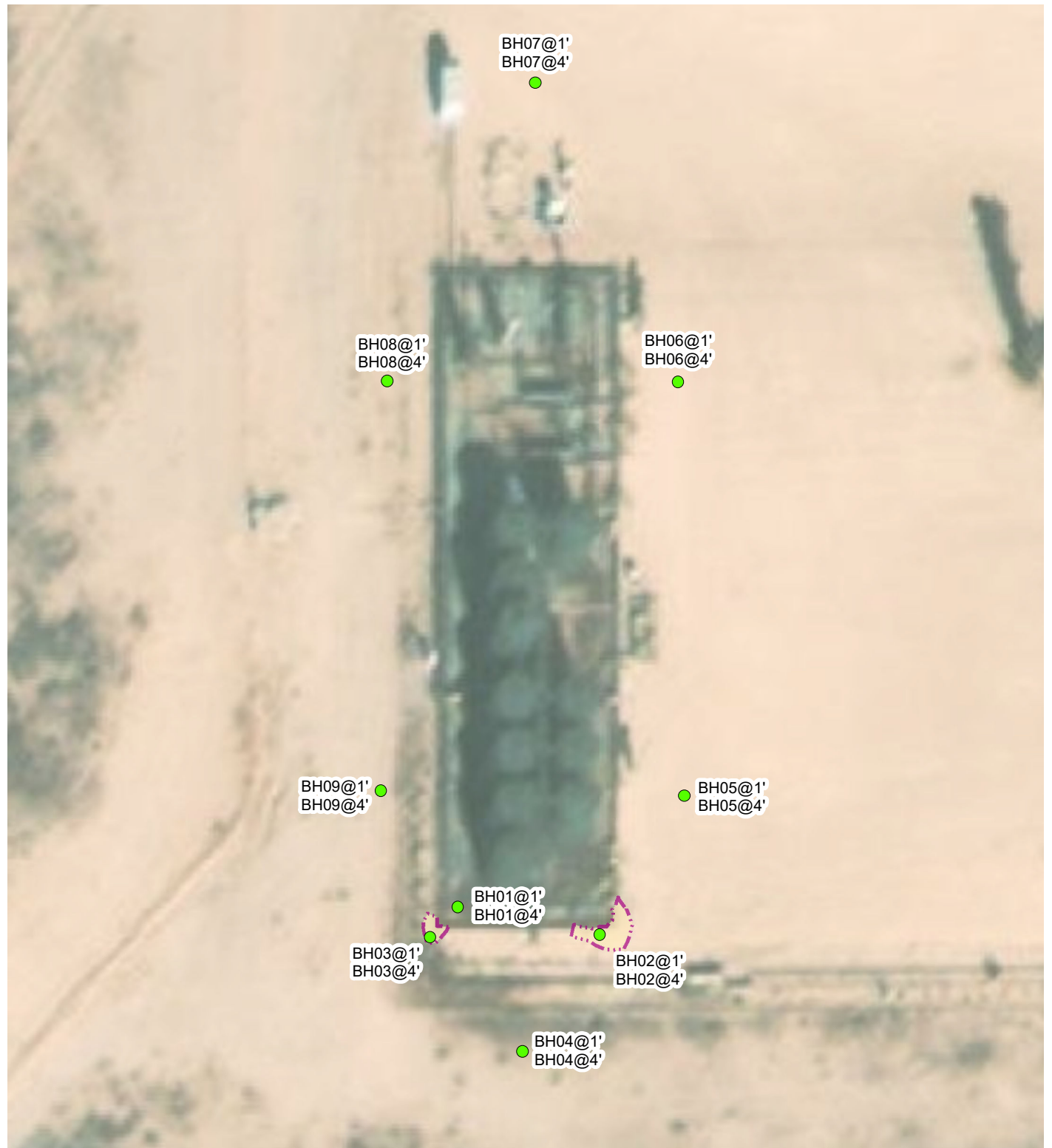
**LEGEND**

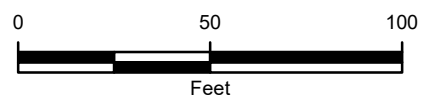
IMAGE COURTESY OF ESRI



DELINEATION SOIL SAMPLE IN COMPLIANCE
WITH APPLICABLE CLOSURE CRITERIA



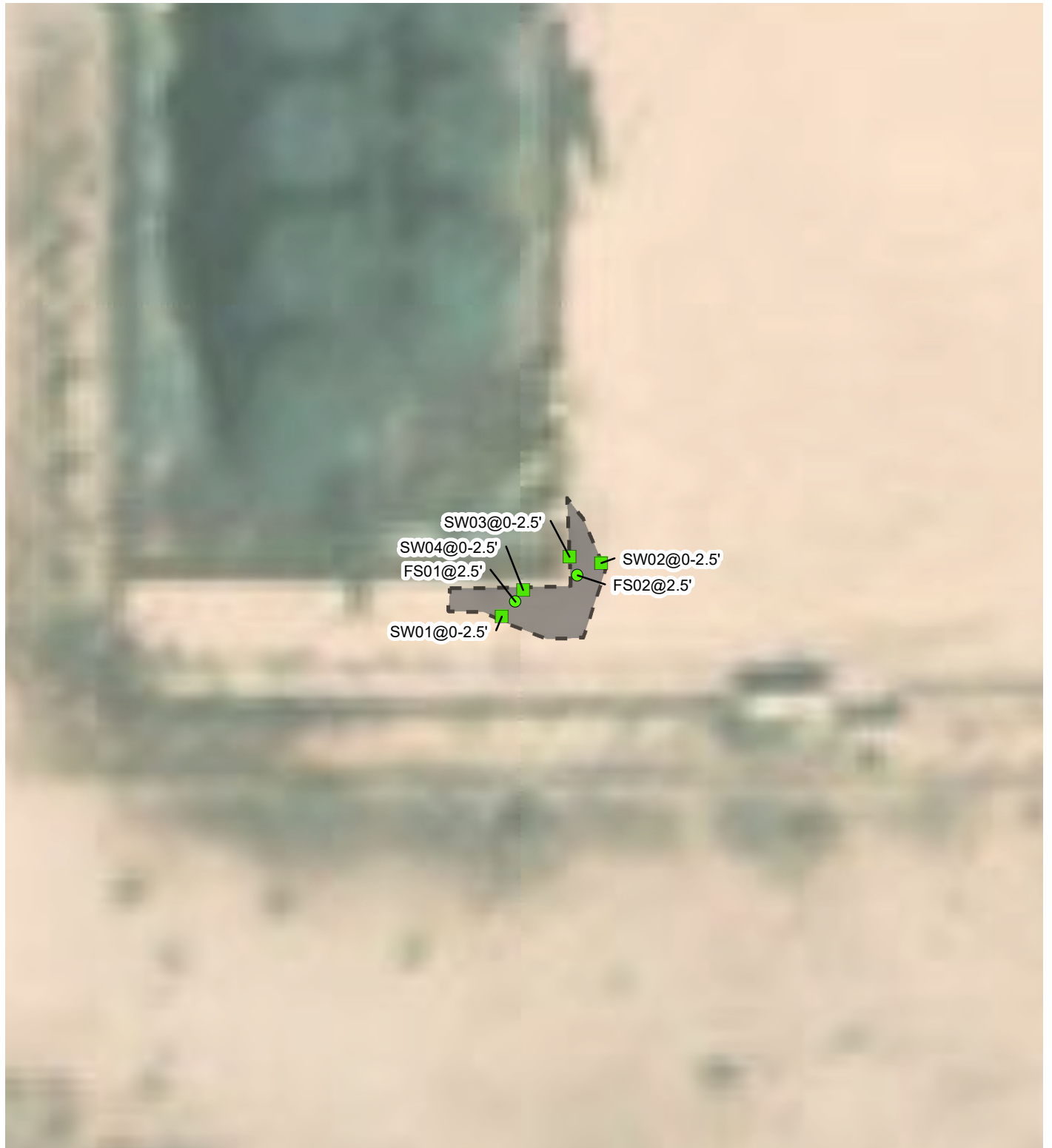
RELEASE EXTENT



NOTE: INCIDENT NUMBER nAPP2129255688
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

FIGURE 2
DELINEATION SOIL SAMPLE LOCATIONS
STERLING STATE 23 27 TB #004H
UNIT O SEC 20 T23S R27E
EDDY COUNTY, NEW MEXICO
MARATHON OIL PERMIAN, LLC

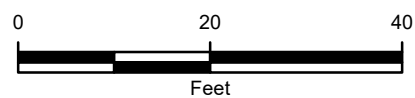


**LEGEND**

- FLOOR SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- SIDEWALL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA

EXCAVATION EXTENT

IMAGE COURTESY OF ESRI



NOTE: INCIDENT NUMBER nAPP2129255688
 SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

FIGURE 3
 EXCAVATION SOIL SAMPLE LOCATIONS
 STERLING STATE 23 27 TB #004H
 UNIT O SEC 20 T23S R27E
 EDDY COUNTY, NEW MEXICO
 MARATHON OIL PERMIAN, LLC

wsp

P:\Marathon Oil\GIS\1403152.008_STERLING STATE 23 27 TB #004H\MXD\1403152.008_FIG03_EXCAVATION_2021.mxd

TABLES

Table 1

Soil Analytical Results
Sterling State 23 27 20 TB #004H
Incident Number nAPP2129255688
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Delineation Soil Samples										
BH01	11/02/2021	1	<0.00198	<0.00397	<49.8	<49.8	<49.8	<49.8	<49.8	13,400
BH01	11/02/2021	4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	52.3
BH02	11/02/2021	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	1,310
BH02	11/02/2021	4	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	382
BH03	11/02/2021	1	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	297
BH03	11/02/2021	4	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	37.3
BH04	11/02/2021	1	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	30.0
BH04	11/02/2021	4	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	36.1
BH05	11/02/2021	1	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	305
BH05	11/02/2021	4	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	29.4
BH06	11/02/2021	1	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	262
BH06	11/02/2021	4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	15.0
BH07	11/02/2021	1	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	84.5
BH07	11/02/2021	4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	22.7

Table 1

Soil Analytical Results
Sterling State 23 27 20 TB #004H
Incident Number nAPP2129255688
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
BH08	11/02/2021	1	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	22.8
BH08	11/02/2021	4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	17.7
BH09	11/02/2021	1	<0.00200	<0.00400	<49.8	<49.8	<49.8	<49.8	<49.8	20.3
BH09	11/02/2021	4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	17.3
Excavation Soil Samples										
FS01	12/14/2021	2.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	437
FS02	12/14/2021	2.5	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	310
SW01	12/14/2021	0 - 2.5	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	217
SW02	12/14/2021	0 - 2.5	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	202
SW03	12/14/2021	0 - 2.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	9,940
SW04	12/14/2021	0 - 2.5	<0.00200	<0.00401	<49.8	<49.8	<49.8	<49.8	<49.8	10,100

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 - motor oil range organics

NMOCD - New Mexico Oil Conservation Division

NMAC - New Mexico Administrative Code

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

NE - Not Established

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

Greyed data represents samples that were excavated

ATTACHMENT 1: REFERENCED WELL RECORD



New Mexico Office of the State Engineer

Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
C	02453	4	4	2	29	23S	27E	574876	3571372*

x

Driller License: 763 **Driller Company:** C & R DRILLING

Driller Name: FELKINS, MICHAEL

Drill Start Date: 02/24/1996	Drill Finish Date: 02/24/1996	Plug Date:
Log File Date: 04/02/1996	PCW Rcv Date:	Source: Shallow
Pump Type:	Pipe Discharge Size:	Estimated Yield: 15 GPM
Casing Size: 5.00	Depth Well: 210 feet	Depth Water: 175 feet

x

Water Bearing Stratifications:	Top	Bottom	Description
	185	205	Sandstone/Gravel/Conglomerate

x

Casing Perforations:	Top	Bottom
	180	210

x

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

12/20/21 10:51 AM

POINT OF DIVERSION SUMMARY

ATTACHMENT 2: PHOTOGRAPHIC LOG



PHOTOGRAPHIC LOG

Marathon Oil Permian, LLC.	Sterling State 23 27 20 TB #004H Eddy County, New Mexico	31403152.008
-------------------------------	---	--------------

Photo No.	Date	
1	October 25, 2021	
View of the breached area inside containment.		 A photograph showing a close-up view of a breached area inside a containment structure. The surface is a mottled, brownish-yellow color, possibly concrete or metal, with a dark, irregular hole or opening in the center. The surrounding area is also brownish-yellow, suggesting a spill or leak of a liquid or solid material.

Photo No.	Date	
2	October 25, 2021	
View of the release area outside containment.		 A photograph showing an outdoor industrial site. In the foreground, there is a dirt and gravel area with some scattered debris. In the background, there are large, dark-colored storage tanks and a metal structure with stairs. A yellow container is visible near the tanks. The sky is clear and blue.



PHOTOGRAPHIC LOG

Marathon Oil Permian, LLC.	Sterling State 23 27 20 TB #004H Eddy County, New Mexico	31403152.008
-------------------------------	---	--------------

Photo No.	Date	
3	October 25, 2021	
View of the release area outside containment (BH03 area)		

Photo No.	Date	
4	December 14, 2021	
View of the southeast excavation area following remediation activities (BH02 area).		

ATTACHMENT 3: LITHOLOGIC/SOIL SAMPLING LOGS

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220								Sample ID: BH01		Date: 11/2/2021	
								Site Name: Sterling State 23 27 20 TB #004H			
								Incident Number: nAPP2129255688			
								WSP Job Number: 31403152.008			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: Anna Byers		Method: Hand Auger	
Lat/Long: 32.284143, -104.208915				Field Screening: Chloride, PID				Hole Diameter: 2.5 inches		Total Depth: 4 feet	
Comments: Moisture Content "M" - Moist, "D" - Dry; BDL - Below Detection Limit of Low Range HACH Chloride Test Strips; Chloride values do not include correction factor; Chloride field screening performed with 1:4 dilution of soil to distilled water; PID calibrated with 100.0 ppm Isobutylene Gas and Ambient Air.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks			
						0	CCHE	0-1 ft bgs: dry compact pad surface caliche			
M	12,644	0	No	BH01	1	1	SC	1-3.5 ft bgs: brown CLAYEY SAND (m.), well-graded sand, low plasticity, cohesive, moist, no odor			
M	5,672	0.2	No		2	2					
M	604	0.4	No		3	3					
							SM	3.5-4 ft bgs: light brown to tan poorly-graded SAND (m.) with silt, no plasticity, no cohesiveness, dry, no odor			
D	BDL	0.2	No	BH01	4	4					
Total Depth											

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220								Sample ID: BH02	Date: 11/2/2021
Site Name: Sterling State 23 27 20 TB #004H								Incident Number: nAPP2129255688	
WSP Job Number: 31403152.008								Logged By: Anna Byers	
LITHOLOGIC / SOIL SAMPLING LOG								Method: Hand Auger	
Lat/Long: 32.284113, -104.208749				Field Screening: Chloride, PID				Hole Diameter: 2.5 inches	Total Depth: 4 feet
Comments: Moisture Content "M" - Moist, "D" - Dry; BDL - Below Detection Limit of Low Range HACH Chloride Test Strips; Chloride values do not include correction factor; Chloride field screening performed with 1:4 dilution of soil to distilled water; PID calibrated with 100.0 ppm Isobutylene Gas and Ambient Air.									
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks	
						0	CCHE	0-1 ft bgs: dry compact pad surface caliche	
M	1,336	1.4	No	BH02	1	1	SC	1-3 ft bgs: brown CLAYEY SAND (m.), well-graded sand, low plasticity, cohesive, moist, no odor	
M	1,184	1.0	No		2	2			
M	372	0.3	No		3	3	SM	3-4 ft bgs: light brown to tan poorly-graded SAND (m.) with silt, no plasticity, no cohesiveness, moist, no odor	
M	504	0.4	No	BH02	4	4			
Total Depth									

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220								Sample ID: BH03		Date: 11/2/2021	
								Site Name: Sterling State 23 27 20 TB #004H			
								Incident Number: nAPP2129255688			
								WSP Job Number: 31403152.008			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: Anna Byers		Method: Hand Auger	
Lat/Long: 32.284115, -104.208947				Field Screening: Chloride, PID				Hole Diameter: 2.5 inches		Total Depth: 4 feet	
Comments: Moisture Content "M" - Moist, "D" - Dry; BDL - Below Detection Limit of Low Range HACH Chloride Test Strips; Chloride values do not include correction factor; Chloride field screening performed with 1:4 dilution of soil to distilled water; PID calibrated with 100.0 ppm Isobutylene Gas and Ambient Air.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks			
						0	CCHE	0-1 ft bgs: dry compact pad surface caliche			
M	296	0.3	No	BH03	1	1	SC	1-4 ft bgs: brown* CLAYEY SAND (m.), well-graded sand, low plasticity, cohesive, no odor *color gradually lightens with depth (brown to tan)			
M	140	0.2	No		2	2					
M	BDL	0.2	No		3	3					
D	BDL	0.3	No	BH03	4	4					
Total Depth											

