ived by OCD: 7/8/2022 8:01:28 AM NM OIL CONSERVATION	Page 1 of
ARTESIA DISTRICT	New Mexico NM OIL CONSERVATION
District I 1625 N. French Dr., Hobbs, NM 8824 District II District II	ARTESIA DISTRICT Form C-141
District II JFAN & 2 2010 Energy Minerals a 811 S. First St., Artesia, NM 88210	and Natural Resources Revised April 3, 2017
	vation Division St. Francis Dr
	e, NM 87505 RECEIVED
Release Notification	and Corrective Action
11415 1802427813	OPERATOR Initial Report Final Report
	Contact: Kyle Littrell Telephone No: 432-221-7331
The second s	Facility Type: Exploration and Production
Surface Owner: State of NM Mineral Owner:	
······································	
	N OF RELEASE           South Line         Feet from the         East/West Line         County
K1923S30E2075South	1960 West Eddy
Latitude 32.288820° Lo	ngitude103.923228° NAD83
NATURE	OF RELEASE
Type of Release Illegal Dumping - Oil, Cement, Water	Volume of Release 10 bbls Volume Recovered 0 bbls
Source of Release Unknown	Date and Hour of Occurrence Date and Hour of Discovery
	1/9/2018 time unknown 1/9/2018 1:30 pm
Was Immediate Notice Given?	If YES, To Whom? N/A
By Whom? N/A	Date and Hour: N/A
Was a Watercourse Reached?	If YES, Volume Impacting the Watercourse.
🗌 Yes 🖾 No	N/A
	ocation from an unknown source. New Mexico State Police were contacted and a
site visit was performed and case #NMSPR1800615 was issued. Describe Area Affected and Cleanup Action Taken.* The dumped areas affected the well pad, pasture and reserve pit to the nor dragged and an environmental contractor was retained to assist with remed	thwest and southwest of the well pad. The stained area of the well pad was back- diation efforts.
regulations all operators are required to report and/or file certain release no public health or the environment. The acceptance of a C-141 report by the should their operations have failed to adequately investigate and remediate	he best of my knowledge and understand that pursuant to NMOCD rules and otifications and perform corrective actions for releases which may endanger e NMOCD marked as "Final Report" does not relieve the operator of liability e contamination that pose a threat to ground water, surface water, human health oes not relieve the operator of responsibility for compliance with any other
1 state	OIL CONSERVATION DIVISION
Signatures a future	Cr. MADIAN
Printed Name: Kyle Littrell	Approved by Environmental Specialist:
Printed Name: Kyle Littrell	Approved by Environmental Specialist: MAGUX W
Printed Name: Kyle Littrell Title: Environmental Coordinator	Approval Date: 1/25/18 Expiration Date: N/A
Printed Name: Kyle Littrell Title: Environmental Coordinator	

125/1	8.4B
12	BAB

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 Page 2 of 358

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

)

Incident ID	NAB1802927873
District RP	2RP-4585
Facility ID	
Application ID	

## **Release Notification**

### **Responsible Party**

Responsible Party: XTO Energy, Inc.	OGRID: 5380
Contact Name:	Contact Telephone:
Contact email:	Incident #: NAB1802927873
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

### **Location of Release Source**

Latitude <u>32.288820</u>

Longitude -103.923228 (NAD 83 in decimal degrees to 5 decimal places)

Site Name Remuda Basin State #2	Site Type Exploration and Production
Date Release Discovered January 9, 2018, 1:30 P.M.	API# (if applicable) 30-015-28400

ſ	Unit Letter	Section	Township	Range	County
	K	19	238	30E	Eddy

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

### Nature and Volume of Release

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

Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
Produced Water Volume Released (bbls)		Volume Recovered (bbls)
	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) Oil, Cement, Water mix	Volume/Weight Released (provide units) 10 bbls	Volume/Weight Recovered (provide units) 0.0 bbls

Cause of Release

A lease operator arrived onsite to find multiple areas of fluids dumped on location from an unknown source. New Mexico State Police were contacted, and a case was issued. The dumped areas affected the well pad, pasture, and reserve pit. The stained area of the well pad was dragged.

Was this a major	If YES, for what reason(s) does the responsible party consider this a major release?
release as defined by	
19.15.29.7(A) NMAC?	
🗌 Yes 🖾 No	
If YES, was immediate ne	otice given to the OCD?

### **Initial Response**

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

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

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

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

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

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

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

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

Printed Name: <u>Garrett Green</u>	Title:Environmental Coordinator
Signature:Satt Sum	Date: <u>6-30-2022</u>
email:garrett.green@exxonmobil.com	Telephone: <u>575-200-0729</u>
OCD Only	
Received by:	Date:

Page 2

Received by OCD: 7/8/2022 8:01:28 AM Form C-141 State of New Mexico

Oil Conservation Division

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Incident ID	NAB1802927873	
District RP	2RP-4585	
Facility ID		
Application ID		

### Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>50-100</u> (ft bgs)
Did this release impact groundwater or surface water?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	🗌 Yes 🛛 No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	🗌 Yes 🛛 No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	🗌 Yes 🛛 No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	🗌 Yes 🛛 No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a wetland?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying a subsurface mine?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying an unstable area such as karst geology?	🛛 Yes 🗌 No
Are the lateral extents of the release within a 100-year floodplain?	🗌 Yes 🛛 No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	🗌 Yes 🔀 No

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

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

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- 🛛 Field data

Page 3

- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within <sup>1</sup>/<sub>2</sub>-mile of the lateral extents of the release
- Boring or excavation logs
- $\boxtimes$  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.

Received by OCD: 7/8/202	22 8:01:28 AM State of New Mexico				Page 5 of 358
				Incident ID	NAB1802927873
Page 4	Oil Conservation Division	servation Division		District RP	2RP-4585
				Facility ID	
				Application ID	
regulations all operators are public health or the environ failed to adequately investig addition, OCD acceptance of and/or regulations. Printed Name: <u>Garret</u> Signature: <u>Satta</u> email: <u>garrett.green@ex</u>		tifications OCD does reat to grou f responsib Title: Date: _	and perform cc not relieve the indwater, surfa bility for compl Environme <u>6-30-2022</u>	prrective actions for rele e operator of liability sh- ce water, human health iance with any other fea <u>ntal Coordinator</u>	eases which may endanger ould their operations have or the environment. In deral, state, or local laws
OCD Only					
Received by:			Date:		

Incident ID	NAB1802927873
District RP	2RP-4585
Facility ID	
Application	D

## Closure

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

<b><u>Closure Report Attachment Checklist</u></b> : Each of the following	items must be included in the closure report.
$\square$ A scaled site and sampling diagram as described in 19.15.29.	11 NMAC
Photographs of the remediated site prior to backfill or photographs be notified 2 days prior to liner inspection)	s of the liner integrity if applicable (Note: appropriate OCD District office
Laboratory analyses of final sampling (Note: appropriate OD	C District office must be notified 2 days prior to final sampling)
Description of remediation activities	
and regulations all operators are required to report and/or file certa may endanger public health or the environment. The acceptance of should their operations have failed to adequately investigate and re- human health or the environment. In addition, OCD acceptance of	ations. The responsible party acknowledges they must substantially onditions that existed prior to the release or their final land use in
Printed Name: <u>Garrett Green</u>	Title: <u>Environmental Coordinator</u>
Signature:Sut Sur	Date: <u>6-30-2022</u>
email:garrett.green@exxonmobil.com	Telephone: <u>575-200-0729</u>
OCD Only Received by: OCD	Date:7/8/2022
	of liability should their operations have failed to adequately investigate and water, human health, or the environment nor does not relieve the responsible /or regulations.
Closure Approved by: <u>Ashley Maxwell</u>	Date: 9/22/2022
Printed Name: Ashley Maxwell	Title: Environmental Specialist

# **E** ENSOLUM

July 1, 2022

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

#### Re: Closure Request Addendum Remuda Basin State #2 Incident Number NAB1802927873 Eddy County, New Mexico

To Whom it May Concern:

Ensolum, LLC (Ensolum) on behalf of XTO Energy, Inc. (XTO), has prepared the following addendum to the original Closure Request submitted on May 6, 2020. This addendum details the additional remediation activities completed at the Remuda Basin State #2 (Site) in response to the denial of the original Closure Request by the New Mexico Oil Conservation Division (NMOCD). In the denial, NMOCD indicated that the Site was located in a high-potential karst area and the most stringent Table 1 Closure Criteria applied. Based on the additional remediation activities described below, XTO is submitting this Closure Request Addendum and requesting closure for Incident Number NAB1802927873.

#### BACKGROUND

The Site is located in in Unit K, Section 19, Township 23 South, Range 30 East, in Eddy County, New Mexico (32.288820 °N, -103.923228 °W) and is associated with oil and gas exploration and production operations on New Mexico State Land.

On January 9, 2018, a lease operator arrived onsite to find multiple areas where fluids had been dumped on the Site from an unknown source. The New Mexico State Police were contacted, and a case number was issued. The release from the illegal dumping affected the well pad, pasture, and historical reserve pit. Approximately 10 barrels (bbls) of oil, cement, and water were released. XTO reported the release to the NMOCD on a Release Notification and Corrective Action Form C-141 on January 22, 2018. The release was assigned Incident Number NAB1802927873.

Between October 2019 and March 2020, XTO conducted assessment, delineation, and excavation activities in response to the release. An estimated 287 cubic yards of impacted soil were excavated from the Site. Based on the site assessment activities and laboratory analytical results from the soil sampling events, XTO submitted a Closure Request on May 6, 2020, requesting no further action (NFA) for the release.

The Closure Request detailed site characterization according to Table 1, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Results from the site characterization are presented on page 3 of the Form C-141, Site Assessment/Characterization. Potential site receptors are identified on Figure 1.

Remuda Basin State #2

Based on the site characterization and a pedestrian karst survey conducted at the Site, the following NMOCD Table 1 Closure Criteria (Closure Criteria) were applied:

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

On July 9, 2020, NMOCD denied the Closure Request for Incident Number NAB1802927873 for the following reasons:

- There is a specific process to have BLM change a karst designation. The OCD follows the BLM, when it comes to karst. The BLM puts together and updates the karst maps. If a site shows as high karst under the current map, that is what we go off of. Ideally, you would need to send your karst study to the BLM and try to get high karst potential downgraded to medium in this particular area. If they do make changes to the map, let us know and we will honor their decision.
- The entire spill area is in high karst, so the closure criteria that would apply is 600 mg/kg on Chlorides and 100 mg/kg on TPH. Please make sure all floor samples and sidewall samples are below these limits.

During December 2021, final abandonment of the Site began. Once the well was abandoned and all production equipment and pipelines were removed from the Site, final remediation of the Site was scheduled. In response to the denial of the original Closure Request, the following Closure Criteria were applied during the final remediation/reclamation activities.

- Benzene: 10 mg/kg
- BTEX: 50 mg/kg
- TPH: 100 mg/kg
- Chloride: 600 mg/kg

#### DELINEATION SOIL SAMPLING ACTIVITIES AND ANALYTICAL RESULTS

Delineation activities were conducted at the Site during January and February 2022. Potholes PH01 through PH15 (intially advanced during 2019) were deepened, and pothloes PH16 through PH18 were advanced to delineate the lateral and vertical extent of impacted soil identified during the 2019/2020 assessment and excavation activities and documented in the original May 2020 Closure Request.

The potholes were advanced to depths ranging from 4 feet to 20 feet bgs. Delineation soil samples were collected from each pothole from depths ranging from 1-foot to 20 feet bgs. Soil from the potholes was field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach<sup>®</sup> chloride QuanTab<sup>®</sup> test strips. Field screening results and observations for the potholes were logged on lithologic/soil sampling logs, which are included in Appendix A. The pothole and delineation soil sample locations are depicted on Figure 2.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Eurofins

Remuda Basin State #2

### **ENSOLUM**

Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results for the delineation soil samples collected from potholes PH01 through PH18 indicated that chloride concentrations exceeded the Closure Criteria at depths ranging from 1-foot to 5 feet to 7 feet bgs in most areas, and as deep as 16 feet bgs in one location at PH16. The terminal depth sample from each pothole was compliant with the Closure Criteria and provided vertical delineation of the chloride impacted soil at depths ranging from 4 feet to 20 feet bgs.

Laboratory analytical results for the delineation samples collected from potholes PH03 and PH04, located near the northwest portion of the pad, indicated that TPH concentrations exceeded the Closure Criteria. The TPH impacts extended to a depth of 3 feet bgs in pothole PH03 and 5 feet bgs in pothole PH04. No hydrocarbon impacts were identified in any of the other potholes advanced at the Site.

Based on laboratory analytical results for the delineation soil samples, additional remediation activities were warranted.

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

Based on the volume of chloride impacted soil identified below 4 feet bgs and vertical delineation of the impacted soil at 18 locations across the well pad, XTO proceeded to excavate the top four feet of soil from the entire well pad and install a 20-mil impermeable liner in the floor of the excavation to mitigate further chloride impacts into the subsurface. The TPH impacted soil identified near pothole PH03 was excavated to a depth of 4 feet bgs. The TPH impacted soil identified near pothole PH04 was excavated to a depth of 6 feet bgs. Pothole PH04 was located north of the well pad and was the only excavation area not included within the liner extent. Photographic documentation of the excavation activities is included in Appendix B.

Following removal of the impacted soil, 5-point composite soil samples were collected from the sidewalls of both excavations and from the floor of the unlined excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite sidewall samples SW01 through SW03 and composite floor samples FS01 and FS02 were collected from the excavation north of the pad near pothole PH04, from depths ranging from the ground surface to 6 feet bgs.

Composite samples SW03 through SW27 were collected from the sidewalls of the lined well pad excavation from depths ranging from the ground surface to 4 feet bgs. Floor samples were not collected since a liner was installed in the floor of the excavation and the delineation potholes provided vertical delineation of the chloride impacted soil at 18 locations across the pad. The soil samples were collected, handled, and analyzed following the same procedures as described above. The excavation extents, liner extent, and excavation soil sample locations are presented on Figure 2.

The excavation area measured approximately 60,000 square feet. A total of approximately 12,720 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Facility in Hobbs, New Mexico.

Laboratory analytical results for excavation sidewall samples SW01 through SW27 and excavation floor samples FS01 and FS02 indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the most stringent Table 1 Closure Criteria. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included as Appendix C.

Remuda Basin State #2

#### **CLOSURE REQUEST**

Site assessment, excavation, and liner installation activities were conducted at the Site to address the January 9, 2018, illegal dumping event. Laboratory analytical results for the excavation sidewall samples indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the most stringent Table 1 Closure Criteria in the top four feet. Upon completion of the excavation activities, a 20-mil impermeable liner was installed at 4 feet bgs over the deeper chloride impacted soil to mitigate further impacts to the subsurface. Based on the soil sample analytical results and installation of the impermeable liner, no further remediation was required. XTO backfilled the excavation with material purchased locally and recontoured the Site to match pre-existing site conditions. The reclaimed well pad was re-seeded with an approved BLM seed mixture.

Excavation of impacted soil from the top four feet and installation of an impermeable liner in the floor of the excavation has mitigated impacts at this Site. Depth to groundwater has been determined to be greater than 50 feet bgs and no other sensitive receptors were identified near the release extent. XTO believes these remedial actions are protective of human health, the environment, and groundwater. As such, XTO respectfully requests closure for Incident Number NAB1802927873.

If you have any questions or comments, please contact Ms. Aimee Cole at (720) 384-7365 or acole@ensolum.com.

Sincerely, Ensolum, LLC

Aimee Cole Senior Managing Scientist

Ashley L. ager

Ashley L. Ager, M.S., P.G. Program Director

cc: Garrett Green, XTO New Mexico State Land Office

Appendices:

- Figure 1 Site Receptor Map
- Figure 2 Delineation and Excavation Soil Sample Locations
- Table 1
   Soil Sample Analytical Results
- Appendix A Lithologic Soil Sampling Logs
- Appendix B Photographic Log
- Appendix C Laboratory Analytical Reports & Chain-of-Custody Documentation
- Appendix D NMOCD Notifications





**FIGURES** 

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## TABLES

				Remuda Basin Si	TABLE 1         PLE ANALYTIC/         tate #2 / Incident         XTO Energy, Inc         y County, New M	ID NAB18029278	73						
Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)			
NMOCD Table 1 C	NMOCD Table 1 Closure Criteria (NMAC 19.15.29)         10         50         NE         NE         NE         NE         100         600												
Delineation Soil Samples													
PH01	1	10/29/2019	<0.00100	<0.00100	<50.2	<50.2	<50.2	<50.2	<50.2	778			
PH01A	2	10/29/2019	<0.000994	<0.000994	<50.1	<50.1	<50.1	<50.1	<50.1	958			
PH01B	3	10/29/2019	<0.000998	<0.000998	<50.3	<50.3	<50.3	<50.3	<50.3	1,110			
PH01C	4	10/29/2019	<0.00101	<0.00101	<49.9	<49.9	<49.9	<49.9	<49.9	852			
PH01D	5	02/15/2022	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	1,120			
PH01E	6	02/15/2022	<0.00198	<0.00397	<50.0	<50.0	<50.0	<50.0	<50.0	24.2			
PH02	1	10/29/2019	<0.000994	<0.000994	<50.0	<50.0	<50.0	<50.0	<50.0	<9.98			
PH02A	2	10/29/2019	<0.000998	0.00512	<50.1	<50.1	<50.1	<50.1	<50.1	71.8			
PH02B	3	10/29/2019	< 0.00100	<0.00100	<50.2	<50.2	<50.2	<50.2	<50.2	881			
PH02C	4	10/29/2019	< 0.00101	<0.00101	<50.0	<50.0	<50.0	<50.0	<50.0	1,500			
PH02D	5	10/29/2019	<0.000994	<0.000994	<49.9	<49.9	<49.9	<49.9	<49.9	841			
PH02E	6	10/29/2019	<0.00100	<0.00100	<50.0	<50.0	<50.0	<50.0	<50.0	511			
PH03	1	10/29/2019	<0.00101	<0.00101	<50.2	412	80.6	412	493	709			
PH03A	2	10/29/2019	<0.000992	<0.000992	<50.0	1350	253	1,350	1,600	417			
PH03B	3	10/29/2019	<0.000990	0.00465	<50.1	230	<50.1	230	230	299			
PH03C	4	10/29/2019	< 0.00100	<0.00100	<49.8	68.7	<49.8	68.7	68.7	582			
PH03D	5	10/29/2019	<0.000992	<0.000992	<50.0	<50.0	<50.0	<50.0	<50.0	581			
PH03E	6	10/29/2019	<0.00101	<0.00101	<50.2	<50.2	<50.2	<50.2	<50.2	462			
PH04	1	10/29/2019	<0.000998	0.00635	<50.1	162	<50.1	162	162	<9.98			
PH04A	2	10/29/2019	<0.000998	<0.000998	<50.3	137	<50.3	137	137	<10.1			
PH04B	3	01/12/2022	<0.00200	<0.00400	<50.0	60.8	<50.0	60.8	60.8	82.3			
PH04D	5	01/12/2022	<0.00199	<0.00398	<49.9	453	<49.9	453	453	11.2			
PH05	1	10/29/2019	<0.00100	<0.00100	<50.0	<50.0	<50.0	<50.0	<50.0	<9.96			
PH05A	2	10/29/2019	<0.000994	<0.000994	<50.3	<50.3	<50.3	<50.3	<50.3	<10.1			
PH05B	3	10/29/2019	<0.00100	<0.00100	<50.1	<50.1	<50.1	<50.1	<50.1	112			
PH05C	4	10/29/2019	<0.00101	<0.00101	<50.3	<50.3	<50.3	<50.3	<50.3	42.9			
PH05D	5	10/29/2019	<0.000998	<0.000998	<50.0	<50.0	<50.0	<50.0	<50.0	50.1			

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TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS Remuda Basin State #2 / Incident ID NAB1802927873 XTO Energy, Inc. Eddy County, New Mexico												
Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)		
NMOCD Table 1 C	losure Criteria	(NMAC 19.15.29)	10	50	NE	NE	NE	NE	100	600		
PH06	1	10/29/2019	<0.00100	<0.00100	<50.3	<50.3	<50.3	<50.3	<50.3	82.8		
PH06B	3	10/29/2019	< 0.00100	<0.00100	<49.9	<49.9	<49.9	<49.9	<49.9	753		
PH06D	5	10/29/2019	<0.000998	<0.000998	<50.1	<50.1	<50.1	<50.1	<50.1	2,600		
PH06F	7	10/29/2019	<0.000994	<0.000994	<50.3	<50.3	<50.3	<50.3	<50.3	958		
PH06I	10	01/13/2022	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	1,240		
PH06J	11	01/24/2022	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	225		
PH07	1	10/29/2019	<0.00100	<0.00100	<50.3	<50.3	<50.3	<50.3	<50.3	1,600		
PH07A	2	10/29/2019	<0.00101	0.00483	<50.2	<50.2	<50.2	<50.2	<50.2	1,130		
PH07B	3	10/29/2019	<0.000992	0.00773	<49.9	<49.9	<49.9	<49.9	<49.9	236		
PH07C	4	10/29/2019	<0.00100	<0.00100	<50.0	<50.0	<50.0	<50.0	<50.0	730		
PH07D	5	10/29/2019	<0.000996	<0.000996	<50.1	<50.1	<50.1	<50.1	<50.1	214		
PH07E	6	10/29/2019	<0.000998	<0.000998	<50.2	<50.2	<50.2	<50.2	<50.2	51.7		
PH08	1	10/30/2019	<0.000998	<0.000998	<50.3	<50.3	<50.3	<50.3	<50.3	1,330		
PH08A	2	10/30/2019	<0.00101	<0.00101	<50.0	<50.0	<50.0	<50.0	<50.0	551		
PH08B	3	10/30/2019	<0.000998	<0.000998	<50.2	<50.2	<50.2	<50.2	<50.2	498		
PH08C	4	10/30/2019	<0.000996	<0.000996	<49.8	<49.8	<49.8	<49.8	<49.8	78.3		
PH08D	5	10/30/2019	<0.00101	<0.00101	<50.0	<50.0	<50.0	<50.0	<50.0	36.2		
PH08E	6	10/30/2019	<0.00101	<0.00101	<50.3	<50.3	<50.3	<50.3	<50.3	352		
PH09	1	10/30/2019	<0.000990	<0.000990	<50.1	<50.1	<50.1	<50.1	<50.1	1,070		
PH09A	2	10/30/2019	<0.000998	<0.000998	<50.2	<50.2	<50.2	<50.2	<50.2	569		
PH09B	3	10/30/2019	<0.000996	<0.000996	<50.2	<50.2	<50.2	<50.2	<50.2	716		
PH09C	5	01/13/2022	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	120		
PH10	1	10/30/2019	<0.000998	<0.000998	<50.2	<50.2	<50.2	<50.2	<50.2	2,220		
PH10A	2	10/30/2019	<0.00100	<0.00100	<50.2	<50.2	<50.2	<50.2	<50.2	1,170		
PH10B	3	10/30/2019	<0.000998	<0.000998	<50.2	<50.2	<50.2	<50.2	<50.2	705		
PH10C	4	10/30/2019	<0.00100	<0.00100	<50.3	<50.3	<50.3	<50.3	<50.3	<497		
PH10D	5	01/13/2022	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	466		

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	TABLE 1         SOIL SAMPLE ANALYTICAL RESULTS         Remuda Basin State #2 / Incident ID NAB1802927873         XTO Energy, Inc.         Eddy County, New Mexico												
Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)			
NMOCD Table 1 Cl	osure Criteria	(NMAC 19.15.29)	10	50	NE	NE	NE	NE	100	600			
PH11	1	10/30/2019	<0.00100	<0.00100	<50.0	<50.0	<50.0	<50.0	<50.0	7,490			
PH11A	2	10/30/2019	<0.000988	<0.000988	<50.1	<50.1	<50.1	<50.1	<50.1	1,360			
PH11B	3	10/30/2019	<0.000988	<0.000988	<50.0	<50.0	<50.0	<50.0	<50.0	<498			
PH12	1	11/04/2019	< 0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	1,800			
PH12A	2	11/04/2019	<0.0000199	<0.0000199	<49.8	<49.8	<49.8	<49.8	<49.8	2,370			
PH12B	3	11/04/2019	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	2,250			
PH12C	4	11/04/2019	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	1,170			
PH12D	5	11/04/2019	<0.00202	<0.00202	<49.8	<49.8	<49.8	<49.8	<49.8	1,650			
PH12E	6	01/12/2022	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	539			
PH13	1	11/04/2019	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	1,350			
PH13A	2	11/04/2019	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	1,610			
PH13B	3	11/04/2019	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	<49.9	1,570			
PH13C	4	01/12/2022	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	422			
PH14	1	11/04/2019	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	5,880			
PH14A	2	11/04/2019	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	<49.9	4,470			
PH14B	3	11/04/2019	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	3,990			
PH14C	4	11/04/2019	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	1,930			
PH14E	6	01/28/2022	<0.00198	<0.00397	<50.0	<50.0	<50.0	<50.0	<50.0	802			
PH14F	7	01/28/2022	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	412			
PH15	7	12/04/2019	<0.00201	<0.00201	<50.2	<50.2	<50.2	<50.2	<50.2	1,060			
PH15A PH16	8	12/04/2019	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	406			
PH16 PH16A	4	01/14/2022	< 0.00198	< 0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	11,900			
PH16A PH16B	10	01/14/2022	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	2,400			
PH16B PH16C	14	01/14/2022	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	979			
PH16D	16	01/14/2022	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	<50.0	<b>694</b> 477			
PH17	20 1	01/14/2022 01/12/2022	<0.00201 <0.00200	<0.00402 <0.00401	<49.9 <50.0	<49.9 <50.0	<49.9 <50.0	<49.9 <50.0	<49.9 <50.0	944			
PH17B	3	01/12/2022	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	944 806			
PH17D	5	02/15/2022	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	603			
PH17E	6	02/15/2022	<0.00200	<0.00401	<49.9 <49.9	<49.9	<49.9	<49.9	<49.9	467			

				Remuda Basin Si	TABLE 1 PLE ANALYTIC/ tate #2 / Incident XTO Energy, Inc y County, New M	ID NAB18029278	73			
Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 C	losure Criteria	(NMAC 19.15.29)	10	50	NE	NE	NE	NE	100	600
PH18 PH18B PH18E PH18F BH01 BH01A BH02 BH02A BH03A	1 3 6 7 0.5 1 0.5 1 0.5 1 0.5	01/12/2022 01/12/2022 02/15/2022 02/15/2022 03/17/2020 03/17/2020 03/17/2020 03/17/2020 03/17/2020 03/17/2020	<0.00198 <0.00199 <0.00199 <0.00198 <0.00202 <0.00198 <0.00201 <0.00201 <0.00201 <0.00198 <0.00200	<0.00397 <0.00398 <0.00398 <0.00397 <0.00202 <0.00198 <0.00201 <0.00201 <0.00201 <0.00198 <0.00200	<49.9 <50.0 <50.0 <50.0 <49.9 <50.3 <50.3 <50.2 <50.2 <50.2	<49.9 <50.0 <50.0 <50.0 <49.9 <50.3 <50.3 <50.2 <50.2 <50.2	<49.9 <50.0 <50.0 <49.9 <50.3 <50.3 <50.2 <50.2 <50.2	<49.9 <50.0 <50.0 <49.9 <50.3 <50.3 <50.2 <50.2 <50.2	<49.9 <50.0 <50.0 <49.9 <50.3 <50.3 <50.2 <50.2 <50.2	1,060 596 1,440 134 6,180 3,580 4,740 4,300 6,640 6,630
BH03A		03/17/2020		orthern TPH Excava				<30.2	<30.2	6,630
FS01 FS02 SW01	6 6 0 - 6	01/20/2022 01/25/2022 01/20/2022	<0.00202 <0.00202 <0.00199	<0.00403 <0.00403 <0.00398	<50.0 <49.9 <49.9	<50.0 <49.9 <49.9	<50.0 <49.9 <49.9	<50.0 <49.9 <49.9	<50.0 <49.9 <49.9	97.7 179 317
SW02 SW03	0 - 6 0 - 6	01/25/2022 01/25/2022	<0.00200 <0.00200	<0.00330 <0.00401 <0.00400	<50.0 <50.0	<50.0 60.1	<50.0 <50.0	<50.0 60.1	<50.0 60.1	268 424

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				Remuda Basin Si	TABLE 1 PLE ANALYTIC/ tate #2 / Incident XTO Energy, Inc y County, New M	ID NAB180292787 	73			
Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 C	losure Criteria	(NMAC 19.15.29)	10	50	NE	NE	NE	NE	100	600
				Well Pad Exc	avation - Sidewa	II Soil Samples				
SW04	0 - 4	01/24/2022	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	51.0
SW05	0 - 4	02/07/2022	<0.00198	<0.00397	<50.0	<50.0	<50.0	<50.0	<50.0	110
SW06	0 - 4	02/14/2022	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	159
SW07	0 - 4	02/07/2022	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	528
SW08	0 - 4	02/11/2022	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	362
SW09	0 - 4	02/11/2022	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	432
SW10	0 - 4	02/16/2022	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	<50.0	329
SW11	0 - 4	02/14/2022	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	525
SW12	0 - 4	02/14/2022	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	483
SW13	0 - 4	02/14/2022	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	274
SW14	0 - 4	02/14/2022	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	34.2
SW15	0 - 4	02/14/2022	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	210
SW16	0 - 4	02/16/2022	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	66.9
SW17	0 - 4	02/16/2022	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	46.6
SW18	0 - 4	02/16/2022	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	41.2
SW19	0 - 4	02/16/2022	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	80.6
SW20	0 - 4	02/16/2022	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	56.3
SW21	0 - 4	02/16/2022	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	555
SW22	0 - 4	02/16/2022	<0.00198	<0.00397	<50.0	72.1	<50.0	72.1	72.1	455
SW23	0 - 4	02/16/2022	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	304
SW24	0 - 4	02/16/2022	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	224
SW25	0 - 4	02/16/2022	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	292
SW26	0 - 4	02/16/2022	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	91.3
SW27	0 - 4	02/16/2022	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	<50.0	206

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics DRO: Diesel Range Organics ORO: Oil Range Organics TPH: Total Petroleum Hydrocarbon

Concentrations in **bold** exceed the NMOCD Table 1 Closure Criteria or reclamation G standard where applicable.

or reclamation Grey text represents samples that have been excavated

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APPENDIX A

Lithologic Soil Sampling Logs

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								Sample Name: PH01	Date: 10.24.2019	
		-						Site Name: Remuda Basin State #2		
	1	1	N	S	OL	. U		Incident Number:		
		_						Job Number:		
					SAMPLING				Method: Trackhoe	
Coord	inates:				AWFLING	100		Logged By: SL/CS Hole Diameter:	Total Depth: 6'	
		ld screeni	ing co	nducted w	ith HACH Ch	loride Test 9	Strins and	PID for chloride and vapor, respect		
								10.24.2019, 5'-6' taken on 02.14.20		
							×			
Moisture Content	Chloride Chloride (ppm)				-	SCS/Roc Symbol	Lithologic Descriptions			
Συ	C		Ś	Sa	(ft bgs)		s SU			
D	854	0.0	N	PH01	1' _	L 1 	CL	Sandy Clay, Red brown, cohesion, medium to fine g no stain, nc	rained, poorly graded,	
D	750	0.0	Ν	PH01A	2'	2	SAA	SAA		
D	1075	0.0	Ν	PH01B	3' _	3	SAA	SAA		
D	750	0.0	N	PH01C	4'	4	SAA	Caliche Gravel		
D	1260	0.2	N	PH01D	5'	5	SAA	SAA		
D	369.6	0.2	N	PH01E	- 6' _	6	SAA	SAA		
						-				

<b>I</b>									
		-			-			Sample Name: PH02 Date: 10.24.2019	
			N	S	OL			Site Name: Remuda Basin State #2	
			-		-			Incident Number:	
			000					Job Number:	
		LITHOL	OGI	C / SOIL S	SAMPLING	LOG		Logged By: SL Method: Trackhoe	e
	inates:							Hole Diameter: Total Depth: 6'	
					ith HACH Ch I to distilled		strips and	PID for chloride and vapor, respectively. Chloride test	
Moisture Content	Moisture       Content         Content       Content         Content       Chloride         Chloride       Chloride         Chloride       Chloride         Debth       (tppm)         USCS/Rock       Camble						USCS/Rock Symbol	Lithologic Descriptions	
D	<179	0.0	N	PH02	لل 1'	L - 1 -	CL	Sandy Clay, Red brown, Low Plasticity, I cohesion, medium to fine grained, poorly g no stain, no odor.	
D	<179	0.0	Ν	PH02A	2'	2	SAA	SAA	
D	443	0.0	Ν	PH02B	3' _	3	SAA	SAA	
D	1372	0.0	Ν	PH02C	4'	4	SAA	Some Caliche Gravel	
D	616	0.0	Ν	PH02D	5' _	5	CCHE	Sand w/ Caliche, tan brown, no odor no s medium-fine grained, poorly graded, no	
D	342	0.0	Ν	PH02E	6'	6	SAA	SAA	