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220						Sample ID: BH04		Date: 11/2/2021	
						Site Name: Sterling State 23 27 20 TB #004H			
						Incident Number: nAPP2129255688			
						WSP Job Number: 31403152.008			
LITHOLOGIC / SOIL SAMPLING LOG						Logged By: Anna Byers		Method: Hand Auger	
Lat/Long: 32.284005, -104.208843			Field Screening: Chloride, PID			Hole Diameter: 2.5 inches		Total Depth: 4 feet	
Comments: Moisture Content "M" - Moist, "D" - Dry; BDL - Below Detection Limit of Low Range HACH Chloride Test Strips; Chloride values do not include correction factor; Chloride field screening performed with 1:4 dilution of soil to distilled water; PID calibrated with 100.0 ppm Isobutylene Gas and Ambient Air.									
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks	
D	BDL	0.1	No	BH04	1	1	SP-SM	0-2 ft bgs: brown SAND (m.) with silt, no plasticity, no cohesiveness, trace roots, dry, no odor	
D	BDL	0.2	No		2	2	SC	2-4 ft bgs: light brown CLAYEY SAND (m.), well-graded sand, low plasticity, cohesive, dry, no odor	
D	BDL	0.1	No		3	3			
D	BDL	0.0	No	BH04	4	4			
Total Depth									

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220								Sample ID: BH05		Date: 11/2/2021	
								Site Name: Sterling State 23 27 20 TB #004H			
								Incident Number: nAPP2129255688			
								WSP Job Number: 31403152.008			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: Anna Byers		Method: Hand Auger	
Lat/Long: 32.284252, -104.208658				Field Screening: Chloride, PID				Hole Diameter: 2.5 inches		Total Depth: 4 feet	
Comments: Moisture Content "M" - Moist, "D" - Dry; BDL - Below Detection Limit of Low Range HACH Chloride Test Strips; Chloride values do not include correction factor; Chloride field screening performed with 1:4 dilution of soil to distilled water; PID calibrated with 100.0 ppm Isobutylene Gas and Ambient Air.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks			
						0	CCHE	0-1 ft bgs: dry compact pad surface caliche			
M	372	0.0	No	BH05	1	1	SC	1-4 ft bgs: brown* CLAYEY SAND (m.), well-graded sand, low plasticity, cohesive, no odor *color gradually lightens with depth (brown to tan)			
M	296	0.1	No		2	2					
D	BDL	0.0	No		3	3					
D	BDL	0.0	No	BH05	4	4					
Total Depth											

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220								Sample ID: BH06		Date: 11/2/2021	
								Site Name: Sterling State 23 27 20 TB #004H			
								Incident Number: nAPP2129255688			
								WSP Job Number: 31403152.008			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: Anna Byers		Method: Hand Auger	
Lat/Long: 32.284653, -104.208664				Field Screening: Chloride, PID				Hole Diameter: 2.5 inches		Total Depth: 4 feet	
Comments: Moisture Content "M" - Moist, "D" - Dry; BDL - Below Detection Limit of Low Range HACH Chloride Test Strips; Chloride values do not include correction factor; Chloride field screening performed with 1:4 dilution of soil to distilled water; PID calibrated with 100.0 ppm Isobutylene Gas and Ambient Air.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks			
						0	CCHE	0-1 ft bgs: dry compact pad surface caliche			
D	260	0.2	No	BH06	1	1	SC	1-4 ft bgs: brown* CLAYEY SAND (m.), well-graded sand, low plasticity, cohesive, trace roots, dry, no odor *color gradually lightens with depth (brown to tan)			
D	BDL	0.0	No		2	2					
D	BDL	0.0	No		3	3					
D	BDL	0.0	No	BH06	4	4					
Total Depth											

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220								Sample ID: BH07		Date: 11/2/2021	
								Site Name: Sterling State 23 27 20 TB #004H			
								Incident Number: nAPP2129255688			
								WSP Job Number: 31403152.008			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: Anna Byers		Method: Hand Auger	
Lat/Long: 32.284942, -104.208827				Field Screening: Chloride, PID				Hole Diameter: 2.5 inches		Total Depth: 4 feet	
Comments: Moisture Content "M" - Moist, "D" - Dry; BDL - Below Detection Limit of Low Range HACH Chloride Test Strips; Chloride values do not include correction factor; Chloride field screening performed with 1:4 dilution of soil to distilled water; PID calibrated with 100.0 ppm Isobutylene Gas and Ambient Air.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks			
						0	CCHE	0-1 ft bgs: dry compact pad surface caliche			
D	BDL	0.1	No	BH07	1	1	SC	1-4 ft bgs: brown* CLAYEY SAND (m.), well-graded sand, low plasticity, cohesive, dry, no odor *color gradually lightens with depth (dark brown to tan)			
D	BDL	0.1	No		2	2					
D	BDL	0.0	No		3	3					
D	BDL	0.2	No	BH07	4	4					
Total Depth											

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220								Sample ID: BH08		Date: 11/2/2021	
								Site Name: Sterling State 23 27 20 TB #004H			
								Incident Number: nAPP2129255688			
								WSP Job Number: 31403152.008			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: Anna Byers		Method: Hand Auger	
Lat/Long: 32.284654, -104.208996				Field Screening: Chloride, PID				Hole Diameter: 2.5 inches		Total Depth: 4 feet	
Comments: Moisture Content "M" - Moist, "D" - Dry; BDL - Below Detection Limit of Low Range HACH Chloride Test Strips; Chloride values do not include correction factor; Chloride field screening performed with 1:4 dilution of soil to distilled water; PID calibrated with 100.0 ppm Isobutylene Gas and Ambient Air.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks			
						0	SP-SM	0-1 ft bgs: brown SAND (m.) with silt, no plasticity, no cohesiveness, trace roots, dry, no odor			
D	BDL	0.0	No	BH08	1	1	SC	1-4 ft bgs: light brown CLAYEY SAND (m.), well-graded sand, low plasticity, cohesive, dry, no odor			
D	BDL	0.0	No		2	2					
D	BDL	0.1	No		3	3					
D	BDL	0.0	No	BH08	4	4					
Total Depth											

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220								Sample ID: BH09		Date: 11/2/2021	
								Site Name: Sterling State 23 27 20 TB #004H			
								Incident Number: nAPP2129255688			
								WSP Job Number: 31403152.008			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: Anna Byers		Method: Hand Auger	
Lat/Long: 32.284257, -104.209003				Field Screening: Chloride, PID				Hole Diameter: 2.5 inches		Total Depth: 4 feet	
Comments: Moisture Content "M" - Moist, "D" - Dry; BDL - Below Detection Limit of Low Range HACH Chloride Test Strips; Chloride values do not include correction factor; Chloride field screening performed with 1:4 dilution of soil to distilled water; PID calibrated with 100.0 ppm Isobutylene Gas and Ambient Air.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks			
D	BDL	0.0	No	BH09	1	1	SP-SM	0-2 ft bgs: brown SAND (m.) with silt, no plasticity, no cohesiveness, trace roots, dry, no odor			
D	BDL	0.0	No		2	2	SC	2-4 ft bgs: light brown CLAYEY SAND (m.), well-graded sand, low plasticity, cohesive, dry, no odor			
D	BDL	0.0	No		3	3					
D	BDL	0.0	No	BH09	4	4					
Total Depth											

ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS



Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-1518-1

Laboratory Sample Delivery Group: Eddy County
Client Project/Site: Sterling 4H 6H CTB

For:

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

Attn: Joseph Hernandez

A handwritten signature in black ink that reads "Jessica Kramer".

Authorized for release by:
11/8/2021 3:12:25 PM

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

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

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

Client: WSP USA Inc.
Project/Site: Sterling 4H 6H CTB

Laboratory Job ID: 890-1518-1
SDG: Eddy County

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: Sterling 4H 6H CTB

Job ID: 890-1518-1
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
S1-	Surrogate recovery exceeds control limits, low 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: Sterling 4H 6H CTB

Job ID: 890-1518-1
SDG: Eddy County

Job ID: 890-1518-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-1518-1

Receipt

The sample was received on 11/2/2021 2:48 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 1.4°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

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-11446 and analytical batch 880-11458 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: WSP USA Inc.
Project/Site: Sterling 4H 6H CTB

Job ID: 890-1518-1
SDG: Eddy County

Client Sample ID: BH01

Lab Sample ID: 890-1518-1

Date Collected: 11/02/21 09:10

Matrix: Solid

Date Received: 11/02/21 14:48

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		11/04/21 11:00	11/04/21 12:08	1
Toluene	<0.00199	U	0.00199	mg/Kg		11/04/21 11:00	11/04/21 12:08	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		11/04/21 11:00	11/04/21 12:08	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		11/04/21 11:00	11/04/21 12:08	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		11/04/21 11:00	11/04/21 12:08	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		11/04/21 11:00	11/04/21 12:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		70 - 130	11/04/21 11:00	11/04/21 12:08	1
1,4-Difluorobenzene (Surr)	98		70 - 130	11/04/21 11:00	11/04/21 12:08	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			11/05/21 13:34	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			11/05/21 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	<49.9	U	49.9	mg/Kg		11/04/21 11:00	11/04/21 12:59	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		11/04/21 11:00	11/04/21 12:59	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		11/04/21 11:00	11/04/21 12:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	73		70 - 130	11/04/21 11:00	11/04/21 12:59	1
o-Terphenyl	69	S1-	70 - 130	11/04/21 11:00	11/04/21 12:59	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	52.3	F1	5.00	mg/Kg			11/07/21 14:43	1

Eurofins Xenco, Carlsbad

Surrogate Summary

Client: WSP USA Inc.
Project/Site: Sterling 4H 6H CTB

Job ID: 890-1518-1
SDG: Eddy County

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)
890-1502-A-53-E MS	Matrix Spike	124	100
890-1502-A-53-F MSD	Matrix Spike Duplicate	109	96
890-1518-1	BH01	115	98
LCS 880-11388/1-A	Lab Control Sample	129	85
LCSD 880-11388/2-A	Lab Control Sample Dup	105	102
MB 880-11388/5-A	Method Blank	96	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)
890-1502-A-121-F MS	Matrix Spike	100	92
890-1502-A-121-G MSD	Matrix Spike Duplicate	92	84
890-1518-1	BH01	73	69 S1-
LCS 880-11376/2-A	Lab Control Sample	108	88
LCSD 880-11376/3-A	Lab Control Sample Dup	103	95
MB 880-11376/1-A	Method Blank	89	94
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: WSP USA Inc.
Project/Site: Sterling 4H 6H CTB

Job ID: 890-1518-1
SDG: Eddy County

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-11388/5-A

Matrix: Solid

Analysis Batch: 11420

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 11388

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		11/04/21 08:30	11/04/21 11:26	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/04/21 08:30	11/04/21 11:26	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/04/21 08:30	11/04/21 11:26	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		11/04/21 08:30	11/04/21 11:26	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/04/21 08:30	11/04/21 11:26	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		11/04/21 08:30	11/04/21 11:26	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130	11/04/21 08:30	11/04/21 11:26	1
1,4-Difluorobenzene (Surr)	99		70 - 130	11/04/21 08:30	11/04/21 11:26	1

Lab Sample ID: LCS 880-11388/1-A

Matrix: Solid

Analysis Batch: 11420

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 11388

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.07875		mg/Kg		79	70 - 130
Toluene	0.100	0.09099		mg/Kg		91	70 - 130
Ethylbenzene	0.100	0.1049		mg/Kg		105	70 - 130
m-Xylene & p-Xylene	0.200	0.1959		mg/Kg		98	70 - 130
o-Xylene	0.100	0.1016		mg/Kg		102	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	129		70 - 130
1,4-Difluorobenzene (Surr)	85		70 - 130

Lab Sample ID: LCSD 880-11388/2-A

Matrix: Solid

Analysis Batch: 11420

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 11388

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.07843		mg/Kg		78	70 - 130	0	35
Toluene	0.100	0.07723		mg/Kg		77	70 - 130	16	35
Ethylbenzene	0.100	0.07689		mg/Kg		77	70 - 130	31	35
m-Xylene & p-Xylene	0.200	0.1621		mg/Kg		81	70 - 130	19	35
o-Xylene	0.100	0.08020		mg/Kg		80	70 - 130	24	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

Lab Sample ID: 890-1502-A-53-E MS

Matrix: Solid

Analysis Batch: 11420

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 11388

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00202	U	0.0994	0.07316		mg/Kg		74	70 - 130
Toluene	<0.00202	U	0.0994	0.07604		mg/Kg		75	70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Sterling 4H 6H CTB

Job ID: 890-1518-1
SDG: Eddy County

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

Lab Sample ID: 890-1502-A-53-E MS

Matrix: Solid

Analysis Batch: 11420

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 11388

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00202	U	0.0994	0.07655		mg/Kg		77	70 - 130
m-Xylene & p-Xylene	<0.00403	U	0.199	0.1626		mg/Kg		82	70 - 130
o-Xylene	<0.00202	U	0.0994	0.08042		mg/Kg		81	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	124		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: 890-1502-A-53-F MSD

Matrix: Solid

Analysis Batch: 11420

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 11388

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.0998	0.08660		mg/Kg		87	70 - 130	17	35
Toluene	<0.00202	U	0.0998	0.08136		mg/Kg		80	70 - 130	7	35
Ethylbenzene	<0.00202	U	0.0998	0.07768		mg/Kg		78	70 - 130	1	35
m-Xylene & p-Xylene	<0.00403	U	0.200	0.1611		mg/Kg		81	70 - 130	1	35
o-Xylene	<0.00202	U	0.0998	0.08199		mg/Kg		82	70 - 130	2	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	109		70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

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

Lab Sample ID: MB 880-11376/1-A

Matrix: Solid

Analysis Batch: 11414

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 11376

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		11/03/21 13:58	11/04/21 09:53	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/03/21 13:58	11/04/21 09:53	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/03/21 13:58	11/04/21 09:53	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130	11/03/21 13:58	11/04/21 09:53	1
o-Terphenyl	94		70 - 130	11/03/21 13:58	11/04/21 09:53	1

Lab Sample ID: LCS 880-11376/2-A

Matrix: Solid

Analysis Batch: 11414

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 11376

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	977.8		mg/Kg		98	70 - 130
Diesel Range Organics (Over C10-C28)	1000	838.1		mg/Kg		84	70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Sterling 4H 6H CTB

Job ID: 890-1518-1
SDG: Eddy County

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

Lab Sample ID: LCS 880-11376/2-A

Matrix: Solid

Analysis Batch: 11414

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 11376

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	108		70 - 130
o-Terphenyl	88		70 - 130

Lab Sample ID: LCSD 880-11376/3-A

Matrix: Solid

Analysis Batch: 11414

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 11376

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	965.5		mg/Kg		97	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	1000	913.0		mg/Kg		91	70 - 130	9	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	103		70 - 130
o-Terphenyl	95		70 - 130

Lab Sample ID: 890-1502-A-121-F MS

Matrix: Solid

Analysis Batch: 11414

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 11376

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	997	1036		mg/Kg		101	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	997	863.0		mg/Kg		84	70 - 130		

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	100		70 - 130
o-Terphenyl	92		70 - 130

Lab Sample ID: 890-1502-A-121-G MSD

Matrix: Solid

Analysis Batch: 11414

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 11376

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	1000	954.6		mg/Kg		93	70 - 130	8	20
Diesel Range Organics (Over C10-C28)	<49.9	U	1000	789.2		mg/Kg		77	70 - 130	9	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	92		70 - 130
o-Terphenyl	84		70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Sterling 4H 6H CTB

Job ID: 890-1518-1
SDG: Eddy County

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-11446/1-A

Matrix: Solid

Analysis Batch: 11458

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			11/07/21 14:01	1

Lab Sample ID: LCS 880-11446/2-A

Matrix: Solid

Analysis Batch: 11458

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 880-11446/3-A

Matrix: Solid

Analysis Batch: 11458

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	245.1		mg/Kg		98	90 - 110	0	20

Lab Sample ID: 890-1518-1 MS

Matrix: Solid

Analysis Batch: 11458

Client Sample ID: BH01

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	52.3	F1	250	331.8	F1	mg/Kg		112	90 - 110

Lab Sample ID: 890-1518-1 MSD

Matrix: Solid

Analysis Batch: 11458

Client Sample ID: BH01

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	52.3	F1	250	332.8	F1	mg/Kg		112	90 - 110	0	20

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: Sterling 4H 6H CTB

Job ID: 890-1518-1
SDG: Eddy County

GC VOA

Prep Batch: 11388

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1518-1	BH01	Total/NA	Solid	5035	
MB 880-11388/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-11388/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-11388/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1502-A-53-E MS	Matrix Spike	Total/NA	Solid	5035	
890-1502-A-53-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 11420

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1518-1	BH01	Total/NA	Solid	8021B	11388
MB 880-11388/5-A	Method Blank	Total/NA	Solid	8021B	11388
LCS 880-11388/1-A	Lab Control Sample	Total/NA	Solid	8021B	11388
LCSD 880-11388/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	11388
890-1502-A-53-E MS	Matrix Spike	Total/NA	Solid	8021B	11388
890-1502-A-53-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	11388

Analysis Batch: 11588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1518-1	BH01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 11376

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1518-1	BH01	Total/NA	Solid	8015NM Prep	
MB 880-11376/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-11376/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-11376/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1502-A-121-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-1502-A-121-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 11414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1518-1	BH01	Total/NA	Solid	8015B NM	11376
MB 880-11376/1-A	Method Blank	Total/NA	Solid	8015B NM	11376
LCS 880-11376/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	11376
LCSD 880-11376/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	11376
890-1502-A-121-F MS	Matrix Spike	Total/NA	Solid	8015B NM	11376
890-1502-A-121-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	11376

Analysis Batch: 11598

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1518-1	BH01	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 11446

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1518-1	BH01	Soluble	Solid	DI Leach	
MB 880-11446/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-11446/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-11446/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: Sterling 4H 6H CTB

Job ID: 890-1518-1
SDG: Eddy County

HPLC/IC (Continued)

Leach Batch: 11446 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1518-1 MS	BH01	Soluble	Solid	DI Leach	
890-1518-1 MSD	BH01	Soluble	Solid	DI Leach	

Analysis Batch: 11458

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1518-1	BH01	Soluble	Solid	300.0	11446
MB 880-11446/1-A	Method Blank	Soluble	Solid	300.0	11446
LCS 880-11446/2-A	Lab Control Sample	Soluble	Solid	300.0	11446
LCSD 880-11446/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	11446
890-1518-1 MS	BH01	Soluble	Solid	300.0	11446
890-1518-1 MSD	BH01	Soluble	Solid	300.0	11446

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Sterling 4H 6H CTB

Job ID: 890-1518-1
SDG: Eddy County

Client Sample ID: BH01
Date Collected: 11/02/21 09:10
Date Received: 11/02/21 14:48

Lab Sample ID: 890-1518-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	11388	11/04/21 11:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11420	11/04/21 12:08	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			11588	11/05/21 13:34	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11598	11/05/21 13:50	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	11376	11/04/21 11:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11414	11/04/21 12:59	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	11446	11/04/21 11:14	SC	XEN MID
Soluble	Analysis	300.0		1			11458	11/07/21 14:43	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: Sterling 4H 6H CTB

Job ID: 890-1518-1
SDG: Eddy County

Laboratory: Eurofins Xenco, Midland

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

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

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

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Method Summary

Client: WSP USA Inc.
Project/Site: Sterling 4H 6H CTB

Job ID: 890-1518-1
SDG: Eddy County

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

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: WSP USA Inc.
Project/Site: Sterling 4H 6H CTB

Job ID: 890-1518-1
SDG: Eddy County

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1518-1	BH01	Solid	11/02/21 09:10	11/02/21 14:48	4

1

2

3

4

5

6

7

8

9

10

11

12

13

14



Environment Testing

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Chain of Custody

Work Order No: _____

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Project Manager:	Joseph Hernandez		Bill to: (if different)	Attn WSP: Joseph Hernandez
Company Name:	WSP USA		Company Name:	
Address:	3328 N A Street		Address:	
City, State ZIP:	Midland, TX 79705		City, State ZIP:	
Phone:	(817) 782-2329	Email:	anna.byers@wsp.com	

Work Order Comments	
Program:	UST/PST ☐ PRR ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:	
Reporting:	Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables:	EDD ☐ ADAPT ☐ Other: _____

[illegible][illegible]

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

Model: Signature of this document and fulfillment of samples constitutes a valid purchase order from client company to Eurofins Xeno, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xeno will be liable only for the cost of samples and will 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 Xeno. A minimum charge of \$85.00 will be applied to each project and a charge of \$3 for each sample submitted to Eurofins Xeno, 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	<i>Anna Byers</i>	<i>Joe Galt</i>	11/22/14 48	2		
3				4		
5				6		

Revised/Type: 08/25/2010 Rev. 3/09/2

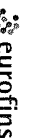
Eurofins Xenco, Carlsbad

4000 McGraw-Hill Ct

Carlsbad NM 88220

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

Chain of Custody Record



Environment Testing

[illegible]

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1518-1

SDG Number: Eddy County

Login Number: 1518

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: 890-1518-1

SDG Number: Eddy County

Login Number: 1518

List Source: Eurofins Xenco, Midland

List Number: 2

List Creation: 11/04/21 10:33 AM

Creator: Kramer, Jessica

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.5/3.6
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	



Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-1519-1

Laboratory Sample Delivery Group: Eddy County

Client Project/Site: Sterling 4H 6HCTB - 31403152.008

For:

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

Attn: Joseph Hernandez

A handwritten signature in black ink that reads "Jessica Kramer".

Authorized for release by:
11/11/2021 12:22:41 PM

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

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

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

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Laboratory Job ID: 890-1519-1
SDG: Eddy County

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

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
*1	LCS/LCSD RPD exceeds control limits.
F1	MS and/or MSD recovery exceeds control limits.
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Case Narrative

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

Job ID: 890-1519-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

**Job Narrative
890-1519-1****Receipt**

The samples were received on 11/2/2021 2:53 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.4°C

GC VOA

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

GC Semi VOA

Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-11464 and analytical batch 880-11507 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-11464 and analytical batch 880-11507 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 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-11589 and analytical batch 880-11624 recovered outside control limits for the following analytes: Diesel Range Organics (Over C10-C28)

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

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-11463 and analytical batch 880-11706 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

Client Sample ID: BH01

Lab Sample ID: 890-1519-1

Date Collected: 11/02/21 08:55

Matrix: Solid

Date Received: 11/02/21 14:53

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		11/05/21 16:41	11/06/21 11:14	1
Toluene	<0.00198	U	0.00198	mg/Kg		11/05/21 16:41	11/06/21 11:14	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		11/05/21 16:41	11/06/21 11:14	1
m-Xylene & p-Xylene	<0.00397	U	0.00397	mg/Kg		11/05/21 16:41	11/06/21 11:14	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		11/05/21 16:41	11/06/21 11:14	1
Xylenes, Total	<0.00397	U	0.00397	mg/Kg		11/05/21 16:41	11/06/21 11:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130	11/05/21 16:41	11/06/21 11:14	1
1,4-Difluorobenzene (Surr)	101		70 - 130	11/05/21 16:41	11/06/21 11:14	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397	mg/Kg			11/08/21 17:11	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			11/09/21 16:19	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 *1	49.8	mg/Kg		11/04/21 13:07	11/05/21 15:17	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		11/04/21 13:07	11/05/21 15:17	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		11/04/21 13:07	11/05/21 15:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130	11/04/21 13:07	11/05/21 15:17	1
o-Terphenyl	107		70 - 130	11/04/21 13:07	11/05/21 15:17	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13400		100	mg/Kg			11/09/21 09:13	20

Client Sample ID: BH02

Lab Sample ID: 890-1519-2

Date Collected: 11/02/21 09:40

Matrix: Solid

Date Received: 11/02/21 14:53

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		11/05/21 16:41	11/06/21 11:35	1
Toluene	<0.00199	U	0.00199	mg/Kg		11/05/21 16:41	11/06/21 11:35	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		11/05/21 16:41	11/06/21 11:35	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		11/05/21 16:41	11/06/21 11:35	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		11/05/21 16:41	11/06/21 11:35	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		11/05/21 16:41	11/06/21 11:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	124		70 - 130	11/05/21 16:41	11/06/21 11:35	1
1,4-Difluorobenzene (Surr)	100		70 - 130	11/05/21 16:41	11/06/21 11:35	1

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Client Sample Results

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

Client Sample ID: BH02

Lab Sample ID: 890-1519-2

Date Collected: 11/02/21 09:40

Matrix: Solid

Date Received: 11/02/21 14:53

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			11/08/21 17:11	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			11/09/21 16:19	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 *1	50.0	mg/Kg		11/04/21 13:07	11/05/21 15:39	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/04/21 13:07	11/05/21 15:39	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/04/21 13:07	11/05/21 15:39	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	94		70 - 130			11/04/21 13:07	11/05/21 15:39	1
o-Terphenyl	99		70 - 130			11/04/21 13:07	11/05/21 15:39	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1310		4.98	mg/Kg			11/09/21 09:20	1

Client Sample ID: BH02

Lab Sample ID: 890-1519-3

Date Collected: 11/02/21 09:52

Matrix: Solid

Date Received: 11/02/21 14:53

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		11/05/21 16:41	11/06/21 11:55	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/05/21 16:41	11/06/21 11:55	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/05/21 16:41	11/06/21 11:55	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		11/05/21 16:41	11/06/21 11:55	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/05/21 16:41	11/06/21 11:55	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		11/05/21 16:41	11/06/21 11:55	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	118		70 - 130			11/05/21 16:41	11/06/21 11:55	1
1,4-Difluorobenzene (Surr)	99		70 - 130			11/05/21 16:41	11/06/21 11:55	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			11/08/21 17:11	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			11/09/21 16:19	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 *1	49.8	mg/Kg		11/04/21 13:07	11/05/21 16:01	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

Client Sample ID: BH02

Lab Sample ID: 890-1519-3

Date Collected: 11/02/21 09:52

Matrix: Solid

Date Received: 11/02/21 14:53

Sample Depth: 4

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		11/04/21 13:07	11/05/21 16:01	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		11/04/21 13:07	11/05/21 16:01	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130			11/04/21 13:07	11/05/21 16:01	1
o-Terphenyl	101		70 - 130			11/04/21 13:07	11/05/21 16:01	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	382	F1	4.99	mg/Kg			11/09/21 09:28	1

Client Sample ID: BH03

Lab Sample ID: 890-1519-4

Date Collected: 11/02/21 10:30

Matrix: Solid

Date Received: 11/02/21 14:53

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		11/05/21 16:41	11/06/21 12:16	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/05/21 16:41	11/06/21 12:16	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/05/21 16:41	11/06/21 12:16	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		11/05/21 16:41	11/06/21 12:16	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/05/21 16:41	11/06/21 12:16	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		11/05/21 16:41	11/06/21 12:16	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	126		70 - 130			11/05/21 16:41	11/06/21 12:16	1
1,4-Difluorobenzene (Surr)	99		70 - 130			11/05/21 16:41	11/06/21 12:16	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			11/08/21 17:11	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			11/09/21 16:19	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 *1	50.0	mg/Kg		11/04/21 13:07	11/05/21 16:22	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/04/21 13:07	11/05/21 16:22	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/04/21 13:07	11/05/21 16:22	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130			11/04/21 13:07	11/05/21 16:22	1
o-Terphenyl	111		70 - 130			11/04/21 13:07	11/05/21 16:22	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

Client Sample ID: BH03

Lab Sample ID: 890-1519-4

Date Collected: 11/02/21 10:30

Matrix: Solid

Date Received: 11/02/21 14:53

Sample Depth: 1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	297		5.05	mg/Kg			11/09/21 09:50	1

Client Sample ID: BH03

Lab Sample ID: 890-1519-5

Date Collected: 11/02/21 10:40

Matrix: Solid

Date Received: 11/02/21 14:53

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		11/05/21 16:41	11/06/21 12:36	1
Toluene	<0.00202	U	0.00202	mg/Kg		11/05/21 16:41	11/06/21 12:36	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		11/05/21 16:41	11/06/21 12:36	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		11/05/21 16:41	11/06/21 12:36	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		11/05/21 16:41	11/06/21 12:36	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		11/05/21 16:41	11/06/21 12:36	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130			11/05/21 16:41	11/06/21 12:36	1
1,4-Difluorobenzene (Surr)	96		70 - 130			11/05/21 16:41	11/06/21 12:36	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			11/08/21 17:11	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			11/09/21 16:19	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		11/04/21 13:07	11/05/21 16:44	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		11/04/21 13:07	11/05/21 16:44	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		11/04/21 13:07	11/05/21 16:44	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	92		70 - 130			11/04/21 13:07	11/05/21 16:44	1
o-Terphenyl	101		70 - 130			11/04/21 13:07	11/05/21 16:44	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	37.3		5.01	mg/Kg			11/09/21 09:58	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

Client Sample ID: BH04

Lab Sample ID: 890-1519-6

Date Collected: 11/02/21 10:45

Matrix: Solid

Date Received: 11/02/21 14:53

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		11/05/21 16:41	11/06/21 12:57	1
Toluene	<0.00201	U	0.00201	mg/Kg		11/05/21 16:41	11/06/21 12:57	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		11/05/21 16:41	11/06/21 12:57	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		11/05/21 16:41	11/06/21 12:57	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		11/05/21 16:41	11/06/21 12:57	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		11/05/21 16:41	11/06/21 12:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	119		70 - 130	11/05/21 16:41	11/06/21 12:57	1
1,4-Difluorobenzene (Surr)	101		70 - 130	11/05/21 16:41	11/06/21 12:57	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			11/08/21 17:11	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			11/09/21 16:19	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		11/04/21 13:07	11/05/21 17:06	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		11/04/21 13:07	11/05/21 17:06	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		11/04/21 13:07	11/05/21 17:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130	11/04/21 13:07	11/05/21 17:06	1
o-Terphenyl	110		70 - 130	11/04/21 13:07	11/05/21 17:06	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	30.0		4.97	mg/Kg			11/09/21 10:20	1

Client Sample ID: BH04

Lab Sample ID: 890-1519-7

Date Collected: 11/02/21 10:57

Matrix: Solid

Date Received: 11/02/21 14:53

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		11/05/21 16:41	11/06/21 13:17	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/05/21 16:41	11/06/21 13:17	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/05/21 16:41	11/06/21 13:17	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		11/05/21 16:41	11/06/21 13:17	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/05/21 16:41	11/06/21 13:17	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		11/05/21 16:41	11/06/21 13:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	134	S1+	70 - 130	11/05/21 16:41	11/06/21 13:17	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

Client Sample ID: BH04

Lab Sample ID: 890-1519-7

Date Collected: 11/02/21 10:57

Matrix: Solid

Date Received: 11/02/21 14:53

Sample Depth: 4

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	104		70 - 130	11/05/21 16:41	11/06/21 13:17	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			11/08/21 17:11	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			11/09/21 16:19	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		11/04/21 13:07	11/05/21 17:49	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		11/04/21 13:07	11/05/21 17:49	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		11/04/21 13:07	11/05/21 17:49	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130			11/04/21 13:07	11/05/21 17:49	1
o-Terphenyl	115		70 - 130			11/04/21 13:07	11/05/21 17:49	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	36.1		4.95	mg/Kg			11/09/21 10:27	1

Client Sample ID: BH05

Lab Sample ID: 890-1519-8

Date Collected: 11/02/21 11:13

Matrix: Solid

Date Received: 11/02/21 14:53

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		11/05/21 16:41	11/06/21 13:38	1
Toluene	<0.00201	U	0.00201	mg/Kg		11/05/21 16:41	11/06/21 13:38	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		11/05/21 16:41	11/06/21 13:38	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		11/05/21 16:41	11/06/21 13:38	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		11/05/21 16:41	11/06/21 13:38	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		11/05/21 16:41	11/06/21 13:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	126		70 - 130	11/05/21 16:41	11/06/21 13:38	1
1,4-Difluorobenzene (Surr)	97		70 - 130	11/05/21 16:41	11/06/21 13:38	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			11/08/21 17:11	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			11/09/21 16:19	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

Client Sample ID: BH05

Lab Sample ID: 890-1519-8

Date Collected: 11/02/21 11:13

Matrix: Solid

Date Received: 11/02/21 14:53

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 *1	49.9	mg/Kg		11/04/21 13:07	11/05/21 18:09	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		11/04/21 13:07	11/05/21 18:09	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		11/04/21 13:07	11/05/21 18:09	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130			11/04/21 13:07	11/05/21 18:09	1
o-Terphenyl	110		70 - 130			11/04/21 13:07	11/05/21 18:09	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	305		4.98	mg/Kg			11/09/21 10:34	1

Client Sample ID: BH05

Lab Sample ID: 890-1519-9

Date Collected: 11/02/21 11:23

Matrix: Solid

Date Received: 11/02/21 14:53

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		11/05/21 16:41	11/06/21 13:58	1
Toluene	<0.00202	U	0.00202	mg/Kg		11/05/21 16:41	11/06/21 13:58	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		11/05/21 16:41	11/06/21 13:58	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		11/05/21 16:41	11/06/21 13:58	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		11/05/21 16:41	11/06/21 13:58	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		11/05/21 16:41	11/06/21 13:58	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130			11/05/21 16:41	11/06/21 13:58	1
1,4-Difluorobenzene (Surr)	97		70 - 130			11/05/21 16:41	11/06/21 13:58	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			11/08/21 17:11	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			11/09/21 16:19	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		11/04/21 13:07	11/05/21 18:31	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		11/04/21 13:07	11/05/21 18:31	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		11/04/21 13:07	11/05/21 18:31	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	112		70 - 130			11/04/21 13:07	11/05/21 18:31	1
o-Terphenyl	129		70 - 130			11/04/21 13:07	11/05/21 18:31	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