								Consula Nama DUO2	Data: 40.24.2040
100		-			-			Sample Name: PH03	Date: 10.24.2019
			N	S	OL			Site Name: Remuda Basin State #2	
		_			-			Incident Number:	
<b> </b>			001					Job Number:	
		LITHOL	OGI	C/SOILS	SAMPLING	LOG		Logged By: SL	Method: Trackhoe
	inates:							Hole Diameter:	Total Depth: 6'
					I to distilled		strips and	PID for chloride and vapor, respecti	vely. Chloride test
Moisture Content	Staining Symbol Symbol						Lithologic Des	criptions	
D	297	0.4	N	PH03	1'	L - 1 -	CL	Sandy Clay, Red brown, cohesion, medium to fine gr no stain, no	rained, poorly graded,
D	252	2.1	Ν	PH03A	2'	2	SAA	SAA, has odor	
D	252	3.0	Ν	PH03B	3'	3	CCHE	Caliche, with sand, tan, odor	, no stain
D	218	2.0	Ν	PH03C	4'	4	SAA	SAA	
М	297	0.0	N	PH03D		5	CL	Clayey sand, with some caliche, ta inches), no odor, no staining, low p	
м	<179	0.0	N	PH03E	6'	6	SAA	poorly graded, medium-fine grain	-

								Sample Name: PH04	Date: 10.29.2019
		-						Site Name: Remuda Basin State #	
		E	N	S	OL		M	Incident Number:	۷
		_			-				
					SAMPLING			Job Number:	Mathed, Tre-List-
C		LITHOL	UGI	C/SULS	AIVIPLING	LUG		Logged By: SL	Method: Trackhoe
	inates:					la viala Tarat (		Hole Diameter:	Total Depth: 4'
					I to distilled		strips and	PID for chloride and vapor, respec	tively. Chloride test
Moisture Content	Moisture       Moisture         Content       Chloride         Chloride       Chloride         (ppm)       (ppm)         (ppm)       Staining         (tt pss)       Debth         (tt pss)       Debth         (tt pss)       Debth         USCS/Rock       USCS/Rock						USCS/Rock Symbol	Lithologic De	scriptions
D	<179	0.0	N	PH04	1'	L 1 	CL	Clayey Sand, Brown, no od graded, low plasticity,	
D	<179	0.0	Ν	PH04A	2'	2	SAA	SAA	
D	<179	0.0	N	PH04B	3'	3	SAA	SAA	
D	<179	0.0	Ν	PH04C	4'	- 4 - 4 	CCHE	Caliche, tan, off white, no c	odor, no stain
						- - -			

								Sample Name: PH05	Date: 10.29.2019
100		-						Site Name: Remuda Basin State #2	Date: 10.29.2019
115		12	N	S	OL	. U		Incident Number:	
		_						Job Number:	
			001		SAMPLING				Mathadi Trackhaa
Coord	inates:				SAIVIPLING	100		Logged By: SL Hole Diameter:	Method: Trackhoe Total Depth: 5'
		d scroop	ing co	and uctod w		lorido Tost 9	String and	PID for chloride and vapor, respecti	
					il to distilled			very. emonue test	
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Des	criptions
D	<179	0.3	N	PH05	لل 1'	L - 1 -	CL	Clayey Sand, Brown, no odo graded, low plasticity, l	
D	<179	0.4	Ν	PH05A	2'	2	SAA	SAA	
D	<179	0.8	N	PH05B	3'	3	SAA	SAA	
D	<179	0.1	Ν	PH05C	4'	4	CCHE	Caliche, tan, off white, no oc	lor, no stain
D	<179	1.0	Z	PH05D	5'	- 5	SAA	SAA	

								Sample Name: PH06	Date: 10.29.2019	
		-		-	0			Site Name: Remuda Basin State #2		
115		E	N	5	01	. U		Incident Number:		
in the second second								Job Number:		
			OGI		SAMPLING	106		Logged By: SL/CS	Method: Trackhoe	
Coordi								Hole Diameter:	Total Depth: 11'	
		ld screeni	ing co	onducted w	ith HACH Ch	loride Test S	Strips and	PID for chloride and vapor, respect		
			-				•	at a later date (01.13.22, and 01.24.	-	
				•			×			
Moisture Content	Chloride (ppm)	m)	Staining	Sample ID	Sample	Depth	USCS/Rock Symbol	Lithelesia Des		
lois	chlorid( (ppm)	Vapor (ppm)	tair	dm	Depth	(ft bgs)	CS/	Lithologic Descriptions		
ΣO	0		S	Sa	(ft bgs)		US S			
						L				
D	<179	1.5	Ν	PH06	1'	1	CL			
_								Clayey Sand, Brown, no odc		
						╞		graded, low plasticity, low cohesiveness		
D	493	1.1	Ν	PH06A	2'	2	SAA	SAA		
					-	-				
					_	-				
D	554	1.1	Ν	PH06B	3'	3	SAA	SAA		
					-	_				
	1404	1.4	NI	DUOCO	4'		<b>C</b> A A	Colishe ton off white no e	day na atain	
D	1484	1.4	Ν	PH06C	4 _	4	SAA	Caliche, tan, off white, no o	dor, no stain	
					-	-				
D	1848	1.0	Ν	PH06D	5'	5	SAA	SAA		
	10.0	110		111002			0,			
					_	-				
М	1602	0.7	Ν	PH06E	6'	6	SAA	SAA		
					-	-				
						-				
Μ	1170	0.9	Ν	PH06F	7' _	_ 7	SAA	SAA		
					-	_				
N /	907	1 1	NI	PH06G	8'	8	<b>۲</b> ۸	544		
Μ	907	1.1	Ν	PHUOG	ō _	Ō	SAA	SAA		
						F				
М	1170	1.2	Ν	РН06Н	9'	9	CCHE	Caliche Tan, Off white		
		_· <b>_</b>			-					
					_	F				
D	296	0.8	Ν	PH06I	10'	10	SAA	SAA		
					-	-				
						F				
D	212	0	Ν	PH06J	11'	11	SAA	SAA		
					-	ŀ				
					-	-				
					_	<b>-</b>				

								Sample Name: PH07	Date: 10.29.2019
100		-		-	0			Site Name: Remuda Basin State #	
115		2	N	5	OL	. U		Incident Number:	2
								Job Number:	
			001		SAMPLING				Method: Trackhoe
Coord	inates:				ANTLING	100		Logged By: SL Hole Diameter:	Total Depth: 6'
-		d scroop	ing co	nductod w		lorido Tost (	String and	PID for chloride and vapor, respec	
					l to distilled			chively. emonae test	
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic De	escriptions
D	683	0.7	N	PH07	1'	L - 1 -	CL	Clayey Sand, Brown, no od Sorted, low plasticity	
D	554	0.0	Ν	PH07A	2' _	2	SAA	SAA	
D	829	1.2	Ν	PH07B	3'	3	SAA	SAA	
D	297	0.6	Ν	PH07C	4'	4	SAA	SAA	
D	342	0.7	Ν	PH06D	5' _	5 5	SAA	SAA	
D	<179	0.1	Ν	PH07E	6'	6	SAA	SAA	

								Sample Name: PH08	Date: 10.30.2019
		-						Site Name: Remuda Basin State #2	
		=	N	S	OL	. U			-
	-	_			-			Incident Number:	
								Job Number:	
Coord		LITHOL	UGI	C/SULS	SAMPLING	LUG		Logged By: SL	Method: Trackhoe Total Depth: 6'
Coordi						la vida Taat (		Hole Diameter:	
					I to distilled	strips and	PID for chloride and vapor, respect	ively. Chionae test	
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Des	scriptions
D	750	0.0	N	PH08	1'	L - 1 -	CL	Clayey Sand, Brown, no odc graded, low plasticity,	
D	297	0.0	Ν	PH08A	2' _	2	SAA	SAA	
D	297	0.0	Ν	PH08B	3' _	3	SAA	SAA	
D	<179	0.0	Ν	PH08C	4'	4	SAA	SAA	
D	<179	0.0	Ν	PH08D	5' _	5	CCHE	Caliche, tan, off white, no o	dor, no stain
D	<179	0.0	N	PH08E	6'	6	SAA	SAA	
					+ + + + + + + +	   			
						- - - -			
					-	 - -			

								Sample Name: DU00	Date: 10.30.2019
		-						Sample Name: PH09 Site Name: Remuda Basin State #2	
		=	N	S	OL	. U	M	Incident Number:	
		_			-				
<b> </b>								Job Number:	
		LITHOL	OGI	C/SOILS	SAMPLING	LOG		Logged By: SL/CS	Method: Trackhoe
	inates:					Hole Diameter:	Total Depth: 5'		
							PID for chloride and vapor, respecti ected 01.13.2022	ively. Chloride test	
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Des	criptions
D	297	0.0	N	РН09	لل 1'	L - 1 -	CL	Clayey Sand, Brown, no odo graded, low plasticity,	
D	342	0.0	Ν	PH09A	2'	2	SAA	SAA	
D	252	0.0	Ν	PH09B	3'	3	CCHE	caliche, tan off white, no sta	in, no odor
					+ + + +	4			
D	176	0.0	Ζ	PH09C	5'	5	CCHE	Reddish brown sandstone w	ith caliche gravel

								Sample Name: DH10	Date: 10.30.2019
		-						Sample Name: PH10 Site Name: Remuda Basin State #2	
15		=	N	S	OL	. U	M	Incident Number:	
		_			-			Job Number:	
			061		SAMPLING	106		Logged By: SL/CS	Method: Trackhoe
Coordi						100		Hole Diameter:	Total Depth: 5'
		ld screen	ing co	onducted w	ith HACH Ch	trins and	PID for chloride and vapor, respect		
								ected 01.13.2022	
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Des	scriptions
D	907	0.2	N	PH10	1' _	L 1 	CL	Clayey Sand, Brown, no odc graded, low plasticity,	
D	1075	0.4	Ν	PH10A	2'	2	SAA	SAA, some caliche gravel	
D	297	0.6	Ν	PH10B	3'	3	CCHE	caliche, tan off white, no sta	iin, no odor
D	554	0.8	N	PH10C	4'	4	SAA		
D	341	0.0	N	PH10D	5' _	- 5 -	CCHE	Greyish brown sandstone with ca	aliche gravel, poorly sorted
					+	- - -			
					+	- - -			
					+ + 	- - -			
					بو + + +	- - -			
						- - -			
						- -			
					+ 				

								Cample Name: DU11	Data: 10.20.2010
		-			-			Sample Name: PH11	Date: 10.30.2019
		3	N	S	OL			Site Name: Remuda Basin State #2 Incident Number:	<u></u>
		_			-				
			000					Job Number:	Mathadi Tersila
Carrie		LITHOL	UGI	C/SULS	SAMPLING	LUG		Logged By: SL	Method: Trackhoe Total Depth: 3'
-	inates:	ld caroon		nductod w		larida Tast (	tring and	Hole Diameter: PID for chloride and vapor, respect	
					l to distilled	strips and	Piblior chionde and vapor, respect	ively. Chionae test	
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic De	scriptions
D	991	0.1	N	PH11	1' _	L 1 	CL	Clayey Sand, Brown, no odo graded, low plasticity,	
D	823	0.2	Ν	PH11A	2'	2	SAA	SAA, some caliche gravel	
D	252	0.2	Ν	PH11B	3'	3	CCHE	caliche, tan off white, no st	ain, no odor

								Sample Name: DH12 Dat	e: 11.04.2019
		-						Sample Name: PH12 Dat Site Name: Remuda Basin State #2	e: 11.04.2019
		=	N	S	OL	. U	M	Incident Number:	
		_						Job Number:	
<b>—</b>					SAMPLING				thod: Trackhoe
Coordi						100			al Depth: 6'
		ld screen	ing co	nducted w		String and	PID for chloride and vapor, respectively.	-	
								ected 01.12.22	chionde test
				_					
Moisture Content	Content Chloride (ppm) (							Lithologic Descript	tions
D	1484	2.0	N	PH12	1'	L - 1 -	CL	Clayey Sand, Brown, no odor, no graded, low plasticity, low	
D	2134	1.7	Ν	PH12A	2'	2	SAA	SAA	
М	2632	1.7	Ν	PH12B	3'	3	SAA	SAA	
М	907	0.9	N	PH12C	4'	4	sp-sm	sand with Caliche gravel, brow medium to fine grained, poorly	
D	750	0.6	Ν	PH12D	5' _	5	SAA	no stain. SAA	
D	369	0.1	N	PH12E	6'	6	SAA	Reddish brown, Fine grained cla	V
					-	- - -			

								Comple Name: DU12	Date: 11.04.2019
		-						Sample Name: PH13 Site Name: Remuda Basin State #2	
		E	N	S	OL	. U	M	Incident Number:	
		_							
			0.01		SAMPLING			Job Number:	Mathady Trackbar
Coord	inates:		UGI		SAIVIPLING	LUG		Logged By: SL/CS Hole Diameter:	Method: Trackhoe Total Depth: 4'
		ld ccroopi	ing	nductod		tring and	PID for chloride and vapor, respect		
								cted 01.12.22	ivery. Chionde test
							-		
Moisture Content	Content Content (ppm) (p							Lithologic Des	criptions
D	1271	1.7	N	PH13	1'	L - 1 -	CL	Clayey Sand, Brown, no odo graded, low plasticity,	
D	991	1.3	Ν	PH13A	2'	2	SAA	SAA, some caliche gravel	
D	1372	0.8	N	PH13B	3'	3	CCHE	Caliche, tan, off white, no oo	dor, no stain
D	476	0.1	Ν	PH13C	4'	4	SAA	SAA	

								Sample Name: PH14 Date: 11.04.2019
100		-		-	0			Site Name: Remuda Basin State #2
115		E	N	5	OL	. U		Incident Number:
a second								Job Number:
		ПТНОГ	OGI		SAMPLING			Logged By: SL/CS Method: Trackhoe
Coord	inates:					100		Hole Diameter: Total Depth: 7'
		ld screen	ing co	onducted w	ith HACH Ch	Strips and	I PID for chloride and vapor, respectively. Chloride test	
								ple collected 01.12.22
				0			~	
Moisture Content	Chloride (ppm)	or n)	Staining	Sample ID	Sample	Depth	JSCS/Rock Symbol	
oist ont	Chloride (ppm)	Vapor (ppm)	ain	hpl	Depth	(ft bgs)	cs/l yml	Lithologic Descriptions
ΣŬ	C C	/ )	St	Saı	(ft bgs)	(0-7	US( S	
						L		
D	3489	1.6	Ν	PH14	1'	1	sp-sc	
	5405	1.0	1.0	11114			30 30	Sand, brown, m-f, poorly graded, no stain, no odor, silt
					_	-		
М	2822	1.4	Ν	PH14A	2'	2	SAA	SAA
					-	-		
					_	_		
Μ	>3489	1.8	Ν	PH14B	3'	3	SAA	SAA
					-	-		
	4000	2.0	• •	<b>DU14 4 C</b>		-	~ • •	
Μ	1988	2.0	Ν	PH14C	4'	4	SAA	SAA
					-	-		
D	1142	0.2	N	PH14D	5'	5	SAA	
	1112	0.2		111110			5/ 4 (	Poorly sorted m-c grained sandstone with silt and
					-	_		caliche gravel
D	560	0.1	Ν	PH14E	6'	6	SAA	SAA
					-	-		
					_	-		
D	392	0.2	Ν	PH14F	7'	_ 7	SAA	SAA
					-	-		
					-	-		
					_	_		
					_	-		
					-	-		
						-		
					-	-		
						-		
					-	-		
						-		
					-	-		
						-		
					-	-		
						-		

								Sample Name: PH16	Date: 01/14/22-01/18/22
		-		C	0			Site Name: Remuda Basin State OC	
15		-	R	2	OL	. U		Incident Number:	
								Job Number:	
		LITHOL	OGI		SAMPLING	i LOG		Logged By: CS	Method: Trackhoe
Coord	inates:							Hole Diameter:	Total Depth: 20'
							PID for chloride and vapor, respect factors included.	ively. Chloride test	
p 0 01									
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Des	scriptions
					1	1			
					-	2			
					-	3			
N	>3466	2.0	Ν	PH16	4'	4	sp-sm	Reddish Brown Well sorted Fin	e grained sandstone
					-	5			
N	>3466	0.5	Ν		6'	6	SAA	SAA	
					-	7			
Ν	>3466	0.6	Ν		8'	8	SAA	SAA, with Gypsum	
					+	9			
Ν	>3466	0.2	Ν	PH16A	10'	10	sp-sm	reddish brown poorly sorted fi	ne grained sandstone
					+	11			
Ν	2850	0.3	Ν		12'	12	SAA	SAA	
					+	13			
Ν	2850	0.0	Ν	PH16B	14'	14	SAA	SAA	
Ν	1428	0.1	Ν		15' _	15	CCHE	Caliche	
Ν	1058	0.0	Ν	PH16C	16'	16	SAA	SAA	
Ν	896	0.4	Ν		17'	17	SAA	SAA	
Ν	1142	0.1	Ν		18'	18	SAA	SAA	
Ν	1142	0.1	Ν		19'	19	SAA	SAA	
Ν	1058	0.2	Ν	PH16D	20'	20	SAA	SAA	
						-			
						-			
						-			
					+ +	-			
					_	-			

								Comple News, DU17	Deta: 11.04.2010
		-			-			Sample Name: PH17 Site Name: Remuda Basin State #2	Date: 11.04.2019
	4	Ξ.	N	S	OL	. U	M	Incident Number:	
		_		-	-			Job Number:	
					SAMPLING	106			Mathady Tradubas
Coordi					AWPLING	LUG		Logged By: SL/CS Hole Diameter:	Method: Trackhoe Total Depth: 6'
		ld screen	ing co	nducted w		trins and	PID for chloride and vapor, respect		
			-				•	Jan14th-Feb15th	ivery. enionae test
				-			~		
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Des	scriptions
D	1142	0.1	N	PH17	1'	1	cche	Caliche	
М	752	0.1	N	PH17A	2'	2	SAA	SAA	
М	560	0.1	Ν	PH17B	3'	3	SAA	SAA	
М	392	0.1	Ν	PH17C	4' _	4	SAA	SAA	
D	526	0.0	Ν	PH17D	5' _	5	SAA	SAA	
D	369	0.0	N	PH17E	6'	6	SAA	SAA	
					  	- -			
					+ + +	- - -			
						-			
					+ + +	-			
					+ + + +	- -			
					-				
•

								Consula Norse DU40	Dete: 01 12 2022
1		-			-			Sample Name: PH18	Date: 01.12.2022
		Ξ	N	S	OL		M	Site Name: Remuda Basin State #.	2
		_			-			Incident Number:	
			001					Job Number:	
C		LITHOL	UGI	C/SULS	SAMPLING	LUG		Logged By: CS	Method: Trackhoe
	Coordinates: Hole Diameter: Total Depth: 7' Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test								
performed with 1:4 dilution factor of soil to distilled water. Collected from									tively. Chloride test
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic De	scriptions
D	974	0.1	N	PH18	1' _	L - 1 -	spsm	Red Brown Poorly sorted fine grained	sandstone
м	974	0.1	Ν	PH18A	2'	2	SAA	SAA, well sorted	
м	442	0.1	Ν	PH18B	3' _	3	cche	Caliche	
м	560	0.2	N	PH18C	4'	4	SAA	SAA	
D			N	PH18D	5' _	5	SAA	SAA	
D	1422	0.0	Ν	PH18E	6'	6	SAA	SAA	
D	<179	0	N	PH18F		7	SAA	SAA	
					-	- - -			
					-	- - -			
					-	- - -			
					-	- - -			
					-	-			



## APPENDIX B

Photographic Log





APPENDIX C

Laboratory Analytical Reports & Chain of Custody Documentation

Received by OCD: 7/8/2022 8:01:28 AM

# 🛟 eurofins

## Environment Testing America

## **ANALYTICAL REPORT**

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

#### Laboratory Job ID: 890-1830-1

Laboratory Sample Delivery Group: 31403236.001.0129.35.002 Client Project/Site: Remuda Basin State 002 Revision: 1

#### For:

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

Attn: Aimee Cole

RAMER

Authorized for release by: 1/20/2022 12:25:40 PM

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

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

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

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

www.eurofinsus.com/Env Released to Imaging: 9/22/2022 7:39:45 AM

Visit us at:

Laboratory Job ID: 890-1830-1 SDG: 31403236.001.0129.35.002

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QC Association Summary	18
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Client: WSP USA Inc. Project/Site: Remuda Basin State 002

Contains No Free Liquid

Detection Limit (DoD/DOE)

Estimated Detection Limit (Dioxin)

Limit of Detection (DoD/DOE)

Method Detection Limit

Minimum Level (Dioxin)

Most Probable Number

Not Calculated

Negative / Absent

Positive / Present Practical Quantitation Limit

Presumptive

**Quality Control** 

Method Quantitation Limit

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

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

Limit of Quantitation (DoD/DOE)

**Dilution Factor** 

Duplicate Error Ratio (normalized absolute difference)

Decision Level Concentration (Radiochemistry)

EPA recommended "Maximum Contaminant Level" Minimum Detectable Activity (Radiochemistry)

Minimum Detectable Concentration (Radiochemistry)

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

Job ID: 890-1830-1 SDG: 31403236.001.0129.35.002

#### Qualifiers

CNF

DER

DL

DLC

EDL

LOD

LOQ

MCL

MDA MDC

MDL

MPN

MQL

NC

ND NEG

POS

PQL PRES

QC

RER

RPD

TEF

TEQ

TNTC

RL

ML

Dil Fac

DL, RA, RE, IN

Quaimers		 3
GC VOA		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
GC Semi VC	AC	5
Qualifier	Qualifier Description	
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	8
F1	MS and/or MSD recovery exceeds control limits.	
U	Indicates the analyte was analyzed for but not detected.	9
Glossary		 10
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	

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

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#### Job ID: 890-1830-1

#### Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-1830-1

#### REVISION

The report being provided is a revision of the original report sent on 1/17/2022. The report (revision 1) is being revised due to Per client email, changed Sample IDs.

Report revision history

#### Receipt

The samples were received on 1/14/2022 8:07 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.0°C

#### GC VOA

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

#### GC Semi VOA

Method 8015MOD\_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-16978 and analytical batch 880-16964 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

#### HPLC/IC

Method 300\_ORGFM\_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-17007 and 880-17007 and analytical batch 880-17057 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

#### **Client Sample Results**

#### **Client Sample ID: PH17** Date Collected: 01/12/22 14:25 Date Received: 01/14/22 08:07

Sample Depth: 1

Method: 8021B - Volatile Orga Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00200	U	0.00200	mg/Kg		01/17/22 07:30	01/17/22 11:22	
Toluene	<0.00200	U	0.00200	mg/Kg		01/17/22 07:30	01/17/22 11:22	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/17/22 07:30	01/17/22 11:22	
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		01/17/22 07:30	01/17/22 11:22	
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/17/22 07:30	01/17/22 11:22	
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		01/17/22 07:30	01/17/22 11:22	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	105		70 - 130			01/17/22 07:30	01/17/22 11:22	
1,4-Difluorobenzene (Surr)	85		70 - 130			01/17/22 07:30	01/17/22 11:22	
Method: Total BTEX - Total B	TEX Calcula	tion						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00401	U	0.00401	mg/Kg			01/17/22 14:46	
Method: 8015 NM - Diesel Rai	nge Organic	s (DRO) (G	SC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<50.0	U	50.0	mg/Kg			01/17/22 14:06	
Method: 8015B NM - Diesel R	ange Organi	ics (DRO)	(GC)					
Analyte	• •	Qualifier		Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1	50.0	mg/Kg		01/17/22 09:12	01/17/22 12:49	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/17/22 09:12	01/17/22 12:49	
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/17/22 09:12	01/17/22 12:49	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane			70 - 130			01/17/22 09:12		
o-Terphenyl	70		70 - 130			01/17/22 09:12	01/17/22 12:49	
Method: 300.0 - Anions, Ion C	:hromatogra	phy - Solu	ıble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	944	F1	4.96	mg/Kg			01/17/22 14:20	
lient Sample ID: PH17A						Lab Samp	le ID: 890-1 Matrix	
							watrix	JUII
ate Collected: 01/12/22 14:30 ate Received: 01/14/22 08:07								
ate Collected: 01/12/22 14:30 ate Received: 01/14/22 08:07								
ate Collected: 01/12/22 14:30 ate Received: 01/14/22 08:07 ample Depth: 2 Method: 8021B - Volatile Orga	anic Compo							
ate Collected: 01/12/22 14:30 ate Received: 01/14/22 08:07 ample Depth: 2 Method: 8021B - Volatile Orga Analyte	anic Compou Result	Qualifier	RL	Unit	D	Prepared	Analyzed	
ate Collected: 01/12/22 14:30 ate Received: 01/14/22 08:07 ample Depth: 2 Method: 8021B - Volatile Orga Analyte Benzene	anic Compor	Qualifier	RL 0.00200	mg/Kg	<u>D</u>	01/17/22 07:30	01/17/22 11:42	_Dil Fa
ate Collected: 01/12/22 14:30 ate Received: 01/14/22 08:07 ample Depth: 2 Method: 8021B - Volatile Orga Analyte Benzene Toluene	anic Compor Result <0.00200 <0.00200	Qualifier U U	RL 0.00200 0.00200	mg/Kg mg/Kg	<u>D</u>	01/17/22 07:30 01/17/22 07:30	01/17/22 11:42 01/17/22 11:42	
ate Collected: 01/12/22 14:30 ate Received: 01/14/22 08:07 ample Depth: 2 Method: 8021B - Volatile Orga Analyte Benzene	anic Compor	Qualifier U U U	RL 0.00200	mg/Kg	<u>D</u>	01/17/22 07:30 01/17/22 07:30	01/17/22 11:42 01/17/22 11:42 01/17/22 11:42	

#### m-Xylene & p-Xylene mg/Kg 01/17/22 07:30 01/17/22 11:42 <0.00399 U 0.00399 o-Xylene <0.00200 U 0.00200 mg/Kg 01/17/22 07:30 01/17/22 11:42 Xylenes, Total <0.00399 U 0.00399 mg/Kg 01/17/22 07:30 01/17/22 11:42 Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 93 70 - 130 01/17/22 07:30 01/17/22 11:42

4-Bromofluorobenzene (Surr)

**Eurofins Carlsbad** 

Job ID: 890-1830-1 SDG: 31403236.001.0129.35.002

## Lab Sample ID: 890-1830-1

Matrix: Solid

5

Released to Imaging: 9/22/2022 7:39:45 AM

1

1

		Client	t Sample Re	∋sults				
lient: WSP USA Inc.	~ 000					SDC 21402	Job ID: 890- 236.001.0129.	
roject/Site: Remuda Basin State	÷002							
lient Sample ID: PH17A						Lab Samp	le ID: 890-1	
ate Collected: 01/12/22 14:30 ate Received: 01/14/22 08:07							Matrix	c: Solid
and Received: 01/14/22 08:07								
Method: 8021B - Volatile Orga	anic Compo	unds (GC)	(Continued)					
Surrogate	%Recovery		Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	111		70 - 130			01/17/22 07:30	<u> </u>	1
Method: Total BTEX - Total BT			ы	l Init	п	Dremorad	Amelymod	Dil Eac
Analyte Total BTEX	Result <0.00399	Qualifier	RL 0.00399	Unit mg/Kg	D	Prepared	Analyzed 01/17/22 14:46	Dil Fac
IOTALDIEA	NU.UUUUUU	U	0.00399	my/ny			U1/11/22 14.40	1
Method: 8015 NM - Diesel Ran	ige Organic	;s (DRO) ((	GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			01/17/22 14:06	1
To the short CD MM Dissel D	O	· (DDO)	(00)					
Method: 8015B NM - Diesel Ra		Contraction (CRO)	(GC) RL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte Gasoline Range Organics	Kesult <49.9			Unit mg/Kg	<u> </u>	•	01/17/22 13:53	
(GRO)-C6-C10	N40.0	U	45.5	my/rxy		U 1/ 1 / / ZZ UJ. 1Z	01/17/22 10.00	1
Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		01/17/22 09:12	01/17/22 13:53	1
C10-C28)	10.0							
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/17/22 09:12	01/17/22 13:53	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane		<u>S1-</u>	70 - 130			-	01/17/22 13:53	1
o-Terphenyl	71		70 - 130			01/17/22 09:12	01/17/22 13:53	1
to the diagonal Aminona Ion C		the Cal						
Method: 300.0 - Anions, Ion Cl Analyte		aphy - Solu Qualifier	uble RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	900		<u>KL</u>	om mg/Kg	— <b>-</b>	Fieparea	01/17/22 14:41	
-	900		5.00	Ingring				
Client Sample ID: PH17B						Lab Samp	le ID: 890-1	
Date Collected: 01/12/22 14:35							Matrix	c: Solid
Date Received: 01/14/22 08:07								
Sample Depth: 3								
Method: 8021B - Volatile Orga	anic Compo	unde (GC)	<b>v</b>					
Analyte		Qualifier	/ RL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte		quanto		•	-	Tropurou	Finaly 200	

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/17/22 07:30	01/17/22 12:02	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/17/22 07:30	01/17/22 12:02	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/17/22 07:30	01/17/22 12:02	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/17/22 07:30	01/17/22 12:02	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/17/22 07:30	01/17/22 12:02	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/17/22 07:30	01/17/22 12:02	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	120		70 - 130			01/17/22 07:30	01/17/22 12:02	1
1,4-Difluorobenzene (Surr)	83		70 - 130			01/17/22 07:30	01/17/22 12:02	1
Method: Total BTEX - Total	BTEX Calcula	tion						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			01/17/22 14:46	1
Method: 8015 NM - Diesel I	Range Organic	s (DRO) (0	SC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0		50.0	mg/Kg			01/17/22 14:06	1

#### **Client Sample Results**

#### **Client Sample ID: PH17B** Date Collected: 01/12/22 14:35 Date Received: 01/14/22 08:07

Sample Depth: 3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/17/22 09:12	01/17/22 14:14	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/17/22 09:12	01/17/22 14:14	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/17/22 09:12	01/17/22 14:14	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	66	S1-	70 - 130			01/17/22 09:12	01/17/22 14:14	1
o-Terphenyl	68	S1-	70 - 130			01/17/22 09:12	01/17/22 14:14	1
_ Method: 300.0 - Anions, Ion C	hromatogra	phy - Solu	ıble					
Method: 300.0 - Anions, Ion C Analyte		phy - Solu Qualifier	ible RL	Unit	D	Prepared	Analyzed	Dil Fac

#### **Client Sample ID: PH17C** Date Collected: 01/12/22 14:40

#### Date Received: 01/14/22 08:07 Sample Depth: 4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		01/17/22 07:30	01/17/22 12:23	1
Toluene	<0.00198	U	0.00198	mg/Kg		01/17/22 07:30	01/17/22 12:23	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		01/17/22 07:30	01/17/22 12:23	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		01/17/22 07:30	01/17/22 12:23	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		01/17/22 07:30	01/17/22 12:23	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		01/17/22 07:30	01/17/22 12:23	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	121		70 - 130			01/17/22 07:30	01/17/22 12:23	1
1,4-Difluorobenzene (Surr)	108		70 - 130			01/17/22 07:30	01/17/22 12:23	1
		<mark>tion</mark> Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte Total BTEX	Result <0.00396	Qualifier	0.00396	Unit mg/Kg	D	Prepared	Analyzed 01/17/22 14:46	Dil Fac
Method: Total BTEX - Total B Analyte Total BTEX Method: 8015 NM - Diesel Ra Analyte	Result <0.00396	Qualifier	0.00396		D 	Prepared Prepared		Dil Fac 1 Dil Fac
Analyte Total BTEX Method: 8015 NM - Diesel Ra	Result <0.00396	Qualifier U s (DRO) (C Qualifier	0.00396	mg/Kg		<u>.</u>	01/17/22 14:46	1
Analyte Total BTEX Method: 8015 NM - Diesel Ra Analyte	Result <0.00396 ange Organic Result <50.0	Qualifier U s (DRO) (C Qualifier U	0.00396 GC) RL 50.0	mg/Kg Unit		<u>.</u>	01/17/22 14:46 Analyzed	1
Analyte Total BTEX Method: 8015 NM - Diesel Ra Analyte Total TPH Method: 8015B NM - Diesel F	Ange Organic Result Concerning Result Solo Range Organ	Qualifier U s (DRO) (C Qualifier U	0.00396 GC) RL 50.0	mg/Kg Unit		<u>.</u>	01/17/22 14:46 Analyzed	1
Analyte Total BTEX Method: 8015 NM - Diesel Ra Analyte Total TPH Method: 8015B NM - Diesel F Analyte Gasoline Range Organics	Ange Organic Result Concerning Result Solo Range Organ	Qualifier U s (DRO) (C Qualifier U ics (DRO) Qualifier	0.00396 C) RL 50.0 (GC)	mg/Kg	D	Prepared	01/17/22 14:46 Analyzed 01/17/22 14:06 Analyzed	1 Dil Fac 1
Analyte Total BTEX Method: 8015 NM - Diesel Ra Analyte Total TPH	Result <0.00396 nge Organic Result <50.0 Range Organ Result	Qualifier U s (DRO) (C Qualifier U ics (DRO) Qualifier U	0.00396 C) RL 50.0 (GC) RL	mg/Kg Unit mg/Kg Unit	D	Prepared Prepared 01/17/22 09:12	01/17/22 14:46 Analyzed 01/17/22 14:06 Analyzed	1 Dil Fac 1

mg/Kg Limits Surrogate %Recovery Qualifier Prepared Analyzed Dil Fac 70 - 130 01/17/22 09:12 01/17/22 14:35 1-Chlorooctane 67 S1-1 01/17/22 09:12 01/17/22 14:35 o-Terphenyl 68 S1-70 - 130 1