Client Sample ID: BH05

Lab Sample ID: 890-1519-9

Date Collected: 11/02/21 11:23

Matrix: Solid

Date Received: 11/02/21 14:53

Sample Depth: 4

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	29.4		4.95	mg/Kg			11/09/21 10:42	1

Client Sample ID: BH06

Lab Sample ID: 890-1519-10

Date Collected: 11/02/21 11:40

Matrix: Solid

Date Received: 11/02/21 14:53

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		11/05/21 16:41	11/06/21 14:18	1
Toluene	<0.00201	U	0.00201	mg/Kg		11/05/21 16:41	11/06/21 14:18	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		11/05/21 16:41	11/06/21 14:18	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		11/05/21 16:41	11/06/21 14:18	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		11/05/21 16:41	11/06/21 14:18	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		11/05/21 16:41	11/06/21 14:18	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130			11/05/21 16:41	11/06/21 14:18	1
1,4-Difluorobenzene (Surr)	98		70 - 130			11/05/21 16:41	11/06/21 14:18	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			11/08/21 17:11	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			11/09/21 16:19	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		11/04/21 13:07	11/05/21 18:52	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		11/04/21 13:07	11/05/21 18:52	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		11/04/21 13:07	11/05/21 18:52	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	99		70 - 130			11/04/21 13:07	11/05/21 18:52	1
o-Terphenyl	112		70 - 130			11/04/21 13:07	11/05/21 18:52	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	262		5.04	mg/Kg			11/09/21 10:49	1

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Client Sample Results

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

Client Sample ID: BH06

Lab Sample ID: 890-1519-11

Date Collected: 11/02/21 11:47

Matrix: Solid

Date Received: 11/02/21 14:53

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		11/05/21 16:41	11/06/21 15:41	1
Toluene	<0.00199	U	0.00199	mg/Kg		11/05/21 16:41	11/06/21 15:41	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		11/05/21 16:41	11/06/21 15:41	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		11/05/21 16:41	11/06/21 15:41	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		11/05/21 16:41	11/06/21 15:41	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		11/05/21 16:41	11/06/21 15:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	121		70 - 130	11/05/21 16:41	11/06/21 15:41	1
1,4-Difluorobenzene (Surr)	101		70 - 130	11/05/21 16:41	11/06/21 15:41	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			11/08/21 17:11	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			11/09/21 16:19	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 *1	50.0	mg/Kg		11/04/21 13:07	11/05/21 19:14	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/04/21 13:07	11/05/21 19:14	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/04/21 13:07	11/05/21 19:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130	11/04/21 13:07	11/05/21 19:14	1
o-Terphenyl	103		70 - 130	11/04/21 13:07	11/05/21 19:14	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15.0		5.01	mg/Kg			11/09/21 10:57	1

Client Sample ID: BH07

Lab Sample ID: 890-1519-12

Date Collected: 11/02/21 12:10

Matrix: Solid

Date Received: 11/02/21 14:53

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		11/05/21 16:41	11/06/21 16:02	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/05/21 16:41	11/06/21 16:02	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/05/21 16:41	11/06/21 16:02	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		11/05/21 16:41	11/06/21 16:02	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/05/21 16:41	11/06/21 16:02	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		11/05/21 16:41	11/06/21 16:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		70 - 130	11/05/21 16:41	11/06/21 16:02	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

Client Sample ID: BH07

Lab Sample ID: 890-1519-12

Date Collected: 11/02/21 12:10

Matrix: Solid

Date Received: 11/02/21 14:53

Sample Depth: 1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	97		70 - 130	11/05/21 16:41	11/06/21 16:02	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			11/08/21 17:11	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			11/09/21 16:19	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 *1	49.8	mg/Kg		11/04/21 13:07	11/05/21 19:35	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		11/04/21 13:07	11/05/21 19:35	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		11/04/21 13:07	11/05/21 19:35	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130			11/04/21 13:07	11/05/21 19:35	1
o-Terphenyl	106		70 - 130			11/04/21 13:07	11/05/21 19:35	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	84.5		4.99	mg/Kg			11/09/21 11:04	1

Client Sample ID: BH07

Lab Sample ID: 890-1519-13

Date Collected: 11/02/21 12:20

Matrix: Solid

Date Received: 11/02/21 14:53

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		11/05/21 16:41	11/06/21 16:22	1
Toluene	<0.00199	U	0.00199	mg/Kg		11/05/21 16:41	11/06/21 16:22	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		11/05/21 16:41	11/06/21 16:22	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		11/05/21 16:41	11/06/21 16:22	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		11/05/21 16:41	11/06/21 16:22	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		11/05/21 16:41	11/06/21 16:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130	11/05/21 16:41	11/06/21 16:22	1
1,4-Difluorobenzene (Surr)	97		70 - 130	11/05/21 16:41	11/06/21 16:22	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			11/08/21 17:11	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			11/09/21 16:19	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

Client Sample ID: BH07

Lab Sample ID: 890-1519-13

Date Collected: 11/02/21 12:20

Matrix: Solid

Date Received: 11/02/21 14:53

Sample Depth: 4

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9	mg/Kg		11/04/21 13:07	11/05/21 19:56	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		11/04/21 13:07	11/05/21 19:56	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		11/04/21 13:07	11/05/21 19:56	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130			11/04/21 13:07	11/05/21 19:56	1
o-Terphenyl	110		70 - 130			11/04/21 13:07	11/05/21 19:56	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22.7		4.98	mg/Kg			11/10/21 11:50	1

Client Sample ID: BH08

Lab Sample ID: 890-1519-14

Date Collected: 11/02/21 12:32

Matrix: Solid

Date Received: 11/02/21 14:53

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		11/05/21 16:41	11/06/21 16:43	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/05/21 16:41	11/06/21 16:43	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/05/21 16:41	11/06/21 16:43	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		11/05/21 16:41	11/06/21 16:43	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/05/21 16:41	11/06/21 16:43	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		11/05/21 16:41	11/06/21 16:43	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	122		70 - 130			11/05/21 16:41	11/06/21 16:43	1
1,4-Difluorobenzene (Surr)	106		70 - 130			11/05/21 16:41	11/06/21 16:43	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			11/08/21 17:11	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			11/09/21 16:19	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		11/04/21 13:07	11/05/21 20:17	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		11/04/21 13:07	11/05/21 20:17	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		11/04/21 13:07	11/05/21 20:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	92		70 - 130			11/04/21 13:07	11/05/21 20:17	1
o-Terphenyl	101		70 - 130			11/04/21 13:07	11/05/21 20:17	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

Client Sample ID: BH08

Lab Sample ID: 890-1519-14

Date Collected: 11/02/21 12:32

Matrix: Solid

Date Received: 11/02/21 14:53

Sample Depth: 1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22.8		4.95	mg/Kg			11/10/21 11:58	1

Client Sample ID: BH08

Lab Sample ID: 890-1519-15

Date Collected: 11/02/21 12:43

Matrix: Solid

Date Received: 11/02/21 14:53

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		11/05/21 16:41	11/06/21 17:03	1
Toluene	<0.00199	U	0.00199	mg/Kg		11/05/21 16:41	11/06/21 17:03	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		11/05/21 16:41	11/06/21 17:03	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		11/05/21 16:41	11/06/21 17:03	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		11/05/21 16:41	11/06/21 17:03	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		11/05/21 16:41	11/06/21 17:03	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130			11/05/21 16:41	11/06/21 17:03	1
1,4-Difluorobenzene (Surr)	100		70 - 130			11/05/21 16:41	11/06/21 17:03	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			11/08/21 17:11	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			11/09/21 16:19	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		11/04/21 13:07	11/05/21 20:38	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		11/04/21 13:07	11/05/21 20:38	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		11/04/21 13:07	11/05/21 20:38	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130			11/04/21 13:07	11/05/21 20:38	1
o-Terphenyl	107		70 - 130			11/04/21 13:07	11/05/21 20:38	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	17.7		5.04	mg/Kg			11/10/21 12:05	1

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Client Sample Results

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

Client Sample ID: BH09

Lab Sample ID: 890-1519-16

Date Collected: 11/02/21 12:53

Matrix: Solid

Date Received: 11/02/21 14:53

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		11/05/21 16:41	11/06/21 17:24	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/05/21 16:41	11/06/21 17:24	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/05/21 16:41	11/06/21 17:24	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		11/05/21 16:41	11/06/21 17:24	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/05/21 16:41	11/06/21 17:24	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		11/05/21 16:41	11/06/21 17:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130	11/05/21 16:41	11/06/21 17:24	1
1,4-Difluorobenzene (Surr)	104		70 - 130	11/05/21 16:41	11/06/21 17:24	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			11/08/21 17:11	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			11/09/21 16:19	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 *1	49.8	mg/Kg		11/04/21 13:07	11/05/21 20:59	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		11/04/21 13:07	11/05/21 20:59	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		11/04/21 13:07	11/05/21 20:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130	11/04/21 13:07	11/05/21 20:59	1
o-Terphenyl	112		70 - 130	11/04/21 13:07	11/05/21 20:59	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	20.3		5.01	mg/Kg			11/10/21 12:13	1

Client Sample ID: BH09

Lab Sample ID: 890-1519-17

Date Collected: 11/02/21 13:03

Matrix: Solid

Date Received: 11/02/21 14:53

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		11/05/21 16:41	11/06/21 17:44	1
Toluene	<0.00199	U	0.00199	mg/Kg		11/05/21 16:41	11/06/21 17:44	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		11/05/21 16:41	11/06/21 17:44	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		11/05/21 16:41	11/06/21 17:44	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		11/05/21 16:41	11/06/21 17:44	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		11/05/21 16:41	11/06/21 17:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130	11/05/21 16:41	11/06/21 17:44	1

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Client Sample Results

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

Client Sample ID: BH09

Lab Sample ID: 890-1519-17

Date Collected: 11/02/21 13:03

Matrix: Solid

Date Received: 11/02/21 14:53

Sample Depth: 4

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	101		70 - 130	11/05/21 16:41	11/06/21 17:44	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			11/08/21 17:11	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			11/09/21 16:19	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		11/05/21 13:34	11/07/21 00:06	1
Diesel Range Organics (Over C10-C28)	<50.0	U *1	50.0	mg/Kg		11/05/21 13:34	11/07/21 00:06	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/05/21 13:34	11/07/21 00:06	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	99		70 - 130			11/05/21 13:34	11/07/21 00:06	1
o-Terphenyl	115		70 - 130			11/05/21 13:34	11/07/21 00:06	

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	17.3		4.99	mg/Kg			11/10/21 12:20	1

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Surrogate Summary

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BFB1 (70-130)	DFBZ1 (70-130)
890-1519-1	BH01	114	101
890-1519-1 MS	BH01	110	101
890-1519-1 MSD	BH01	113	96
890-1519-2	BH02	124	100
890-1519-3	BH02	118	99
890-1519-4	BH03	126	99
890-1519-5	BH03	113	96
890-1519-6	BH04	119	101
890-1519-7	BH04	134 S1+	104
890-1519-8	BH05	126	97
890-1519-9	BH05	107	97
890-1519-10	BH06	112	98
890-1519-11	BH06	121	101
890-1519-12	BH07	116	97
890-1519-13	BH07	111	97
890-1519-14	BH08	122	106
890-1519-15	BH08	113	100
890-1519-16	BH09	111	104
890-1519-17	BH09	112	101
LCS 880-11477/1-A	Lab Control Sample	105	102
LCSD 880-11477/2-A	Lab Control Sample Dup	106	97
MB 880-11476/5-A	Method Blank	128	97
MB 880-11477/5-A	Method Blank	112	96
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-130)	OTPH1 (70-130)
820-2486-A-1-C MS	Matrix Spike	102	104
820-2486-A-1-D MSD	Matrix Spike Duplicate	98	99
890-1519-1	BH01	97	107
890-1519-2	BH02	94	99
890-1519-3	BH02	93	101
890-1519-4	BH03	100	111
890-1519-5	BH03	92	101
890-1519-6	BH04	100	110
890-1519-7	BH04	100	115
890-1519-8	BH05	96	110
890-1519-9	BH05	112	129
890-1519-10	BH06	99	112
890-1519-11	BH06	93	103
890-1519-12	BH07	93	106
890-1519-13	BH07	97	110
890-1519-14	BH08	92	101

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Surrogate Summary

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-1519-15	BH08	97	107
890-1519-16	BH09	97	112
890-1519-17	BH09	99	115
890-1520-A-1-G MS	Matrix Spike	72	62 S1-
890-1520-A-1-H MSD	Matrix Spike Duplicate	66 S1-	60 S1-
LCS 880-11464/2-A	Lab Control Sample	81	86
LCS 880-11589/2-A	Lab Control Sample	80	83
LCSD 880-11451/3-A	Lab Control Sample Dup	83	89
LCSD 880-11464/3-A	Lab Control Sample Dup	87	100
LCSD 880-11589/3-A	Lab Control Sample Dup	74	76
MB 880-11451/1-A	Method Blank	101	118
MB 880-11464/1-A	Method Blank	93	103
MB 880-11589/1-A	Method Blank	108	130
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-11476/5-A

Matrix: Solid

Analysis Batch: 11515

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 11476

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		11/05/21 09:00	11/05/21 23:59	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/05/21 09:00	11/05/21 23:59	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/05/21 09:00	11/05/21 23:59	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		11/05/21 09:00	11/05/21 23:59	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/05/21 09:00	11/05/21 23:59	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		11/05/21 09:00	11/05/21 23:59	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	128		70 - 130	11/05/21 09:00	11/05/21 23:59	1
1,4-Difluorobenzene (Surr)	97		70 - 130	11/05/21 09:00	11/05/21 23:59	1

Lab Sample ID: MB 880-11477/5-A

Matrix: Solid

Analysis Batch: 11515

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 11477

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		11/05/21 16:41	11/06/21 10:53	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/05/21 16:41	11/06/21 10:53	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/05/21 16:41	11/06/21 10:53	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		11/05/21 16:41	11/06/21 10:53	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/05/21 16:41	11/06/21 10:53	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		11/05/21 16:41	11/06/21 10:53	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130	11/05/21 16:41	11/06/21 10:53	1
1,4-Difluorobenzene (Surr)	96		70 - 130	11/05/21 16:41	11/06/21 10:53	1

Lab Sample ID: LCS 880-11477/1-A

Matrix: Solid

Analysis Batch: 11515

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 11477

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.08670		mg/Kg		87	70 - 130
Toluene	0.100	0.08238		mg/Kg		82	70 - 130
Ethylbenzene	0.100	0.08292		mg/Kg		83	70 - 130
m-Xylene & p-Xylene	0.200	0.1700		mg/Kg		85	70 - 130
o-Xylene	0.100	0.08796		mg/Kg		88	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

Lab Sample ID: LCSD 880-11477/2-A

Matrix: Solid

Analysis Batch: 11515

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 11477

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.08646		mg/Kg		86	70 - 130	0	35

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QC Sample Results

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

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

Lab Sample ID: LCSD 880-11477/2-A

Matrix: Solid

Analysis Batch: 11515

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 11477

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene	0.100	0.08498		mg/Kg		85	70 - 130	3	35
Ethylbenzene	0.100	0.08572		mg/Kg		86	70 - 130	3	35
m-Xylene & p-Xylene	0.200	0.1770		mg/Kg		89	70 - 130	4	35
o-Xylene	0.100	0.08966		mg/Kg		90	70 - 130	2	35

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

Lab Sample ID: 890-1519-1 MS

Matrix: Solid

Analysis Batch: 11515

Client Sample ID: BH01

Prep Type: Total/NA

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	110		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

Lab Sample ID: 890-1519-1 MSD

Matrix: Solid

Analysis Batch: 11515

Client Sample ID: BH01

Prep Type: Total/NA

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	113		70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

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

Lab Sample ID: MB 880-11451/1-A

Matrix: Solid

Analysis Batch: 11507

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 11451

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		11/04/21 11:27	11/05/21 21:41	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/04/21 11:27	11/05/21 21:41	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/04/21 11:27	11/05/21 21:41	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	101		70 - 130	11/04/21 11:27	11/05/21 21:41	1
o-Terphenyl	118		70 - 130	11/04/21 11:27	11/05/21 21:41	1

Lab Sample ID: LCSD 880-11451/3-A

Matrix: Solid

Analysis Batch: 11507

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 11451

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	723.4		mg/Kg		72	70 - 130	15	20

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

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

Lab Sample ID: LCSD 880-11451/3-A

Matrix: Solid

Analysis Batch: 11507

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 11451

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics (Over C10-C28)	1000	893.5		mg/Kg		89	70 - 130	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	83		70 - 130
o-Terphenyl	89		70 - 130