Job ID: 890-1830-1 SDG: 31403236.001.0129.35.002

#### Lab Sample ID: 890-1830-3 Matrix: Solid

Lab Sample ID: 890-1830-4

Matrix: Solid

**Eurofins Carlsbad** 

Chloride         693         5.04         mg/kg         01/17/22 14:55           Client Sample ID: PH18 Date Collected: 01/1/2/22 15:00 Date Received: 01/14/22 08:07 Sample Depth: 1         Lab Sample ID: 890-18 Matrix:           Method: 8021B - Volatile Organic Compounds (GC) Analyte         Result Qualifier         RL 0.00198         Unit         D         Prepared 01/17/22 07:30         Analyzed 01/17/22 07:30         O1/17/22 12:43           Benzene         <0.00198 U         0.00198         mg/kg         01/17/22 07:30         01/17/22 12:43           Ethylbenzene         <0.00198 U         0.00198         mg/kg         01/17/22 07:30         01/17/22 12:43           Surgate         <0.00198 U         0.00198         mg/kg         01/17/22 07:30         01/17/22 12:43           xylenes, Total         <0.00397 U         0.00397         mg/kg         01/17/22 07:30         01/17/22 12:43           Surrogate         */Recovery Qualifier         Limits         Prepared         Analyzed         01/17/22 12:43           Method: Total BTEX - Total BTEX Calculation         Result Qualifier         Limits         Prepared         Analyzed         01/17/22 12:43           Method: 8015 NM - Diesel Range Organics (DRO) (GC)         Result Qualifier         RL         Unit         D         Prepared         Analyzed         01/17/22 1	-		Client	Sample R	esults				
Date Collected: 01/12/22 14:40         Matrix:           Date Received: 01/14/22 08:07         Sample Depth: 4           Method: 300.0 - Anions, Ion Chromatography - Soluble Analyte         Result Qualifier         RL         Unit         D         Prepared         Analyzed         01/17/22 14:55           Client Sample ID: PH18         Lab Sample ID: 800-18         Matrix::         Matrix:         Matrix::           Sample Depth: 1         Method: 8021B - Volatile Organic Compounds (GC)         Matrix::         Matrix::         Matrix::           Analyte         Result Qualifier         RL         Unit         D         Prepared         Analyzed         D           Benzene         <0.00188         0.00198         mg/Kg         01/17/22 12:43         D         01/17/22 12:43         D           Benzene         <0.00188         0.00198         mg/Kg         01/17/22 12:43         D         01/17/22 12:43         D         D1/17/22 12:43         D		e 002					SDG: 31403		
Analyte         Result Qualifier         RL         Unit         D         Prepared         Analyzed         Clichtoride           Chloride         693         5.04         mg/Kg         01/17/22 14:55         01/17/22 14:55           Client Sample ID: PH18 Date Collected: 01/12/22 15:00 Date Received: 01/14/22 08:07         Lab Sample ID: 890-18         Matrix::           Sample Depth: 1         Method: 8021B - Volatile Organic Compounds (GC)         Analyzed         01/17/22 07:30         01/17/22 12:43           Analyte         Result Qualifier         RL         Unit         D         Prepared         01/17/22 07:30         01/17/22 12:43           Toluene         <0.00198         0.00198         mg/Kg         01/17/22 07:30         01/17/22 12:43           m-Xylene & p-Xylene         <0.00197         0.00397         mg/Kg         01/17/22 07:30         01/17/22 12:43           surrogate         <0.00397         0.00397         mg/Kg         01/17/22 07:30         01/17/22 12:43           Surrogate         <%Recovery         Qualifier         Limits         Prepared         Analyzed         01/17/22 07:30         01/17/22 12:43           1:4-Difluorobenzene (Surr)         120         70 - 130         mg/Kg         01/17/22 07:30         01/17/22 12:43           Method: 8	Date Collected: 01/12/22 14:40 Date Received: 01/14/22 08:07						Lab Samp		
Chloride         693         5.04         mg/Kg         01/17/22 14:55           Client Sample ID: PH18 Date Collected: 01/12/22 15:00 Date Received: 01/14/22 08:07 Sample Depth: 1         Lab Sample ID: 890-18 Matrix:           Method: 8021B - Volatile Organic Compounds (GC) Analyte         Result Qualifier         RL 0.00198         Unit mg/Kg         D         Prepared 01/17/22 07:30         Analyzed 01/17/22 12:43           Benzene         <0.00198 U         0.00198         mg/Kg         01/17/22 07:30         01/17/22 12:43           Ethylbenzene         <0.00198 U         0.00198         mg/Kg         01/17/22 07:30         01/17/22 12:43           Surgate         <0.00198 U         0.00198         mg/Kg         01/17/22 07:30         01/17/22 12:43           Xylenes, Total         <0.00198 U         0.00397         mg/Kg         01/17/22 07:30         01/17/22 12:43           Surrogate         %Recovery Qualifier         Limits         Prepared         Analyzed         01/17/22 12:43           4-Bromofluorobenzene (Surr)         120         70:130         01/17/22 07:30         01/17/22 12:43           Method: Total BTEX - Total BTEX Calculation Analyte         Result Qualifier         RL         Unit         D         Prepared         Analyzed         01/17/22 14:45           Method: 80155 NM - Diesel Range Org					Unit	D	Prepared	Analyzed	Dil Fac
Date Collected: 01/12/22 15:00 Date Received: 01/14/22 08:07 Sample Depth: 1         Matrix:           Method: 8021B - Volatile Organic Compounds (GC) Analyte         Result Qualifier         RL         Unit         D         Prepared 01/17/22 07:30         Analyzed 01/17/22 12:43         Tolescont           Benzene         <0.00198	•				mg/Kg				1
Analyte         Result         Qualifier         RL         Unit         D         Prepared         Analyzed         I           Benzene         <0.00198         U         0.00198         mg/Kg         01/17/22 07:30         01/17/22 12:43         01/17/22 07:30         01/17/22 12:43           Toluene         <0.00198         U         0.00198         mg/Kg         01/17/22 07:30         01/17/22 12:43           m-Xylene & p-Xylene         <0.00198         U         0.00198         mg/Kg         01/17/22 07:30         01/17/22 12:43           o-Xylene & p-Xylene         <0.00198         U         0.00198         mg/Kg         01/17/22 07:30         01/17/22 12:43           o-Xylene & Total         <0.00397         U         0.00397         mg/Kg         01/17/22 07:30         01/17/22 12:43           Surrogate         <0.00397         U         0.00397         mg/Kg         01/17/22 07:30         01/17/22 12:43           Method: Total BTEX - Total BTEX Calculation         Analyzed         Intimits         Prepared         Analyzed         01/17/22 12:43           Method: 80155 NM - Diesel Range Organics (DRO) (GC)         Malyte         Result         Qualifier         RL         Unit         D         Prepared         Analyzed         01/17/22 14:56 <th>Date Collected: 01/12/22 15:00 Date Received: 01/14/22 08:07</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>Lab Samp</th> <th></th> <th></th>	Date Collected: 01/12/22 15:00 Date Received: 01/14/22 08:07						Lab Samp		
Benzene         <0.00198         U         0.00198         mg/Kg         01/17/22 07:30         01/17/22 12:43           Toluene         <0.00198	•								
Toluene         <0.00198         U         0.00198         mg/kg         01/17/22 07:30         01/17/22 12:43           Ethylbenzene         <0.00198						_ <u>D</u>			Dil Fac
Ethylbenzene       <0.00198									1
m-Xylene & p-Xylene       <0.00397									1
o-Xylene         <0.00198         U         0.00198         mg/Kg         01/17/22 07:30         01/17/22 12:43           Xylenes, Total         <0.00397         U         0.00397         mg/Kg         01/17/22 07:30         01/17/22 12:43           Surrogate         %Recovery         Qualifier         Limits         mg/Kg         01/17/22 07:30         01/17/22 12:43           4-Bromofluorobenzene (Surr)         103         70 - 130         01/17/22 07:30         01/17/22 12:43         01/17/22 12:43           Method: Total BTEX - Total BTEX Calculation         Result Qualifier         RL         Unit         Prepared         Analyzed         I           Total BTEX          Result Qualifier         RL         Unit         P         Prepared         Analyzed         I           Method: 8015 NM - Diesel Range Organics (DRO) (GC)         Manalyte         Result Qualifier         RL         Unit         P         Prepared         Analyzed         I           Method: 8015B NM - Diesel Range Organics (DRO) (GC)         Analyte         Result Qualifier         RL         Unit         P         Prepared         Analyzed         I           Gasoline Range Organics (Over         <49.9         U         49.9         mg/Kg         01/17/12/2 09:12         01/17/22 14									
Xylenes, Total       <0.00397       U       0.00397       mg/Kg       01/17/22 07:30       01/17/22 12:43         Surrogate 4-Bromofluorobenzene (Surr)       %Recovery 120       Qualifier 103       Limits 70 - 130       Prepared 01/17/22 07:30       Analyzed 01/17/22 12:43       Analyzed 01/17/22 12:43         Method: Total BTEX - Total BTEX Calculation Analyte       Result Qualifier 0.00397       RL 0.00397       Unit 0.00397       D       Prepared 01/17/22 07:30       Analyzed 01/17/22 12:43       C         Method: Total BTEX       Result Qualifier 0.00397       RL 0.00397       Unit mg/Kg       D       Prepared 01/17/22 12:43       Analyzed 01/17/22 12:43       C         Method: 8015 NM - Diesel Range Organics (DRO) (GC) Analyte       Result Qualifier       RL 01       Unit mg/Kg       D       Prepared 01/17/22 14:66       Analyzed 01/17/22 14:66       C         Method: 8015B NM - Diesel Range Organics (DRO) (GC) Analyte       Result Qualifier       RL 01       Unit mg/Kg       D       Prepared 01/17/22 09:12       Analyzed 01/17/22 14:56       C         Method: 8015B NM - Diesel Range Organics (DVC)       Qualifier       RL 01       Munit mg/Kg       D       Prepared 01/17/22 09:12       Analyzed 01/17/22 14:56       D         Method: 8015B NM - Diesel Range Organics (Over       <49.9       U       49.9       mg/Kg </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1</td>									1
4-Bromofluorobenzene (Surr)       120       70.130       01/17/22 07:30       01/17/22 12:43         1,4-Difluorobenzene (Surr)       103       70.130       01/17/22 07:30       01/17/22 12:43         Method: Total BTEX - Total BTEX Calculation Analyte       Result Qualifier       RL 0.00397       0       01/17/22 07:30       01/17/22 12:43         Method: Total BTEX       - Total BTEX       Calculation       - Malyzed       - Mal	-								1
1,4-Difluorobenzene (Surr)10370-130 $01/17/22 07:30$ $01/17/22 12:43$ Method: Total BTEX - Total BTEX Calculation AnalyteResultQualifierRL 0.00397UnitDPreparedAnalyzed 01/17/22 14:46IMethod: 8015 NM - Diesel Range Organics (DRO) (GC) AnalyteResultQualifierRL 0.00397UnitDPreparedAnalyzed 01/17/22 14:46IMethod: 8015 NM - Diesel Range Organics (DRO) (GC) AnalyteResultQualifierRL 01/17/22 14:06UnitDPreparedAnalyzed 01/17/22 14:06IMethod: 8015B NM - Diesel Range Organics (DRO) (GC) AnalyteResultQualifierRL 01/01/01/01/01/01/01/01/01/01/01/01/01/0	Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Method: Total BTEX - Total BTEX Calculation AnalyteResultQualifierRLUnitDPreparedAnalyzedDTotal BTEX<0.00397	4-Bromofluorobenzene (Surr)	120		70 - 130			01/17/22 07:30	01/17/22 12:43	1
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	1,4-Difluorobenzene (Surr)	103		70 - 130			01/17/22 07:30	01/17/22 12:43	1
Total BTEX $< 0.00397$ $\cup$ $0.00397$ $mg/Kg$ $du/17/22$ 14:46Method: 8015 NM - Diesel Range Organics (DRO) (GC)Result QualifierRLUnit $D$ PreparedAnalyzed $du/17/22$ 14:46Total TPH $< 49.9$ $U$ $49.9$ $U$ $49.9$ $mg/Kg$ $D$ PreparedAnalyzed $du/17/22$ 14:06Method: 8015B NM - Diesel Range Organics (DRO) (GC)ResultQualifierRL $Unit$ $D$ PreparedAnalyzed $du/17/22$ 14:06Method: 8015B NM - Diesel Range Organics (DRO) (GC)ResultQualifierRL $Unit$ $D$ PreparedAnalyzed $du/17/22$ 14:06Method: 8015B NM - Diesel Range Organics (DRO) (GC)ResultQualifierRL $Unit$ $D$ PreparedAnalyzed $du/17/22$ 14:56Method: 8015B NM - Diesel Range Organics (DRO)QualifierRL $Mg/Kg$ $Unit$ $D$ PreparedAnalyzed $du/17/22$ 14:56Method: 8015B NM - Diesel Range Organics (Over $< 49.9$ $U$ $49.9$ $mg/Kg$ $01/17/22$ 09:12 $01/17/22$ 14:56Method: GRO)-C6-C10Diesel Range Organics (Over C28-C36) $< 49.9$ $U$ $49.9$ $mg/Kg$ $01/17/22$ 09:12 $01/17/22$ 14:56Dil Range Organics (Over C28-C36) $< 49.9$ $U$ $49.9$ $mg/Kg$ $01/17/22$ 09:12 $01/17/22$ 14:56Surrogate $\frac{%Recovery}{66}$ $\frac{Qualifier}{S1-}$ $Limits$ $01/17/22$ 09:12 $01/17/22$ 14:56	Method: Total BTEX - Total B	TEX Calcula	tion						
Method:         8015 NM - Diesel Range Organics (DRO) (GC)           Analyte         Result         Qualifier         RL         Unit         D         Prepared         Analyzed         I           Total TPH         <49.9	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte         Result         Qualifier         RL         Unit         D         Prepared         Analyzed         I           Total TPH         <49.9	Total BTEX	<0.00397	U	0.00397	mg/Kg			01/17/22 14:46	1
Total TPH       <49.9       49.9       mg/Kg       01/17/22 14:06         Method: 8015B NM - Diesel Range Organics (DRO) (GC)       Result       Qualifier       RL       Unit       D       Prepared       Analyzed       I         Gasoline Range Organics       <49.9	Method: 8015 NM - Diesel Rar			GC)					
Method: 8015B NM - Diesel Range Organics (DRO) (GC)           Analyte         Result         Qualifier         RL         Unit         D         Prepared         Analyzed         I           Gasoline Range Organics         <49.9						D	Prepared		Dil Fac
Analyte         Result         Qualifier         RL         Unit         D         Prepared         Analyzed         I           Gasoline Range Organics         <49.9	Total TPH	<49.9	U	49.9	mg/Kg			01/17/22 14:06	1
Gasoline Range Organics       <49.9       U       49.9       mg/Kg       01/17/22 09:12       01/17/22 14:56         (GRO)-C6-C10       Diesel Range Organics (Over       <49.9				· · ·					
(GRO)-C6-C10       Diesel Range Organics (Over       <49.9	-					_ D			Dil Fac
C10-C28)       OII Range Organics (Over C28-C36)       <49.9       U       49.9       mg/Kg       01/17/22 09:12       01/17/22 14:56         Surrogate       %Recovery       Qualifier       Limits       Prepared       Analyzed       I         1-Chlorooctane       66       S1-       70 - 130       01/17/22 09:12       01/17/22 14:56       I	(GRO)-C6-C10	<49.9	U				01/17/22 09:12	01/17/22 14:56	1
Surrogate         %Recovery         Qualifier         Limits         Prepared         Analyzed         I           1-Chlorooctane         66         51-         70-130         01/17/22 09:12         01/17/22 14:56         I	C10-C28)	<49.9	U	49.9	mg/Kg		01/17/22 09:12	01/17/22 14:56	1
1-Chlorooctane         66         S1-         70 - 130         01/17/22 09:12         01/17/22 14:56	Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/17/22 09:12	01/17/22 14:56	1
	Surrogate			Limits					Dil Fac
o-Terphenyl 67 S1- 70-130 01/17/22 09:12 01/17/22 14:56	1-Chlorooctane						01/17/22 09:12	01/17/22 14:56	1
	o-Terphenyl	67	S1-	70 - 130			01/17/22 09:12	01/17/22 14:56	1
Method: 300.0 - Anions, Ion Chromatography - Soluble           Analyte         Result Qualifier         RL         Unit         D         Prepared         Analyzed         I			· ·		Unit	D	Prepared	Analvzed	Dil Fac

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01/17/22 16:20

Released to Imaging: 9/22/2022 7:39:45 AM

Chloride

4.99

mg/Kg

#### **Client Sample Results**

#### **Client Sample ID: PH18A** Date Collected: 01/12/22 15:05 D S

Job ID: 890-1830-1
SDG: 31403236.001.0129.35.002

#### Lab Sample ID: 890-1830-6 Matrix: Solid

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Date Received: 01/14/22 08: Sample Depth: 2	07
Method: 8021B - Volatile O	rganic Compounds (GC)
Analyte	Result Qualifier

Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		01/17/22 07:30	01/17/22 13:04	1
Toluene	<0.00198	U	0.00198	mg/Kg		01/17/22 07:30	01/17/22 13:04	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		01/17/22 07:30	01/17/22 13:04	1
m-Xylene & p-Xylene	<0.00397	U	0.00397	mg/Kg		01/17/22 07:30	01/17/22 13:04	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		01/17/22 07:30	01/17/22 13:04	1
Xylenes, Total	<0.00397	U	0.00397	mg/Kg		01/17/22 07:30	01/17/22 13:04	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		70 - 130			01/17/22 07:30	01/17/22 13:04	1
1,4-Difluorobenzene (Surr)	107		70 - 130			01/17/22 07:30	01/17/22 13:04	1
Method: Total BTEX - Total B	<b>TEX Calcula</b>	tion						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397	mg/Kg			01/17/22 14:46	1
Method: 8015 NM - Diesel Rar	nge Organic	s (DRO) (G	C)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			01/17/22 14:06	1
Method: 8015B NM - Diesel R	ange Organ	ics (DRO) (	GC)					
Analyte		Qualifier	, RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		01/17/22 09:12	01/17/22 15:18	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		01/17/22 09:12	01/17/22 15:18	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/17/22 09:12	01/17/22 15:18	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	70		70 - 130			01/17/22 09:12	01/17/22 15:18	1
o-Terphenyl	71		70 - 130			01/17/22 09:12	01/17/22 15:18	1
Method: 300.0 - Anions, Ion C	hromatogra	uphy - Solu	ble					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1210		4.98	mg/Kg			01/17/22 16:43	1
lient Sample ID: PH18B						Lab Samp	le ID: 890-1	830-7
ate Collected: 01/12/22 15:10 ate Received: 01/14/22 08:07							Matrix	c: Solid
ample Depth: 3								
Method: 8021B - Volatile Orga	anic Compo	unds (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/17/22 07:30	01/17/22 13:24	1
	0.00400					0.4.14.7.100 07 00		

Surrogate 4-Bromofluorobenzene (Surr)	<b>%Recovery</b>	Qualifier	Limits		<b>Prepared</b>	Analyzed	Dil Fac
Xylenes, Total	<0.00398	U	0.00398	mg/Kg	01/17/22 07:30	01/17/22 13:24	1
o-Xylene	<0.00199	U	0.00199	mg/Kg	01/17/22 07:30	01/17/22 13:24	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg	01/17/22 07:30	01/17/22 13:24	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg	01/17/22 07:30	01/17/22 13:24	1
Toluene	<0.00199	U	0.00199	mg/Kg	01/17/22 07:30	01/17/22 13:24	1
Benzene	<0.00199	U	0.00199	mg/Kg	01/17/22 07:30	01/17/22 13:24	1

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Released to Imaging: 9/22/2022 7:39:45 AM

		Client	t Sample Re	sults				
lient: WSP USA Inc. roject/Site: Remuda Basin State	- 002					SDC: 31403	Job ID: 890- 236.001.0129.	
-								
Client Sample ID: PH18B						Lab Samp	le ID: 890-1	
Pate Collected: 01/12/22 15:10 Pate Received: 01/14/22 08:07							Matrix	k: Solid
Sample Depth: 3								
Method: 8021B - Volatile Orga	anic Compo	unds (GC)	(Continued)					
Surrogate	%Recovery		Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	100		70 - 130				01/17/22 13:24	1
- - 								
Method: Total BTEX - Total B1 Analyte		ation Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	- Result <0.00398		RL	Onit mg/Kg	Ľ	Flepareu	01/17/22 14:46	
	<b>NU.00000</b>	U	0.00000	mgring			01/11/22 17.70	•
Method: 8015 NM - Diesel Rar			GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			01/17/22 14:06	1
Method: 8015B NM - Diesel Ra	ange Organ	ics (DRO)	(GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0		50.0	mg/Kg			01/17/22 15:39	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/17/22 09:12	01/17/22 15:39	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/17/22 09:12	01/17/22 15:39	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	51	S1-	70 - 130			01/17/22 09:12	01/17/22 15:39	1
o-Terphenyl	52	S1-	70 - 130			01/17/22 09:12	01/17/22 15:39	1
Method: 300.0 - Anions, Ion C		· ·		•,	_	- ·		
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	596		5.00	mg/Kg			01/17/22 16:50	1
Client Sample ID: PH18C						Lab Samp	le ID: 890-1	830-8
Date Collected: 01/12/22 15:15	)					•		k: Solid
Date Received: 01/14/22 08:07								
Sample Depth: 4								
	-ria Compo		\					
Method: 8021B - Volatile Orga Analyte		Qualifier	) RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	- <u> </u>			0			01/17/22 13:45	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		01/17/22 07:30	01/17/22 13:45	1
Toluene	<0.00202	U	0.00202	mg/Kg		01/17/22 07:30	01/17/22 13:45	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		01/17/22 07:30	01/17/22 13:45	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		01/17/22 07:30	01/17/22 13:45	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		01/17/22 07:30	01/17/22 13:45	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		01/17/22 07:30	01/17/22 13:45	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	122		70 - 130			01/17/22 07:30	01/17/22 13:45	1
1,4-Difluorobenzene (Surr)	105		70 - 130			01/17/22 07:30	01/17/22 13:45	1
Method: Total BTEX - Total	<b>BTEX Calcula</b>	tion						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			01/17/22 14:46	1
Method: 8015 NM - Diesel I	Range Organic	s (DRO) (0	SC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			01/17/22 14:06	1

### **Client Sample Results**

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						000.04400	Job ID: 890-	
lient: WSP USA Inc. roject/Site: Remuda Basin State	902					SDG: 31403	230.001.0129.	35.00Z
Client Sample ID: PH18C						Lab Samp	le ID: 890-1	830-8
Date Collected: 01/12/22 15:15							Matrix	: Solid
Date Received: 01/14/22 08:07 Sample Depth: 4								
Method: 8015B NM - Diesel Ra Analyte		<mark>ics (DRO)</mark> Qualifier	(GC) RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9		49.9	mg/Kg		•	01/17/22 16:00	1
(GRO)-C6-C10 Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		01/17/22 09:12	01/17/22 16:00	1
C10-C28) Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/17/22 09:12	01/17/22 16:00	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	68	S1-	70 - 130			01/17/22 09:12	01/17/22 16:00	1
o-Terphenyl	70		70 - 130			01/17/22 09:12	01/17/22 16:00	1
Method: 300.0 - Anions, Ion C								
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	719		4.95	mg/Kg			01/17/22 16:58	1
Date Received: 01/14/22 08:07								
ample Depth: 5	nic Compoi	unds (GC)						
		u <mark>nds (GC)</mark> Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
ample Depth: 5 Method: 8021B - Volatile Orga		Qualifier		Unit mg/Kg	<u>D</u>	·	Analyzed 01/17/22 14:05	Dil Fac
Cample Depth: 5 Method: 8021B - Volatile Orga Analyte Benzene Toluene	<b>Result</b> <0.00199 <0.00199	Qualifier U U	RL 0.00199 0.00199	mg/Kg mg/Kg	<u>D</u>	01/17/22 07:30 01/17/22 07:30	01/17/22 14:05 01/17/22 14:05	
Method: 8021B - Volatile Orga Analyte Benzene Toluene Ethylbenzene	Result           <0.00199	Qualifier U U U	RL           0.00199           0.00199           0.00199           0.00199	mg/Kg mg/Kg mg/Kg	<u>D</u>	01/17/22 07:30 01/17/22 07:30 01/17/22 07:30	01/17/22 14:05 01/17/22 14:05 01/17/22 14:05	1 1 1
Method: 8021B - Volatile Orga Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	Result           <0.00199	Qualifier U U U U	RL           0.00199           0.00199           0.00199           0.00199           0.00398	mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30	01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05	1 1 1 1
Method: 8021B - Volatile Orga Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene	Result           <0.00199	Qualifier U U U U U U U	RL           0.00199           0.00199           0.00199           0.00199           0.00398           0.00199	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30	01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05	1 1 1 1 1 1
Method: 8021B - Volatile Orga Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	Result           <0.00199	Qualifier U U U U U U U	RL           0.00199           0.00199           0.00199           0.00199           0.00398	mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30	01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05	1 1 1 1
Method: 8021B - Volatile Orga Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Xylenes, Total Surrogate	Result           <0.00199	Qualifier U U U U U U U U	RL           0.00199           0.00199           0.00199           0.00398           0.00199           0.00398           0.00398           Limits	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 <b>Prepared</b>	01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 Analyzed	1 1 1 1 1 1
Sample Depth: 5         Method: 8021B - Volatile Orga         Analyte         Benzene         Toluene         Ethylbenzene         m-Xylene & p-Xylene         o-Xylene         Xylenes, Total         Surrogate         4-Bromofluorobenzene (Surr)	Result           <0.00199	Qualifier U U U U U U U U	RL           0.00199           0.00199           0.00199           0.00398           0.00199           0.00398           0.00398           Limits           70 - 130	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 <b>Prepared</b> 01/17/22 07:30	01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 <b>Analyzed</b> 01/17/22 14:05	1 1 1 1 1 1 1 1 <b>Dil Fac</b> 1
Sample Depth: 5         Method: 8021B - Volatile Orga         Analyte         Benzene         Toluene         Ethylbenzene         m-Xylene & p-Xylene         o-Xylene         Xylenes, Total         Surrogate         4-Bromofluorobenzene (Surr)         1,4-Difluorobenzene (Surr)	Result           <0.00199	Qualifier U U U U U U U Qualifier	RL           0.00199           0.00199           0.00199           0.00398           0.00199           0.00398           0.00398           Limits	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	<u> </u>	01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 <b>Prepared</b> 01/17/22 07:30	01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 Analyzed	1 1 1 1 1 1 1
Sample Depth: 5         Method: 8021B - Volatile Orga         Analyte         Benzene         Toluene         Ethylbenzene         m-Xylene & p-Xylene         o-Xylene         Xylenes, Total         Surrogate         4-Bromofluorobenzene (Surr)         1,4-Difluorobenzene (Surr)         Method: Total BTEX - Total BT	Result           <0.00199	Qualifier U U U U U U U Qualifier	RL           0.00199           0.00199           0.00199           0.00398           0.00199           0.00398           0.00398	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	01/17/22 07:30           01/17/22 07:30           01/17/22 07:30           01/17/22 07:30           01/17/22 07:30           01/17/22 07:30           01/17/22 07:30           01/17/22 07:30           01/17/22 07:30           01/17/22 07:30           01/17/22 07:30           01/17/22 07:30           01/17/22 07:30	01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 <b>Analyzed</b> 01/17/22 14:05 01/17/22 14:05	1 1 1 1 1 1 1 1 <b>Dil Fac</b> 1
Sample Depth: 5         Method: 8021B - Volatile Orga         Analyte         Benzene         Toluene         Ethylbenzene         m-Xylene & p-Xylene         o-Xylene         Xylenes, Total         Surrogate         4-Bromofluorobenzene (Surr)         1,4-Difluorobenzene (Surr)	Result           <0.00199	Qualifier U U U U U Qualifier Qualifier	RL           0.00199           0.00199           0.00199           0.00398           0.00199           0.00398           0.00398           Limits           70 - 130	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg		01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 <b>Prepared</b> 01/17/22 07:30	01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 <b>Analyzed</b> 01/17/22 14:05	1 1 1 1 1 1 1 <b>Dil Fac</b> 1 1
Sample Depth: 5         Method: 8021B - Volatile Orga         Analyte         Benzene         Toluene         Ethylbenzene         m-Xylene & p-Xylene         o-Xylene         Xylenes, Total         Surrogate         4-Bromofluorobenzene (Surr)         1,4-Difluorobenzene (Surr)         Method: Total BTEX - Total BT         Analyte	Result           <0.00199	Qualifier U U U U U U U U U U U U U U U U U U U	RL           0.00199           0.00199           0.00199           0.00398           0.00199           0.00398           Limits           70 - 130           70 - 130           RL           0.00398	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg		01/17/22 07:30           01/17/22 07:30           01/17/22 07:30           01/17/22 07:30           01/17/22 07:30           01/17/22 07:30           01/17/22 07:30           01/17/22 07:30           01/17/22 07:30           01/17/22 07:30           01/17/22 07:30           01/17/22 07:30           01/17/22 07:30	01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05	1 1 1 1 1 1 <b>Dil Fac</b> 1 <b>Dil Fac</b>
Sample Depth: 5         Method: 8021B - Volatile Orga         Analyte         Benzene         Toluene         Ethylbenzene         m-Xylene & p-Xylene         o-Xylene         Xylenes, Total         Surrogate         4-Bromofluorobenzene (Surr)         1,4-Difluorobenzene (Surr)         Method: Total BTEX - Total BT         Analyte         Total BTEX         Method: 8015 NM - Diesel Ram         Analyte	Result           <0.00199	Qualifier U U U U U U U U U U U U U U U U U U U	RL         0.00199         0.00199         0.00199         0.00398         0.00199         0.00398   <	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg <b>Unit</b> <b>Unit</b>		01/17/22 07:30           01/17/22 07:30           01/17/22 07:30           01/17/22 07:30           01/17/22 07:30           01/17/22 07:30           01/17/22 07:30           01/17/22 07:30           01/17/22 07:30           01/17/22 07:30           01/17/22 07:30           01/17/22 07:30           01/17/22 07:30	01/17/22 14:05 01/17/22 14:46 Analyzed	1 1 1 1 1 1 <i>Dil Fac</i> 1 Dil Fac
Sample Depth: 5         Method: 8021B - Volatile Orga         Analyte         Benzene         Toluene         Ethylbenzene         m-Xylene & p-Xylene         o-Xylene         Xylenes, Total         Surrogate         4-Bromofluorobenzene (Surr)         1,4-Difluorobenzene (Surr)         Method: Total BTEX - Total BT         Analyte         Total BTEX	Result           <0.00199	Qualifier U U U U U U U U U U U U U U U U U U U	RL           0.00199           0.00199           0.00199           0.00398           0.00199           0.00398           0.00398           Limits           70 - 130           70 - 130           0.00398	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 Prepared	01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:46	1 1 1 1 1 1 <b>Dil Fac</b> 1 <b>Dil Fac</b> 1
Sample Depth: 5         Method: 8021B - Volatile Orga         Analyte         Benzene         Toluene         Ethylbenzene         m-Xylene & p-Xylene         o-Xylene         Xylenes, Total         Surrogate         4-Bromofluorobenzene (Surr)         1,4-Difluorobenzene (Surr)         Method: Total BTEX - Total BT         Analyte         Total BTEX         Method: 8015 NM - Diesel Ran         Analyte         Total TPH         Method: 8015B NM - Diesel Ran	Result           <0.00199	Qualifier U U U U U Qualifier U S (DRO) (C Qualifier U S (DRO) (C Qualifier U	RL         0.00199         0.00199         0.00199         0.00398         0.00199         0.00398         Limits         70 - 130         70 - 130         70 - 130         FL         0.00398	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg Unit mg/Kg	D	01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 Prepared Prepared	01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:06	1 1 1 1 1 1 <b>Dil Fac</b> 1 <b>Dil Fac</b> 1 <b>Dil Fac</b> 1
Ample Depth: 5         Method: 8021B - Volatile Orga         Analyte         Benzene         Toluene         Ethylbenzene         m-Xylene & p-Xylene         o-Xylene         Xylenes, Total         Surrogate         4-Bromofluorobenzene (Surr)         1,4-Difluorobenzene (Surr)         Method: Total BTEX - Total BT         Analyte         Total BTEX         Method: 8015 NM - Diesel Ran         Analyte         Total TPH         Method: 8015B NM - Diesel Ran         Analyte	Result           <0.00199	Qualifier U U U U Qualifier U S (DRO) (C Qualifier U S (DRO) (C Qualifier U S (DRO) (C Qualifier	RL         0.00199         0.00199         0.00398         0.00398         0.00398         Limits         70 - 130         70 - 130         RL         0.00398	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg Unit mg/Kg Unit	<u>D</u>	01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 Prepared Prepared Prepared	01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:05 01/17/22 14:46 Analyzed 01/17/22 14:06 Analyzed	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Sample Depth: 5         Method: 8021B - Volatile Orga         Analyte         Benzene         Toluene         Ethylbenzene         m-Xylene & p-Xylene         o-Xylene         Xylenes, Total         Surrogate         4-Bromofluorobenzene (Surr)         1,4-Difluorobenzene (Surr)         Method: Total BTEX - Total BT         Analyte         Total BTEX         Method: 8015 NM - Diesel Ran         Analyte         Total TPH         Method: 8015B NM - Diesel Ran         Analyte         Gasoline Range Organics         (GRO)-C6-C10	Result           <0.00199	Qualifier U U U U U U Qualifier U S (DRO) (C Qualifier U U S (DRO) (C Qualifier U U S (DRO) (C Qualifier U	RL         0.00199         0.00199         0.00398         0.00398         0.00398         Limits         70 - 130         70 - 130         70 - 130         70 - 130         6C)         RL         49.9         (GC)         RL         49.9	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg Unit mg/Kg Unit mg/Kg	D	01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 Prepared Prepared 01/17/22 09:12	01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:06           Analyzed           01/17/22 14:06           Analyzed           01/17/22 14:06	1 1 1 1 1 1 1 <b>Dil Fac</b> 1 <b>Dil Fac</b> 1 <b>Dil Fac</b> 1 <b>Dil Fac</b> 1
Sample Depth: 5         Method: 8021B - Volatile Orga         Analyte         Benzene         Toluene         Ethylbenzene         m-Xylene & p-Xylene         o-Xylene         Xylenes, Total         Surrogate         4-Bromofluorobenzene (Surr)         1,4-Difluorobenzene (Surr)         Method: Total BTEX - Total BT         Analyte         Total BTEX         Method: 8015 NM - Diesel Ran         Analyte         Total TPH         Method: 8015B NM - Diesel Ran         Analyte         Gasoline Range Organics         (GRO)-C6-C10         Diesel Range Organics (Over         C10-C28)	Result           <0.00199	Qualifier U U U U Qualifier U S (DRO) (C Qualifier U S (DRO) (C Qualifier U U U U	RL           0.00199           0.00199           0.00398           0.00398           0.00398           Limits           70 - 130           70 - 130           70 - 130           70 - 130           6C)           RL           49.9           49.9           49.9	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg Unit mg/Kg Unit mg/Kg mg/Kg	D	01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 Prepared Prepared 01/17/22 09:12 01/17/22 09:12	01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:06           Analyzed           01/17/22 14:06           Analyzed           01/17/22 14:06           Analyzed           01/17/22 14:06	1 1 1 1 1 1 1 <b>Dil Fac</b> 1 <b>Dil Fac</b> 1 <b>Dil Fac</b> 1 1
Sample Depth: 5         Method: 8021B - Volatile Orga         Analyte         Benzene         Toluene         Ethylbenzene         m-Xylene & p-Xylene         o-Xylene         Xylenes, Total         Surrogate         4-Bromofluorobenzene (Surr)         1,4-Difluorobenzene (Surr)         Method: Total BTEX - Total BT         Analyte         Total BTEX         Method: 8015 NM - Diesel Ran         Analyte         Total TPH         Method: 8015B NM - Diesel Ran         Analyte         Gasoline Range Organics         (GRO)-C6-C10         Diesel Range Organics (Over         C10-C28)         Oll Range Organics (Over C28-C36)	Result           <0.00199	Qualifier U U U U Qualifier U S (DRO) (C Qualifier U S (DRO) (C Qualifier U S (DRO) U Qualifier U U U U U U U U U U U U U U U U U U U	RL         0.00199         0.00199         0.00398         0.00398         0.00398         Limits         70 - 130         70 - 130         70 - 130         70 - 130         6C)         RL         49.9         (GC)         RL         49.9	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg Unit mg/Kg Unit mg/Kg	D	01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 Prepared Prepared 01/17/22 09:12 01/17/22 09:12	01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:06           Analyzed           01/17/22 14:06           Analyzed           01/17/22 14:06	1 1 1 1 1 1 <b>Dil Fac</b> 1 <b>Dil Fac</b> 1 <b>Dil Fac</b> 1 1 1
Sample Depth: 5         Method: 8021B - Volatile Orga         Analyte         Benzene         Toluene         Ethylbenzene         m-Xylene & p-Xylene         o-Xylene         Xylenes, Total         Surrogate         4-Bromofluorobenzene (Surr)         1,4-Difluorobenzene (Surr)         Method: Total BTEX - Total BT         Analyte         Total BTEX         Method: 8015 NM - Diesel Ran         Analyte         Total TPH         Method: 8015B NM - Diesel Ran         Analyte         Gasoline Range Organics         (GRO)-C6-C10         Diesel Range Organics (Over         C10-C28)         Oll Range Organics (Over C28-C36)         Surrogate	Result           <0.00199	Qualifier U U U U Qualifier U S (DRO) (C Qualifier U S (DRO) (C Qualifier U U U Qualifier U U U Qualifier	RL         0.00199         0.00199         0.00398         0.00398         Limits         70 - 130         70 - 130         70 - 130         70 - 130         6C)         RL         49.9         49.9         49.9         49.9         49.9         49.9         49.9         49.9         49.9         49.9	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg Unit mg/Kg Unit mg/Kg mg/Kg	D	01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30 Prepared 01/17/22 07:30 01/17/22 07:30 01/17/22 07:30	01/17/22 14:05 01/17/22 14:46 01/17/22 14:46 01/17/22 14:46 01/17/22 14:21 01/17/22 16:21 01/17/22 16:21 01/17/22 16:21 01/17/22 16:21	1 1 1 1 1 1 1 1 <b>Dil Fac</b> 1 <b>Dil Fac</b> 1 <b>Dil Fac</b> 1 1 1 1 1
Sample Depth: 5         Method: 8021B - Volatile Orga         Analyte         Benzene         Toluene         Ethylbenzene         m-Xylene & p-Xylene         o-Xylene         Xylenes, Total         Surrogate         4-Bromofluorobenzene (Surr)         1,4-Difluorobenzene (Surr)         Method: Total BTEX - Total BT         Analyte         Total BTEX         Method: 8015 NM - Diesel Ran         Analyte         Total TPH         Method: 8015B NM - Diesel Ran         Analyte         Gasoline Range Organics         (GRO)-C6-C10         Diesel Range Organics (Over         C10-C28)         Oll Range Organics (Over C28-C36)	Result           <0.00199	Qualifier U U U U Qualifier U S (DRO) (C Qualifier U S (DRO) (C Qualifier U S (DRO) U Qualifier U U U U U U U U U U U U U U U U U U U	RL         0.00199         0.00199         0.00398         0.00398         Limits         70 - 130         70 - 130         70 - 130         70 - 130         6C)         RL         49.9         49.9         49.9         49.9         49.9	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg Unit mg/Kg Unit mg/Kg mg/Kg	D	01/17/22 07:30         01/17/22 09:12         01/17/22 09:12         01/17/22 09:12	01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:05           01/17/22 14:06           Analyzed           01/17/22 14:06           Analyzed           01/17/22 14:21           01/17/22 16:21           01/17/22 16:21           01/17/22 16:21           01/17/22 16:21	1 1 1 1 1 1 <b>Dil Fac</b> 1 <b>Dil Fac</b> 1 <b>Dil Fac</b> 1 1 1

		Client S	Sample Re	sults					1
Client: WSP USA Inc. Project/Site: Remuda Basin State 00	)2					SDG: 3140	Job ID: 890- 3236.001.0129		2
Client Sample ID: PH18D Date Collected: 01/12/22 10:25			Lab Samp	ole ID: 890-1 Matrix	8 <b>30-9</b> Solid	3			
Date Received: 01/14/22 08:07 Sample Depth: 5									4
Method: 300.0 - Anions, Ion Chro Analyte		phy - Solub Qualifier	le RL	Unit	D	Prepared	Analyzed	Dil Fac	5
Chloride	621		4.98	mg/Kg		Flepaleu	01/17/22 17:05	1	6
									7
									8
									9
									10
									11
									12
									13
									14

#### **Surrogate Summary**

Client: WSP USA Inc. Project/Site: Remuda Basin State 002

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

			Pe	rcent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
890-1830-1	PH17	105	85		
890-1830-1 MS	PH17	107	94		
890-1830-1 MSD	PH17	105	100		12
890-1830-2	PH17A	93	111		
890-1830-3	PH17B	120	83		
890-1830-4	PH17C	121	108		
890-1830-5	PH18	120	103		
890-1830-6	PH18A	116	107		
890-1830-7	PH18B	130	100		
890-1830-8	PH18C	122	105		
890-1830-9	PH18D	121	90		
LCS 880-16867/1-A	Lab Control Sample	117	102		
LCSD 880-16867/2-A	Lab Control Sample Dup	109	93		
MB 880-16867/5-A	Method Blank	121	104		
Surrogate Legend					
BFB = 4-Bromofluorob	enzene (Surr)				
DFBZ = 1,4-Difluorobe	nzene (Surr)				

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

			Perc
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-1830-1	PH17	66 S1-	70
890-1830-1 MS	PH17	67 S1-	60 S1-
890-1830-1 MSD	PH17	77	68 S1-
890-1830-2	PH17A	68 S1-	71
890-1830-3	PH17B	66 S1-	68 S1-
890-1830-4	PH17C	67 S1-	68 S1-
890-1830-5	PH18	66 S1-	67 S1-
890-1830-6	PH18A	70	71
890-1830-7	PH18B	51 S1-	52 S1-
890-1830-8	PH18C	68 S1-	70
890-1830-9	PH18D	58 S1-	60 S1-
LCS 880-16978/2-A	Lab Control Sample	98	92
LCSD 880-16978/3-A	Lab Control Sample Dup	91	89
MB 880-16978/1-A	Method Blank	74	77

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Job ID: 890-1830-1 SDG: 31403236.001.0129.35.002

Prep Type: Total/NA

Prep Type: Total/NA

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Client: WSP USA Inc. Project/Site: Remuda Basin State 002

Lab Sample ID: MB 880-16867/5-A

**Matrix: Solid** 

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

Analysis Batch: 16967							Prep Batch:	16867
-	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/17/22 07:30	01/17/22 10:53	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/17/22 07:30	01/17/22 10:53	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/17/22 07:30	01/17/22 10:53	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/17/22 07:30	01/17/22 10:53	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/17/22 07:30	01/17/22 10:53	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/17/22 07:30	01/17/22 10:53	1
	MB	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	121		70 - 130			01/17/22 07:30	01/17/22 10:53	1
1,4-Difluorobenzene (Surr)	104		70 - 130			01/17/22 07:30	01/17/22 10:53	1

#### Lab Sample ID: LCS 880-16867/1-A Matrix: Solid Analysis Batch: 16967

•	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09568		mg/Kg		96	70 - 130	
Toluene	0.100	0.09826		mg/Kg		98	70 - 130	
Ethylbenzene	0.100	0.1055		mg/Kg		106	70 - 130	
m-Xylene & p-Xylene	0.200	0.2080		mg/Kg		104	70 - 130	
o-Xylene	0.100	0.1008		mg/Kg		101	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	117		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

#### Lab Sample ID: LCSD 880-16867/2-A Matrix: Solid

#### Analysis Batch: 16967

Analysis Batch: 16967							Prep E	-	
	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08583		mg/Kg		86	70 - 130	11	35
Toluene	0.100	0.09537		mg/Kg		95	70 - 130	3	35
Ethylbenzene	0.100	0.09776		mg/Kg		98	70 - 130	8	35
m-Xylene & p-Xylene	0.200	0.1819		mg/Kg		91	70 - 130	13	35
o-Xylene	0.100	0.08903		mg/Kg		89	70 - 130	12	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	109		70 - 130
1,4-Difluorobenzene (Surr)	93		70 - 130

#### Lab Sample ID: 890-1830-1 MSD Matrix: Solid

Anal	vsis	Batch:	16967

Analysis Batch: 16967									Prep	Batch: 1	16867
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00200	U	0.0994	0.1012		mg/Kg					
Toluene	<0.00200	U	0.0994	0.09193		mg/Kg					

**Eurofins Carlsbad** 

**Client Sample ID: PH17** 

**Prep Type: Total/NA** 

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

Released to Imaging: 9/22/2022 7:39:45 AM

#### **Prep Type: Total/NA** Prep Batch: 16867

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

Prep Type: Total/NA

**Client Sample ID: Lab Control Sample** 

Client: WSP USA Inc. Project/Site: Remuda Basin State 002 Job ID: 890-1830-1 SDG: 31403236.001.0129.35.002

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

Motrix: Solid	MSD							Clie	ent Sample	
Matrix: Solid									Prep Type:	
Analysis Batch: 16967	Sample S	amplo	Spike	Men	MSD				Prep Batc %Rec.	RP
Analyte	Result Q	-	Added		Qualifier	Unit	D	%Rec		PD Lim
Ethylbenzene	<0.00200 U			0.09900		mg/Kg				
m-Xylene & p-Xylene	<0.00401 U		0.199	0.1853		mg/Kg				
p-Xylene	<0.00200 U		0.0994	0.08833		mg/Kg				
	MSD M	SD								
Surrogate	%Recovery Q	ualifier	Limits							
4-Bromofluorobenzene (Surr)	105		70 - 130							
1,4-Difluorobenzene (Surr)	100		70 - 130							
Lab Sample ID: 890-1830-1	MS							Cli	ent Sample	ID: PH1
Matrix: Solid									Prep Type:	
Analysis Batch: 16967										
	MS M	S								
Surrogate	%Recovery Q	ualifier	Limits							
4-Bromofluorobenzene (Surr)	107		70 - 130							
1,4-Difluorobenzene (Surr)	94		70 - 130							
Matrix: Solid	978/1-A						Cli	ent Samp	ole ID: Metho Prep Type: Prep Bato	Total/N
Matrix: Solid		в мв					Cli	ent Samp		Total/N
Matrix: Solid Analysis Batch: 16964	м	B MB It Qualifier	RL		Unit			ent Samp Prepared	Prep Type:	Total/N h: 1697
Matrix: Solid Analysis Batch: 16964 Analyte Gasoline Range Organics	M Resu				Unit mg/K		<u>D</u> _I	Prepared	Prep Type: Prep Bato	Total/N h: 1697 Dil Fa
Matrix: Solid Analysis Batch: 16964 Analyte Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over	M Resu <50	It Qualifier				g	<u>₽</u>   	Prepared 17/22 09:12	Prep Type: Prep Batc Analyzed	Total/N h: 1697 Dil Fa
Matrix: Solid Analysis Batch: 16964 Analyte Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	M Resu <50 <50	It Qualifier	50.0		mg/K	g	<u>₽</u> <u> </u> 01/ 01/	Prepared 17/22 09:12 17/22 09:12	Analyzed           01/17/22 11:4	Total/N h: 1697 <u>Dil Fa</u> 5
Matrix: Solid Analysis Batch: 16964 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	M Resu <50 >50	It Qualifier 0 U 0 U	50.0		mg/K	g	<u>₽</u> <u> </u> 01/ 01/	Prepared 17/22 09:12 17/22 09:12	Analyzed           01/17/22 11:4	Total/N h: 1697 <u>Dil Fa</u> 5
Matrix: Solid Analysis Batch: 16964 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36	M Resu <50 <50 ) <50 <i>M</i>	It Qualifier U 0 U 0 U	50.0		mg/K	g	■ 1 01/ 01/ 01/ 01/	Prepared 17/22 09:12 17/22 09:12	Analyzed           01/17/22 11:4	Total/N h: 1697 5 5 5
Matrix: Solid Analysis Batch: 16964 Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36 Surrogate	M Resu <50 <50 ) <50 <i>M</i> %Recover	ItQualifier0U0U0UBMB	50.0 50.0 50.0		mg/K	g	■ I 01/ 01/ 01/ 01/ 01/	Prepared 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 Prepared 17/22 09:12	Analyzed           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4	Total/N h: 1697 5 5 5 5 5 5 5 5 5 5 5 5 5
Lab Sample ID: MB 880-169 Matrix: Solid Analysis Batch: 16964 Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36 Surrogate 1-Chlorooctane p-Terphenyl	M Resu <50 <50 ) <50 <i>M</i> <i>%Recove</i> 7	It     Qualifier       0     U       0     U       0     U       0     U       0     U       0     U       0     U       0     U       0     U       0     U       0     U	50.0 50.0 50.0		mg/K	g	■ I 01/ 01/ 01/ 01/ 01/	Prepared 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 Prepared 17/22 09:12	Prep Type: Prep Batc 01/17/22 11:4 01/17/22 11:4 01/17/22 11:4 Analyzed	Total/N h: 1697 5 5 5 5 5 5 5 5 5 5 5 5 5
Matrix: Solid Analysis Batch: 16964 Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36 Surrogate I-Chlorooctane D-Terphenyl	M Resu <50 <50 ) <50 <i>M</i> %Recover 7 7	ItQualifier0U <td></td> <td></td> <td>mg/K</td> <td>g g</td> <td><b>D I</b> 01/ 01/ 01/ 01/ 01/</td> <td>Prepared 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12</td> <td>Analyzed           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4</td> <td>Total/N h: 1697 5 5 5 5 5 5 5 5 5 5 5 5 5</td>			mg/K	g g	<b>D I</b> 01/ 01/ 01/ 01/ 01/	Prepared 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12	Analyzed           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4	Total/N h: 1697 5 5 5 5 5 5 5 5 5 5 5 5 5
Matrix: Solid Analysis Batch: 16964 Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36 Surrogate I-Chlorooctane D-Terphenyl Lab Sample ID: LCS 880-16	M Resu <50 <50 ) <50 <i>M</i> %Recover 7 7	ItQualifier0U <td></td> <td></td> <td>mg/K</td> <td>g g</td> <td><b>D I</b> 01/ 01/ 01/ 01/ 01/</td> <td>Prepared 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12</td> <td>Prep Type: Prep Bato 01/17/22 11:4 01/17/22 11:4 01/17/22 11:4 <i>Analyzed</i> 01/17/22 11:4</td> <td>Dil Fa         5         1         Sample</td>			mg/K	g g	<b>D I</b> 01/ 01/ 01/ 01/ 01/	Prepared 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12	Prep Type: Prep Bato 01/17/22 11:4 01/17/22 11:4 01/17/22 11:4 <i>Analyzed</i> 01/17/22 11:4	Dil Fa         5         1         Sample
Matrix: Solid Analysis Batch: 16964 Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36 Surrogate 1-Chlorooctane D-Terphenyl Lab Sample ID: LCS 880-16 Matrix: Solid	M Resu <50 <50 ) <50 <i>M</i> %Recover 7 7	ItQualifier0U <td></td> <td></td> <td>mg/K</td> <td>g g</td> <td><b>D I</b> 01/ 01/ 01/ 01/ 01/</td> <td>Prepared 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12</td> <td>Prep Type: Prep Bato 01/17/22 11:4 01/17/22 11:4 01/17/22 11:4 01/17/22 11:4 <i>Analyzed</i> 01/17/22 11:4 01/17/22 11:4</td> <td>Total/N h: 1697 <u>Dil Fa</u> 5 <u>Dil Fa</u> 5 <u>Dil Fa</u> 5 1 Sampl Total/N</td>			mg/K	g g	<b>D I</b> 01/ 01/ 01/ 01/ 01/	Prepared 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12	Prep Type: Prep Bato 01/17/22 11:4 01/17/22 11:4 01/17/22 11:4 01/17/22 11:4 <i>Analyzed</i> 01/17/22 11:4 01/17/22 11:4	Total/N h: 1697 <u>Dil Fa</u> 5 <u>Dil Fa</u> 5 <u>Dil Fa</u> 5 1 Sampl Total/N
Matrix: Solid Analysis Batch: 16964 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36 Surrogate 1-Chlorooctane	M Resu <50 <50 ) <50 <i>M</i> %Recover 7 7	ItQualifier0U <td></td> <td>LCS</td> <td>mg/K</td> <td>g g</td> <td><b>D I</b> 01/ 01/ 01/ 01/ 01/</td> <td>Prepared 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12</td> <td>Prep Type: Prep Batc 01/17/22 11:4 01/17/22 11:4 01/17/22 11:4 01/17/22 11:4 01/17/22 11:4 01/17/22 11:4 Lab Contro Prep Type:</td> <td>Dil Fa           5           5           5           5           5           5           5           5           5           5           5           5           5           5           5           5           5           5           1 Sampl           Total/N</td>		LCS	mg/K	g g	<b>D I</b> 01/ 01/ 01/ 01/ 01/	Prepared 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12	Prep Type: Prep Batc 01/17/22 11:4 01/17/22 11:4 01/17/22 11:4 01/17/22 11:4 01/17/22 11:4 01/17/22 11:4 Lab Contro Prep Type:	Dil Fa           5           5           5           5           5           5           5           5           5           5           5           5           5           5           5           5           5           5           1 Sampl           Total/N
Matrix: Solid Analysis Batch: 16964 Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36 Surrogate 1-Chlorooctane D-Terphenyl Lab Sample ID: LCS 880-16 Matrix: Solid Analysis Batch: 16964 Analyte	M Resu <50 <50 ) <50 <i>M</i> %Recover 7 7	ItQualifier0U <td>50.0 50.0 50.0 <u>Limits</u> 70 - 130 70 - 130 70 - 130</td> <td>Result</td> <td>mg/K mg/K mg/K</td> <td>g g</td> <td>■ 1 01/ 01/ 01/ 01/ 01/ 01/ 01/ 01/ 01/</td> <td>Prepared 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12</td> <td>Prep Type: Prep Bato 01/17/22 11:4 01/17/22 11:4 01/17/22 11:4 01/17/22 11:4 <i>Analyzed</i> 01/17/22 11:4 01/17/22 11:4 Lab Contro Prep Type: Prep Bato %Rec. Limits</td> <td>Dil Fa           5           5           5           5           5           5           5           5           5           5           5           5           5           5           5           5           5           5           1 Sampl           Total/N</td>	50.0 50.0 50.0 <u>Limits</u> 70 - 130 70 - 130 70 - 130	Result	mg/K mg/K mg/K	g g	■ 1 01/ 01/ 01/ 01/ 01/ 01/ 01/ 01/ 01/	Prepared 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12	Prep Type: Prep Bato 01/17/22 11:4 01/17/22 11:4 01/17/22 11:4 01/17/22 11:4 <i>Analyzed</i> 01/17/22 11:4 01/17/22 11:4 Lab Contro Prep Type: Prep Bato %Rec. Limits	Dil Fa           5           5           5           5           5           5           5           5           5           5           5           5           5           5           5           5           5           5           1 Sampl           Total/N
Matrix: Solid Analysis Batch: 16964 Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36 Surrogate 1-Chlorooctane p-Terphenyl Lab Sample ID: LCS 880-16 Matrix: Solid Analysis Batch: 16964 Analyte Gasoline Range Organics	M Resu <50 <50 ) <50 <i>M</i> %Recover 7 7	ItQualifier0U <td>50.0 50.0 50.0 <u>Limits</u> 70 - 130 70 - 130 <b>Spike</b></td> <td></td> <td>mg/K mg/K mg/K</td> <td>g g Clie</td> <td>■ 1 01/ 01/ 01/ 01/ 01/ 01/ 01/ 01/ 01/</td> <td>Prepared 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12</td> <td>Prep Type: Prep Bato 01/17/22 11:4 01/17/22 11:4 01/17/22 11:4 01/17/22 11:4 Analyzed 01/17/22 11:4 01/17/22 11:4 Lab Contro Prep Type: Prep Bato %Rec.</td> <td>Dil Fa           5           5           5           5           5           5           5           5           5           5           5           5           5           5           5           5           5           5           1 Sampl           Total/N</td>	50.0 50.0 50.0 <u>Limits</u> 70 - 130 70 - 130 <b>Spike</b>		mg/K mg/K mg/K	g g Clie	■ 1 01/ 01/ 01/ 01/ 01/ 01/ 01/ 01/ 01/	Prepared 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12	Prep Type: Prep Bato 01/17/22 11:4 01/17/22 11:4 01/17/22 11:4 01/17/22 11:4 Analyzed 01/17/22 11:4 01/17/22 11:4 Lab Contro Prep Type: Prep Bato %Rec.	Dil Fa           5           5           5           5           5           5           5           5           5           5           5           5           5           5           5           5           5           5           1 Sampl           Total/N
Matrix: Solid Analysis Batch: 16964 Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36 Surrogate I-Chlorooctane D-Terphenyl Lab Sample ID: LCS 880-16 Matrix: Solid Analysis Batch: 16964 Analyte Gasoline Range Organics GRO)-C6-C10	M Resu <50 <50 ) <50 <i>M</i> %Recover 7 7	ItQualifier0U <td>50.0 50.0 50.0 <u>Limits</u> 70 - 130 70 - 130 70 - 130 70 - 130</td> <td>Result 1033</td> <td>mg/K mg/K mg/K</td> <td>g g Clie <u>Unit</u> mg/Kg</td> <td>■ 1 01/ 01/ 01/ 01/ 01/ 01/ 01/ 01/ 01/</td> <td>Prepared 17/22 09:12 17/22 09:12 17/22 09:12 Prepared 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12</td> <td>Analyzed           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           Lab Controo           Prep Type:           Prep Bato           %Rec.           Limits           70 - 130</td> <td>Total/N h: 1697 <u>Dil Fa</u> 5 <u>Dil Fa</u> 5 <u>Dil Fa</u> 5 1 Sampl Total/N</td>	50.0 50.0 50.0 <u>Limits</u> 70 - 130 70 - 130 70 - 130 70 - 130	Result 1033	mg/K mg/K mg/K	g g Clie <u>Unit</u> mg/Kg	■ 1 01/ 01/ 01/ 01/ 01/ 01/ 01/ 01/ 01/	Prepared 17/22 09:12 17/22 09:12 17/22 09:12 Prepared 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12	Analyzed           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           Lab Controo           Prep Type:           Prep Bato           %Rec.           Limits           70 - 130	Total/N h: 1697 <u>Dil Fa</u> 5 <u>Dil Fa</u> 5 <u>Dil Fa</u> 5 1 Sampl Total/N
Matrix: Solid Analysis Batch: 16964 Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) DII Range Organics (Over C28-C36 Surrogate I-Chlorooctane D-Terphenyl Lab Sample ID: LCS 880-16 Matrix: Solid Analysis Batch: 16964 Analyte Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over	M Resu <50 <50 ) <50 <i>M</i> %Recover 7 7	ItQualifier0U <td>50.0 50.0 50.0 <u>Limits</u> 70 - 130 70 - 130 70 - 130</td> <td>Result</td> <td>mg/K mg/K mg/K</td> <td>g g Clie Unit</td> <td>■ 1 01/ 01/ 01/ 01/ 01/ 01/ 01/ 01/ 01/</td> <td>Prepared 17/22 09:12 17/22 09:12 17/22 09:12 Prepared 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12</td> <td>Prep Type: Prep Bato 01/17/22 11:4 01/17/22 11:4 01/17/22 11:4 01/17/22 11:4 <i>Analyzed</i> 01/17/22 11:4 01/17/22 11:4 Lab Contro Prep Type: Prep Bato %Rec. Limits</td> <td>Total/N h: 1697 <u>Dil Fa</u> 5 <u>Dil Fa</u> 5 <u>Dil Fa</u> 5 1 Sampl Total/N</td>	50.0 50.0 50.0 <u>Limits</u> 70 - 130 70 - 130 70 - 130	Result	mg/K mg/K mg/K	g g Clie Unit	■ 1 01/ 01/ 01/ 01/ 01/ 01/ 01/ 01/ 01/	Prepared 17/22 09:12 17/22 09:12 17/22 09:12 Prepared 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12	Prep Type: Prep Bato 01/17/22 11:4 01/17/22 11:4 01/17/22 11:4 01/17/22 11:4 <i>Analyzed</i> 01/17/22 11:4 01/17/22 11:4 Lab Contro Prep Type: Prep Bato %Rec. Limits	Total/N h: 1697 <u>Dil Fa</u> 5 <u>Dil Fa</u> 5 <u>Dil Fa</u> 5 1 Sampl Total/N
Matrix: Solid Analysis Batch: 16964 Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36 Surrogate 1-Chlorooctane D-Terphenyl Lab Sample ID: LCS 880-16 Matrix: Solid Analysis Batch: 16964 Analyte	M Resu <50 <50 ) <50 <i>M</i> %Recover 7 7	It Qualifier U U U U U U U U U U U U U U U U U U U	50.0 50.0 50.0 <u>Limits</u> 70 - 130 70 - 130 70 - 130 70 - 130	Result 1033	mg/K mg/K mg/K	g g Clie <u>Unit</u> mg/Kg	■ 1 01/ 01/ 01/ 01/ 01/ 01/ 01/ 01/ 01/	Prepared 17/22 09:12 17/22 09:12 17/22 09:12 Prepared 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12 17/22 09:12	Analyzed           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           01/17/22 11:4           Lab Controo           Prep Type:           Prep Bato           %Rec.           Limits           70 - 130	Total/N h: 1697 <u>Dil Fa</u> 5 <u>Dil Fa</u> 5 <u>Dil Fa</u> 5 1 Sampl Total/N

	203	LU3	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	98		70 - 130
o-Terphenyl	92		70 - 130

Client: WSP USA Inc. Project/Site: Remuda Basin State 002

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

						-					
Lab Sample ID: LCSD 88	0-16978/3-A				C C	Client Sa	mple	ID: Lat	o Control	Sample	e Dun
Matrix: Solid							mpio	ID. Lui	Prep Ty		
Analysis Batch: 16964										Batch:	
Analysis Baten. 10004			Spike	LCSD	LCSD				%Rec.	Juton	RPD
Analyte			Added	_	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1022		mg/Kg		102	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	894.7		mg/Kg		89	70 - 130	2	20
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	91		70 - 130								
o-Terphenyl	89		70 - 130								
Lab Sample ID: 890-1830	4 MC							<u> </u>	lient Sam		
Matrix: Solid									Prep Ty	-	
Analysis Batch: 16964										Batch:	
Analysis Batch. 10504	Sample	Sample	Spike	MS	MS				%Rec.	Saten.	10370
Analyte		Qualifier	Added	_	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10		U F1	999	1350		mg/Kg		135	70 - 130		
Diesel Range Organics (Over	<50.0	U	999	1144		mg/Kg		112	70 - 130		
C10-C28)											
•		MS									
Surrogate	%Recovery		Limits								
1-Chlorooctane	67	•	70 - 130								
o-Terphenyl	60	S1-	70 - 130								
Lab Sample ID: 890-1830	-1 MSD							С	lient Sam	ple ID:	<b>PH17</b>
Matrix: Solid									Prep Ty	pe: Tot	al/NA
Analysis Batch: 16964										Batch: <sup>,</sup>	
-	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1	998	1508	F1	mg/Kg		151	70 - 130	11	20
	.50.0		000	4000				400	70 400	4.0	~~~

C10-C28)			
	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	77		70 - 130
o-Terphenyl	68	S1-	70 - 130

<50.0 U

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

Diesel Range Organics (Over

Lab Sample ID: MB 880-17007/1-/ Matrix: Solid Analysis Batch: 17057	<b>N</b>					Client Sam	ple ID: Methoo Prep Type: S	
	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			01/17/22 13:59	1

998

1308

mg/Kg

129

70 - 130

13

20

**Eurofins Carlsbad** 

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Released to Imaging: 9/22/2022 7:39:45 AM

Client: WSP USA Inc. Project/Site: Remuda Basin State 002 Job ID: 890-1830-1 SDG: 31403236.001.0129.35.002