Lab Sample ID: MB 880-11464/1-A

Matrix: Solid

Analysis Batch: 11507

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 11464

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		11/04/21 13:07	11/05/21 11:16	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/04/21 13:07	11/05/21 11:16	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/04/21 13:07	11/05/21 11:16	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130	11/04/21 13:07	11/05/21 11:16	1
o-Terphenyl	103		70 - 130	11/04/21 13:07	11/05/21 11:16	1

Lab Sample ID: LCS 880-11464/2-A

Matrix: Solid

Analysis Batch: 11507

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 11464

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1074		mg/Kg		107	70 - 130
Diesel Range Organics (Over C10-C28)	1000	873.4		mg/Kg		87	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	81		70 - 130
o-Terphenyl	86		70 - 130

Lab Sample ID: LCSD 880-11464/3-A

Matrix: Solid

Analysis Batch: 11507

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 11464

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	854.1	*1	mg/Kg		85	70 - 130	23	20
Diesel Range Organics (Over C10-C28)	1000	935.5		mg/Kg		94	70 - 130	7	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	87		70 - 130
o-Terphenyl	100		70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

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

Lab Sample ID: 890-1520-A-1-G MS

Matrix: Solid

Analysis Batch: 11507

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 11464

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	997	973.9		mg/Kg		98	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U F1	997	718.2		mg/Kg		72	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
1-Chlorooctane	72		70 - 130						
o-Terphenyl	62	S1-	70 - 130						

Lab Sample ID: 890-1520-A-1-H MSD

Matrix: Solid

Analysis Batch: 11507

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 11464

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	1000	924.7		mg/Kg		92	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1	1000	692.8	F1	mg/Kg		69	70 - 130	4	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	66	S1-	70 - 130								
o-Terphenyl	60	S1-	70 - 130								

Lab Sample ID: MB 880-11589/1-A

Matrix: Solid

Analysis Batch: 11624

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 11589

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		11/05/21 13:34	11/06/21 21:43	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/05/21 13:34	11/06/21 21:43	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/05/21 13:34	11/06/21 21:43	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	108		70 - 130			11/05/21 13:34	11/06/21 21:43	1
o-Terphenyl	130		70 - 130			11/05/21 13:34	11/06/21 21:43	1

Lab Sample ID: LCS 880-11589/2-A

Matrix: Solid

Analysis Batch: 11624

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 11589

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	933.7		mg/Kg		93	70 - 130
Diesel Range Organics (Over C10-C28)	1000	889.8		mg/Kg		89	70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

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

Lab Sample ID: LCS 880-11589/2-A

Matrix: Solid

Analysis Batch: 11624

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 11589

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	80		70 - 130
o-Terphenyl	83		70 - 130

Lab Sample ID: LCSD 880-11589/3-A

Matrix: Solid

Analysis Batch: 11624

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 11589

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	877.0		mg/Kg		88	70 - 130	6	20
Diesel Range Organics (Over C10-C28)	1000	709.3	*1	mg/Kg		71	70 - 130	23	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	74		70 - 130
o-Terphenyl	76		70 - 130

Lab Sample ID: 820-2486-A-1-C MS

Matrix: Solid

Analysis Batch: 11624

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 11589

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	997	1216		mg/Kg		122	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U *1	997	1047		mg/Kg		104	70 - 130		

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	102		70 - 130
o-Terphenyl	104		70 - 130

Lab Sample ID: 820-2486-A-1-D MSD

Matrix: Solid

Analysis Batch: 11624

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 11589

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	1000	1283		mg/Kg		128	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<49.9	U *1	1000	1014		mg/Kg		100	70 - 130	3	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	98		70 - 130
o-Terphenyl	99		70 - 130

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QC Sample Results

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-11463/1-A

Matrix: Solid

Analysis Batch: 11706

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			11/09/21 02:23	1

Lab Sample ID: LCS 880-11463/2-A

Matrix: Solid

Analysis Batch: 11706

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	272.4		mg/Kg		109	90 - 110

Lab Sample ID: LCSD 880-11463/3-A

Matrix: Solid

Analysis Batch: 11706

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	272.1		mg/Kg		109	90 - 110	0	20

Lab Sample ID: 890-1519-3 MS

Matrix: Solid

Analysis Batch: 11706

Client Sample ID: BH02

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	382	F1	250	658.7	F1	mg/Kg		111	90 - 110

Lab Sample ID: 890-1519-3 MSD

Matrix: Solid

Analysis Batch: 11706

Client Sample ID: BH02

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	382	F1	250	654.0		mg/Kg		109	90 - 110	1	20

Lab Sample ID: MB 880-11465/1-A

Matrix: Solid

Analysis Batch: 11709

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			11/10/21 08:39	1

Lab Sample ID: LCS 880-11465/2-A

Matrix: Solid

Analysis Batch: 11709

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	251.4		mg/Kg		101	90 - 110

Lab Sample ID: LCSD 880-11465/3-A

Matrix: Solid

Analysis Batch: 11709

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	251.9		mg/Kg		101	90 - 110	0	20

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QC Sample Results

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 880-7343-A-53-B MS

Matrix: Solid

Analysis Batch: 11709

Client Sample ID: Matrix Spike

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	6790		2500	9088		mg/Kg		92	90 - 110

Lab Sample ID: 880-7343-A-53-C MSD

Matrix: Solid

Analysis Batch: 11709

Client Sample ID: Matrix Spike Duplicate

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	6790		2500	9117		mg/Kg		93	90 - 110	0	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

GC VOA

Prep Batch: 11476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-11476/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 11477

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1519-1	BH01	Total/NA	Solid	5035	
890-1519-2	BH02	Total/NA	Solid	5035	
890-1519-3	BH02	Total/NA	Solid	5035	
890-1519-4	BH03	Total/NA	Solid	5035	
890-1519-5	BH03	Total/NA	Solid	5035	
890-1519-6	BH04	Total/NA	Solid	5035	
890-1519-7	BH04	Total/NA	Solid	5035	
890-1519-8	BH05	Total/NA	Solid	5035	
890-1519-9	BH05	Total/NA	Solid	5035	
890-1519-10	BH06	Total/NA	Solid	5035	
890-1519-11	BH06	Total/NA	Solid	5035	
890-1519-12	BH07	Total/NA	Solid	5035	
890-1519-13	BH07	Total/NA	Solid	5035	
890-1519-14	BH08	Total/NA	Solid	5035	
890-1519-15	BH08	Total/NA	Solid	5035	
890-1519-16	BH09	Total/NA	Solid	5035	
890-1519-17	BH09	Total/NA	Solid	5035	
MB 880-11477/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-11477/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-11477/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 11515

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1519-1	BH01	Total/NA	Solid	8021B	11477
890-1519-2	BH02	Total/NA	Solid	8021B	11477
890-1519-3	BH02	Total/NA	Solid	8021B	11477
890-1519-4	BH03	Total/NA	Solid	8021B	11477
890-1519-5	BH03	Total/NA	Solid	8021B	11477
890-1519-6	BH04	Total/NA	Solid	8021B	11477
890-1519-7	BH04	Total/NA	Solid	8021B	11477
890-1519-8	BH05	Total/NA	Solid	8021B	11477
890-1519-9	BH05	Total/NA	Solid	8021B	11477
890-1519-10	BH06	Total/NA	Solid	8021B	11477
890-1519-11	BH06	Total/NA	Solid	8021B	11477
890-1519-12	BH07	Total/NA	Solid	8021B	11477
890-1519-13	BH07	Total/NA	Solid	8021B	11477
890-1519-14	BH08	Total/NA	Solid	8021B	11477
890-1519-15	BH08	Total/NA	Solid	8021B	11477
890-1519-16	BH09	Total/NA	Solid	8021B	11477
890-1519-17	BH09	Total/NA	Solid	8021B	11477
MB 880-11476/5-A	Method Blank	Total/NA	Solid	8021B	11476
MB 880-11477/5-A	Method Blank	Total/NA	Solid	8021B	11477
LCS 880-11477/1-A	Lab Control Sample	Total/NA	Solid	8021B	11477
LCSD 880-11477/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	11477
890-1519-1 MS	BH01	Total/NA	Solid	8021B	
890-1519-1 MSD	BH01	Total/NA	Solid	8021B	

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QC Association Summary

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

GC VOA

Analysis Batch: 11768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1519-1	BH01	Total/NA	Solid	Total BTEX	
890-1519-2	BH02	Total/NA	Solid	Total BTEX	
890-1519-3	BH02	Total/NA	Solid	Total BTEX	
890-1519-4	BH03	Total/NA	Solid	Total BTEX	
890-1519-5	BH03	Total/NA	Solid	Total BTEX	
890-1519-6	BH04	Total/NA	Solid	Total BTEX	
890-1519-7	BH04	Total/NA	Solid	Total BTEX	
890-1519-8	BH05	Total/NA	Solid	Total BTEX	
890-1519-9	BH05	Total/NA	Solid	Total BTEX	
890-1519-10	BH06	Total/NA	Solid	Total BTEX	
890-1519-11	BH06	Total/NA	Solid	Total BTEX	
890-1519-12	BH07	Total/NA	Solid	Total BTEX	
890-1519-13	BH07	Total/NA	Solid	Total BTEX	
890-1519-14	BH08	Total/NA	Solid	Total BTEX	
890-1519-15	BH08	Total/NA	Solid	Total BTEX	
890-1519-16	BH09	Total/NA	Solid	Total BTEX	
890-1519-17	BH09	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 11451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-11451/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCSD 880-11451/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Prep Batch: 11464

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1519-1	BH01	Total/NA	Solid	8015NM Prep	
890-1519-2	BH02	Total/NA	Solid	8015NM Prep	
890-1519-3	BH02	Total/NA	Solid	8015NM Prep	
890-1519-4	BH03	Total/NA	Solid	8015NM Prep	
890-1519-5	BH03	Total/NA	Solid	8015NM Prep	
890-1519-6	BH04	Total/NA	Solid	8015NM Prep	
890-1519-7	BH04	Total/NA	Solid	8015NM Prep	
890-1519-8	BH05	Total/NA	Solid	8015NM Prep	
890-1519-9	BH05	Total/NA	Solid	8015NM Prep	
890-1519-10	BH06	Total/NA	Solid	8015NM Prep	
890-1519-11	BH06	Total/NA	Solid	8015NM Prep	
890-1519-12	BH07	Total/NA	Solid	8015NM Prep	
890-1519-13	BH07	Total/NA	Solid	8015NM Prep	
890-1519-14	BH08	Total/NA	Solid	8015NM Prep	
890-1519-15	BH08	Total/NA	Solid	8015NM Prep	
890-1519-16	BH09	Total/NA	Solid	8015NM Prep	
MB 880-11464/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-11464/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-11464/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1520-A-1-G MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-1520-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

GC Semi VOA

Analysis Batch: 11507

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1519-1	BH01	Total/NA	Solid	8015B NM	11464
890-1519-2	BH02	Total/NA	Solid	8015B NM	11464
890-1519-3	BH02	Total/NA	Solid	8015B NM	11464
890-1519-4	BH03	Total/NA	Solid	8015B NM	11464
890-1519-5	BH03	Total/NA	Solid	8015B NM	11464
890-1519-6	BH04	Total/NA	Solid	8015B NM	11464
890-1519-7	BH04	Total/NA	Solid	8015B NM	11464
890-1519-8	BH05	Total/NA	Solid	8015B NM	11464
890-1519-9	BH05	Total/NA	Solid	8015B NM	11464
890-1519-10	BH06	Total/NA	Solid	8015B NM	11464
890-1519-11	BH06	Total/NA	Solid	8015B NM	11464
890-1519-12	BH07	Total/NA	Solid	8015B NM	11464
890-1519-13	BH07	Total/NA	Solid	8015B NM	11464
890-1519-14	BH08	Total/NA	Solid	8015B NM	11464
890-1519-15	BH08	Total/NA	Solid	8015B NM	11464
890-1519-16	BH09	Total/NA	Solid	8015B NM	11464
MB 880-11451/1-A	Method Blank	Total/NA	Solid	8015B NM	11451
MB 880-11464/1-A	Method Blank	Total/NA	Solid	8015B NM	11464
LCS 880-11464/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	11464
LCSD 880-11451/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	11451
LCSD 880-11464/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	11464
890-1520-A-1-G MS	Matrix Spike	Total/NA	Solid	8015B NM	11464
890-1520-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	11464

Prep Batch: 11589

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1519-17	BH09	Total/NA	Solid	8015NM Prep	
MB 880-11589/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-11589/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-11589/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
820-2486-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
820-2486-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 11624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1519-17	BH09	Total/NA	Solid	8015B NM	11589
MB 880-11589/1-A	Method Blank	Total/NA	Solid	8015B NM	11589
LCS 880-11589/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	11589
LCSD 880-11589/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	11589
820-2486-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	11589
820-2486-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	11589

Analysis Batch: 11856

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1519-1	BH01	Total/NA	Solid	8015 NM	
890-1519-2	BH02	Total/NA	Solid	8015 NM	
890-1519-3	BH02	Total/NA	Solid	8015 NM	
890-1519-4	BH03	Total/NA	Solid	8015 NM	
890-1519-5	BH03	Total/NA	Solid	8015 NM	
890-1519-6	BH04	Total/NA	Solid	8015 NM	
890-1519-7	BH04	Total/NA	Solid	8015 NM	

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

GC Semi VOA (Continued)

Analysis Batch: 11856 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1519-8	BH05	Total/NA	Solid	8015 NM	
890-1519-9	BH05	Total/NA	Solid	8015 NM	
890-1519-10	BH06	Total/NA	Solid	8015 NM	
890-1519-11	BH06	Total/NA	Solid	8015 NM	
890-1519-12	BH07	Total/NA	Solid	8015 NM	
890-1519-13	BH07	Total/NA	Solid	8015 NM	
890-1519-14	BH08	Total/NA	Solid	8015 NM	
890-1519-15	BH08	Total/NA	Solid	8015 NM	
890-1519-16	BH09	Total/NA	Solid	8015 NM	
890-1519-17	BH09	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 11463

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1519-1	BH01	Soluble	Solid	DI Leach	
890-1519-2	BH02	Soluble	Solid	DI Leach	
890-1519-3	BH02	Soluble	Solid	DI Leach	
890-1519-4	BH03	Soluble	Solid	DI Leach	
890-1519-5	BH03	Soluble	Solid	DI Leach	
890-1519-6	BH04	Soluble	Solid	DI Leach	
890-1519-7	BH04	Soluble	Solid	DI Leach	
890-1519-8	BH05	Soluble	Solid	DI Leach	
890-1519-9	BH05	Soluble	Solid	DI Leach	
890-1519-10	BH06	Soluble	Solid	DI Leach	
890-1519-11	BH06	Soluble	Solid	DI Leach	
890-1519-12	BH07	Soluble	Solid	DI Leach	
MB 880-11463/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-11463/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-11463/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1519-3 MS	BH02	Soluble	Solid	DI Leach	
890-1519-3 MSD	BH02	Soluble	Solid	DI Leach	

Leach Batch: 11465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1519-13	BH07	Soluble	Solid	DI Leach	
890-1519-14	BH08	Soluble	Solid	DI Leach	
890-1519-15	BH08	Soluble	Solid	DI Leach	
890-1519-16	BH09	Soluble	Solid	DI Leach	
890-1519-17	BH09	Soluble	Solid	DI Leach	
MB 880-11465/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-11465/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-11465/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-7343-A-53-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-7343-A-53-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 11706

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1519-1	BH01	Soluble	Solid	300.0	11463
890-1519-2	BH02	Soluble	Solid	300.0	11463
890-1519-3	BH02	Soluble	Solid	300.0	11463

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

HPLC/IC (Continued)

Analysis Batch: 11706 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1519-4	BH03	Soluble	Solid	300.0	11463
890-1519-5	BH03	Soluble	Solid	300.0	11463
890-1519-6	BH04	Soluble	Solid	300.0	11463
890-1519-7	BH04	Soluble	Solid	300.0	11463
890-1519-8	BH05	Soluble	Solid	300.0	11463
890-1519-9	BH05	Soluble	Solid	300.0	11463
890-1519-10	BH06	Soluble	Solid	300.0	11463
890-1519-11	BH06	Soluble	Solid	300.0	11463
890-1519-12	BH07	Soluble	Solid	300.0	11463
MB 880-11463/1-A	Method Blank	Soluble	Solid	300.0	11463
LCS 880-11463/2-A	Lab Control Sample	Soluble	Solid	300.0	11463
LCSD 880-11463/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	11463
890-1519-3 MS	BH02	Soluble	Solid	300.0	11463
890-1519-3 MSD	BH02	Soluble	Solid	300.0	11463

Analysis Batch: 11709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1519-13	BH07	Soluble	Solid	300.0	11465
890-1519-14	BH08	Soluble	Solid	300.0	11465
890-1519-15	BH08	Soluble	Solid	300.0	11465
890-1519-16	BH09	Soluble	Solid	300.0	11465
890-1519-17	BH09	Soluble	Solid	300.0	11465
MB 880-11465/1-A	Method Blank	Soluble	Solid	300.0	11465
LCS 880-11465/2-A	Lab Control Sample	Soluble	Solid	300.0	11465
LCSD 880-11465/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	11465
880-7343-A-53-B MS	Matrix Spike	Soluble	Solid	300.0	11465
880-7343-A-53-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	11465