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

Lab Sample ID: LCS 880-1 Matrix: Solid	7007/2-A					Clier	nt Sar	nple ID	: Lab Cor Prep T	ntrol Sa ype: Sc	
Analysis Batch: 17057											
			Spike	LCS	LCS				%Rec.		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride			250	266.8		mg/Kg		107	90 - 110		
Lab Sample ID: LCSD 880	-17007/3-A				c	Client Sa	mple	ID: Lat	Control	Sample	Dup
Matrix: Solid									Prep T	ype: Sc	oluble
Analysis Batch: 17057											
			Spike	LCSD	LCSD				%Rec.		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride		·	250	250.1		mg/Kg		100	90 - 110	6	20
								<b>C</b>	liant Cam		DU47
Lab Sample ID: 890-1830-7	1 1015							U.	lient Sam	-	
Matrix: Solid									Prep I	ype: So	oluble
Analysis Batch: 17057	0	0	0						0/ <b>D</b>		
	•	Sample	Spike	MS	MS		_	a. <b>-</b>	%Rec.		
Analyte		Qualifier	Added	Result		Unit	D	%Rec	Limits		
Chloride	944	F1	248	1155	F1	mg/Kg		85	90 - 110		
Lab Sample ID: 890-1830-								С	lient Sam	ple ID:	PH17
Matrix: Solid	-									ype: Sc	
Analysis Batch: 17057											
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	944	F1	248	1156	F1	mg/Kg		85	90 - 110	0	20

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### **QC Association Summary**

Client: WSP USA Inc. Project/Site: Remuda Basin State 002

Job ID: 890-1830-1 SDG: 31403236.001.0129.35.002

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## GC VOA

#### Prep Batch: 16867

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1830-1	PH17	Total/NA	Solid	5035	
890-1830-2	PH17A	Total/NA	Solid	5035	
890-1830-3	PH17B	Total/NA	Solid	5035	
890-1830-4	PH17C	Total/NA	Solid	5035	
890-1830-5	PH18	Total/NA	Solid	5035	
890-1830-6	PH18A	Total/NA	Solid	5035	
890-1830-7	PH18B	Total/NA	Solid	5035	
890-1830-8	PH18C	Total/NA	Solid	5035	
890-1830-9	PH18D	Total/NA	Solid	5035	
MB 880-16867/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-16867/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-16867/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1830-1 MSD	PH17	Total/NA	Solid	5035	

#### Analysis Batch: 16967

Lab Sample ID	Client Sample ID		Matrix	Method	Prep Batch
890-1830-1	PH17	Total/NA	Solid	8021B	16867
890-1830-2	PH17A	Total/NA	Solid	8021B	16867
890-1830-3	PH17B	Total/NA	Solid	8021B	16867
890-1830-4	PH17C	Total/NA	Solid	8021B	16867
890-1830-5	PH18	Total/NA	Solid	8021B	16867
890-1830-6	PH18A	Total/NA	Solid	8021B	16867
890-1830-7	PH18B	Total/NA	Solid	8021B	16867
890-1830-8	PH18C	Total/NA	Solid	8021B	16867
890-1830-9	PH18D	Total/NA	Solid	8021B	16867
MB 880-16867/5-A	Method Blank	Total/NA	Solid	8021B	16867
LCS 880-16867/1-A	Lab Control Sample	Total/NA	Solid	8021B	16867
LCSD 880-16867/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	16867
890-1830-1 MS	PH17	Total/NA	Solid	8021B	
890-1830-1 MSD	PH17	Total/NA	Solid	8021B	16867

#### Analysis Batch: 17056

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1830-1	PH17	Total/NA	Solid	Total BTEX	
890-1830-2	PH17A	Total/NA	Solid	Total BTEX	
890-1830-3	PH17B	Total/NA	Solid	Total BTEX	
890-1830-4	PH17C	Total/NA	Solid	Total BTEX	
890-1830-5	PH18	Total/NA	Solid	Total BTEX	
890-1830-6	PH18A	Total/NA	Solid	Total BTEX	
890-1830-7	PH18B	Total/NA	Solid	Total BTEX	
890-1830-8	PH18C	Total/NA	Solid	Total BTEX	
890-1830-9	PH18D	Total/NA	Solid	Total BTEX	

#### GC Semi VOA

#### Analysis Batch: 16964

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1830-1	PH17	Total/NA	Solid	8015B NM	16978
890-1830-2	PH17A	Total/NA	Solid	8015B NM	16978
890-1830-3	PH17B	Total/NA	Solid	8015B NM	16978
890-1830-4	PH17C	Total/NA	Solid	8015B NM	16978

### **QC Association Summary**

Client: WSP USA Inc. Project/Site: Remuda Basin State 002

#### GC Semi VOA (Continued)

#### Analysis Batch: 16964 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1830-5	PH18	Total/NA	Solid	8015B NM	16978
890-1830-6	PH18A	Total/NA	Solid	8015B NM	16978
890-1830-7	PH18B	Total/NA	Solid	8015B NM	16978
890-1830-8	PH18C	Total/NA	Solid	8015B NM	16978
890-1830-9	PH18D	Total/NA	Solid	8015B NM	16978
MB 880-16978/1-A	Method Blank	Total/NA	Solid	8015B NM	16978
LCS 880-16978/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	16978
LCSD 880-16978/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	16978
890-1830-1 MS	PH17	Total/NA	Solid	8015B NM	16978
890-1830-1 MSD	PH17	Total/NA	Solid	8015B NM	16978

#### Prep Batch: 16978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-1830-1	PH17	Total/NA	Solid	8015NM Prep		
890-1830-2	PH17A	Total/NA	Solid	8015NM Prep		
890-1830-3	PH17B	Total/NA	Solid	8015NM Prep		
890-1830-4	PH17C	Total/NA	Solid	8015NM Prep		
890-1830-5	PH18	Total/NA	Solid	8015NM Prep		
890-1830-6	PH18A	Total/NA	Solid	8015NM Prep		
890-1830-7	PH18B	Total/NA	Solid	8015NM Prep		
890-1830-8	PH18C	Total/NA	Solid	8015NM Prep		
890-1830-9	PH18D	Total/NA	Solid	8015NM Prep		
MB 880-16978/1-A	Method Blank	Total/NA	Solid	8015NM Prep		
LCS 880-16978/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep		
LCSD 880-16978/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep		
890-1830-1 MS	PH17	Total/NA	Solid	8015NM Prep		
890-1830-1 MSD	PH17	Total/NA	Solid	8015NM Prep		

#### Analysis Batch: 17055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1830-1	PH17	Total/NA	Solid	8015 NM	
890-1830-2	PH17A	Total/NA	Solid	8015 NM	
890-1830-3	PH17B	Total/NA	Solid	8015 NM	
890-1830-4	PH17C	Total/NA	Solid	8015 NM	
890-1830-5	PH18	Total/NA	Solid	8015 NM	
890-1830-6	PH18A	Total/NA	Solid	8015 NM	
890-1830-7	PH18B	Total/NA	Solid	8015 NM	
890-1830-8	PH18C	Total/NA	Solid	8015 NM	
890-1830-9	PH18D	Total/NA	Solid	8015 NM	

#### HPLC/IC

#### Leach Batch: 17007

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1830-1	PH17	Soluble	Solid	DI Leach	
890-1830-2	PH17A	Soluble	Solid	DI Leach	
890-1830-3	PH17B	Soluble	Solid	DI Leach	
890-1830-4	PH17C	Soluble	Solid	DI Leach	
890-1830-5	PH18	Soluble	Solid	DI Leach	
890-1830-6	PH18A	Soluble	Solid	DI Leach	
890-1830-7	PH18B	Soluble	Solid	DI Leach	

#### **Eurofins Carlsbad**

Job ID: 890-1830-1 SDG: 31403236.001.0129.35.002

#### **QC** Association Summary

#### Client: WSP USA Inc. Project/Site: Remuda Basin State 002

#### HPLC/IC (Continued)

#### Leach Batch: 17007 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1830-8	PH18C	Soluble	Solid	DI Leach	
890-1830-9	PH18D	Soluble	Solid	DI Leach	
MB 880-17007/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-17007/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-17007/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1830-1 MS	PH17	Soluble	Solid	DI Leach	
890-1830-1 MSD	PH17	Soluble	Solid	DI Leach	
Analysis Batch: 170	57				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1830-1	PH17	Soluble	Solid	300.0	17007
890-1830-2	PH17A	Soluble	Solid	300.0	17007
890-1830-3	PH17B	Soluble	Solid	300.0	17007
890-1830-4	PH17C	Soluble	Solid	300.0	17007
890-1830-5	PH18	Soluble	Solid	300.0	17007
890-1830-6	PH18A	Soluble	Solid	300.0	17007
890-1830-7	PH18B	Soluble	Solid	300.0	17007
890-1830-8	PH18C	Soluble	Solid	300.0	17007
890-1830-9	PH18D	Soluble	Solid	300.0	17007
MB 880-17007/1-A	Method Blank	Soluble	Solid	300.0	17007
LCS 880-17007/2-A	Lab Control Sample	Soluble	Solid	300.0	17007
LCSD 880-17007/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	17007
890-1830-1 MS	PH17	Soluble	Solid	300.0	17007
890-1830-1 MSD	PH17	Soluble	Solid	300.0	17007

Project/Site: Remuda Basin State 002

Job ID: 890-1830-1 SDG: 31403236.001.0129.35.002

#### Lab Sample ID: 890-1830-1 Matrix: Solid

Lab Sample ID: 890-1830-2

Lab Sample ID: 890-1830-3

Lab Sample ID: 890-1830-4

Matrix: Solid

Matrix: Solid

**Client Sample ID: PH17** Date Collected: 01/12/22 14:25 Date Received: 01/14/22 08:07

Client: WSP USA Inc.

	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			16867	01/17/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	16967	01/17/22 11:22	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	17056	01/17/22 14:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17055	01/17/22 14:06	AJ	XEN MID
Total/NA	Prep	8015NM Prep			16978	01/17/22 09:12	DM	XEN MID
Total/NA	Analysis	8015B NM		1	16964	01/17/22 12:49	AJ	XEN MID
Soluble	Leach	DI Leach			17007	01/17/22 12:10	SC	XEN MID
Soluble	Analysis	300.0		1	17057	01/17/22 14:20	SC	XEN MID

#### **Client Sample ID: PH17A** Date Collected: 01/12/22 14:30 Date Received: 01/14/22 08:07

	Batch	Batch		Dilution	Batch	Prepared		
Prep Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			16867	01/17/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	16967	01/17/22 11:42	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	17056	01/17/22 14:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17055	01/17/22 14:06	AJ	XEN MID
Total/NA	Prep	8015NM Prep			16978	01/17/22 09:12	DM	XEN MID
Total/NA	Analysis	8015B NM		1	16964	01/17/22 13:53	AJ	XEN MID
Soluble	Leach	DI Leach			17007	01/17/22 12:10	SC	XEN MID
Soluble	Analysis	300.0		1	17057	01/17/22 14:41	SC	XEN MID

#### **Client Sample ID: PH17B** Date Collected: 01/12/22 14:35 Date Received: 01/14/22 08:07

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			16867	01/17/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	16967	01/17/22 12:02	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	17056	01/17/22 14:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17055	01/17/22 14:06	AJ	XEN MID
Total/NA	Prep	8015NM Prep			16978	01/17/22 09:12	DM	XEN MID
Total/NA	Analysis	8015B NM		1	16964	01/17/22 14:14	AJ	XEN MID
Soluble	Leach	DI Leach			17007	01/17/22 12:10	SC	XEN MID
Soluble	Analysis	300.0		1	17057	01/17/22 14:48	SC	XEN MID

#### **Client Sample ID: PH17C** Date Collected: 01/12/22 14:40 Date Received: 01/14/22 08:07

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			16867	01/17/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	16967	01/17/22 12:23	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	17056	01/17/22 14:46	AJ	XEN MID

**Eurofins Carlsbad** 

Matrix: Solid

Lab Chronicle

Client: WSP USA Inc. Project/Site: Remuda Basin State 002

#### Client Sample ID: PH17C Date Collected: 01/12/22 14:40 Date Received: 01/14/22 08:07

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1	17055	01/17/22 14:06	AJ	XEN MID
Total/NA	Prep	8015NM Prep			16978	01/17/22 09:12	DM	XEN MID
Total/NA	Analysis	8015B NM		1	16964	01/17/22 14:35	AJ	XEN MID
Soluble	Leach	DI Leach			17007	01/17/22 12:10	SC	XEN MID
Soluble	Analysis	300.0		1	17057	01/17/22 14:55	SC	XEN MID

#### Client Sample ID: PH18 Date Collected: 01/12/22 15:00 Date Received: 01/14/22 08:07

	Batch	Batch		Dilution	Batch	Prepared		
Prep Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			16867	01/17/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	16967	01/17/22 12:43	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	17056	01/17/22 14:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17055	01/17/22 14:06	AJ	XEN MID
Total/NA	Prep	8015NM Prep			16978	01/17/22 09:12	DM	XEN MID
Total/NA	Analysis	8015B NM		1	16964	01/17/22 14:56	AJ	XEN MID
Soluble	Leach	DI Leach			17007	01/17/22 12:10	SC	XEN MID
Soluble	Analysis	300.0		1	17057	01/17/22 16:20	SC	XEN MID

#### Client Sample ID: PH18A Date Collected: 01/12/22 15:05

Date Received: 01/12/22 13:03

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			16867	01/17/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	16967	01/17/22 13:04	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	17056	01/17/22 14:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17055	01/17/22 14:06	AJ	XEN MID
Total/NA	Prep	8015NM Prep			16978	01/17/22 09:12	DM	XEN MID
Total/NA	Analysis	8015B NM		1	16964	01/17/22 15:18	AJ	XEN MID
Soluble	Leach	DI Leach			17007	01/17/22 12:10	SC	XEN MID
Soluble	Analysis	300.0		1	17057	01/17/22 16:43	SC	XEN MID

#### Client Sample ID: PH18B Date Collected: 01/12/22 15:10 Date Received: 01/14/22 08:07

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			16867	01/17/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	16967	01/17/22 13:24	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	17056	01/17/22 14:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17055	01/17/22 14:06	AJ	XEN MID
Total/NA	Prep	8015NM Prep			16978	01/17/22 09:12	DM	XEN MID
Total/NA	Analysis	8015B NM		1	16964	01/17/22 15:39	AJ	XEN MID

**Eurofins Carlsbad** 

#### Lab Sample ID: 890-1830-4 Matrix: Solid

Lab Sample ID: 890-1830-5

Matrix: Solid

#### Lab Sample ID: 890-1830-6 Matrix: Solid

Lab Sample ID: 890-1830-7

Matrix: Solid

Project/Site: Remuda Basin State 002

#### Lab Chronicle

Job ID: 890-1830-1 SDG: 31403236.001.0129.35.002

Lab Sample ID: 890-1830-8

Lab Sample ID: 890-1830-9

#### Lab Sample ID: 890-1830-7 Matrix: Solid

Client Sample ID: PH18B Date Collected: 01/12/22 15:10 Date Received: 01/14/22 08:07

Client: WSP USA Inc.

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			17007	01/17/22 12:10	SC	XEN MID
Soluble	Analysis	300.0		1	17057	01/17/22 16:50	SC	XEN MID

#### Client Sample ID: PH18C Date Collected: 01/12/22 15:15 Date Received: 01/14/22 08:07

	Batch	Batch		Dilution	Batch	Prepared			
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab	
Total/NA	Prep	5035			16867	01/17/22 07:30	KL	XEN MID	
Total/NA	Analysis	8021B		1	16967	01/17/22 13:45	KL	XEN MID	
Total/NA	Analysis	Total BTEX		1	17056	01/17/22 14:46	AJ	XEN MID	
Total/NA	Analysis	8015 NM		1	17055	01/17/22 14:06	AJ	XEN MID	
Total/NA	Prep	8015NM Prep			16978	01/17/22 09:12	DM	XEN MID	
Total/NA	Analysis	8015B NM		1	16964	01/17/22 16:00	AJ	XEN MID	
Soluble	Leach	DI Leach			17007	01/17/22 12:10	SC	XEN MID	
Soluble	Analysis	300.0		1	17057	01/17/22 16:58	SC	XEN MID	

#### Client Sample ID: PH18D Date Collected: 01/12/22 10:25 Date Received: 01/14/22 08:07

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			16867	01/17/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	16967	01/17/22 14:05	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	17056	01/17/22 14:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17055	01/17/22 14:06	AJ	XEN MID
Total/NA	Prep	8015NM Prep			16978	01/17/22 09:12	DM	XEN MID
Total/NA	Analysis	8015B NM		1	16964	01/17/22 16:21	AJ	XEN MID
Soluble	Leach	DI Leach			17007	01/17/22 12:10	SC	XEN MID
Soluble	Analysis	300.0		1	17057	01/17/22 17:05	SC	XEN MID

Laboratory References:

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

Eurofins Carlsbad

890-1830-1 0129.35.002

Matrix: Solid

Matrix: Solid

Client: WSP USA Inc.

**Accreditation/Certification Summary** 

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Job ID: 890-1830-1 SDG: 31403236.001.0129.35.002

#### Project/Site: Remuda Basin State 002 Laboratory: Eurofins Midland

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

uthority	Pro	ogram	Identification Number	Expiration Date
exas	NE	ELAP	T104704400-21-22	06-30-22
<b>T C U C U C</b>			a the antificant law, the analysis of a state state of the state of th	This list many include an above familie
the following analytes the agency does not c	•	ort, but the laboratory is r	for certified by the governing authority.	This list may include analytes for whic
0,	•	ort, but the laboratory is r Matrix	Analyte	This list may include analytes for which
the agency does not o	ffer certification.		, , , , ,	I his list may include analytes for whic

**Eurofins Carlsbad** 

#### **Method Summary**

#### Client: WSP USA Inc. Project/Site: Remuda Basin State 002

Job ID: 890-1830-1 SDG: 31403236.001.0129.35.002

Method	Method Description	Protocol	Laboratory
3021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
3015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
3015B 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
3015NM Prep	Microextraction	SW846	XEN MID
OI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

#### Protocol References:

ASTM = ASTM International

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

#### Laboratory References:

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

#### Sample Summary

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Job ID: 890-1830-1 SDG: 31403236.001.0129.35.002

#### Client: WSP USA Inc. Project/Site: Remuda Basin State 002

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1830-1	PH17	Solid	01/12/22 14:25	01/14/22 08:07	1
890-1830-2	PH17A	Solid	01/12/22 14:30	01/14/22 08:07	2
890-1830-3	PH17B	Solid	01/12/22 14:35	01/14/22 08:07	3
890-1830-4	PH17C	Solid	01/12/22 14:40	01/14/22 08:07	4
890-1830-5	PH18	Solid	01/12/22 15:00	01/14/22 08:07	1
890-1830-6	PH18A	Solid	01/12/22 15:05	01/14/22 08:07	2
890-1830-7	PH18B	Solid	01/12/22 15:10	01/14/22 08:07	3
890-1830-8	PH18C	Solid	01/12/22 15:15	01/14/22 08:07	4
890-1830-9	PH18D	Solid	01/12/22 10:25	01/14/22 08:07	5

ived by	, <b>0</b> 0	<u>:</u> Т <u></u>			8:01	28	AM										_														Page 67
	Va D	Relinquished by: (Signature)	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its athilates and subcontractors. It assigns standard terms and conducons of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the contro of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	Circle Method	Total 200.7 / 6010		PH20	PH20	PH20	PH20	PH20	PH19	PH19	PH19	PH19	Sample Identification	Sample Custody Seals:	Cooler Custody Seals:	Received Intact:	Temperature (°C):	SAMPLE RECEIPT	Sampler's Name:	P.O. Number:	Project Number:	Project Name:	Phone	City, State ZIP:	Address:	Company Name:	Project Manager:	X
		: (Signature)	gnature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its amiliates and subcon . 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 A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms	Circle Method(s) and Metal(s) to be analyzed	010 200.8 / 6020:		0	0	0	0	0	9	9	9	9	tification	ils: Yes No	Yes	(Yes	1.21		Conner Shore		31403;	Remu	720.384.7365	Arvada, CO 80003	4600 West 60th Avenue	WSP USA Inc	Aimee Cole	
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V		by: (Signature)	itutes a valid pu assume any rea d a charge of \$5	TCLP / SPLP 6010:	8RCRA 13		1025	1515	1510	1505	1500	1440	1435	1430	1425	Time Sampled	Total Containers:	Correction Factor:	WW OD	Thermometer ID	Wet Ice:	Due Date	Rush: 24	Routine	Ţ	Email:					Houstor Midlar bs.NM (575-39)
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		Relinquished by: (Signature)	contracto uch losse: rms will bu	u Pb															890-18						ANALYSIS REQUEST						
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		nature)	o circums unless pi	NI Se	Pb Mg		-	-					$\left  \right $	-	-			-	of Cus						UEST	٦ ا	Re		Pr	1 	13-620-20
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1/20/2022 (Rev. 1)

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#### Login Sample Receipt Checklist

Client: WSP USA Inc.

#### Login Number: 1830 List Number: 1 Creator: Clifton, Cloe

<6mm (1/4").

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

Job Number: 890-1830-1

SDG Number: 31403236.001.0129.35.002

List Source: Eurofins Carlsbad

#### Login Sample Receipt Checklist

Client: WSP USA Inc.

Login Number: 1830 List Number: 2 Creator: Rodriguez, Leticia Job Number: 890-1830-1 SDG Number: 31403236.001.0129.35.002

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

Received by OCD: 7/8/2022 8:01:28 AM

# 🛟 eurofins

## Environment Testing America

## **ANALYTICAL REPORT**

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

#### Laboratory Job ID: 890-1831-1

Laboratory Sample Delivery Group: 31403236.001.0129.35.02 Client Project/Site: Remuda Basin State 002 Revision: 1

#### For:

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

Attn: Aimee Cole

RAMER

Authorized for release by: 1/20/2022 12:29:58 PM

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

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

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

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

www.eurofinsus.com/Env Released to Imaging: 9/22/2022 7:39:45 AM

Laboratory Job ID: 890-1831-1 SDG: 31403236.001.0129.35.02

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Client: WSP USA Inc. Project/Site: Remuda Basin State 002

**Eurofins Carlsbad** 

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Qualifiers		3
GC VOA Qualifier	Qualifier Description	4
U	Indicates the analyte was analyzed for but not detected.	
GC Semi VO Qualifier	A Qualifier Description	5
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	8
U	Indicates the analyte was analyzed for but not detected.	
Glossary		9
Abbreviation	These commonly used abbreviations may or may not be present in this report.	
¤	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)	4
Dil Fac	Dilution Factor	1
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 MPN	Minimum Level (Dioxin) 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	
	Relative Percent Difference, a measure of the relative difference between two points Toxicity Equivalent Factor (Dioxin)	
RPD TEF TEQ		

Job ID: 890-1831-1 SDG: 31403236.001.0129.35.02
#### Job ID: 890-1831-1

#### Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-1831-1

#### REVISION

The report being provided is a revision of the original report sent on 1/17/2022. The report (revision 1) is being revised due to Per client email, requesting Sample IDs to be changed.

Report revision history

#### Receipt

The samples were received on 1/14/2022 8:07 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.0°C

#### GC VOA

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

#### GC Semi VOA

Method 8015MOD\_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-16978 and analytical batch 880-16964 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

#### HPLC/IC

Method 300\_ORGFM\_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-17007 and analytical batch 880-17057 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

# **Client Sample Results**

## Client Sample ID: PH04 Date Collected: 01/12/22 13:40 Date Received: 01/14/22 08:07

Sample Depth: 1

Method: 8021B - Volatile Orga Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201		0.00201	mg/Kg		01/17/22 07:30	01/17/22 11:21	
Toluene	< 0.00201	U	0.00201	mg/Kg		01/17/22 07:30	01/17/22 11:21	
Ethylbenzene	<0.00201		0.00201	mg/Kg				
m-Xylene & p-Xylene	< 0.00402		0.00402	mg/Kg		01/17/22 07:30		1
o-Xylene	< 0.00201		0.00201	mg/Kg		01/17/22 07:30		1
Xylenes, Total	<0.00402		0.00402	mg/Kg		01/17/22 07:30		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	119		70 - 130			01/17/22 07:30	01/17/22 11:21	-
1,4-Difluorobenzene (Surr)	80		70 - 130			01/17/22 07:30	01/17/22 11:21	1
Method: Total BTEX - Total B	TEX Calcula	tion						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			01/17/22 14:46	1
Method: 8015 NM - Diesel Rar	ıge Organic	s (DRO) (G	iC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			01/17/22 14:06	1
Method: 8015B NM - Diesel Ra	ange Organ	ics (DRO) (	GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/17/22 09:16	01/17/22 12:48	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/17/22 09:16	01/17/22 12:48	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/17/22 09:16	01/17/22 12:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	86		70 - 130			01/17/22 09:16	01/17/22 12:48	1
o-Terphenyl	87		70 - 130			01/17/22 09:16	01/17/22 12:48	1
Method: 300.0 - Anions, Ion C	hromatogra	i <mark>phy - Solu</mark>	ble					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	438		5.00	mg/Kg			01/17/22 17:13	1
lient Sample ID: PH04A						Lab Samp	le ID: 890-1	831-2
ate Collected: 01/12/22 13:45							Matrix	c: Solid
ate Received: 01/14/22 08:07 ample Depth: 2								
• •								
Method: 8021B - Volatile Orga Analyte		unds (GC) Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200		0.00200	mg/Kg		01/17/22 07:30	01/17/22 11:42	
Toluene	<0.00200		0.00200	mg/Kg			01/17/22 11:42	1
	<0.00200		0.00200			01/17/22 07.30	01/17/22 11.42	

Job ID: 890-1831-1

# SDG: 31403236.001.0129.35.02

Lab Sample ID: 890-1831-1 Matrix: Solid

Eurofins Carlsbad

Analyzed

1

1

1

1

1

Dil Fac

01/17/22 07:30 01/17/22 11:42

01/17/22 07:30 01/17/22 11:42

01/17/22 07:30 01/17/22 11:42

01/17/22 07:30 01/17/22 11:42

01/17/22 07:30 01/17/22 11:42

Prepared

Released to Imaging: 9/22/2022 7:39:45 AM

<0.00200 U

<0.00399 U

<0.00200 U

<0.00399 U

%Recovery Qualifier

104

Ethylbenzene

Xylenes, Total

o-Xylene

Surrogate

m-Xylene & p-Xylene

4-Bromofluorobenzene (Surr)

0.00200

0.00399

0.00200

0.00399

Limits

70 - 130

mg/Kg

mg/Kg

mg/Kg

mg/Kg

-1 )2 2 •1 2

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		Client	Sample Re	sults				
lient: WSP USA Inc.	200					200 0440	Job ID: 890-	
roject/Site: Remuda Basin State	ə 002					SDG: 3140	3236.001.0129	9.35.02
lient Sample ID: PH04A						Lab Samp	le ID: 890-1	831-2
ate Collected: 01/12/22 13:45								k: Solid
ate Received: 01/14/22 08:07								
ample Depth: 2								
Method: 8021B - Volatile Orga	anic Compo	unds (GC)	(Continued)					
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	98		70 - 130			01/17/22 07:30	01/17/22 11:42	1
		41.5.m						
Method: Total BTEX - Total BT Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399		0.00399	mg/Kg	— <u>-</u>	Fiepaiea	01/17/22 14:46	
	·0.00000	0	0.00000	119/13			01/11/22 11.13	•
Method: 8015 NM - Diesel Rar	nge Organic	s (DRO) (C	ЭC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	78.4		49.9	mg/Kg	_		01/17/22 14:15	1
Mithed 00450 NM Dissol D	And	· (DDO)	(00)					
Method: 8015B NM - Diesel Ra		i <mark>ics (DRO)</mark> Qualifier	(GC) RL	Unit	D	Dramarad	Analyzad	Dil Fac
Analyte Gasoline Range Organics	- <b>Result</b> <49.9		49.9	Unit mg/Kg	<u> </u>		Analyzed 01/17/22 13:51	
(GRO)-C6-C10	<b>\4</b> 0.0	U	43.3	IIIy/Ny		01/17/22 03.10	01/17/22 13.31	I
Diesel Range Organics (Over	78.4		49.9	mg/Kg		01/17/22 09:16	01/17/22 13:51	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/17/22 09:16	01/17/22 13:51	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	- <u>////////////////////////////////////</u>		70 - 130			<u> </u>	01/17/22 13:51	1
o-Terphenyl	104		70 - 130				01/17/22 13:51	1
Method: 300.0 - Anions, Ion C					_	_		
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	64.7		5.05	mg/Kg			01/17/22 17:20	1
Client Sample ID: PH04B						Lab Samp	le ID: 890-1	831-3
Date Collected: 01/12/22 13:50								k: Solid
Date Received: 01/14/22 08:07								
Sample Depth: 3								
-								
Method: 8021B - Volatile Orga					_			
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/17/22 07:30	01/17/22 12:02	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/17/22 07:30	01/17/22 12:02	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/17/22 07:30	01/17/22 12:02	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/17/22 07:30	01/17/22 12:02	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/17/22 07:30	01/17/22 12:02	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/17/22 07:30	01/17/22 12:02	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/17/22 07:30	01/17/22 12:02	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	124		70 - 130			01/17/22 07:30	01/17/22 12:02	1
1,4-Difluorobenzene (Surr)	108		70 - 130			01/17/22 07:30	01/17/22 12:02	1
- Method: Total BTEX - Tota	I BTEX Calcula	tion						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			01/17/22 14:46	1
Method: 8015 NM - Diesel	Range Organic	s (DRO) (0	SC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	60.8		50.0	mg/Kg			01/17/22 14:15	1

# **Client Sample Results**

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Matrix: Solid

Job ID: 890-1831-1
SDG: 31403236.001.0129.35.02

Lab Sample ID: 890-1831-3

#### Client Sample ID: PH04B Date Collected: 01/12/22 13:50 Date Received: 01/14/22 08:07

Project/Site: Remuda Basin State 002

# Sample Depth: 3

Client: WSP USA Inc.