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

Client Sample ID: BH01

Lab Sample ID: 890-1519-1

Date Collected: 11/02/21 08:55

Matrix: Solid

Date Received: 11/02/21 14:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	11477	11/05/21 16:41	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11515	11/06/21 11:14	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			11768	11/08/21 17:11	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11856	11/09/21 16:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	11464	11/04/21 13:07	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11507	11/05/21 15:17	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	11463	11/04/21 13:06	SC	XEN MID
Soluble	Analysis	300.0		20			11706	11/09/21 09:13	CH	XEN MID

Client Sample ID: BH02

Lab Sample ID: 890-1519-2

Date Collected: 11/02/21 09:40

Matrix: Solid

Date Received: 11/02/21 14:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	11477	11/05/21 16:41	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11515	11/06/21 11:35	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			11768	11/08/21 17:11	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11856	11/09/21 16:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	11464	11/04/21 13:07	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11507	11/05/21 15:39	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	11463	11/04/21 13:06	SC	XEN MID
Soluble	Analysis	300.0		1			11706	11/09/21 09:20	CH	XEN MID

Client Sample ID: BH02

Lab Sample ID: 890-1519-3

Date Collected: 11/02/21 09:52

Matrix: Solid

Date Received: 11/02/21 14:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	11477	11/05/21 16:41	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11515	11/06/21 11:55	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			11768	11/08/21 17:11	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11856	11/09/21 16:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	11464	11/04/21 13:07	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11507	11/05/21 16:01	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	11463	11/04/21 13:06	SC	XEN MID
Soluble	Analysis	300.0		1			11706	11/09/21 09:28	CH	XEN MID

Client Sample ID: BH03

Lab Sample ID: 890-1519-4

Date Collected: 11/02/21 10:30

Matrix: Solid

Date Received: 11/02/21 14:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	11477	11/05/21 16:41	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11515	11/06/21 12:16	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			11768	11/08/21 17:11	AJ	XEN MID

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

Client Sample ID: BH03

Lab Sample ID: 890-1519-4

Date Collected: 11/02/21 10:30

Matrix: Solid

Date Received: 11/02/21 14:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			11856	11/09/21 16:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	11464	11/04/21 13:07	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11507	11/05/21 16:22	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	11463	11/04/21 13:06	SC	XEN MID
Soluble	Analysis	300.0		1			11706	11/09/21 09:50	CH	XEN MID

Client Sample ID: BH03

Lab Sample ID: 890-1519-5

Date Collected: 11/02/21 10:40

Matrix: Solid

Date Received: 11/02/21 14:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	11477	11/05/21 16:41	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11515	11/06/21 12:36	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			11768	11/08/21 17:11	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11856	11/09/21 16:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	11464	11/04/21 13:07	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11507	11/05/21 16:44	AJ	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	11463	11/04/21 13:06	SC	XEN MID
Soluble	Analysis	300.0		1			11706	11/09/21 09:58	CH	XEN MID

Client Sample ID: BH04

Lab Sample ID: 890-1519-6

Date Collected: 11/02/21 10:45

Matrix: Solid

Date Received: 11/02/21 14:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	11477	11/05/21 16:41	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11515	11/06/21 12:57	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			11768	11/08/21 17:11	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11856	11/09/21 16:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	11464	11/04/21 13:07	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11507	11/05/21 17:06	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	11463	11/04/21 13:06	SC	XEN MID
Soluble	Analysis	300.0		1			11706	11/09/21 10:20	CH	XEN MID

Client Sample ID: BH04

Lab Sample ID: 890-1519-7

Date Collected: 11/02/21 10:57

Matrix: Solid

Date Received: 11/02/21 14:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	11477	11/05/21 16:41	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11515	11/06/21 13:17	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			11768	11/08/21 17:11	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11856	11/09/21 16:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	11464	11/04/21 13:07	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11507	11/05/21 17:49	AJ	XEN MID

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

Client Sample ID: BH04

Lab Sample ID: 890-1519-7

Date Collected: 11/02/21 10:57

Matrix: Solid

Date Received: 11/02/21 14:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.05 g	50 mL	11463	11/04/21 13:06	SC	XEN MID
Soluble	Analysis	300.0		1			11706	11/09/21 10:27	CH	XEN MID

Client Sample ID: BH05

Lab Sample ID: 890-1519-8

Date Collected: 11/02/21 11:13

Matrix: Solid

Date Received: 11/02/21 14:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	11477	11/05/21 16:41	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11515	11/06/21 13:38	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			11768	11/08/21 17:11	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11856	11/09/21 16:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	11464	11/04/21 13:07	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11507	11/05/21 18:09	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	11463	11/04/21 13:06	SC	XEN MID
Soluble	Analysis	300.0		1			11706	11/09/21 10:34	CH	XEN MID

Client Sample ID: BH05

Lab Sample ID: 890-1519-9

Date Collected: 11/02/21 11:23

Matrix: Solid

Date Received: 11/02/21 14:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	11477	11/05/21 16:41	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11515	11/06/21 13:58	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			11768	11/08/21 17:11	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11856	11/09/21 16:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	11464	11/04/21 13:07	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11507	11/05/21 18:31	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	11463	11/04/21 13:06	SC	XEN MID
Soluble	Analysis	300.0		1			11706	11/09/21 10:42	CH	XEN MID

Client Sample ID: BH06

Lab Sample ID: 890-1519-10

Date Collected: 11/02/21 11:40

Matrix: Solid

Date Received: 11/02/21 14:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	11477	11/05/21 16:41	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11515	11/06/21 14:18	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			11768	11/08/21 17:11	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11856	11/09/21 16:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	11464	11/04/21 13:07	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11507	11/05/21 18:52	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	11463	11/04/21 13:06	SC	XEN MID
Soluble	Analysis	300.0		1			11706	11/09/21 10:49	CH	XEN MID

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

Client Sample ID: BH06

Lab Sample ID: 890-1519-11

Date Collected: 11/02/21 11:47

Matrix: Solid

Date Received: 11/02/21 14:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	11477	11/05/21 16:41	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11515	11/06/21 15:41	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			11768	11/08/21 17:11	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11856	11/09/21 16:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	11464	11/04/21 13:07	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11507	11/05/21 19:14	AJ	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	11463	11/04/21 13:06	SC	XEN MID
Soluble	Analysis	300.0		1			11706	11/09/21 10:57	CH	XEN MID

Client Sample ID: BH07

Lab Sample ID: 890-1519-12

Date Collected: 11/02/21 12:10

Matrix: Solid

Date Received: 11/02/21 14:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	11477	11/05/21 16:41	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11515	11/06/21 16:02	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			11768	11/08/21 17:11	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11856	11/09/21 16:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	11464	11/04/21 13:07	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11507	11/05/21 19:35	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	11463	11/04/21 13:06	SC	XEN MID
Soluble	Analysis	300.0		1			11706	11/09/21 11:04	CH	XEN MID

Client Sample ID: BH07

Lab Sample ID: 890-1519-13

Date Collected: 11/02/21 12:20

Matrix: Solid

Date Received: 11/02/21 14:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	11477	11/05/21 16:41	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11515	11/06/21 16:22	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			11768	11/08/21 17:11	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11856	11/09/21 16:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	11464	11/04/21 13:07	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11507	11/05/21 19:56	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	11465	11/04/21 13:12	SC	XEN MID
Soluble	Analysis	300.0		1			11709	11/10/21 11:50	CH	XEN MID

Client Sample ID: BH08

Lab Sample ID: 890-1519-14

Date Collected: 11/02/21 12:32

Matrix: Solid

Date Received: 11/02/21 14:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	11477	11/05/21 16:41	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11515	11/06/21 16:43	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			11768	11/08/21 17:11	AJ	XEN MID

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

Client Sample ID: BH08

Lab Sample ID: 890-1519-14

Date Collected: 11/02/21 12:32

Matrix: Solid

Date Received: 11/02/21 14:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			11856	11/09/21 16:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	11464	11/04/21 13:07	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11507	11/05/21 20:17	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	11465	11/04/21 13:12	SC	XEN MID
Soluble	Analysis	300.0		1			11709	11/10/21 11:58	CH	XEN MID

Client Sample ID: BH08

Lab Sample ID: 890-1519-15

Date Collected: 11/02/21 12:43

Matrix: Solid

Date Received: 11/02/21 14:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	11477	11/05/21 16:41	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11515	11/06/21 17:03	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			11768	11/08/21 17:11	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11856	11/09/21 16:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	11464	11/04/21 13:07	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11507	11/05/21 20:38	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	11465	11/04/21 13:12	SC	XEN MID
Soluble	Analysis	300.0		1			11709	11/10/21 12:05	CH	XEN MID

Client Sample ID: BH09

Lab Sample ID: 890-1519-16

Date Collected: 11/02/21 12:53

Matrix: Solid

Date Received: 11/02/21 14:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	11477	11/05/21 16:41	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11515	11/06/21 17:24	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			11768	11/08/21 17:11	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11856	11/09/21 16:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	11464	11/04/21 13:07	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11507	11/05/21 20:59	AJ	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	11465	11/04/21 13:12	SC	XEN MID
Soluble	Analysis	300.0		1			11709	11/10/21 12:13	CH	XEN MID

Client Sample ID: BH09

Lab Sample ID: 890-1519-17

Date Collected: 11/02/21 13:03

Matrix: Solid

Date Received: 11/02/21 14:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	11477	11/05/21 16:41	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11515	11/06/21 17:44	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			11768	11/08/21 17:11	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			11856	11/09/21 16:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	11589	11/05/21 13:34	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11624	11/07/21 00:06	AJ	XEN MID

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

Client Sample ID: BH09
Date Collected: 11/02/21 13:03
Date Received: 11/02/21 14:53

Lab Sample ID: 890-1519-17
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	11465	11/04/21 13:12	SC	XEN MID
Soluble	Analysis	300.0		1			11709	11/10/21 12:20	CH	XEN MID

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

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Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

Laboratory: Eurofins Xenco, Midland

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

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

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

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

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Method Summary

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

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

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: WSP USA Inc.
Project/Site: Sterling 4H 6HCTB - 31403152.008

Job ID: 890-1519-1
SDG: Eddy County

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1519-1	BH01	Solid	11/02/21 08:55	11/02/21 14:53	1
890-1519-2	BH02	Solid	11/02/21 09:40	11/02/21 14:53	
890-1519-3	BH02	Solid	11/02/21 09:52	11/02/21 14:53	4
890-1519-4	BH03	Solid	11/02/21 10:30	11/02/21 14:53	1
890-1519-5	BH03	Solid	11/02/21 10:40	11/02/21 14:53	4
890-1519-6	BH04	Solid	11/02/21 10:45	11/02/21 14:53	1
890-1519-7	BH04	Solid	11/02/21 10:57	11/02/21 14:53	4
890-1519-8	BH05	Solid	11/02/21 11:13	11/02/21 14:53	1
890-1519-9	BH05	Solid	11/02/21 11:23	11/02/21 14:53	4
890-1519-10	BH06	Solid	11/02/21 11:40	11/02/21 14:53	1
890-1519-11	BH06	Solid	11/02/21 11:47	11/02/21 14:53	4
890-1519-12	BH07	Solid	11/02/21 12:10	11/02/21 14:53	1
890-1519-13	BH07	Solid	11/02/21 12:20	11/02/21 14:53	4
890-1519-14	BH08	Solid	11/02/21 12:32	11/02/21 14:53	1
890-1519-15	BH08	Solid	11/02/21 12:43	11/02/21 14:53	4
890-1519-16	BH09	Solid	11/02/21 12:53	11/02/21 14:53	1
890-1519-17	BH09	Solid	11/02/21 13:03	11/02/21 14:53	4



Environment Testing Xenco

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Chain of Custody

Work Order No: _____

www.xenco.com Page _____ of 2

Project Manager:	Joseph Hernandez	Bill to: (if different)	Attn WSP: Joseph Hernandez
Company Name:	WSP USA	Company Name:	
Address:	3308 N A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	(281) 708-2329	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:	Skilling 4H LHC8	Turn Around	☒ Routine ☐ Rush	Pres. Code	
Project Number:	34462152.008				
Project Location:	Eddy County	Due Date:			
Sampler's Name:	Anna Byers	TAT starts the day received by the lab, if received by 4:30pm			
P.O. #:	MAP21294255688				
SAMPLE RECEIPT		Temp Blank:	☒ No ☐ Yes	Wet Ice:	☒ Yes ☐ No
Samples Received Intact:	☒ Yes ☐ No	Thermometer ID:	TM-007		
Cooler Custody/Seals:	☒ Yes ☐ No	Correction Factor:	-0.2		
Sample Custody Seals:	☒ Yes ☐ No	Temperature Reading:	1.4		
Total Containers:		Corrected Temperature:	1.4		
Parameters					
TRH (EPA 8015 Mod)					
BTEX (EPA 8021 B)					
Chloride (EPA 300.0)					
ANALYSIS REQUEST					
880-1519 Chain of Custody					
Preservative Codes					
None: NO DI Water: H ₂ O					
Cool: Cool MeOH: Me					
HCL: HC HNO ₃ : HN					
H ₂ SO ₄ : H ₂ NaOH: Na					
H ₃ PO ₄ : HP					
NaHSO ₄ : NABIS					
Na ₂ S ₂ O ₃ : NaSO ₃					
Zn Acetate+NaOH: Zn					
NaOH+Ascorbic Acid: SAPC					
Sample Comments					

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Parameters
BH01	S	11/2/21	0855	1'	Grab	1	TRH (EPA 8015 Mod)
BH02			0940	1'		1	BTEX (EPA 8021 B)
BH02			0952	4'		1	Chloride (EPA 300.0)
BH03			1030	1'		1	
BH03			1040	4'		1	
BH04			1045	1'		1	
BH04			1057	4'		1	
BH05			1113	1'		1	
BH05			1123	4'		1	
BH06			1140	1'		1	

Total 2007/6010 2008/6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO₂ Na Sr Ti Sn U V Zn

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

Notice: Signature of the document and reimbursement 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 \$95.00 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
Anna Byers	Joe Culp	11-2-21 1440			



Environment Testing Xenco

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Chain of Custody

Work Order No: _____

www.xenco.com Page 2 of 2

Project Manager:	Joseph Hernandez	Bill to: (if different)	Attn: Joseph Hernandez
Company Name:	WSP USA	Company Name:	WSP
Address:	3308 N A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	(281) 702-2329	Email:	anna.byers@wsp.com

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

Project Name:	Sterling 4th Lb CTB	Turn Around	☒ Routine ☐ Rush	Pres. Code	
Project Number:	31403152-008	Due Date:			
Project Location:	Eddy County	TAT starts the day received by the lab, if received by 4:30pm			
Sampler's Name:	Anna Byers				
P.O. #:	naqp 2129255688				
SAMPLE RECEIPT	Temp Blank:	Yes	No	Wet Ice:	Yes
Samples Received Inact:	Yes	No	Thermometer ID:		
Cooler Custody Seals:	Yes	No	Correction Factor:		
Sample Custody Seals:	Yes	No	Temperature Reading:		
Total Containers:	Yes	No	Corrected Temperature:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Parameters	ANALYSIS REQUEST	Preservative Codes	Sample Comments
Bt06	S	11/8/21	1147	4'	Grab	1	TPH (EPA 8015 Mod)		None: NO	DI Water: H ₂ O
Bt07			1210	4'		1	BTEX (EPA 8021 B)		Cool: Cool	MeOH: Me
Bt08			1220	4'		1	Chloride (EPA 300.0)		HCL: HC	HNO ₃ : HN
Bt09			1232	4'		1			H ₂ SO ₄ : H ₂	NaOH: Na
Bt10			1243	4'		1			H ₃ PO ₄ : HP	
Bt11			1253	4'		1			NaHSO ₄ : NABIS	
Bt12			1303	4'		1			Na ₂ S ₂ O ₃ : NASO ₃	
									Zn Acetate+NaOH: Zn	
									NaOH+Ascorbic Acid: SAPC	

Total 2007 / 6010 2008 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Pb Mn Mo Ni K Se Ag SiO₂ Na Sr Ti Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 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
Anna Byers	Joe Goff	11-2-21 1448			