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/17/22 09:16	01/17/22 14:12	1
Diesel Range Organics (Over C10-C28)	60.8		50.0	mg/Kg		01/17/22 09:16	01/17/22 14:12	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/17/22 09:16	01/17/22 14:12	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	83		70 - 130			01/17/22 09:16	01/17/22 14:12	1
o-Terphenyl	78		70 - 130			01/17/22 09:16	01/17/22 14:12	1

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

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	82.3	4.99	mg/Kg			01/17/22 17:43	1

#### **Client Sample ID: PH04C**

#### Date Collected: 01/12/22 14:00 Date Received: 01/14/22 08:07 Sample Depth: 4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		01/17/22 07:30	01/17/22 12:23	1
Toluene	<0.00202	U	0.00202	mg/Kg		01/17/22 07:30	01/17/22 12:23	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		01/17/22 07:30	01/17/22 12:23	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		01/17/22 07:30	01/17/22 12:23	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		01/17/22 07:30	01/17/22 12:23	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		01/17/22 07:30	01/17/22 12:23	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130			01/17/22 07:30	01/17/22 12:23	1
1,4-Difluorobenzene (Surr)	91		70 - 130			01/17/22 07:30	01/17/22 12:23	1
Method: Total BTEX - Total B	FEX Calcula	tion						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			01/17/22 14:46	1
Method: 8015 NM - Diesel Rar	nge Organic	s (DRO) (0	C)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	161		50.0	mg/Kg			01/17/22 14:15	1
Method: 8015B NM - Diesel R	ange Organ	ics (DRO)	(GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/17/22 09:16	01/17/22 14:33	1
	161		50.0	mg/Kg		01/17/22 09:16	01/17/22 14:33	1
C10-C28)	<50.0	U	50.0	mg/Kg		01/17/22 09:16	01/17/22 14:33	1
Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate			50.0 <b>Limits</b>	mg/Kg		01/17/22 09:16 <b>Prepared</b>	01/17/22 14:33 Analyzed	1 Dil Fac
C10-C28) Oll Range Organics (Over C28-C36)	<50.0			mg/Kg				1 Dil Fac

Eurofins Carlsbad

**Released to Imaging: 9/22/2022 7:39:45 AM** 

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		Client	Sample Re	esults				
Client: WSP USA Inc. Project/Site: Remuda Basin Stat	e 002					SDG: 3140	Job ID: 890- 3236.001.012	
Client Sample ID: PH04C Date Collected: 01/12/22 14:00 Date Received: 01/14/22 08:07 Sample Depth: 4						Lab Samp	le ID: 890-1 Matrix	831-4 c: Solid
Method: 300.0 - Anions, Ion C Analyte		phy - Solu Qualifier	ible RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	17.1		4.97	mg/Kg			01/17/22 17:51	1
Client Sample ID: PH04D Date Collected: 01/12/22 14:05 Date Received: 01/14/22 08:07 Sample Depth: 5						Lab Samp	le ID: 890-1 Matrix	831-5 c: Solid
Method: 8021B - Volatile Orga Analyte		u <mark>nds (GC)</mark> Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/17/22 07:30	01/17/22 12:43	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/17/22 07:30	01/17/22 12:43	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/17/22 07:30	01/17/22 12:43	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/17/22 07:30	01/17/22 12:43	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/17/22 07:30	01/17/22 12:43	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/17/22 07:30	01/17/22 12:43	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130			01/17/22 07:30	01/17/22 12:43	1
1,4-Difluorobenzene (Surr)	71		70 - 130			01/17/22 07:30	01/17/22 12:43	1
Method: Total BTEX - Total B	TEX Calcula	tion						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			01/17/22 14:46	1
Method: 8015 NM - Diesel Ra								
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	453		49.9	mg/Kg			01/17/22 14:15	1
Method: 8015B NM - Diesel R Analyte		i <mark>cs (DRO)</mark> Qualifier	<mark>(GC)</mark> RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9		49.9	mg/Kg		<u> </u>	01/17/22 14:54	1
(GRO)-C6-C10 Diesel Range Organics (Over	453		49.9	mg/Kg		01/17/22 09:16	01/17/22 14:54	1
C10-C28) Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/17/22 09:16	01/17/22 14:54	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	84	<u> </u>	70 - 130				01/17/22 14:54	1
o-Terphenyl	80		70 - 130			01/17/22 09:16	01/17/22 14:54	1
Method: 300.0 - Anions, Ion C Analyte		<mark>phy - Solι</mark> Qualifier	ible RL	Unit	D	Prepared	Analyzed	Dil Fac

Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fac 4.95 01/17/22 18:14 Chloride mg/Kg 11.2 1

# **Client Sample Results**

#### **Client Sample ID: PH01** Date Collected: 01/12/22 09:45 Date Received: 01/14/22 08:07 Sample Depth: 4

Job ID: 890-1831-1
SDG: 31403236.001.0129.35.02

# Lab Sample ID: 890-1831-6

Matrix: Solid

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Method: 8021B - Volatile Orga								
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/17/22 07:30	01/17/22 13:03	
Toluene	<0.00200	U	0.00200	mg/Kg		01/17/22 07:30	01/17/22 13:03	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/17/22 07:30	01/17/22 13:03	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		01/17/22 07:30	01/17/22 13:03	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/17/22 07:30	01/17/22 13:03	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		01/17/22 07:30	01/17/22 13:03	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	126		70 - 130			01/17/22 07:30	01/17/22 13:03	
1,4-Difluorobenzene (Surr)	80		70 - 130			01/17/22 07:30	01/17/22 13:03	
Method: Total BTEX - Total B	TEX Calcula	tion						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			01/17/22 14:46	1
Method: 8015 NM - Diesel Ra	nge Organic	s (DRO) (0	GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			01/17/22 14:15	1
Method: 8015B NM - Diesel R	ange Organ	ics (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		01/17/22 09:16	01/17/22 15:15	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		01/17/22 09:16	01/17/22 15:15	
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/17/22 09:16	01/17/22 15:15	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	81		70 - 130			01/17/22 09:16	01/17/22 15:15	
o-Terphenyl	80		70 - 130			01/17/22 09:16	01/17/22 15:15	1
Method: 300.0 - Anions, Ion C	Chromatogra	iphy - Solu	ıble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	637		4.95	mg/Kg			01/17/22 18:21	1
Client Sample ID: PH12E						Lab Samp	le ID: 890-1	831-7
Date Collected: 01/12/22 10:30						-	Matrix	: Solic
Date Received: 01/14/22 08:07								
Sample Depth: 6								
Method: 8021B - Volatile Orga	anic Compo	unds (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00200	U	0.00200	mg/Kg		01/17/22 07:30	01/17/22 13:24	
Toluene	<0.00200	U	0.00200	mg/Kg		01/17/22 07:30	01/17/22 13:24	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/17/22 07:30	01/17/22 13:24	
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		01/17/22 07:30	01/17/22 13:24	

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roject/Site: Remuda Basin State								004
lient Sample ID: PH12E						Lab Samp	le ID: 890-1	
ate Collected: 01/12/22 10:30 ate Received: 01/14/22 08:07							Matrix	: Sol
ample Depth: 6								
· ·								
Method: 8021B - Volatile Orga	nic Compo	unds (GC)	(Continued)					
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil F
1,4-Difluorobenzene (Surr)	104		70 - 130			01/17/22 07:30	01/17/22 13:24	
Method: Total BTEX - Total B	FX Calcula	tion						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil F
Total BTEX	<0.00401	U	0.00401	mg/Kg			01/17/22 14:46	
Method: 8015 NM - Diesel Rar				1114		Durana	A walk was d	<b>D</b> :11
Analyte Total TPH	Kesuit <50.0	Qualifier		Unit	D	Prepared	Analyzed 01/17/22 14:15	Dil I
	<50.0	0	50.0	mg/Kg			01/17/22 14.15	
Method: 8015B NM - Diesel Ra	ange Organ	ics (DRO)	(GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil I
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		01/17/22 09:16	01/17/22 15:36	
GRO)-C6-C10 Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		01/17/22 09:16	01/17/22 15:36	
C10-C28)	0010	C C	0010			0.1,11,22,00110		
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/17/22 09:16	01/17/22 15:36	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil
1-Chlorooctane	86		70 - 130			01/17/22 09:16	01/17/22 15:36	
p-Terphenyl	86		70 - 130			01/17/22 09:16	01/17/22 15:36	
Mathadi 200.0 Aniana Ian C	h vo moto ava	nhu Colu	bla					
Method: 300.0 - Anions, Ion C Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil I
Chloride	539		5.00	mg/Kg			01/17/22 18:29	
lient Sample ID: PH13C						Lab Samp	le ID: 890-1	
ate Collected: 01/12/22 10:15							Matrix	: So
ate Received: 01/14/22 08:07								

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/17/22 07:30	01/17/22 13:44	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/17/22 07:30	01/17/22 13:44	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/17/22 07:30	01/17/22 13:44	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/17/22 07:30	01/17/22 13:44	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/17/22 07:30	01/17/22 13:44	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/17/22 07:30	01/17/22 13:44	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			01/17/22 07:30	01/17/22 13:44	1
1,4-Difluorobenzene (Surr)	95		70 - 130			01/17/22 07:30	01/17/22 13:44	1
Method: Total BTEX - Total	BTEX Calcula	tion						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			01/17/22 14:46	1
Method: 8015 NM - Diesel F	Range Organic	s (DRO) (0	SC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			01/17/22 14:15	1

Client: WSP USA Inc.

# **Client Sample Results**

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Matrix: Solid

Job ID: 890-1831-1 SDG: 31403236.001.0129.35.02

Lab Sample ID: 890-1831-8

#### Client Sample ID: PH13C Date Collected: 01/12/22 10:15 Date Received: 01/14/22 08:07 Sample Depth: 4

Project/Site: Remuda Basin State 002

Gascine Range Organics (GR0)-C0-C10         <49.9									
Gaseline Parge Organics (GRQ)-C6:C10         regKg         01/17/22 09:16         01/17/22 15:57           Diesel Range Organics (Over C1O-C28)         <49.9 U         49.9         mg/Kg         01/17/22 09:16         01/17/22 15:57           CIO-C28)         <49.9 U         49.9         mg/Kg         01/17/22 09:16         01/17/22 15:57           Surrogate         '/Recovery Qualifier         Limits         Prepared         Analyzed         D           T-Chorosoctane         76         70.130         01/17/22 09:16         01/17/22 15:57         D           Method: 300.0 - Anions, Ion Chromatography - Soluble         Analyte         Result Qualifier         RL         Unit         D         Prepared         Analyzed         D           Chioride         422         5:00         mg/Kg         01/17/22 09:16         01/17/22 18:35           State Collected: 01/13/22 09:20         Lab Sample ID: Beyon 18         Matrix: S         Matrix: S           Sample Depth: 10         Result Qualifier         Mg/Kg         Unit         D         Prepared         Analyzed         D           Method: 8021B - Volatile Organic Compounds (GC)         Analyte         Unit         D         Prepared         Analyzed         D           Analyte         0.00201 U         0.0						_	<u> </u>		
(GRQ)-Co-Cri0         -         <	•					D	·		Dil F
C10-C28)       cluitics       mg/kg       01/17/22 09:16       01/17/22 15:57         Surragete       %Recovery       Qualifier       Limits       Prepared       Analyzed       01/17/22 15:57         Di Range Organics (Over C28-C36)       76       70-130       01/17/22 09:16       01/17/22 15:57       D         Surragete       76       70-130       01/17/22 09:16       01/17/22 15:57       D         Nethod: 300.0 - Anions, Ion Chromatography - Soluble       Analyte       D       Prepared       Analyzed       D         Chloride       422       5.00       mg/Kg       01/17/22 09:16       01/17/22 18:36       D         Chloride       422       5.00       mg/Kg       01/17/22 09:16       01/17/22 18:35         Chloride       01/17/22 09:16       01/17/22 18:35       Matrix: State Received: 01/14/22 08:07       Matrix: State Received: 01/14/22 07:30       01/17/22 18:35         Benzene       <0.00201		<49.9	U	49.9	mg/Kg		01/17/22 09:16	01/17/22 15:57	
Oll Range Organics (Over C28-C36)         <49.9         u         49.9         mg/kg         01/17/22 09:16         01/17/22 15:57           Surrogate         %Recovery         Qualifier         Limits         Prepared         Analyzed         D           7-Chirocotane         76         70-130         01/17/22 09:16         01/17/22 15:57         D           Method: 300.0 - Anions, Ion Chromatography - Soluble         Nethod: S00.0 - Anions, Ion Chromatography - Solubic         Nethod: S00.0 - Anions, Ion Ch		<49.9	U	49.9	mg/Kg		01/17/22 09:16	01/17/22 15:57	
1-Chicosoctane         76         70-130         01/17/22 09:16         01/17/22 16:57           or-Terphenyl         74         70-130         01/17/22 09:16         01/17/22 16:57           Method: 300.0 - Anions, Ion Chromatography - Soluble Analyte         Result Qualifier         RL         Unit         D         Prepared         Analyzed         D           Chloride         422         5.00         mg/Kg         Prepared         Analyzed         D           Chloride         422         5.00         mg/Kg         01/17/22 18:36         Matrix: S           Silient Sample ID: PH061         Lab Sample ID: 890-183         Matrix: S         Matrix: S           ate Received: 01/13/22 09:20         ate Collected: 01/13/22 09:30         Matrix: S         Matrix: S           ample Depth: 10         Result Qualifier         RL         Unit         D         Prepared         Analyzed         D           Benzene         <0.00201		<49.9	U	49.9	mg/Kg		01/17/22 09:16	01/17/22 15:57	
o-Terphenyl         74         70.130         01/17/22 09:16         01/17/22 15:57           Method: 300.0 - Anions, Ion Chromatography - Soluble Analyte         Result Qualifier         RL         Unit         D         Prepared         Analyzed         D           Chloride         422         5.00         mg/kg         01/17/22 18:36         D           Cilient Sample ID: PH06i ate Collected: 01/13/22 09:20         Lab Sample ID: 890-183         Matrix: S           ate Collected: 01/13/22 09:20         Matrix: S         Matrix: S           ate Collected: 01/13/22 09:20         Matrix: S         Matrix: S           ate Collected: 01/13/22 09:20         Matrix: S         Matrix: S           Benzene         <0.00201	Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil F
Method: 300.0 - Anions, Ion Chromatography - Soluble Analyte         Result Qualifier         RL         Unit         D         Prepared         Analyzed         D           Chloride         422         5.00         mg/Kg         D         Prepared         Analyzed         D           Chloride         422         5.00         mg/Kg         D         Prepared         Analyzed         D           Chloride         422         5.00         mg/Kg         D         Prepared         Analyzed         D           State Roceived: 01/14/22 09:20         cate Roceived: 01/14/22 08:07         Cate Roceived: 01/14/22 08:07         Matrix: S           State Roceived: 01/14/22 08:07         Result Qualifier         RL         Unit         Mg/Kg         D         Analyzed         D           Benzene         <0.00201	1-Chlorooctane	76		70 - 130			01/17/22 09:16	01/17/22 15:57	
Analyte         Result         Qualifier         RL         Unit         D         Prepared         Analyzed         D           Chloride         422         5.00         mg/Kg         D         Prepared         Analyzed         D           Chloride         422         5.00         mg/Kg         D         D         D1/17/22 18:36         D           Chloride         01/13/22 09:20         ate Received: 01/14/22 08:07         Sumary Sum	o-Terphenyl	74		70 - 130			01/17/22 09:16	01/17/22 15:57	
Chloride         422         5.00         mg/Kg         01/17/22 18:36           Chloride         422         5.00         mg/Kg         01/17/22 18:36           Chloride         422         5.00         mg/Kg         01/17/22 18:36           Chloride         01/17/22 09:20         Lab Sample ID: 890-183         Matrix: S           ate Received: 01/14/22 08:07         Matrix: S         Matrix: S           ample Depth: 10         Result Qualifier         RL         Unit         D         Prepared         Analyzed         D           Benzene         <0.00201	-								
Lilient Sample ID: PH06I ate Collected: 01/13/22 09:20 ate Received: 01/14/22 08:07 ample Depth: 10         Lab Sample ID: 890-183 Matrix: S           Method: 8021B - Volatile Organic Compounds (GC) Analyte         Result Qualifier Vinit         D         Prepared 01/17/22 07:30         Analyzed 01/17/22 07:30         D           Result Qualifier Toluene         CO00201         Unit         D         Prepared 01/17/22 07:30         Analyzed 01/17/22 07:30         01/17/22 14:05           Survagate         CO00201         0.00201         mg/Kg         01/17/22 07:30         01/17/22 14:05           Survagate         CO00201         0.00402         U         0.00402         U         0.00402         U         0.00402         0.01/17/22 14:05           Surrogate         %Recovery Qualifier         Limits         Prepared         Analyzed         D           Analyte         Result Qualifier         RL         Unit         D         Prepared         Analyzed			Qualifier			D	Prepared	-	Dil F
Matrix: S	Chloride	422		5.00	mg/Kg	_		01/17/22 18:36	
Analyte         Result         Qualifier         RL         Unit         Prepared         Analyzed         D           Genzene         <0.00201         U         0.00201         mg/Kg         01/17/22 07:30         01/17/22 14:05         01/17/22 07:30         01/17/22 14:05         01/17/22 07:30         0									
Benzene         <0.00201         U         0.00201         mg/Kg         01/17/22 07:30         01/17/22 14:05           Toluene         <0.00201					Unit	п	Prepared	Analyzed	Dil F
Toluene         <0.00201         U         0.00201         mg/Kg         01/17/22 07:30         01/17/22 14:05           Ethylbenzene         <0.00201							·		
Ethylbenzene         <0.00201         U         0.00201         mg/Kg         01/17/22 07:30         01/17/22 14:05           m-Xylene & p-Xylene         <0.00402					00				
mxXylene & p-Xylene       <0.00402									
b-Xylene         <0.00201         U         0.00201         mg/Kg         01/17/22 07:30         01/17/22 14:05           Xylenes, Total         <0.00402									
Xylenes, Total         <0.00402         U         0.00402         mg/Kg         01/17/22 07:30         01/17/22 14:05           Surrogate         %Recovery         Qualifier         Limits         Prepared         Analyzed         D           4-Bromofluorobenzene (Surr)         119         70 - 130         01/17/22 07:30         01/17/22 14:05         D           1,4-Difluorobenzene (Surr)         99         70 - 130         01/17/22 07:30         01/17/22 14:05         D           Method: Total BTEX - Total BTEX Calculation         Result         Qualifier         RL         Unit         D         Prepared         Analyzed         D           Analyte         Result         Qualifier         RL         0.00402         Unit         D         Prepared         Analyzed         D           Method: 8015 NM - Diesel Range Organics (DRO) (GC)         Analyte         Result         Qualifier         RL         Unit         D         Prepared         Analyzed         D           Method: 8015 NM - Diesel Range Organics (DRO) (GC)         Malyte         Result         Qualifier         RL         Unit         D         Prepared         Analyzed         D           Gasoline Range Organics         (JPP)         UPPrepared         Analyzed         D									
4-Bromofluorobenzene (Surr)       119       70 - 130       01/17/22 07:30       01/17/22 14:05         1, 4-Difluorobenzene (Surr)       99       70 - 130       01/17/22 07:30       01/17/22 14:05         Method: Total BTEX - Total BTEX Calculation       Result Qualifier       RL       Unit       D       Prepared       Analyzed       D         Total BTEX         Result Qualifier       RL       Unit       D       Prepared       Analyzed       D         Method: 8015 NM - Diesel Range Organics (DRO) (GC)       Result       Qualifier       RL       Unit       D       Prepared       Analyzed       D         Method: 8015B NM - Diesel Range Organics (DRO) (GC)       Result       Qualifier       RL       Unit       D       Prepared       Analyzed       D         Method: 8015B NM - Diesel Range Organics (DRO) (GC)       Result       Qualifier       RL       Unit       D       Prepared       Analyzed       D         Method: 8015B NM - Diesel Range Organics                                 <	•								
1,4-Diffuorobenzene (Surr)9970 - 13001/17/22 07:3001/17/22 14:05Method: Total BTEX - Total BTEX Calculation AnalyteResult QualifierRL 0.00402Unit UDPrepared MillionAnalyzed 01/17/22 14:46DMethod: 8015 NM - Diesel Range Organics (DRO) (GC) AnalyteResult QualifierRL 0.00402Unit 49.9DPrepared mg/KgAnalyzed 01/17/22 14:46DMethod: 8015 NM - Diesel Range Organics (DRO) (GC) AnalyteResult QualifierRL 49.9Unit 49.9DPrepared mg/KgAnalyzed 01/17/22 14:15DMethod: 8015B NM - Diesel Range Organics (DRO) (GC) AnalyteResult QualifierRL 49.9Unit 49.9DPrepared mg/KgAnalyzed 01/17/22 09:16DMethod: 8015B NM - Diesel Range Organics (DRO) (GC) AnalyteResult QualifierRL 49.9Unit 49.9DPrepared mg/KgAnalyzed 01/17/22 09:16DMethod: 8015B NM - Diesel Range Organics (DRO) (GC) AnalyteResult QualifierRL 49.9Unit 49.9DOMethod: 8015B NM - Diesel Range Organics (DRO) (GC) 01/17/22 09:16N 01/17/22 16:18DMethod: 8015B NM - Diesel Range Organics (DRO) (GC) 01/17/22 09:16N 01/17/22 16:18DMethod: 8015B NM - Diesel Range Organics (Over C10-C28)V49.9M Mg/KgDOutN 01/17/22 09:1601/17/22 16:18D	Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil I
Method: Total BTEX - Total BTEX CalculationAnalyteResultQualifierRLUnitDPreparedAnalyzedDTotal BTEX<0.00402	4-Bromofluorobenzene (Surr)	119		70 - 130			01/17/22 07:30	01/17/22 14:05	
Analyte Total BTEXResult   Qualifier URL 0.00402Unit mg/KgDPrepared Method:Analyzed 01/17/22 14:46DMethod: 8015 NM - Diesel Range Organics (DRO) (GC) AnalyteResult QualifierQualifier RL 49.9RL UUnit mg/KgDPrepared Method:Analyzed 01/17/22 14:46DMethod: 8015B NM - Diesel Range Organics (DRO) (GC) AnalyteResult   QualifierQualifier RL 49.9RL UUnit mg/KgDPrepared 01/17/22 14:15Analyzed DMethod: 8015B NM - Diesel Range Organics (DRO) (GC) AnalyteResult QualifierQualifier RL URL 49.9Unit mg/KgDPrepared 01/17/22 09:16Analyzed 01/17/22 16:18GRO)-C6-C10 Diesel Range Organics (Over C10-C28)<49.9	1,4-Difluorobenzene (Surr)	99		70 - 130			01/17/22 07:30	01/17/22 14:05	
Total BTEX         <0.00402         U         0.00402         mg/Kg         01/17/22 14:46           Method:         8015 NM - Diesel Range Organics (DRO) (GC)         Result         Qualifier         RL         Unit         D         Prepared         Analyzed         D           Total TPH         <49.9									
Method: 8015 NM - Diesel Range Organics (DRO) (GC)AnalyteResultQualifierRLUnitDPreparedAnalyzedDTotal TPH<49.9	-					D	Prepared		Dil F
AnalyteResultQualifierRLUnitDPreparedAnalyzedDTotal TPH<49.9	Iotal BTEX	<0.00402	U	0.00402	mg/Kg			01/17/22 14:46	
Total TPH       <49.9       49.9       mg/Kg       01/17/22 14:15         Method: 8015B NM - Diesel Range Organics (DRO) (GC)       Malyte       Result       Qualifier       RL       Unit       D       Prepared       Analyzed       D         GRO)-C6-C10       Vision (Over       <49.9					Unit	<b>P</b>	Branarad	Analyzad	יווח
Method: 8015B NM - Diesel Range Organics (DRO) (GC)AnalyteResultQualifierRLUnitDPreparedAnalyzedDGasoline Range Organics<49.9	-					U	Prepared		Dil F
AnalyteResultQualifierRLUnitDPreparedAnalyzedDGasoline Range Organics<49.9					mg/ <b>k</b> g			01/17/22 14:15	
Gasoline Range Organics         <49.9         Here         Here         Mg/Kg         01/17/22 09:16         01/17/22 16:18           GRO)-C6-C10         Diesel Range Organics (Over         <49.9					Unit	п	Prepared	Analyzed	Dil F
(GRO)-C6-C10 Diesel Range Organics (Over <49.9 U 49.9 mg/Kg 01/17/22 09:16 01/17/22 16:18 C10-C28)	-						·		
C10-C28)	5 S	~+3.3	0	U.U.	119/129		51/11/22 03.10	51/11/22 10.10	
	Diesel Range Organics (Over	~10 0	11	10 0	malka		01/17/22 00.16	01/17/22 16.19	

01/17/22 09:16 01/17/22 16:18 Oll Range Organics (Over C28-C36) <49.9 U 49.9 mg/Kg 1 Limits Dil Fac Surrogate %Recovery Qualifier Prepared Analyzed 70 - 130 01/17/22 09:16 01/17/22 16:18 1-Chlorooctane 80 1 79 o-Terphenyl 70 - 130 01/17/22 09:16 01/17/22 16:18 1

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Released to Imaging: 9/22/2022 7:39:45 AM

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#### **Client Sample Results** Client: WSP USA Inc. Job ID: 890-1831-1 SDG: 31403236.001.0129.35.02 Project/Site: Remuda Basin State 002 **Client Sample ID: PH06I** Lab Sample ID: 890-1831-9 Date Collected: 01/13/22 09:20 Matrix: Solid Date Received: 01/14/22 08:07 Sample Depth: 10 Method: 300.0 - Anions, Ion Chromatography - Soluble **Result Qualifier** Analyte RL Unit D Prepared Analyzed Dil Fac 4.99 01/17/22 18:44 Chloride mg/Kg 1240 Client Sample ID: PH10D Lab Sample ID: 890-1831-10 Date Collected: 01/13/22 09:55 Matrix: Solid Date Received: 01/14/22 08:07 Sample Depth: 5 Method: 8021B - Volatile Organic Compounds (GC) **Result Qualifier** Unit Prepared Analyzed Analyte RL D Dil Fac Benzene <0.00200 U 01/17/22 07:30 01/17/22 14:25 0.00200 mg/Kg 1 Toluene <0.00200 U 0.00200 mg/Kg 01/17/22 07:30 01/17/22 14:25 1 01/17/22 07:30 01/17/22 14:25 Ethvlbenzene <0.00200 U 0.00200 mg/Kg 1 m-Xylene & p-Xylene <0.00401 U 0.00401 mg/Kg 01/17/22 07:30 01/17/22 14:25 1 o-Xylene <0.00200 U 0.00200 mg/Kg 01/17/22 07:30 01/17/22 14:25 1 01/17/22 07:30 01/17/22 14:25 Xylenes, Total <0.00401 U 0.00401 mg/Kg 1 Dil Fac Surrogate %Recovery Qualifier Limits Prepared Analyzed 4-Bromofluorobenzene (Surr) 106 70 - 130 01/17/22 07:30 01/17/22 14:25 90 1,4-Difluorobenzene (Surr) 70 - 130 01/17/22 07:30 01/17/22 14:25 **Method: Total BTEX - Total BTEX Calculation** Unit Analyte **Result Qualifier** RL D Prepared Analyzed Dil Fac Total BTEX <0.00401 U 0.00401 mg/Kg 01/17/22 14:46 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 01/17/22 14:15 1 Method: 8015B NM - Diesel Range Organics (DRO) (GC) Analyte **Result Qualifier** RL Unit D Prepared Analyzed Dil Fac <50.0 U 01/17/22 09:16 01/17/22 16:39 Gasoline Range Organics 50.0 mg/Kg (GRO)-C6-C10 50.0 01/17/22 09:16 01/17/22 16:39 **Diesel Range Organics (Over** <50.0 U mg/Kg 1 C10-C28) Oll Range Organics (Over C28-C36) <50.0 U 50.0 01/17/22 09:16 01/17/22 16:39 mg/Kg 1 Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 1-Chlorooctane 97 70 - 130 01/17/22 09:16 01/17/22 16:39 1 o-Terphenyl 90 70 - 130 01/17/22 09:16 01/17/22 16:39 1

Method: 300.0 - Anions, Ion Cl	hromatography - Solu	ble					
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	466	4.98	mg/Kg			01/17/22 18:52	1

# **Client Sample Results**

Method: 8021B - Volatile Organic Compounds (GC)

#### **Client Sample ID: PH09C** Date Collected: 01/13/22 15:25 Date Received: 01/14/22 08:07 Sample Depth: 5

Job ID: 890-1831-1
SDG: 31403236.001.0129.35.02

# Lab Sample ID: 890-1831-11

Matrix: Solid

Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/17/22 07:30	01/17/22 14:26	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/17/22 07:30	01/17/22 14:26	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/17/22 07:30	01/17/22 14:26	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/17/22 07:30	01/17/22 14:26	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/17/22 07:30	01/17/22 14:26	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/17/22 07:30	01/17/22 14:26	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	128		70 - 130				01/17/22 14:26	1
1,4-Difluorobenzene (Surr)	109		70 - 130			01/17/22 07:30	01/17/22 14:26	1
Method: Total BTEX - Total B		tion						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400		0.00400	mg/Kg		Fiepareu	01/17/22 14:46	
	<0.00400	0	0.00400	mg/ng			01/17/22 14.40	1
Method: 8015 NM - Diesel Rar	nge Organic	s (DRO) (0	SC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			01/17/22 14:15	1
Method: 8015B NM - Diesel Ra	• •		(GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		01/17/22 09:12	01/17/22 16:43	1
(GRO)-C6-C10	-50.0		50.0	11		04/47/00 00 40	04/47/00 40 40	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/17/22 09:12	01/17/22 16:43	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/17/22 09.12	01/17/22 16:43	1
	-00.0	-	00.0			5 III/LL 00.1L	5 III/22 10.40	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	68	S1-	70 - 130			01/17/22 09:12	01/17/22 16:43	1
o-Terphenyl	69	S1-	70 - 130			01/17/22 09:12	01/17/22 16:43	1
— Г								
Mothod: 200.0 Anione Ion C								
Method: 300.0 - Anions, Ion C		· ·			_	_		
Analyte Chloride		Qualifier	IDIE 	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 01/17/22 18:59	Dil Fac

# **Surrogate Summary**

Client: WSP USA Inc. Project/Site: Remuda Basin State 002

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

			Per	rcent Surrogate Recovery
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-1830-A-1-A MS	Matrix Spike	107	94	
890-1830-A-1-B MSD	Matrix Spike Duplicate	105	100	
890-1831-1	PH04	119	80	
890-1831-1 MS	PH04	102	89	
890-1831-1 MSD	PH04	103	104	
890-1831-2	PH04A	104	98	
890-1831-3	PH04B	124	108	
890-1831-4	PH04C	103	91	
890-1831-5	PH04D	100	71	
890-1831-6	PH01	126	80	
890-1831-7	PH12E	119	104	
890-1831-8	PH13C	112	95	
890-1831-9	PH06I	119	99	
890-1831-10	PH10D	106	90	
890-1831-11	PH09C	128	109	
LCS 880-16866/1-A	Lab Control Sample	101	94	
LCS 880-16867/1-A	Lab Control Sample	117	102	
LCSD 880-16866/2-A	Lab Control Sample Dup	100	98	
LCSD 880-16867/2-A	Lab Control Sample Dup	109	93	
MB 880-16866/5-A	Method Blank	112	98	

104

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#### Surrogate Legend

MB 880-16867/5-A

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Method Blank

_			Pe
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-1830-A-1-E MS	Matrix Spike	67 S1-	60 S1-
890-1830-A-1-F MSD	Matrix Spike Duplicate	77	68 S1-
890-1831-1	PH04	86	87
890-1831-1 MS	PH04	87	78
890-1831-1 MSD	PH04	82	76
890-1831-2	PH04A	106	104
890-1831-3	PH04B	83	78
890-1831-4	PH04C	95	97
890-1831-5	PH04D	84	80
890-1831-6	PH01	81	80
890-1831-7	PH12E	86	86
890-1831-8	PH13C	76	74
890-1831-9	PH06I	80	79
890-1831-10	PH10D	97	90
890-1831-11	PH09C	68 S1-	69 S1-
LCS 880-16978/2-A	Lab Control Sample	98	92
LCSD 880-16978/3-A	Lab Control Sample Dup	91	89
MB 880-16978/1-A	Method Blank	74	77

Job ID: 890-1831-1 SDG: 31403236.001.0129.35.02

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Prep Type: Total/NA

Prep Type: Total/NA

# **Surrogate Summary**

#### Client: WSP USA Inc. Project/Site: Remuda Basin State 002

Job ID: 890-1831-1 SDG: 31403236.001.0129.35.02

Prep Type: Total/NA

#### Surrogate Legend

1CO = 1-Chlorooctane OTPH = o-Terphenyl

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

#### Matrix: Solid

		1CO2	Per OTPH2	cent Surrogate Recovery (Acceptance Limits)	6
Lab Sample ID LCS 880-16979/2-A	Client Sample ID	<u>(70-130)</u> 103	(70-130) 103		7
LCSD 880-16979/3-A MB 880-16979/1-A	Lab Control Sample Dup Method Blank	97 84	96 84		8
Surrogate Legend					9
OTPH = o-Terphenyl					

Client: WSP USA Inc. Project/Site: Remuda Basin State 002

Lab Sample ID: MB 880-16866/5-A

**Matrix: Solid** 

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

Analysis Batch: 16966							Prep Batch:	16866
	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00200	U	0.00200	mg/Kg		01/17/22 07:30	01/17/22 11:00	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/17/22 07:30	01/17/22 11:00	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/17/22 07:30	01/17/22 11:00	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/17/22 07:30	01/17/22 11:00	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/17/22 07:30	01/17/22 11:00	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/17/22 07:30	01/17/22 11:00	1
	MB	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130			01/17/22 07:30	01/17/22 11:00	1
1,4-Difluorobenzene (Surr)	98		70 - 130			01/17/22 07:30	01/17/22 11:00	1

#### Lab Sample ID: LCS 880-16866/1-A Matrix: Solid Analysis Batch: 16966

Analysis Batch: 16966							Prep Bat	ch: 16866
	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.08383		mg/Kg		84	70 - 130	
Toluene	0.100	0.07952		mg/Kg		80	70 - 130	
Ethylbenzene	0.100	0.07824		mg/Kg		78	70 - 130	
m-Xylene & p-Xylene	0.200	0.1639		mg/Kg		82	70 - 130	
o-Xylene	0.100	0.08093		mg/Kg		81	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

#### Lab Sample ID: LCSD 880-16866/2-A Matrix: Solid

#### Analysis Batch: 16966

Analysis Batch: 16966						Prep Batch: 16866			
	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08521		mg/Kg		85	70 - 130	2	35
Toluene	0.100	0.07770		mg/Kg		78	70 - 130	2	35
Ethylbenzene	0.100	0.07460		mg/Kg		75	70 - 130	5	35
m-Xylene & p-Xylene	0.200	0.1541		mg/Kg		77	70 - 130	6	35
o-Xylene	0.100	0.07860		mg/Kg		79	70 - 130	3	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

#### Lab Sample ID: 890-1831-1 MSD Matrix: Solid

#### Analysis Batch: 16966

Analysis Batch: 16966									Prep	Batch: 1	16866
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U	0.101	0.09613		mg/Kg					
Toluene	<0.00201	U	0.101	0.08518		mg/Kg					

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**Client Sample ID: PH04** 

**Prep Type: Total/NA** 

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**Client Sample ID: Lab Control Sample** 

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

SDG: 31403236.001.0129.35.02

Job ID: 890-1831-1

Prep Type: Total/NA

**Prep Type: Total/NA** 

**Prep Type: Total/NA** 

Job ID: 890-1831-1 SDG: 31403236.001.0129.35.02

**Client Sample ID: Lab Control Sample** 

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

Prep Type: Total/NA

Prep Batch: 16867

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

Lab Sample ID: 890-1831 Matrix: Solid Analysis Batch: 16966	-1 MSD										ent Sample   Prep Type: Prep Batc	Total/	NA
	Sample	•		Spike		MSD					%Rec.		RPD
Analyte	Result		fier	Added		Qualifier	Unit		_ <u>D</u>	%Rec	Limits RI	PD Li	imit
Ethylbenzene	<0.00201			0.101	0.08842		mg/Kg						
m-Xylene & p-Xylene	<0.00402			0.201	0.1819		mg/Kg						
o-Xylene	<0.00201	U		0.101	0.08978		mg/Kg						
	MSD	MSD											
Surrogate	%Recovery	Quali	fier	Limits									
4-Bromofluorobenzene (Surr)	103			70 - 130									
1,4-Difluorobenzene (Surr)	104			70 - 130									
Analysis Batch: 16967		мви	ИВ								Prep Batc	n: 168	67
Analyte			Qualifier	RI		Unit		D	Pr	epared	Analyzed	Dil	Fac
Benzene	<0.002	200 l	J	0.0020	)	mg/K	9		01/17	7/22 07:30	01/17/22 10:53	}	1
Toluene	<0.00	200 l	J	0.0020	)	mg/K	a		01/17	7/22 07:30	01/17/22 10:5	3	
Ethylbenzene							5						1
Eurypenzene	<0.002	200 l	J	0.0020	)	mg/K	-		01/17	7/22 07:30	01/17/22 10:53	3	1 1
m-Xylene & p-Xylene	<0.00 <0.00			0.0020 0.0040		-	9				01/17/22 10:55 01/17/22 10:55		•
		400 l	J		)	mg/K	g g		01/17	7/22 07:30		3	1
m-Xylene & p-Xylene o-Xylene	<0.004	400 l 200 l	1 1	0.00400	)	mg/K mg/K	9 9 9		01/17 01/17	7/22 07:30 7/22 07:30	01/17/22 10:5	3	1 1
m-Xylene & p-Xylene	<0.00 <0.00 <0.00	400 U 200 U 400 U	1 1	0.00400	)	mg/K mg/K mg/K	9 9 9		01/17 01/17	7/22 07:30 7/22 07:30	01/17/22 10:5 01/17/22 10:5	3	1 1 1
m-Xylene & p-Xylene o-Xylene	<0.00 <0.00 <0.00	400 U 200 U 400 U <b>MB I</b>	ј ј ИВ	0.00400	)	mg/K mg/K mg/K	9 9 9		01/17 01/17 01/17	7/22 07:30 7/22 07:30	01/17/22 10:5 01/17/22 10:5	3	1 1 1 1
m-Xylene & p-Xylene o-Xylene Xylenes, Total	<0.00 <0.00 <0.00	400 U 200 U 400 U <b>MB I</b>	ј ј ИВ	0.00400 0.00200 0.00400	) ) )	mg/K mg/K mg/K	9 9 9		01/17 01/17 01/17 <b>Pr</b>	7/22 07:30 7/22 07:30 7/22 07:30	01/17/22 10:53 01/17/22 10:53 01/17/22 10:53 <b>Analyzed</b>	3 3 3 <b>Dil</b>	1 1 1 1

#### Lab Sample ID: LCS 880-16867/1-A Matrix: Solid Analysis Batch: 16967

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09568		mg/Kg		96	70 - 130	
Toluene	0.100	0.09826		mg/Kg		98	70 - 130	
Ethylbenzene	0.100	0.1055		mg/Kg		106	70 - 130	
m-Xylene & p-Xylene	0.200	0.2080		mg/Kg		104	70 - 130	
o-Xylene	0.100	0.1008		mg/Kg		101	70 - 130	

	LCS LCS	
Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	117	70 - 130
1,4-Difluorobenzene (Surr)	102	70 - 130

#### Lab Sample ID: LCSD 880-16867/2-A Matrix: Solid Analysis Batch: 16967

Analysis Batch: 16967							Prep Batch: 1		16867	
	Spike	LCSD	LCSD				%Rec.		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.08583		mg/Kg		86	70 - 130	11	35	
Toluene	0.100	0.09537		mg/Kg		95	70 - 130	3	35	
Ethylbenzene	0.100	0.09776		mg/Kg		98	70 - 130	8	35	
m-Xylene & p-Xylene	0.200	0.1819		mg/Kg		91	70 - 130	13	35	

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Prep Type: Total/NA

Client: WSP USA Inc. Project/Site: Remuda Basin State 002 Page 87 of 358

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

Lab Sample ID: LCSD 88	0-16867/2-A				C	Client Sa	mple	ID: Lat	Control		
Matrix: Solid									Prep Ty		
Analysis Batch: 16967			Spike		LCSD				%Rec.	Batch:	RP
Analyte			Added		Qualifier	Unit	D	%Rec	Limits	RPD	Lim
o-Xylene			0.100	0.08903	Quaimer			89	70 - 130	12	
-Лунене			0.100	0.06903		mg/Kg		09	70-130	12	Ċ
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
-Bromofluorobenzene (Surr)	109		70 - 130								
,4-Difluorobenzene (Surr)	93		70 - 130								
.ab Sample ID: 890-1830	)-A-1-B MSD					Client S	Samp	le ID: N	latrix Spi	ke Dup	licat
Aatrix: Solid									Prep Ty		
Analysis Batch: 16967										Batch:	
•	Sample	Sample	Spike	MSD	MSD				%Rec.		RF
nalyte		Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Lin
enzene	<0.00200	U	0.0994	0.1012		mg/Kg					
oluene	<0.00200	U	0.0994	0.09193		mg/Kg					
thylbenzene	<0.00200	U	0.0994	0.09900		mg/Kg					
n-Xylene & p-Xylene	<0.00401	U	0.199	0.1853		mg/Kg					
-Xylene	<0.00200	U	0.0994	0.08833		mg/Kg					
	MSD	MSD									
urrogate	%Recovery	Qualifier	Limits								
-Bromofluorobenzene (Surr)	105		70 - 130								
,4-Difluorobenzene (Surr)	100		70 - 130								
_ab Sample ID: 890-1831	-1 MS							С	ient Sam	nle ID:	РНО
Matrix: Solid									Prep Ty	-	
Analysis Batch: 16966											
,											
		MS	,								
urrogate	%Recovery	Qualifier	Limits								
-Bromofluorobenzene (Surr)	102		70 - 130 70 - 130								
,4-Difluorobenzene (Surr)	89		70 - 130								
.ab Sample ID: 890-1830	)-A-1-A MS						CI	ient Sa	mple ID:	Matrix	Spik
Matrix: Solid									Prep Ty		
Analysis Batch: 16967									<b>-</b> - <b>-</b> - <b>-</b> - <b>-</b>		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
-Bromofluorobenzene (Surr)	107		70 - 130								
,4-Difluorobenzene (Surr)	94		70 - 130								
ethod: 8015B NM - D	Diesel Rand	ge Organ	nics (DRO	) (GC)							
		<u> </u>	- (,	- <u>/</u>							
ab Sample ID: MB 880-1	16978/1-A						Clie	nt Sam	ple ID: M		
Aatrix: Solid									Prep Ty	pe: Io	

Prep Type: Total/NA Prep Batch: 16978

Analysis Batch: 16964							Prep Batch:	<b>16978</b>
-	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/17/22 09:12	01/17/22 11:45	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/17/22 09:12	01/17/22 11:45	1

Client: WSP USA Inc. Project/Site: Remuda Basin State 002

Job ID: 890-1831-1 SDG: 31403236.001.0129.35.02

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

Lab Sample ID: MB 880-169	978/1-A						C	Client		ole ID: M		
Matrix: Solid										Prep Ty	pe: To	tal/NA
Analysis Batch: 16964										Prep E		
-	Ν	ИВ МВ										
Analyte	Res	ult Qualifier	RL		Unit		D	Prep	bared	Analy	zed	Dil Fac
Oll Range Organics (Over C28-C36	) <50	0.0 U	50.0		mg/K	g	_ C	)1/17/2	22 09:12	01/17/22	11:45	1
Sumo noto		MB MB ery Qualifier	Limits					Dra		Analy		
Surrogate 1-Chlorooctane		$\frac{2}{74}$ Qualifier	$\frac{1111115}{70-130}$				7		pared	Analy 01/17/22		Dil Fac
o-Terphenyl		74 77	70 - 130 70 - 130							01/17/22		1
o-reiphenyi		11	70-730				Ľ	///////////////////////////////////////	22 09.12	01/11/22	11.45	
Lab Sample ID: LCS 880-16	978/2-A					Clie	nt s	Sam	ole ID:	Lab Co	ntrol S	ample
Matrix: Solid										Prep Ty		
Analysis Batch: 16964											Batch:	
			Spike	LCS	LCS					%Rec.		
Analyte			Added		Qualifier	Unit		D %	6Rec	Limits		
Gasoline Range Organics			1000	1033		mg/Kg			103	70 - 130		
(GRO)-C6-C10												
Diesel Range Organics (Over			1000	878.7		mg/Kg			88	70 - 130		
C10-C28)												
	LCS I	LCS										
Surrogate	%Recovery	Qualifier	Limits									
1-Chlorooctane	98		70 - 130									
I-Chiorooclane	90		10-100									
o-Terphenyl Lab Sample ID: LCSD 880-	92		70 - 130		(	Client Sa	amp	ole IC		Control		
o-Terphenyl Lab Sample ID: LCSD 880- Matrix: Solid	92		70 - 130			Client Sa	amp	ole IC		Prep Ty Prep E	pe: To	tal/NA 16978
o-Terphenyl Lab Sample ID: LCSD 880- Matrix: Solid Analysis Batch: 16964	92		70 - 130 Spike		LCSD		amp			Prep Ty Prep I %Rec.	pe: To Batch:	tal/NA 16978 RPD
o-Terphenyl Lab Sample ID: LCSD 880- Matrix: Solid Analysis Batch: 16964 Analyte	92		70 - 130 Spike Added	Result		Unit	amp		6Rec	Prep Ty Prep E %Rec. Limits	pe: To Batch: 	tal/NA 16978 RPD Limit
o-Terphenyl Lab Sample ID: LCSD 880- Matrix: Solid Analysis Batch: 16964 Analyte Gasoline Range Organics	92		70 - 130 Spike		LCSD		amp 			Prep Ty Prep I %Rec.	pe: To Batch:	tal/NA 16978 RPD Limit
o-Terphenyl Lab Sample ID: LCSD 880- Matrix: Solid Analysis Batch: 16964 Analyte Gasoline Range Organics (GRO)-C6-C10	92		70 - 130 Spike Added 1000	Result 1022	LCSD	Unit mg/Kg	amp 		6 <b>Rec</b>	Prep Ty Prep E %Rec. Limits 70 - 130	pe: To Batch: 	tal/NA 16978 RPD Limit
o-Terphenyl Lab Sample ID: LCSD 880- Matrix: Solid Analysis Batch: 16964 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	92		70 - 130 Spike Added	Result	LCSD	Unit	amp 		6Rec	Prep Ty Prep E %Rec. Limits	pe: To Batch: 	tal/NA 16978 RPD Limit
o-Terphenyl Lab Sample ID: LCSD 880- Matrix: Solid Analysis Batch: 16964 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	92 16978/3-A		70 - 130 Spike Added 1000	Result 1022	LCSD	Unit mg/Kg	amp		6 <b>Rec</b>	Prep Ty Prep E %Rec. Limits 70 - 130	pe: To Batch: 	tal/NA 16978 RPD Limit
o-Terphenyl Lab Sample ID: LCSD 880- Matrix: Solid Analysis Batch: 16964 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	92 16978/3-A		70 - 130 Spike Added 1000	Result 1022	LCSD	Unit mg/Kg	amp		6 <b>Rec</b>	Prep Ty Prep E %Rec. Limits 70 - 130	pe: To Batch: 	tal/NA 16978 RPD Limit
o-Terphenyl Lab Sample ID: LCSD 880- Matrix: Solid Analysis Batch: 16964 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	92 16978/3-A LCSD L %Recovery 0		70 - 130 Spike Added 1000 1000 Limits	Result 1022	LCSD	Unit mg/Kg	amp		6 <b>Rec</b>	Prep Ty Prep E %Rec. Limits 70 - 130	pe: To Batch: 	tal/NA 16978 RPD Limit
o-Terphenyl Lab Sample ID: LCSD 880- Matrix: Solid Analysis Batch: 16964 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane	92 16978/3-A		70 - 130 Spike Added 1000 1000 Limits 70 - 130	Result 1022	LCSD	Unit mg/Kg	amp		6 <b>Rec</b>	Prep Ty Prep E %Rec. Limits 70 - 130	pe: To Batch: 	tal/NA 16978 RPD Limit
o-Terphenyl Lab Sample ID: LCSD 880- Matrix: Solid Analysis Batch: 16964 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	92 16978/3-A LCSD [ %Recovery 0 91		70 - 130 Spike Added 1000 1000 Limits	Result 1022	LCSD	Unit mg/Kg	amp		6 <b>Rec</b>	Prep Ty Prep E %Rec. Limits 70 - 130	pe: To Batch: 	tal/NA 16978 RPD Limit
o-Terphenyl Lab Sample ID: LCSD 880- Matrix: Solid Analysis Batch: 16964 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl	92 16978/3-A LCSD [ %Recovery 0 91 89		70 - 130 Spike Added 1000 1000 Limits 70 - 130	Result 1022	LCSD	Unit mg/Kg	amr	<u>D</u> <u>%</u>	6 <b>Rec</b> 102 89	Prep Ty Prep E %Rec. Limits 70 - 130	rpe: To Batch: <u>RPD</u> 1 2	tal/NA 16978 RPD Limit 20 20
o-Terphenyl Lab Sample ID: LCSD 880- Matrix: Solid Analysis Batch: 16964 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane	92 16978/3-A LCSD [ %Recovery 0 91 89		70 - 130 Spike Added 1000 1000 Limits 70 - 130	Result 1022	LCSD	Unit mg/Kg	amp	<u>D</u> <u>%</u>	6 <b>Rec</b> 102 89 nt Sam	Prep Ty Prep F %Rec. Limits 70 - 130 70 - 130	mpe: To Batch: <u>RPD</u> 1 2 Matrix	tal/NA 16978 RPD Limit 20 20 Spike
o-Terphenyl Lab Sample ID: LCSD 880-7 Matrix: Solid Analysis Batch: 16964 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1830-A Matrix: Solid	92 16978/3-A LCSD [ %Recovery 0 91 89		70 - 130 Spike Added 1000 1000 Limits 70 - 130	Result 1022	LCSD	Unit mg/Kg	amp	<u>D</u> <u>%</u>	6 <b>Rec</b> 102 89 nt Sam	Prep Ty           Prep F           %Rec.           Limits           70 - 130           70 - 130           Prep I           Prep I	Matrix pe: To Batch: 1 2	tal/NA 16978 RPD Limit 20 20 Spike
o-Terphenyl Lab Sample ID: LCSD 880-7 Matrix: Solid Analysis Batch: 16964 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1830-A Matrix: Solid	92 16978/3-A LCSD [ %Recovery 0 91 89	Qualifier	70 - 130 Spike Added 1000 1000 Limits 70 - 130	Result 1022 894.7	LCSD	Unit mg/Kg	amp	<u>D</u> <u>%</u>	6 <b>Rec</b> 102 89 nt Sam	Prep Ty           Prep F           %Rec.           Limits           70 - 130           70 - 130           Prep I           Prep I	Matrix pe: To Batch: 1 2	Antal/NA 16978 RPD Limit 20 20 Spike otal/NA
o-Terphenyl Lab Sample ID: LCSD 880- Matrix: Solid Analysis Batch: 16964 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1830-A Matrix: Solid Analysis Batch: 16964	92 16978/3-A <i>LCSD L</i> %Recovery 0 91 89 -1-E MS	Qualifier	70 - 130 Spike Added 1000 1000 Limits 70 - 130 70 - 130	Result 1022 894.7 MS	LCSD Qualifier	Unit mg/Kg		D %	6 <b>Rec</b> 102 89 nt Sam	Prep Ty Prep F %Rec. Limits 70 - 130 70 - 130 70 - 130 Prep Ty Prep F	Matrix pe: To Batch: 1 2	Antal/NA 16978 RPD Limit 20 20 Spike otal/NA
o-Terphenyl Lab Sample ID: LCSD 880-* Matrix: Solid Analysis Batch: 16964 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1830-A Matrix: Solid Analysis Batch: 16964 Analyte Gasoline Range Organics	92 16978/3-A <i>LCSD L</i> %Recovery 0 91 89 -1-E MS Sample S	Qualifier Sample Qualifier	70 - 130  Spike Added 1000 1000  Limits 70 - 130 70 - 130 70 - 130 Spike	Result 1022 894.7 MS	LCSD Qualifier MS Qualifier	Unit mg/Kg mg/Kg		D %	6 <mark>Rec</mark> – 102 – 89 <b>nt Sam</b>	Prep Ty Prep F %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130 Prep F %Rec.	Matrix pe: To Batch: 1 2	Spike
o-Terphenyl Lab Sample ID: LCSD 880- Matrix: Solid Analysis Batch: 16964 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1830-A Matrix: Solid Analysis Batch: 16964 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	92 16978/3-A <i>LCSD L</i> %Recovery 0 91 89 -1-E MS Sample S Result 0	Qualifier Sample Qualifier J F1	70 - 130         Spike         Added         1000         1000         1000         1000         1000         50 - 130         70 - 130         70 - 130         Spike         Added	Result 1022 894.7 MS Result	LCSD Qualifier MS Qualifier	Unit mg/Kg mg/Kg	amp	D %	6 <mark>Rec</mark> 102 89 <b>nt Sar</b> r	Prep Ty Prep F %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	Matrix pe: To Batch: 1 2	tal/NA 16978 RPD Limit 20 20 Spike tal/NA
o-Terphenyl Lab Sample ID: LCSD 880- Matrix: Solid Analysis Batch: 16964 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1830-A Matrix: Solid Analysis Batch: 16964 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	92 16978/3-A <i>LCSD L</i> %Recovery 0 91 89 -1-E MS Sample 5 Result 0 <50.0 0	Qualifier Sample Qualifier J F1 J	70 - 130         Spike         Added         1000         1000         1000         1000         1000         1000         50 - 130         70 - 130         70 - 130         Spike         Added         999	Result           1022           894.7           MS           Result           1350	LCSD Qualifier MS Qualifier	Unit mg/Kg mg/Kg <u>Unit</u> mg/Kg	amp	D %	6 <mark>Rec</mark> 102 89 <b>nt Sam</b> 6 <b>Rec</b> 135	Prep Ty Prep F %Rec. Limits 70 - 130 70 - 130 70 - 130 Prep Ty Prep F %Rec. Limits 70 - 130	Matrix pe: To Batch: 1 2	tal/NA 16978 RPD Limit 20 20 Spike tal/NA
o-Terphenyl Lab Sample ID: LCSD 880- Matrix: Solid Analysis Batch: 16964 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1830-A Matrix: Solid Analysis Batch: 16964 Analyte	92 16978/3-A <i>LCSD I</i> %Recovery 91 89 -1-E MS Sample S Result 0 <50.0 U	Qualifier Sample Qualifier J F1 J	70 - 130         Spike         Added         1000         1000         1000         1000         1000         1000         50 - 130         70 - 130         70 - 130         Spike         Added         999	Result           1022           894.7           MS           Result           1350	LCSD Qualifier MS Qualifier	Unit mg/Kg mg/Kg <u>Unit</u> mg/Kg	am;	D %	6 <mark>Rec</mark> 102 89 <b>nt Sam</b> 6 <b>Rec</b> 135	Prep Ty Prep F %Rec. Limits 70 - 130 70 - 130 70 - 130 Prep Ty Prep F %Rec. Limits 70 - 130	Matrix pe: To Batch: 1 2	Antal/NA 16978 RPD Limit 20 20 Spike otal/NA

1-Chlorooctane 67 S1-70 - 130 70 - 130 60 S1o-Terphenyl

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Client: WSP USA Inc. Project/Site: Remuda Basin State 002 Job ID: 890-1831-1 SDG: 31403236.001.0129.35.02

**Client Sample ID: Method Blank** 

01/17/22 09:16 01/17/22 11:45

**Client Sample ID: Lab Control Sample** 

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

**Prep Type: Total/NA** 

Prep Type: Total/NA

Prep Type: Total/NA

Prep Batch: 16979

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

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Lab Sample ID: 890-1830-A-1-F MSDClient SMatrix: SolidAnalysis Batch: 16964								Client Sample ID: Matrix Spike D Prep Type: ` Prep Batc						
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD			
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit			
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1	998	1508	F1	mg/Kg		151	70 - 130	11	20			
Diesel Range Organics (Over C10-C28)	<50.0	U	998	1308		mg/Kg		129	70 - 130	13	20			
	MSD	MSD												
Surrogate	%Recovery	Qualifier	Limits											

1-Chlorooctane	77		70 - 130
o-Terphenyl	68	S1-	70 - 130
l ab Sample ID: MR 990 16	070/1 A		

#### Lab Sample ID: MB 880-16979/1-A Matrix: Solid Analysis Batch: 16961

	MB	МВ							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/17/22 09:16	01/17/22 11:45	1	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/17/22 09:16	01/17/22 11:45	1	
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/17/22 09:16	01/17/22 11:45	1	
	MB	MB							
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	84		70 - 130			01/17/22 09:16	01/17/22 11:45	1	

#### Lab Sample ID: LCS 880-16979/2-A Matrix: Solid

o-Terphenyl

#### **Analysis Batch: 16961** Prep Batch: 16979 Spike LCS LCS %Rec. Added Result Qualifier Analyte Unit D %Rec Limits Gasoline Range Organics 1000 70 - 130 843.6 mg/Kg 84 (GRO)-C6-C10 1000 Diesel Range Organics (Over 882.3 mg/Kg 88 70 - 130 C10-C28)

70 - 130

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

#### Lab Sample ID: LCSD 880-16979/3-A Matrix: Solid Analysis Batch: 16961

Analysis Batch: 16961							Prep E	Batch: 1	6979
	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	840.6		mg/Kg		84	70 - 130	0	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	846.2		mg/Kg		85	70 - 130	4	20
C10-C28)									

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Client: WSP USA Inc. Project/Site: Remuda Basin State 002 Job ID: 890-1831-1 SDG: 31403236.001.0129.35.02

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

Lab Sample ID: LCSD 880- Matrix: Solid Analysis Batch: 16961	16979/3-A				C	lient Sa	mple	ID: Lab	Control S Prep Ty Prep B	pe: Tot	tal/NA
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	97		70 - 130								
o-Terphenyl	96		70 - 130								
Lab Sample ID: 890-1831-1	MS							CI	ient Sam	ple ID:	PH04
Matrix: Solid									Prep Ty		
Analysis Batch: 16961									Prep E	-	
	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	1175		mg/Kg		114	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	999	961.0		mg/Kg		91	70 - 130		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	87		70 - 130								
o-Terphenyl	78		70 - 130								
Lab Sample ID: 890-1831-1	MSD							CI	ient Sam	ple ID:	PH04
Matrix: Solid									Prep Ty	pe: Tot	tal/NA
Analysis Batch: 16961									Prep E		
-	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	1159		mg/Kg		113	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	949.4		mg/Kg		90	70 - 130	1	20
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	82		70 - 130								
o-Terphenyl	76		70 - 130								

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

Lab Sample ID: MB 880-17007/1-A Matrix: Solid Analysis Batch: 17057								Clie	ent Sam	ple ID: Methoo Prep Type: \$	
-	МВ	MB									
Analyte	Result	Qualifier		RL		Unit	D	Р	repared	Analyzed	Dil Fac
Chloride	<5.00	U		5.00		mg/Kg				01/17/22 13:59	1
Lab Sample ID: LCS 880-17007/2-A Matrix: Solid Analysis Batch: 17057							Client	: Sai	nple ID:	Lab Control S Prep Type: S	
Analysis Batch. 17037			Spike		LCS	LCS				%Rec.	
Analyte Chloride			Added 250		<b>Result</b> 266.8	Qualifier	Unit mg/Kg	<u>D</u>	<b>%Rec</b>	Limits	

Client: WSP USA Inc. Project/Site: Remuda Basin State 002 Job ID: 890-1831-1 SDG: 31403236.001.0129.35.02

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

Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 17057	-17007/3-A				(	Client Sa	mple	ID: Lat	Control Prep T		
Analysis Datch. 17037			Spike	LCSD	LCSD				%Rec.		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride			250	250.1		mg/Kg		100	90 - 110	6	20
Lab Sample ID: 890-1831-	2 MS							Clie	ent Sampl		
Matrix: Solid Analysis Batch: 17057									Prep T	ype: So	elanic
	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	64.7		253	327.4		mg/Kg		104	90 - 110		
	2 MSD							Clie	ent Samp	le ID: P	H04A
Matrix: Solid									Prep T	vpe: So	oluble
Analysis Batch: 17057											
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	64.7		253	322.8		mg/Kg		102	90 - 110	1	20

# **QC Association Summary**

Client: WSP USA Inc. Project/Site: Remuda Basin State 002

Job ID: 890-1831-1 SDG: 31403236.001.0129.35.02

Prep Batch: 16866

GC VOA

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1831-1	PH04	Total/NA	Solid	5035	
390-1831-2	PH04A	Total/NA	Solid	5035	
390-1831-3	PH04B	Total/NA	Solid	5035	
890-1831-4	PH04C	Total/NA	Solid	5035	
890-1831-5	PH04D	Total/NA	Solid	5035	
390-1831-6	PH01	Total/NA	Solid	5035	
390-1831-7	PH12E	Total/NA	Solid	5035	
390-1831-8	PH13C	Total/NA	Solid	5035	
390-1831-9	PH06I	Total/NA	Solid	5035	
390-1831-10	PH10D	Total/NA	Solid	5035	
MB 880-16866/5-A	Method Blank	Total/NA	Solid	5035	
_CS 880-16866/1-A	Lab Control Sample	Total/NA	Solid	5035	
CSD 880-16866/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
390-1831-1 MSD	PH04	Total/NA	Solid	5035	

#### Prep Batch: 16867

090-1031-7	FILIZE	IUlai/INA	Soliu	3033		
890-1831-8	PH13C	Total/NA	Solid	5035		8
890-1831-9	PH06I	Total/NA	Solid	5035		
890-1831-10	PH10D	Total/NA	Solid	5035		9
MB 880-16866/5-A	Method Blank	Total/NA	Solid	5035		
LCS 880-16866/1-A	Lab Control Sample	Total/NA	Solid	5035		10
LCSD 880-16866/2-A	Lab Control Sample Dup	Total/NA	Solid	5035		
890-1831-1 MSD	PH04	Total/NA	Solid	5035		11
Prep Batch: 16867						
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	12
890-1831-11	PH09C	Total/NA	Solid	5035		4.0
MB 880-16867/5-A	Method Blank	Total/NA	Solid	5035		13
LCS 880-16867/1-A	Lab Control Sample	Total/NA	Solid	5035		
LCSD 880-16867/2-A	Lab Control Sample Dup	Total/NA	Solid	5035		14
890-1830-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035		
<u> </u>						

#### Analysis Batch: 16966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1831-1	PH04	Total/NA	Solid	8021B	16866
890-1831-2	PH04A	Total/NA	Solid	8021B	16866
890-1831-3	PH04B	Total/NA	Solid	8021B	16866
890-1831-4	PH04C	Total/NA	Solid	8021B	16866
890-1831-5	PH04D	Total/NA	Solid	8021B	16866
890-1831-6	PH01	Total/NA	Solid	8021B	16866
890-1831-7	PH12E	Total/NA	Solid	8021B	16866
890-1831-8	PH13C	Total/NA	Solid	8021B	16866
890-1831-9	PH06I	Total/NA	Solid	8021B	16866
890-1831-10	PH10D	Total/NA	Solid	8021B	16866
MB 880-16866/5-A	Method Blank	Total/NA	Solid	8021B	16866
LCS 880-16866/1-A	Lab Control Sample	Total/NA	Solid	8021B	16866
LCSD 880-16866/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	16866
890-1831-1 MS	PH04	Total/NA	Solid	8021B	
890-1831-1 MSD	PH04	Total/NA	Solid	8021B	16866

#### Analysis Batch: 16967

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Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1831-11	PH09C	Total/NA	Solid	8021B	16867
MB 880-16867/5-A	Method Blank	Total/NA	Solid	8021B	16867
LCS 880-16867/1-A	Lab Control Sample	Total/NA	Solid	8021B	16867
LCSD 880-16867/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	16867
890-1830-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	
890-1830-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	16867

# **QC Association Summary**

Client: WSP USA Inc. Project/Site: Remuda Basin State 002

Job ID: 890-1831-1 SDG: 31403236.001.0129.35.02

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# GC VOA

#### Analysis Batch: 17056

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1831-1	PH04	Total/NA	Solid	Total BTEX	
890-1831-2	PH04A	Total/NA	Solid	Total BTEX	
890-1831-3	PH04B	Total/NA	Solid	Total BTEX	
890-1831-4	PH04C	Total/NA	Solid	Total BTEX	
390-1831-5	PH04D	Total/NA	Solid	Total BTEX	
390-1831-6	PH01	Total/NA	Solid	Total BTEX	
890-1831-7	PH12E	Total/NA	Solid	Total BTEX	
390-1831-8	PH13C	Total/NA	Solid	Total BTEX	
890-1831-9	PH06I	Total/NA	Solid	Total BTEX	
890-1831-10	PH10D	Total/NA	Solid	Total BTEX	
890-1831-11	PH09C	Total/NA	Solid	Total BTEX	

#### GC Semi VOA

#### Analysis Batch: 16961

Lab Sample ID 890-1831-1	Client Sample ID PH04	Prep Type Total/NA	Matrix Solid	Method 8015B NM	Prep Batch 16979
890-1831-2	PH04A	Total/NA	Solid	8015B NM	16979
890-1831-3	PH04B	Total/NA	Solid	8015B NM	16979
890-1831-4	PH04C	Total/NA	Solid	8015B NM	16979
890-1831-5	PH04D	Total/NA	Solid	8015B NM	16979
890-1831-6	PH01	Total/NA	Solid	8015B NM	16979
890-1831-7	PH12E	Total/NA	Solid	8015B NM	16979
890-1831-8	PH13C	Total/NA	Solid	8015B NM	16979
890-1831-9	PH06I	Total/NA	Solid	8015B NM	16979
890-1831-10	PH10D	Total/NA	Solid	8015B NM	16979
MB 880-16979/1-A	Method Blank	Total/NA	Solid	8015B NM	16979
LCS 880-16979/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	16979
LCSD 880-16979/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	16979
890-1831-1 MS	PH04	Total/NA	Solid	8015B NM	16979
890-1831-1 MSD	PH04	Total/NA	Solid	8015B NM	16979

#### Analysis Batch: 16964

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1831-11	PH09C	Total/NA	Solid	8015B NM	16978
MB 880-16978/1-A	Method Blank	Total/NA	Solid	8015B NM	16978
LCS 880-16978/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	16978
LCSD 880-16978/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	16978
890-1830-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	16978
890-1830-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	16978

#### Prep Batch: 16978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1831-11	PH09C	Total/NA	Solid	8015NM Prep	
MB 880-16978/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-16978/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-16978/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1830-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-1830-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

GC Semi VOA Prep Batch: 16979 Lab Sample ID

890-1831-1

890-1831-2

890-1831-3

890-1831-4

890-1831-5

890-1831-6

890-1831-7

890-1831-8

890-1831-9

890-1831-10

MB 880-16979/1-A

LCS 880-16979/2-A

890-1831-1 MS

890-1831-1 MSD

LCSD 880-16979/3-A

# **QC Association Summary**

Prep Type

Total/NA

Matrix

Solid

Client: WSP USA Inc. Project/Site: Remuda Basin State 002

**Client Sample ID** 

**PH04** 

PH04A

PH04B

PH04C

PH04D

PH01

PH12E

PH13C

PH06I

PH10D

PH04

PH04

Method Blank

Lab Control Sample

Lab Control Sample Dup

Job ID: 890-1831-1 SDG: 31403236.001.0129.35.02

Method

8015NM Prep

Prep Batch

# 2 3 4 5 6 7

8 9 10

# Analysis Batch: 17055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1831-1	PH04	Total/NA	Solid	8015 NM	
890-1831-2	PH04A	Total/NA	Solid	8015 NM	
890-1831-3	PH04B	Total/NA	Solid	8015 NM	
890-1831-4	PH04C	Total/NA	Solid	8015 NM	
890-1831-5	PH04D	Total/NA	Solid	8015 NM	
890-1831-6	PH01	Total/NA	Solid	8015 NM	
890-1831-7	PH12E	Total/NA	Solid	8015 NM	
890-1831-8	PH13C	Total/NA	Solid	8015 NM	
890-1831-9	PH06I	Total/NA	Solid	8015 NM	
890-1831-10	PH10D	Total/NA	Solid	8015 NM	
890-1831-11	PH09C	Total/NA	Solid	8015 NM	

## HPLC/IC

#### Leach Batch: 17007

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1831-1	PH04	Soluble	Solid	DI Leach	
890-1831-2	PH04A	Soluble	Solid	DI Leach	
890-1831-3	PH04B	Soluble	Solid	DI Leach	
890-1831-4	PH04C	Soluble	Solid	DI Leach	
890-1831-5	PH04D	Soluble	Solid	DI Leach	
890-1831-6	PH01	Soluble	Solid	DI Leach	
890-1831-7	PH12E	Soluble	Solid	DI Leach	
890-1831-8	PH13C	Soluble	Solid	DI Leach	
890-1831-9	PH06I	Soluble	Solid	DI Leach	
890-1831-10	PH10D	Soluble	Solid	DI Leach	
890-1831-11	PH09C	Soluble	Solid	DI Leach	
MB 880-17007/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-17007/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-17007/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1831-2 MS	PH04A	Soluble	Solid	DI Leach	
890-1831-2 MSD	PH04A	Soluble	Solid	DI Leach	

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# **QC** Association Summary

Client: WSP USA Inc. Project/Site: Remuda Basin State 002 Job ID: 890-1831-1 SDG: 31403236.001.0129.35.02

## HPLC/IC

#### Analysis Batch: 17057

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1831-1	PH04	Soluble	Solid	300.0	17007
890-1831-2	PH04A	Soluble	Solid	300.0	17007
890-1831-3	PH04B	Soluble	Solid	300.0	17007
890-1831-4	PH04C	Soluble	Solid	300.0	17007
890-1831-5	PH04D	Soluble	Solid	300.0	17007
890-1831-6	PH01	Soluble	Solid	300.0	17007
890-1831-7	PH12E	Soluble	Solid	300.0	17007
890-1831-8	PH13C	Soluble	Solid	300.0	17007
890-1831-9	PH06I	Soluble	Solid	300.0	17007
890-1831-10	PH10D	Soluble	Solid	300.0	17007
890-1831-11	PH09C	Soluble	Solid	300.0	17007
MB 880-17007/1-A	Method Blank	Soluble	Solid	300.0	17007
LCS 880-17007/2-A	Lab Control Sample	Soluble	Solid	300.0	17007
LCSD 880-17007/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	17007
890-1831-2 MS	PH04A	Soluble	Solid	300.0	17007
890-1831-2 MSD	PH04A	Soluble	Solid	300.0	17007

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Project/Site: Remuda Basin State 002

Job ID: 890-1831-1 SDG: 31403236.001.0129.35.02

## Lab Sample ID: 890-1831-1 Matrix: Solid

Lab Sample ID: 890-1831-3

Lab Sample ID: 890-1831-4

Client Sample ID: PH04 Date Collected: 01/12/22 13:40 Date Received: 01/14/22 08:07

Client: WSP USA Inc.