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Eurofins Xenco, Carlsbad

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

Chain of Custody Record



Environment Testing
America

Client Information (Sub Contract Lab)		Sampler	Lab PM	Carrier Tracking No(s)	COC No
Client Contact:	Phone	Kramer Jessica	State of Origin	890-494-1	
Shipping/Receiving	E-Mail	jessica.kramer@eurofins.com	New Mexico	Page 1 of 2	
Company	Eurofins Xenco		Accreditations Required (See note):		Job #
Address	1211 W Florida Ave	Due Date Requested	11/8/2021	NELAP - Louisiana NELAP - Texas	
City	Midland	TAT Requested (days):		Preservation Codes	
State, Zip	TX 79701	PO #		A. HCL B. NaOH C. Zn Acetate D. Nitric Acid E. NaHSO4 F. MeOH G. Ammonia H. Ascorbic Acid I. Ice J. DI Water K. EDTA L. EDA M. Hexane N. None O. ASNB02 P. Na2OAS Q. Na2SO3 R. Na2S2O3 S. H2SO4 T. TSP Dodecylalate U. Acetone V. MCAA W. pH 4-5 Z. other (specify)	
Phone:	432-704-5440(Tel)	WC #		Other:	
Email:		Project #	89000048		
Project Name	Sterling 4H 6HCTB	SSOM#			
Site					
Sample Identification - Client ID (Lab ID)					
BH01 (890-1519-1)	11/2/21	08 55	Mountain	Solid	
BH02 (890-1519-2)	11/2/21	09 40	Mountain	Solid	
BH02 (890-1519-3)	11/2/21	09 52	Mountain	Solid	
BH03 (890-1519-4)	11/2/21	10 30	Mountain	Solid	
BH03 (890-1519-5)	11/2/21	10 40	Mountain	Solid	
BH04 (890-1519-6)	11/2/21	10 45	Mountain	Solid	
BH04 (890-1519-7)	11/2/21	10 57	Mountain	Solid	
BH05 (890-1519-8)	11/2/21	11 13	Mountain	Solid	
BH05 (890-1519-9)	11/2/21	11 23	Mountain	Solid	
Note: Since laboratory accreditations are subject to change, Eurofins Xenco LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis, the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Xenco LLC.					
Possible Hazard Identification					
Unconfirmed		Primary Deliverable Rank 2		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
Deliverable Requested I II III IV Other (specify)				Return To Client ☐ Disposal By Lab ☐ Archive For ☐ Months	
Empty Kit Relinquished by		Date	Time	Method of Shipment	
Relinquished by <i>Due Call 11.3.21</i>		Date/Time		Received by <i>J. Kramer</i> Date/Time <i>11.4.21</i> Company	
Relinquished by		Date/Time		Received by <i>J. Kramer</i> Date/Time <i>10.27</i> Company	
Relinquished by		Date/Time		Received by <i>J. Kramer</i> Date/Time <i>10.27</i> Company	
Custody Seals Intact		Custody Seal No		Cooler Temperature(s) °C and Other Remarks	
Δ Yes Δ No				35/3.6	

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

[illegible]

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1519-1

SDG Number: Eddy County

Login Number: 1519

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: 890-1519-1

SDG Number: Eddy County

Login Number: 1519

List Source: Eurofins Xenco, Midland

List Number: 2

List Creation: 11/04/21 10:33 AM

Creator: Kramer, Jessica

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.5/3.6
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	



Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-1719-1

Laboratory Sample Delivery Group: 31403152.01

Client Project/Site: Sterling #4 & #6 CTB

Revision: 1

For:

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

Attn: Kalei Jennings

A handwritten signature in black ink that reads "J. Kramer".

Authorized for release by:
12/17/2021 4:39:02 PM

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

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results through

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www.eurofinsus.com/Env

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

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

Client: WSP USA Inc.
Project/Site: Sterlinng #4 & #6 CTB

Laboratory Job ID: 890-1719-1
SDG: 31403152.01

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: Sterlingg #4 & #6 CTB

Job ID: 890-1719-1
SDG: 31403152.01

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc.
Project/Site: Sterlinng #4 & #6 CTB

Job ID: 890-1719-1
SDG: 31403152.01

Job ID: 890-1719-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-1719-1

REVISION

The report being provided is a revision of the original report sent on 12/16/2021. The report (revision 1) is being revised due to Per client email, edited COC samples are composite.

Report revision history

Receipt

The samples were received on 12/14/2021 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 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

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: Sterlingng #4 & #6 CTB

Job ID: 890-1719-1
SDG: 31403152.01

Client Sample ID: FS01

Lab Sample ID: 890-1719-1

Date Collected: 12/14/21 13:58

Matrix: Solid

Date Received: 12/14/21 16:55

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		12/16/21 07:45	12/16/21 12:32	1
Toluene	<0.00199	U	0.00199	mg/Kg		12/16/21 07:45	12/16/21 12:32	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		12/16/21 07:45	12/16/21 12:32	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		12/16/21 07:45	12/16/21 12:32	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		12/16/21 07:45	12/16/21 12:32	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		12/16/21 07:45	12/16/21 12:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130	12/16/21 07:45	12/16/21 12:32	1
1,4-Difluorobenzene (Surr)	99		70 - 130	12/16/21 07:45	12/16/21 12:32	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			12/16/21 21:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			12/15/21 16:03	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		12/16/21 08:22	12/16/21 13:50	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/16/21 08:22	12/16/21 13:50	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/16/21 08:22	12/16/21 13:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130	12/16/21 08:22	12/16/21 13:50	1
o-Terphenyl	111		70 - 130	12/16/21 08:22	12/16/21 13:50	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	437		4.95	mg/Kg			12/16/21 16:09	1

Client Sample ID: FS02

Lab Sample ID: 890-1719-2

Date Collected: 12/14/21 14:00

Matrix: Solid

Date Received: 12/14/21 16:55

Sample Depth: 2.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		12/16/21 07:45	12/16/21 12:53	1
Toluene	<0.00200	U	0.00200	mg/Kg		12/16/21 07:45	12/16/21 12:53	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		12/16/21 07:45	12/16/21 12:53	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		12/16/21 07:45	12/16/21 12:53	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		12/16/21 07:45	12/16/21 12:53	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		12/16/21 07:45	12/16/21 12:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130	12/16/21 07:45	12/16/21 12:53	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Sterlingng #4 & #6 CTB

Job ID: 890-1719-1
SDG: 31403152.01

Client Sample ID: FS02

Date Collected: 12/14/21 14:00

Date Received: 12/14/21 16:55

Sample Depth: 2.5

Lab Sample ID: 890-1719-2

Matrix: Solid

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	105		70 - 130	12/16/21 07:45	12/16/21 12:53	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			12/16/21 21:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			12/15/21 16:03	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		12/16/21 08:22	12/16/21 14:11	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/16/21 08:22	12/16/21 14:11	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/16/21 08:22	12/16/21 14:11	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	101		70 - 130			12/16/21 08:22	12/16/21 14:11	1
o-Terphenyl	118		70 - 130			12/16/21 08:22	12/16/21 14:11	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	310		5.04	mg/Kg			12/16/21 16:34	1

Client Sample ID: SW01

Date Collected: 12/14/21 14:02

Date Received: 12/14/21 16:55

Sample Depth: 0 - 2.5

Lab Sample ID: 890-1719-3

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		12/16/21 07:45	12/16/21 13:13	1
Toluene	<0.00200	U	0.00200	mg/Kg		12/16/21 07:45	12/16/21 13:13	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		12/16/21 07:45	12/16/21 13:13	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		12/16/21 07:45	12/16/21 13:13	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		12/16/21 07:45	12/16/21 13:13	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		12/16/21 07:45	12/16/21 13:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130	12/16/21 07:45	12/16/21 13:13	1
1,4-Difluorobenzene (Surr)	99		70 - 130	12/16/21 07:45	12/16/21 13:13	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			12/16/21 21:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			12/15/21 16:03	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Sterlingg #4 & #6 CTB

Job ID: 890-1719-1
SDG: 31403152.01

Client Sample ID: SW01

Lab Sample ID: 890-1719-3

Date Collected: 12/14/21 14:02

Matrix: Solid

Date Received: 12/14/21 16:55

Sample Depth: 0 - 2.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		12/16/21 08:22	12/16/21 14:32	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		12/16/21 08:22	12/16/21 14:32	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		12/16/21 08:22	12/16/21 14:32	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130			12/16/21 08:22	12/16/21 14:32	1
o-Terphenyl	103		70 - 130			12/16/21 08:22	12/16/21 14:32	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	217		4.98	mg/Kg			12/16/21 16:42	1

Client Sample ID: SW02

Lab Sample ID: 890-1719-4

Date Collected: 12/14/21 14:04

Matrix: Solid

Date Received: 12/14/21 16:55

Sample Depth: 0 - 2.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		12/16/21 07:45	12/16/21 13:33	1
Toluene	<0.00198	U	0.00198	mg/Kg		12/16/21 07:45	12/16/21 13:33	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		12/16/21 07:45	12/16/21 13:33	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		12/16/21 07:45	12/16/21 13:33	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		12/16/21 07:45	12/16/21 13:33	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		12/16/21 07:45	12/16/21 13:33	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	117		70 - 130			12/16/21 07:45	12/16/21 13:33	1
1,4-Difluorobenzene (Surr)	100		70 - 130			12/16/21 07:45	12/16/21 13:33	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			12/16/21 21:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			12/15/21 16:03	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	<49.9	U	49.9	mg/Kg		12/16/21 08:22	12/16/21 14:53	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		12/16/21 08:22	12/16/21 14:53	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		12/16/21 08:22	12/16/21 14:53	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130			12/16/21 08:22	12/16/21 14:53	1
o-Terphenyl	117		70 - 130			12/16/21 08:22	12/16/21 14:53	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Sterlingg #4 & #6 CTB

Job ID: 890-1719-1
SDG: 31403152.01

Client Sample ID: SW02

Date Collected: 12/14/21 14:04

Date Received: 12/14/21 16:55

Sample Depth: 0 - 2.5

Lab Sample ID: 890-1719-4

Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	202		4.99	mg/Kg			12/16/21 16:51	1

Client Sample ID: SW03

Date Collected: 12/14/21 14:08

Date Received: 12/14/21 16:55

Sample Depth: 0 - 2.5

Lab Sample ID: 890-1719-5

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		12/16/21 07:45	12/16/21 13:54	1
Toluene	<0.00201	U	0.00201	mg/Kg		12/16/21 07:45	12/16/21 13:54	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		12/16/21 07:45	12/16/21 13:54	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		12/16/21 07:45	12/16/21 13:54	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		12/16/21 07:45	12/16/21 13:54	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		12/16/21 07:45	12/16/21 13:54	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		70 - 130			12/16/21 07:45	12/16/21 13:54	1
1,4-Difluorobenzene (Surr)	105		70 - 130			12/16/21 07:45	12/16/21 13:54	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			12/16/21 21:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			12/15/21 16:03	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		12/16/21 08:22	12/16/21 15:34	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/16/21 08:22	12/16/21 15:34	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/16/21 08:22	12/16/21 15:34	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	101		70 - 130			12/16/21 08:22	12/16/21 15:34	1
o-Terphenyl	123		70 - 130			12/16/21 08:22	12/16/21 15:34	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9940		49.7	mg/Kg			12/16/21 16:59	10

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Sterlingg #4 & #6 CTB

Job ID: 890-1719-1
SDG: 31403152.01

Client Sample ID: SW04

Lab Sample ID: 890-1719-6

Date Collected: 12/14/21 14:11

Matrix: Solid

Date Received: 12/14/21 16:55

Sample Depth: 0 - 2.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		12/16/21 07:45	12/16/21 14:14	1
Toluene	<0.00200	U	0.00200	mg/Kg		12/16/21 07:45	12/16/21 14:14	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		12/16/21 07:45	12/16/21 14:14	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		12/16/21 07:45	12/16/21 14:14	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		12/16/21 07:45	12/16/21 14:14	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		12/16/21 07:45	12/16/21 14:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	117		70 - 130	12/16/21 07:45	12/16/21 14:14	1
1,4-Difluorobenzene (Surr)	98		70 - 130	12/16/21 07:45	12/16/21 14:14	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			12/16/21 21:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			12/15/21 16:03	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	<49.8	U	49.8	mg/Kg		12/16/21 08:22	12/16/21 15:55	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		12/16/21 08:22	12/16/21 15:55	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		12/16/21 08:22	12/16/21 15:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130	12/16/21 08:22	12/16/21 15:55	1
o-Terphenyl	116		70 - 130	12/16/21 08:22	12/16/21 15:55	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10100		49.5	mg/Kg			12/16/21 17:24	10

Eurofins Xenco, Carlsbad

Surrogate Summary

Client: WSP USA Inc.
Project/Site: Sterlingg #4 & #6 CTB

Job ID: 890-1719-1
SDG: 31403152.01

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)
890-1719-1	FS01	107	99
890-1719-1 MS	FS01	113	100
890-1719-1 MSD	FS01	111	101
890-1719-2	FS02	105	105
890-1719-3	SW01	113	99
890-1719-4	SW02	117	100
890-1719-5	SW03	116	105
890-1719-6	SW04	117	98
LCS 880-14827/1-A	Lab Control Sample	108	95
LCSD 880-14827/2-A	Lab Control Sample Dup	105	92
MB 880-14827/5-A	Method Blank	99	103

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-9101-A-1-E MS	Matrix Spike	78	84
880-9101-A-1-F MSD	Matrix Spike Duplicate	75	81
890-1719-1	FS01	93	111
890-1719-2	FS02	101	118
890-1719-3	SW01	89	103
890-1719-4	SW02	100	117
890-1719-5	SW03	101	123
890-1719-6	SW04	95	116
LCS 880-14906/2-A	Lab Control Sample	94	104
LCSD 880-14906/3-A	Lab Control Sample Dup	94	101
MB 880-14906/1-A	Method Blank	102	129

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Sterlingg #4 & #6 CTB

Job ID: 890-1719-1
SDG: 31403152.01

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-14827/5-A

Matrix: Solid

Analysis Batch: 14890

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 14827

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		12/16/21 07:45	12/16/21 10:39	1
Toluene	<0.00200	U	0.00200	mg/Kg		12/16/21 07:45	12/16/21 10:39	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		12/16/21 07:45	12/16/21 10:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		12/16/21 07:45	12/16/21 10:39	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		12/16/21 07:45	12/16/21 10:39	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		12/16/21 07:45	12/16/21 10:39	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	12/16/21 07:45	12/16/21 10:39	1
1,4-Difluorobenzene (Surr)	103		70 - 130	12/16/21 07:45	12/16/21 10:39	1

Lab Sample ID: LCS 880-14827/1-A

Matrix: Solid

Analysis Batch: 14890

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 14827

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.07563		mg/Kg		76	70 - 130
Toluene	0.100	0.07381		mg/Kg		74	70 - 130
Ethylbenzene	0.100	0.07648		mg/Kg		76	70 - 130
m-Xylene & p-Xylene	0.200	0.1583		mg/Kg		79	70 - 130
o-Xylene	0.100	0.08001		mg/Kg		80	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

Lab Sample ID: LCSD 880-14827/2-A

Matrix: Solid

Analysis Batch: 14890

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 14827

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Benzene	0.100	0.07974		mg/Kg		80	70 - 130	5	35
Toluene	0.100	0.08006		mg/Kg		80	70 - 130	8	35
Ethylbenzene	0.100	0.08202		mg/Kg		82	70 - 130	7	35
m-Xylene & p-Xylene	0.200	0.1693		mg/Kg		85	70 - 130	7	35
o-Xylene	0.100	0.08345		mg/Kg		83	70 - 130	4	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

Lab Sample ID: 890-1719-1 MSD

Matrix: Solid

Analysis Batch: 14890

Client Sample ID: FS01

Prep Type: Total/NA

Prep Batch: 14827

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Benzene	<0.00199	U	0.101	0.07696		mg/Kg					
Toluene	<0.00199	U	0.101	0.07807		mg/Kg					

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Sterlingg #4 & #6 CTB

Job ID: 890-1719-1
SDG: 31403152.01

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

Lab Sample ID: 890-1719-1 MSD

Matrix: Solid

Analysis Batch: 14890

Client Sample ID: FS01

Prep Type: Total/NA

Prep Batch: 14827

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylbenzene	<0.00199	U	0.101	0.08397		mg/Kg					
m-Xylene & p-Xylene	<0.00398	U	0.202	0.1784		mg/Kg					
o-Xylene	<0.00199	U	0.101	0.08729		mg/Kg					

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	111		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

Lab Sample ID: 890-1719-1 MS

Matrix: Solid

Analysis Batch: 14890

Client Sample ID: FS01

Prep Type: Total/NA

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	113		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

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

Lab Sample ID: MB 880-14906/1-A

Matrix: Solid

Analysis Batch: 14894

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 14906

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		12/16/21 08:22	12/16/21 09:51	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/16/21 08:22	12/16/21 09:51	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/16/21 08:22	12/16/21 09:51	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 130	12/16/21 08:22	12/16/21 09:51	1
o-Terphenyl	129		70 - 130	12/16/21 08:22	12/16/21 09:51	1

Lab Sample ID: LCS 880-14906/2-A

Matrix: Solid

Analysis Batch: 14894

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 14906

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	897.9		mg/Kg		90	70 - 130
Diesel Range Organics (Over C10-C28)	1000	909.9		mg/Kg		91	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	94		70 - 130
o-Terphenyl	104		70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Sterlingg #4 & #6 CTB

Job ID: 890-1719-1
SDG: 31403152.01

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

Lab Sample ID: LCSD 880-14906/3-A

Matrix: Solid

Analysis Batch: 14894

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 14906

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	918.7		mg/Kg		92	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	1000	1009		mg/Kg		101	70 - 130	10	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	94		70 - 130						
o-Terphenyl	101		70 - 130						

Lab Sample ID: 880-9101-A-1-E MS

Matrix: Solid

Analysis Batch: 14894

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 14906

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	996	936.0		mg/Kg		91	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	996	872.8		mg/Kg		88	70 - 130		
Surrogate	MS %Recovery	MS Qualifier	Limits								
1-Chlorooctane	78		70 - 130								
o-Terphenyl	84		70 - 130								

Lab Sample ID: 880-9101-A-1-F MSD

Matrix: Solid

Analysis Batch: 14894

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 14906

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	<50.0	U	995	1015		mg/Kg		99	70 - 130	8	20
Diesel Range Organics (Over C10-C28)	<50.0	U	995	863.6		mg/Kg		87	70 - 130	1	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	75		70 - 130								
o-Terphenyl	81		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-14940/1-A

Matrix: Solid

Analysis Batch: 14980

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			12/16/21 15:44	1

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Sterlinng #4 & #6 CTB

Job ID: 890-1719-1
SDG: 31403152.01

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-14940/2-A

Matrix: Solid

Analysis Batch: 14980

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	254.1		mg/Kg		102	90 - 110

Lab Sample ID: LCSD 880-14940/3-A

Matrix: Solid

Analysis Batch: 14980

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	254.0		mg/Kg		102	90 - 110	0	20

Lab Sample ID: 890-1719-1 MS

Matrix: Solid

Analysis Batch: 14980

Client Sample ID: FS01

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	437		248	667.4		mg/Kg		93	90 - 110

Lab Sample ID: 890-1719-1 MSD

Matrix: Solid

Analysis Batch: 14980

Client Sample ID: FS01

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	437		248	667.3		mg/Kg		93	90 - 110	0	20

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: Sterlingg #4 & #6 CTB

Job ID: 890-1719-1
SDG: 31403152.01

GC VOA

Prep Batch: 14827

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1719-1	FS01	Total/NA	Solid	5035	
890-1719-2	FS02	Total/NA	Solid	5035	
890-1719-3	SW01	Total/NA	Solid	5035	
890-1719-4	SW02	Total/NA	Solid	5035	
890-1719-5	SW03	Total/NA	Solid	5035	
890-1719-6	SW04	Total/NA	Solid	5035	
MB 880-14827/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-14827/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-14827/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1719-1 MSD	FS01	Total/NA	Solid	5035	

Analysis Batch: 14890

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1719-1	FS01	Total/NA	Solid	8021B	14827
890-1719-2	FS02	Total/NA	Solid	8021B	14827
890-1719-3	SW01	Total/NA	Solid	8021B	14827
890-1719-4	SW02	Total/NA	Solid	8021B	14827
890-1719-5	SW03	Total/NA	Solid	8021B	14827
890-1719-6	SW04	Total/NA	Solid	8021B	14827
MB 880-14827/5-A	Method Blank	Total/NA	Solid	8021B	14827
LCS 880-14827/1-A	Lab Control Sample	Total/NA	Solid	8021B	14827
LCSD 880-14827/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	14827
890-1719-1 MS	FS01	Total/NA	Solid	8021B	
890-1719-1 MSD	FS01	Total/NA	Solid	8021B	14827

Analysis Batch: 14932

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1719-1	FS01	Total/NA	Solid	Total BTEX	
890-1719-2	FS02	Total/NA	Solid	Total BTEX	
890-1719-3	SW01	Total/NA	Solid	Total BTEX	
890-1719-4	SW02	Total/NA	Solid	Total BTEX	
890-1719-5	SW03	Total/NA	Solid	Total BTEX	
890-1719-6	SW04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 14652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1719-1	FS01	Total/NA	Solid	8015 NM	
890-1719-2	FS02	Total/NA	Solid	8015 NM	
890-1719-3	SW01	Total/NA	Solid	8015 NM	
890-1719-4	SW02	Total/NA	Solid	8015 NM	
890-1719-5	SW03	Total/NA	Solid	8015 NM	
890-1719-6	SW04	Total/NA	Solid	8015 NM	

Analysis Batch: 14894

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1719-1	FS01	Total/NA	Solid	8015B NM	14906
890-1719-2	FS02	Total/NA	Solid	8015B NM	14906
890-1719-3	SW01	Total/NA	Solid	8015B NM	14906
890-1719-4	SW02	Total/NA	Solid	8015B NM	14906

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: Sterlingg #4 & #6 CTB

Job ID: 890-1719-1
SDG: 31403152.01

GC Semi VOA (Continued)

Analysis Batch: 14894 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1719-5	SW03	Total/NA	Solid	8015B NM	14906
890-1719-6	SW04	Total/NA	Solid	8015B NM	14906
MB 880-14906/1-A	Method Blank	Total/NA	Solid	8015B NM	14906
LCS 880-14906/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	14906
LCSD 880-14906/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	14906
880-9101-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	14906
880-9101-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	14906

Prep Batch: 14906

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1719-1	FS01	Total/NA	Solid	8015NM Prep	
890-1719-2	FS02	Total/NA	Solid	8015NM Prep	
890-1719-3	SW01	Total/NA	Solid	8015NM Prep	
890-1719-4	SW02	Total/NA	Solid	8015NM Prep	
890-1719-5	SW03	Total/NA	Solid	8015NM Prep	
890-1719-6	SW04	Total/NA	Solid	8015NM Prep	
MB 880-14906/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-14906/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-14906/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-9101-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-9101-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 14940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1719-1	FS01	Soluble	Solid	DI Leach	
890-1719-2	FS02	Soluble	Solid	DI Leach	
890-1719-3	SW01	Soluble	Solid	DI Leach	
890-1719-4	SW02	Soluble	Solid	DI Leach	
890-1719-5	SW03	Soluble	Solid	DI Leach	
890-1719-6	SW04	Soluble	Solid	DI Leach	
MB 880-14940/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-14940/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-14940/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1719-1 MS	FS01	Soluble	Solid	DI Leach	
890-1719-1 MSD	FS01	Soluble	Solid	DI Leach	

Analysis Batch: 14980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1719-1	FS01	Soluble	Solid	300.0	14940
890-1719-2	FS02	Soluble	Solid	300.0	14940
890-1719-3	SW01	Soluble	Solid	300.0	14940
890-1719-4	SW02	Soluble	Solid	300.0	14940
890-1719-5	SW03	Soluble	Solid	300.0	14940
890-1719-6	SW04	Soluble	Solid	300.0	14940
MB 880-14940/1-A	Method Blank	Soluble	Solid	300.0	14940
LCS 880-14940/2-A	Lab Control Sample	Soluble	Solid	300.0	14940
LCSD 880-14940/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	14940
890-1719-1 MS	FS01	Soluble	Solid	300.0	14940
890-1719-1 MSD	FS01	Soluble	Solid	300.0	14940

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Sterling #4 & #6 CTB

Job ID: 890-1719-1
SDG: 31403152.01

Client Sample ID: FS01

Date Collected: 12/14/21 13:58

Date Received: 12/14/21 16:55

Lab Sample ID: 890-1719-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	14827	12/16/21 07:45	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	14890	12/16/21 12:32	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14932	12/16/21 21:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			14652	12/15/21 16:03	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	14906	12/16/21 08:22	DM	XEN MID
Total/NA	Analysis	8015B NM		1			14894	12/16/21 13:50	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	14940	12/16/21 12:03	CH	XEN MID
Soluble	Analysis	300.0		1			14980	12/16/21 16:09	CH	XEN MID

Client Sample ID: FS02

Date Collected: 12/14/21 14:00

Date Received: 12/14/21 16:55

Lab Sample ID: 890-1719-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	14827	12/16/21 07:45	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	14890	12/16/21 12:53	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14932	12/16/21 21:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			14652	12/15/21 16:03	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	14906	12/16/21 08:22	DM	XEN MID
Total/NA	Analysis	8015B NM		1			14894	12/16/21 14:11	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	14940	12/16/21 12:03	CH	XEN MID
Soluble	Analysis	300.0		1			14980	12/16/21 16:34	CH	XEN MID

Client Sample ID: SW01

Date Collected: 12/14/21 14:02

Date Received: 12/14/21 16:55

Lab Sample ID: 890-1719-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	14827	12/16/21 07:45	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	14890	12/16/21 13:13	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14932	12/16/21 21:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			14652	12/15/21 16:03	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	14906	12/16/21 08:22	DM	XEN MID
Total/NA	Analysis	8015B NM		1			14894	12/16/21 14:32	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	14940	12/16/21 12:03	CH	XEN MID
Soluble	Analysis	300.0		1			14980	12/16/21 16:42	CH	XEN MID

Client Sample ID: SW02

Date Collected: 12/14/21 14:04

Date Received: 12/14/21 16:55

Lab Sample ID: 890-1719-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	14827	12/16/21 07:45	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	14890	12/16/21 13:33	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14932	12/16/21 21:04	AJ	XEN MID

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Sterling #4 & #6 CTB

Job ID: 890-1719-1
SDG: 31403152.01

Client Sample ID: SW02

Date Collected: 12/14/21 14:04

Date Received: 12/14/21 16:55

Lab Sample ID: 890-1719-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			14652	12/15/21 16:03	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	14906	12/16/21 08:22	DM	XEN MID
Total/NA	Analysis	8015B NM		1			14894	12/16/21 14:53	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	14940	12/16/21 12:03	CH	XEN MID
Soluble	Analysis	300.0		1			14980	12/16/21 16:51	CH	XEN MID

Client Sample ID: SW03

Date Collected: 12/14/21 14:08

Date Received: 12/14/21 16:55

Lab Sample ID: 890-1719-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	14827	12/16/21 07:45	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	14890	12/16/21 13:54	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14932	12/16/21 21:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			14652	12/15/21 16:03	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	14906	12/16/21 08:22	DM	XEN MID
Total/NA	Analysis	8015B NM		1			14894	12/16/21 15:34	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	14940	12/16/21 12:03	CH	XEN MID
Soluble	Analysis	300.0		10			14980	12/16/21 16:59	CH	XEN MID

Client Sample ID: SW04

Date Collected: 12/14/21 14:11

Date Received: 12/14/21 16:55

Lab Sample ID: 890-1719-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	14827	12/16/21 07:45	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	14890	12/16/21 14:14	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			14932	12/16/21 21:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			14652	12/15/21 16:03	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	14906	12/16/21 08:22	DM	XEN MID
Total/NA	Analysis	8015B NM		1			14894	12/16/21 15:55	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	14940	12/16/21 12:03	CH	XEN MID
Soluble	Analysis	300.0		10			14980	12/16/21 17:24	CH	XEN MID

Laboratory References:

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

Eurofins Xenco, Carlsbad

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: Sterlinng #4 & #6 CTB

Job ID: 890-1719-1
SDG: 31403152.01

Laboratory: Eurofins Xenco, Midland

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

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

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

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

Method Summary

Client: WSP USA Inc.
Project/Site: Sterlingg #4 & #6 CTB

Job ID: 890-1719-1
SDG: 31403152.01

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

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Eurofins Xenco, Carlsbad

Sample Summary

Client: WSP USA Inc.
Project/Site: Sterlinng #4 & #6 CTB

Job ID: 890-1719-1
SDG: 31403152.01

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1719-1	FS01	Solid	12/14/21 13:58	12/14/21 16:55	2.5
890-1719-2	FS02	Solid	12/14/21 14:00	12/14/21 16:55	2.5
890-1719-3	SW01	Solid	12/14/21 14:02	12/14/21 16:55	0 - 2.5
890-1719-4	SW02	Solid	12/14/21 14:04	12/14/21 16:55	0 - 2.5
890-1719-5	SW03	Solid	12/14/21 14:08	12/14/21 16:55	0 - 2.5
890-1719-6	SW04	Solid	12/14/21 14:11	12/14/21 16:55	0 - 2.5



Chain of Custody

Work Order No: _____

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
 Midland, TX (432) 704-5440 EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296

www.xenco.com Page _____ of _____

Project Manager:	Joseph Hernandez	Bill to: (if different)	Melodie Sanjari
Company Name:	WSP USA Inc., Permian office	Company Name:	Marathon Oil
Address:	3300 North A St. Bldg 1, Unit 222	Address:	411 S Tidwell Rd
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:	(432) 704-5178	Email:	travis.casey@wsp.com, kate.jennings@wsp.com, dan.moir@wsp.com

Program: ☒ UST/PST ☐ PRP ☐ Brownfields ☐ RC ☐ Superfund State of Project: NM Reporting Level: ☐ I ☐ II ☐ III ☐ ST/UST ☐ PRP ☐ I/II/IV ☐ Deliverables: EDD ☐ ADAPT ☐ Other: _____		Work Order Comments _____ _____ _____
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Project Name:	Sterling #4 & #6 CTB	Turn Around	ANALYSIS REQUEST		Work Order Notes
Project Number:	31403152.01	Routine			IN: nAPP21255688
P.O. Number:		Rush: 24hrs			CC:
Sampler's Name:	Travis Casey	Due Date: 12-16			API:
SAMPLE RECEIPT		Temp Blank: ☒ Yes ☐ No	Wet Ice: ☒ Yes ☐ No		
Temperature (°C):	1.4/1.2	Thermometer ID			
Received Inact:	Yes ☒ No ☐	Correction Factor: -0.2			
Cooler Custody Seals:	Yes ☐ No ☒	Total Containers:			
Sample Custody Seals:	Yes ☐ No ☒				
890-1719 Chain of Custody					
TAT starts the day received by the lab. If received by 4:30pm					
Sample Identification					
Sample	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers
FS01	S	12/14/2021	13:58	2.5	1 X X X
FS02	S	12/14/2021	14:00	2.5	1 X X X
SW01	S	12/14/2021	14:02	0-2.5	1 X X X
SW02	S	12/14/2021	14:04	0-2.5	1 X X X
SW03	S	12/14/2021	14:08	0-2.5	1 X X X
SW04	S	12/14/2021	14:11	0-2.5	1 X X X
Sample Comments					
Descrete - Composite					
Descrete -					
Descrete -					
Descrete -					
Descrete -					
Descrete -					

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

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco. Its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each 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
		12/14/21 1653			

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

Chain of Custody Record



eurofins
Environment Testing
America

Client Information (Sub Contract Lab)		Sampler	Lab PM	Carrier Tracking No(s)	COC No
Client Contact:	Phone	Kramer Jessica	State of Origin:	890-548 1	Page: 1 of 1
Shipping/Receiving	E-Mail	jessica.kramer@eurofinsnet.com	New Mexico	Job #	890-1719-1
Company	Eurofins Xenco		Accreditations Required (See note):		Preservation Codes
Address:	1211 W Florida Ave		NE LAP - Louisiana, NE LAP - Texas		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Ammonia H - Ascorbic Acid I - Ice Water J - DI Water K - EDTA L - EDTA Other:
City	Midland	Due Date Requested	12/16/2021		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify)
State, Zip:	TX 79701	TAAT Requested (days):	7		
Phone:	432-704-5440(Tel)	PO #:			
Email:		WO #:			
Project Name:	Sterling #4 & #6 CTB	Project #:	88001014		
Site:		SSOW#:			
Sample Identification - Client ID (Lab ID)					
FS01 (890-1719-1)	12/14/21	13:58	Mountain	14:00	1
FS02 (890-1719-2)	12/14/21	14:00	Mountain		1
SW01 (890-1719-3)	12/14/21	14:02	Mountain		1
SW02 (890-1719-4)	12/14/21	14:04	Mountain		1
SW03 (890-1719-5)	12/14/21	14:08	Mountain		1
SW04 (890-1719-6)	12/14/21	14:11	Mountain		1
Special Instructions/Note:					
Note: Since laboratory accreditations are subject to change, Eurofins Xenco LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Xenco LLC.					
Possible Hazard Identification					
Unconfirmed					
Deliverable Requested I, II, III, IV, Other (specify)					
Primary Deliverable Rank 2					
Empty Kit Relinquished by:					
Relinquished by:					
Relinquished by:					
Relinquished by:					
Custody Seals Intact:					
Custody Seal No					
Cooler Temperature(s) °C and Other Remarks					
Ver 06/08/2021					

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-1719-1

SDG Number: 31403152.01

Login Number: 1719

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: 890-1719-1

SDG Number: 31403152.01

Login Number: 1719

List Number: 2

Creator: Lowe, Katie

List Source: Eurofins Xenco, Midland

List Creation: 12/16/21 01:21 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	

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

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

CONDITIONS

Action 77515

CONDITIONS

Operator: MARATHON OIL PERMIAN LLC 990 Town & Country Blvd. Houston, TX 77024	OGRID: 372098
	Action Number: 77515
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	None	2/2/2022