	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			16866	01/17/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	16966	01/17/22 11:21	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	17056	01/17/22 14:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17055	01/17/22 14:06	AJ	XEN MID
Total/NA	Prep	8015NM Prep			16979	01/17/22 09:16	DM	XEN MID
Total/NA	Analysis	8015B NM		1	16961	01/17/22 12:48	AJ	XEN MID
Soluble	Leach	DI Leach			17007	01/17/22 12:10	SC	XEN MID
Soluble	Analysis	300.0		1	17057	01/17/22 17:13	SC	XEN MID

#### Client Sample ID: PH04A Date Collected: 01/12/22 13:45 Date Received: 01/14/22 08:07

	Batch	Batch		Dilution	Batch	Prepared		
Prep Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			16866	01/17/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	16966	01/17/22 11:42	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	17056	01/17/22 14:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17055	01/17/22 14:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			16979	01/17/22 09:16	DM	XEN MID
Total/NA	Analysis	8015B NM		1	16961	01/17/22 13:51	AJ	XEN MID
Soluble	Leach	DI Leach			17007	01/17/22 12:10	SC	XEN MID
Soluble	Analysis	300.0		1	17057	01/17/22 17:20	SC	XEN MID

#### Client Sample ID: PH04B Date Collected: 01/12/22 13:50 Date Received: 01/14/22 08:07

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			16866	01/17/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	16966	01/17/22 12:02	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	17056	01/17/22 14:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17055	01/17/22 14:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			16979	01/17/22 09:16	DM	XEN MID
Total/NA	Analysis	8015B NM		1	16961	01/17/22 14:12	AJ	XEN MID
Soluble	Leach	DI Leach			17007	01/17/22 12:10	SC	XEN MID
Soluble	Analysis	300.0		1	17057	01/17/22 17:43	SC	XEN MID

#### Client Sample ID: PH04C Date Collected: 01/12/22 14:00 Date Received: 01/14/22 08:07

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			16866	01/17/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	16966	01/17/22 12:23	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	17056	01/17/22 14:46	AJ	XEN MID

**Eurofins Carlsbad** 

Matrix: Solid

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Matrix: Solid

Matrix: Solid

Project/Site: Remuda Basin State 002

Lab Chronicle

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Matrix: Solid

Job ID: 890-1831-1 SDG: 31403236.001.0129.35.02

## Lab Sample ID: 890-1831-4 Matrix: Solid

Client Sample ID: PH04C Date Collected: 01/12/22 14:00 Date Received: 01/14/22 08:07

Client: WSP USA Inc.

	Batch	Batch		Dilution	Batch	Prepared		
Prep Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1	17055	01/17/22 14:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			16979	01/17/22 09:16	DM	XEN MID
Total/NA	Analysis	8015B NM		1	16961	01/17/22 14:33	AJ	XEN MID
Soluble	Leach	DI Leach			17007	01/17/22 12:10	SC	XEN MID
Soluble	Analysis	300.0		1	17057	01/17/22 17:51	SC	XEN MID

#### Client Sample ID: PH04D Date Collected: 01/12/22 14:05 Date Received: 01/14/22 08:07

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			16866	01/17/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	16966	01/17/22 12:43	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	17056	01/17/22 14:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17055	01/17/22 14:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			16979	01/17/22 09:16	DM	XEN MID
Total/NA	Analysis	8015B NM		1	16961	01/17/22 14:54	AJ	XEN MID
Soluble	Leach	DI Leach			17007	01/17/22 12:10	SC	XEN MID
Soluble	Analysis	300.0		1	17057	01/17/22 18:14	SC	XEN MID

#### Client Sample ID: PH01 Date Collected: 01/12/22 09:45

Date Received: 01/12/22 09:45

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			16866	01/17/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	16966	01/17/22 13:03	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	17056	01/17/22 14:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17055	01/17/22 14:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			16979	01/17/22 09:16	DM	XEN MID
Total/NA	Analysis	8015B NM		1	16961	01/17/22 15:15	AJ	XEN MID
Soluble	Leach	DI Leach			17007	01/17/22 12:10	SC	XEN MID
Soluble	Analysis	300.0		1	17057	01/17/22 18:21	SC	XEN MID

#### Client Sample ID: PH12E Date Collected: 01/12/22 10:30 Date Received: 01/14/22 08:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			16866	01/17/22 07:30		XEN MID
Total/NA	Analysis	8021B		1	16966	01/17/22 13:24	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	17056	01/17/22 14:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17055	01/17/22 14:15	AJ	XEN MID
Total/NA Total/NA	Prep Analysis	8015NM Prep 8015B NM		1	16979 16961	01/17/22 09:16 01/17/22 15:36		XEN MID XEN MID

**Eurofins Carlsbad** 

Matrix: Solid

#### Lab Sample ID: 890-1831-6 Matrix: Solid

Lab Sample ID: 890-1831-7

# Lab Chronicle

Client: WSP USA Inc. Project/Site: Remuda Basin State 002

#### Client Sample ID: PH12E Date Collected: 01/12/22 10:30 Date Received: 01/14/22 08:07

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			17007	01/17/22 12:10	SC	XEN MID
Soluble	Analysis	300.0		1	17057	01/17/22 18:29	SC	XEN MID

#### Client Sample ID: PH13C Date Collected: 01/12/22 10:15 Date Received: 01/14/22 08:07

	Batch	Batch		Dilution	Batch	Prepared		
Prep Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			16866	01/17/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	16966	01/17/22 13:44	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	17056	01/17/22 14:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17055	01/17/22 14:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			16979	01/17/22 09:16	DM	XEN MID
Total/NA	Analysis	8015B NM		1	16961	01/17/22 15:57	AJ	XEN MID
Soluble	Leach	DI Leach			17007	01/17/22 12:10	SC	XEN MID
Soluble	Analysis	300.0		1	17057	01/17/22 18:36	SC	XEN MID

#### Client Sample ID: PH06I Date Collected: 01/13/22 09:20 Date Received: 01/14/22 08:07

	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			16866	01/17/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	16966	01/17/22 14:05	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	17056	01/17/22 14:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17055	01/17/22 14:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			16979	01/17/22 09:16	DM	XEN MID
Total/NA	Analysis	8015B NM		1	16961	01/17/22 16:18	AJ	XEN MID
Soluble	Leach	DI Leach			17007	01/17/22 12:10	SC	XEN MID
Soluble	Analysis	300.0		1	17057	01/17/22 18:44	SC	XEN MID

#### Client Sample ID: PH10D Date Collected: 01/13/22 09:55 Date Received: 01/14/22 08:07

Lab Sa	mple ID:	890-183	1-10
		Matrix:	Solid

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			16866	01/17/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	16966	01/17/22 14:25	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	17056	01/17/22 14:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17055	01/17/22 14:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			16979	01/17/22 09:16	DM	XEN MID
Total/NA	Analysis	8015B NM		1	16961	01/17/22 16:39	AJ	XEN MID
Soluble	Leach	DI Leach			17007	01/17/22 12:10	SC	XEN MID
Soluble	Analysis	300.0		1	17057	01/17/22 18:52	SC	XEN MID

#### **Eurofins Carlsbad**

Job ID: 890-1831-1 SDG: 31403236.001.0129.35.02 ab Sample ID: 890-1831-7

Matrix: Solid

Matrix: Solid

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#### Lab Sample ID: 890-1831-7 Matrix: Solid

Lab Sample ID: 890-1831-8

Released to Imaging: 9/22/2022 7:39:45 AM

#### Client Sample ID: PH09C Date Collected: 01/13/22 15:25 Date Received: 01/14/22 08:07

Job ID: 890-1831-1 SDG: 31403236.001.0129.35.02

## Lab Sample ID: 890-1831-11 Matrix: Solid

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			16867	01/17/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	16967	01/17/22 14:26	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	17056	01/17/22 14:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17055	01/17/22 14:15	AJ	XEN MID
Total/NA	Prep	8015NM Prep			16978	01/17/22 09:12	DM	XEN MID
Total/NA	Analysis	8015B NM		1	16964	01/17/22 16:43	AJ	XEN MID
Soluble	Leach	DI Leach			17007	01/17/22 12:10	SC	XEN MID
Soluble	Analysis	300.0		1	17057	01/17/22 18:59	SC	XEN MID

#### Laboratory References:

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

Eurofins Carlsbad

**Released to Imaging: 9/22/2022 7:39:45 AM** 

Client: WSP USA Inc.

**Accreditation/Certification Summary** 

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10

Job ID: 890-1831-1 SDG: 31403236.001.0129.35.02

# Project/Site: Remuda Basin State 002 Laboratory: Eurofins Midland

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

uthority		ogram	Identification Number	Expiration Date
exas	NELAP T104704400-21-22		T104704400-21-22	06-30-22
<b>T C U C U C</b>			1	This Reference in the formula of the formula
I he following analytes the agency does not o	•	rt, but the laboratory is r	ot certified by the governing authority.	I his list may include analytes for whic
• •	•	rt, but the laboratory is r Matrix	Analyte	I his list may include analytes for whic
the agency does not o	ffer certification.			I his list may include analytes for whic

# **Method Summary**

#### Client: WSP USA Inc. Project/Site: Remuda Basin State 002

Job ID: 890-1831-1 SDG: 31403236.001.0129.35.02

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
3015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

#### **Protocol References:**

ASTM = ASTM International

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

#### Laboratory References:

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

# Sample Summary

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Client: WSP USA Inc. Project/Site: Remuda Basin State 002 Job ID: 890-1831-1 SDG: 31403236.001.0129.35.02

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1831-1	PH04	Solid	01/12/22 13:40	01/14/22 08:07	1
890-1831-2	PH04A	Solid	01/12/22 13:45	01/14/22 08:07	2
890-1831-3	PH04B	Solid	01/12/22 13:50	01/14/22 08:07	3
890-1831-4	PH04C	Solid	01/12/22 14:00	01/14/22 08:07	4
890-1831-5	PH04D	Solid	01/12/22 14:05	01/14/22 08:07	5
890-1831-6	PH01	Solid	01/12/22 09:45	01/14/22 08:07	4
890-1831-7	PH12E	Solid	01/12/22 10:30	01/14/22 08:07	6
890-1831-8	PH13C	Solid	01/12/22 10:15	01/14/22 08:07	4
890-1831-9	PH06I	Solid	01/13/22 09:20	01/14/22 08:07	10
890-1831-10	PH10D	Solid	01/13/22 09:55	01/14/22 08:07	5
890-1831-11	PH09C	Solid	01/13/22 15:25	01/14/22 08:07	5

Midland, TX (432-704-5440)       EL Paso, TX (915)585-3443       Lubbock, TX (806)794-1296         575-392-7550)       Phoenix, AZ (480-355-0900)       Atlanta, GA (770-449-8800)       Tampa, FL (813-620-2000)         Bill to: (if different)       Address:       3104       Ereen Street       Program:         Company Name:       XTO Energy       Address:       3104 E Green Street       Reporting         City, State ZIP:       Carlsbad, NM 88220       Reporting       Deliverab         Email:       conner, shore@wsp.com; aimee.cole@wsp.com       Deliverab         Routine       AnaLysis REQUEST       No         Rush:       300       00.0       00.0	Hobbs.NM (575-392-7559)       Phoenix,AZ (480-355-0900)       Auterco. com         Bill to: (if affisient)       Active AD & IAV       All C:       Work Order t         Company Name:       XTO Energy       Program: UST/PST       Program: UST/PST       Program: UST/PST         Address:       3104 E Green Street       State of Project:       Reporting:Level II       Program: UST/PST       Program: UST/
	am: UST/PST tte of Project: Inng:Level II rables: EDD

1/20/2022 (Rev. 1)

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	Relinquished by: (Signature)	otice: Sig f service. f Xenco.		Total 200.7 / 6010						PH09	PH10	PH06	Sample Identification	Sample Custody Seals:	Cooler Custody Seals:	Received Intact:	Temperature (°C):	SAMPLE RECEIPT	Sampler's Name:	P.O. Number:	Project Number:	Project Name:	Phone:	City, State ZIP:	Address:	Company Name:	Project Manager:	X
	: (Signature)	nature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcon 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 A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms	nd	010 200.8 / 6020:						90	ō	6	ntification	als: Yes No	ls: Yes No	Yes			Conner Shore		314032	Remu	720.384.7365	Arvada, CO 80003	4600 West 60th Avenue	WSP USA Inc.	Aimee Cole	
		st of sample applied to	to be an	020:						S	S	s	Matrix	o N/A	N/A	No		Temp Blank:			236.001.0	da Basin		003	h Avenu			60
De Cry	Received	samples constites and shall not each project and		~						1/13/2022	1/13/2022	1/13/2022	Date Sampled	Tota	Corre		$\left( \right)$	Yes No			31403236.001.0129.35.02	Remuda Basin State 002			Ø			Нор
Ϋ́	Received by: (Signature)	tutes a valid pur assume any res I a charge of \$5 s	TCLP / SPL	8RCRA 13F						1525	955	920	Time Sampled	<b>Total Containers:</b>	Correction Factor:	0	Thermometer ID	Wet Ice. Yes	Due Date	Rush	Routine	Tu	Email:					Clidin Of Custony Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX Midland, TX (432-704-5440) EL Paso, TX (915)585-3443 Lubbock, TX Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800)
	e)	chase order from ponsibility for ar for each sample		13PPM Texas 11						υī	טַ	10'	Depth				0	Yes No	Date:	Rush: JYHR TAT	ne	Turn Around	Email: conner.shore@wsp.com; aimee.cole@wsp.com	City, State ZIP:	Address:	Company Name:	Bill to: (if different)	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 575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (81
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	Relino	ates and su the client if red. These t	Cr Co	Cd Ca			┝	_				-					_						0wsp.co					San Antor 43 Lubboo
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	Relinquished by: (Signature)	tractors. It assigns standard terms and conditions losses are due to circumstances beyond the control will be enforced unless previously negotiated.	Pb Mn Mo Ni Se Ag	Cu Fe Pb		_		+	_													ANALYSIS REQUEST						( (210) 509-3334 (806)794-1296 )   Tampa,FL (813-620-2000)
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	iture)		1631 / 24	Na Sr T			+	+			-	-			TAT	T				AFE		-	ADaPT			rownfields	Work Order Comments	1 1
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	Date/Time		1631 / 245.1 / 7470 / 7471 : Hg	V Zn									Sample Comments	lab, if received by 4:30pm	TAT starts the day recevied by the					AFE: EW.2022.00063.EXP.01		Work Order Notes			]	Derfund		of.
	ne		1 : Hg										Its	mai	d by the					EXP.01		Š		Γ	]		]	12

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# Login Sample Receipt Checklist

Client: WSP USA Inc.

#### Login Number: 1831 List Number: 1 Creator: Clifton, Cloe

<6mm (1/4").

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

14

Job Number: 890-1831-1

List Source: Eurofins Carlsbad

SDG Number: 31403236.001.0129.35.02

# Login Sample Receipt Checklist

Client: WSP USA Inc.

MS/MSDs

<6mm (1/4").

Login Number: 1831 ......

Job Number: 890-1831-1 SDG Number: 31403236.001.0129.35.02

List Source: Eurofins Midland

5 14

List Number: 2			List Creation: 01/17/22 09:43 AN
Creator: Rodriguez, Leticia			
Question	Answer	Comment	
The cooler's custody seal, if present, is intact.	N/A		
Sample custody seals, if present, are intact.	N/A		
The cooler or samples do not appear to have been compromised or tampered with.	True		
Samples were received on ice.	True		
Cooler Temperature is acceptable.	True		
Cooler Temperature is recorded.	True		
COC is present.	True		
COC is filled out in ink and legible.	True		
COC is filled out with all pertinent information.	True		
Is the Field Sampler's name present on COC?	True		
There are no discrepancies between the containers received and the COC.	True		
Samples are received within Holding Time (excluding tests with immediate HTs)	True		
Sample containers have legible labels.	True		
Containers are not broken or leaking.	True		
Sample collection date/times are provided.	True		
Appropriate sample containers are used.	True		
Sample bottles are completely filled.	True		
Sample Preservation Verified.	N/A		

True

N/A

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

Containers requiring zero headspace have no headspace or bubble is

Received by OCD: 7/8/2022 8:01:28 AM

# 🔅 eurofins

# Environment Testing America

# **ANALYTICAL REPORT**

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

# Laboratory Job ID: 890-1849-1

Laboratory Sample Delivery Group: 31403236.001.0129.35.02 Client Project/Site: Remuda Basin State #2 Revision: 1

# For:

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

Attn: Aimee Cole

RAMER

Authorized for release by: 1/25/2022 1:38:00 PM

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

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

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

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

Visit us at: www.eurofinsus.com/Env Released to Imaging: 9/22/2022 7:39:45 AM

Laboratory Job ID: 890-1849-1 SDG: 31403236.001.0129.35.02

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Surrogate Summary	9
QC Sample Results	11
QC Association Summary	16
Lab Chronicle	19
Certification Summary	21
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Sample Summary	23
Chain of Custody	24
Receipt Checklists	25
Client: WSP USA Inc. Project/Site: Remuda Basin State #2 Job ID: 890-1849-1 SDG: 31403236.001.0129.35.02

# Qualifiers

Quaimers		 3
GC VOA		
Qualifier	Qualifier Description	
S1+	Surrogate recovery exceeds control limits, high biased.	
U	Indicates the analyte was analyzed for but not detected.	5
GC Semi VC	A	
Qualifier	Qualifier Description	
*_	LCS and/or LCSD is outside acceptance limits, low biased.	
*1	LCS/LCSD RPD exceeds control limits.	
S1-	Surrogate recovery exceeds control limits, low biased.	
U	Indicates the analyte was analyzed for but not detected.	8
HPLC/IC		
Qualifier	Qualifier Description	9
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	
ONE	Contains No Encollimited	

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

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# Job ID: 890-1849-1

# Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-1849-1

#### REVISION

The report being provided is a revision of the original report sent on 1/21/2022. The report (revision 1) is being revised due to Per client email, requesting re run on sample PH 16 (@20') for chloride..

Report revision history

#### Receipt

The samples were received on 1/19/2022 4:16 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 1.6°C

#### GC VOA

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

#### GC Semi VOA

Method 8015MOD\_NM: The laboratory control sample (LCS) associated with preparation batch 880-17333 and analytical batch 880-17443 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

Method 8015MOD\_NM: Surrogate recovery for the following samples were outside control limits: PH16A (890-1849-2), PH16B (890-1849-3), PH16C (890-1849-4) and PH16D (890-1849-5). Evidence of matrix interferences is not obvious.

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 880-17449 and 880-17449 and analytical batch 880-17490 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 Sample ID: PH16** Date Collected: 01/14/22 14:20 Date Received: 01/19/22 16:16 Sample Depth: 4

Job ID: 890-1849-1
SDG: 31403236.001.0129.35.02

# Lab Sample ID: 890-1849-1

Matrix: Solid

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00198	U	0.00198	mg/Kg		01/21/22 13:48	01/21/22 14:39	
Toluene	<0.00198	U	0.00198	mg/Kg		01/21/22 13:48	01/21/22 14:39	
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		01/21/22 13:48	01/21/22 14:39	
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		01/21/22 13:48	01/21/22 14:39	
o-Xylene	<0.00198	U	0.00198	mg/Kg		01/21/22 13:48	01/21/22 14:39	
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		01/21/22 13:48	01/21/22 14:39	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	130		70 - 130			01/21/22 13:48	01/21/22 14:39	
1,4-Difluorobenzene (Surr)	88		70 - 130			01/21/22 13:48	01/21/22 14:39	
Method: Total BTEX - Total B	TEX Calcula	tion						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00396	U	0.00396	mg/Kg			01/20/22 16:32	
Method: 8015 NM - Diesel Rar			C)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<50.0	U	50.0	mg/Kg			01/21/22 14:20	
Method: 8015B NM - Diesel R	ange Organ	ics (DRO) (	GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *- *1	50.0	mg/Kg		01/20/22 12:53	01/21/22 14:13	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/20/22 12:53	01/21/22 14:13	
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/20/22 12:53	01/21/22 14:13	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	70		70 - 130			01/20/22 12:53	01/21/22 14:13	
o-Terphenyl	70		70 - 130			01/20/22 12:53	01/21/22 14:13	
Method: 300.0 - Anions, Ion C			ble					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	11900		99.8	mg/Kg			01/21/22 17:08	20
Client Sample ID: PH16A Date Collected: 01/14/22 14:50 Date Received: 01/19/22 16:16 Sample Depth: 10						Lab Samp	le ID: 890-1 Matrix	
Mothodi 2021 D. Volatila Oraz	nio Comro							
Method: 8021B - Volatile Orga Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00201	U	0.00201	mg/Kg		01/21/22 13:48	01/21/22 14:59	
Toluene	<0.00201		0.00201	mg/Kg		01/21/22 13:48		
Ethylbenzene	< 0.00201	U	0.00201	ma/ka		01/21/22 13:48	01/21/22 14:59	
Ethylbenzene m-Xylene & p-Xylene	<0.00201 <0.00402		0.00201 0.00402	mg/Kg mg/Kg			01/21/22 14:59 01/21/22 14:59	

o-Xylene Xylenes, Total	<0.00201 <0.00402	-	0.00201 0.00402	mg/Kg mg/Kg		01/21/22 14:59 01/21/22 14:59	1 1
Surrogate 4-Bromofluorobenzene (Surr)	%Recovery 119	Qualifier	Limits 70 - 130		<b>Prepared</b> 01/21/22 13:48	Analyzed 01/21/22 14:59	Dil Fac 1

**Eurofins Carlsbad** 

Method: 300.0 - Anions, Ion Chro	matography - Solub	ole					
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11900	99.8	mg/Kg			01/21/22 17:08	20

# Г E S

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1/25/2022 (Rev. 1)

		Client	t Sample Re	sults				
ilient: WSP USA Inc. roject/Site: Remuda Basin State	a #2					SDG: 3140	Job ID: 890- 3236.001.0129	
-	; #∠							
Client Sample ID: PH16A Date Collected: 01/14/22 14:50						Lab Samp	le ID: 890-1 Matrix	1849-2 c: Solid
Date Received: 01/19/22 16:16 Sample Depth: 10								
Method: 8021B - Volatile Orga	nic Compo	unds (GC)	(Continued)					
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	100		70 - 130			01/21/22 13:48	01/21/22 14:59	1
Method: Total BTEX - Total BT	EX Calcula	ition						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			01/20/22 16:32	1
Method: 8015 NM - Diesel Ran	ige Organic	;s (DRO) ((	GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			01/21/22 14:20	1
Method: 8015B NM - Diesel Ra	ange Organ	ics (DRO)	(GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *- *1	49.9	mg/Kg		01/20/22 12:53	01/21/22 14:34	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		01/20/22 12:53	01/21/22 14:34	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/20/22 12:53	01/21/22 14:34	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	71		70 - 130			01/20/22 12:53	01/21/22 14:34	1
o-Terphenyl	69	S1-	70 - 130			01/20/22 12:53	01/21/22 14:34	1
Method: 300.0 - Anions, Ion C	hromatogra	aphy - Soli	uble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2400		50.4	mg/Kg			01/21/22 17:15	10
Client Sample ID: PH16B						Lab Samp	le ID: 890-1	849-3
Date Collected: 01/14/22 09:30 Date Received: 01/19/22 16:16								c: Solid

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/21/22 13:48	01/21/22 15:20	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/21/22 13:48	01/21/22 15:20	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/21/22 13:48	01/21/22 15:20	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		01/21/22 13:48	01/21/22 15:20	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/21/22 13:48	01/21/22 15:20	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		01/21/22 13:48	01/21/22 15:20	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	148	S1+	70 - 130			01/21/22 13:48	01/21/22 15:20	1
1,4-Difluorobenzene (Surr)	117		70 - 130			01/21/22 13:48	01/21/22 15:20	1
Method: Total BTEX - Total	BTEX Calcula	tion						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			01/20/22 16:32	1
Method: 8015 NM - Diesel F	Range Organic	s (DRO) (G	C)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			01/21/22 14:20	1

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Project/Site: Remuda Basin State #2

# **Client Sample Results**

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Job ID: 890-1849-1
SDG: 31403236.001.0129.35.02

# Lab Sample ID: 890-1849-3 Matrix: Solid

**Client Sample ID: PH16B** Date Collected: 01/14/22 09:30 Date Received: 01/19/22 16:16 Sample Depth: 15

Client: WSP USA Inc.

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *- *1	49.9	mg/Kg		01/20/22 12:53	01/21/22 14:55	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		01/20/22 12:53	01/21/22 14:55	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/20/22 12:53	01/21/22 14:55	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	67	S1-	70 - 130			01/20/22 12:53	01/21/22 14:55	1
o-Terphenyl	63	S1-	70 - 130			01/20/22 12:53	01/21/22 14:55	1

# Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	979		49.8	mg/K	g		01/21/22 17:38	10

# **Client Sample ID: PH16C**

## Date Collected: 01/14/22 10:00 Date Received: 01/19/22 16:16 Sample Depth: 16

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		01/21/22 13:48	01/21/22 15:40	1
Toluene	<0.00202	U	0.00202	mg/Kg		01/21/22 13:48	01/21/22 15:40	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		01/21/22 13:48	01/21/22 15:40	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		01/21/22 13:48	01/21/22 15:40	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		01/21/22 13:48	01/21/22 15:40	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		01/21/22 13:48	01/21/22 15:40	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130			01/21/22 13:48	01/21/22 15:40	1
1,4-Difluorobenzene (Surr)	88		70 - 130			01/21/22 13:48	01/21/22 15:40	1
Method: Total BTEX - Total B1	EX Calcula	tion						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			01/20/22 16:32	1
Method: 8015 NM - Diesel Rar	nge Organic	s (DRO) (G	SC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			01/21/22 14:20	1
Method: 8015B NM - Diesel Ra	ange Organ	ics (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		01/20/22 12:53	01/21/22 15:15	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/20/22 12:53	01/21/22 15:15	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/20/22 12:53	01/21/22 15:15	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	67	<u>S1-</u>	70 - 130			01/20/22 12:53	01/21/22 15:15	1
I-Chiorooclane	07	57-	70-750			01/20/22 12:00	01/21/22 10.10	

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5 Lab Sample ID: 890-1849-4

12 13

Matrix: Solid

		Client	Sample Re	esults				-
Client: WSP USA Inc. Project/Site: Remuda Basin State	#2					SDG: 3140	Job ID: 890- 3236.001.012	
Client Sample ID: PH16C Date Collected: 01/14/22 10:00 Date Received: 01/19/22 16:16 Sample Depth: 16						Lab Samp	le ID: 890-1 Matrix	849-4 :: Solid
Method: 300.0 - Anions, Ion C Analyte		phy - Solu Qualifier	ible RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	694		49.5	mg/Kg			01/21/22 17:45	10
Client Sample ID: PH16D Date Collected: 01/14/22 15:00 Date Received: 01/19/22 16:16 Sample Depth: 20						Lab Samp	le ID: 890-1 Matrix	849-5 :: Solid
Method: 8021B - Volatile Orga Analyte		u <mark>nds (GC)</mark> Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		01/21/22 13:48	01/21/22 16:00	1
Toluene	<0.00201	U	0.00201	mg/Kg		01/21/22 13:48	01/21/22 16:00	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		01/21/22 13:48	01/21/22 16:00	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		01/21/22 13:48	01/21/22 16:00	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		01/21/22 13:48	01/21/22 16:00	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		01/21/22 13:48	01/21/22 16:00	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	131	S1+	70 - 130			01/21/22 13:48	01/21/22 16:00	1
1,4-Difluorobenzene (Surr)	104		70 - 130			01/21/22 13:48	01/21/22 16:00	1
Method: Total BTEX - Total BT	EX Calcula	tion						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00402	U	0.00402	mg/Kg			01/20/22 16:32	1
Method: 8015 NM - Diesel Ran Analyte		<mark>s (DRO) ((</mark> Qualifier	GC) RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9		49.9	mg/Kg			01/21/22 14:20	1
∟ Method: 8015B NM - Diesel Ra	inge Organ	ics (DRO)	(GC)			Duran and		
Analyte Gasoline Range Organics		Qualifier U *- *1		Unit	<u>D</u>	Prepared 01/20/22 12:53	Analyzed 01/21/22 15:36	Dil Fac
(GRO)-C6-C10				mg/Kg				
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		01/20/22 12:53	01/21/22 15:36	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/20/22 12:53	01/21/22 15:36	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	66	S1-	70 - 130			01/20/22 12:53	01/21/22 15:36	1
o-Terphenyl	63	S1-	70 - 130			01/20/22 12:53	01/21/22 15:36	1
Method: 300.0 - Anions, Ion C Analyte		phy - Solu Qualifier	ible RL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorido			4.08	<u></u>			01/24/22 16:20	

AnalyteResultQualifierRLUnitDPreparedAnalyzedDil FacChloride4774.984.98mg/KgD01/24/22 16:201

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Released to Imaging: 9/22/2022 7:39:45 AM

# **Surrogate Summary**

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

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

		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
820-3188-A-21-A MS	Matrix Spike	108	95	
820-3188-A-21-B MSD	Matrix Spike Duplicate	103	94	
890-1849-1	PH16	130	88	
890-1849-2	PH16A	119	100	
890-1849-3	PH16B	148 S1+	117	
890-1849-4	PH16C	105	88	
890-1849-5	PH16D	131 S1+	104	
LCS 880-17169/1-A	Lab Control Sample	95	107	
LCS 880-17426/1-A	Lab Control Sample	100	101	
LCSD 880-17169/2-A	Lab Control Sample Dup	95	101	
LCSD 880-17426/2-A	Lab Control Sample Dup	104	94	
MB 880-17169/5-A	Method Blank	109	103	
Surrogate Legend				
BFB = 4-Bromofluorobe	enzene (Surr)			
DFBZ = 1,4-Difluorober	nzene (Surr)			

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

			Prep Type. Total/NA
<b>_</b>			Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID		
890-1843-A-21-B MSD	Matrix Spike Duplicate		·
Surrogate Legend			

Surrogate Legend BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

			Perc
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-10392-A-1-C MS	Matrix Spike	67 S1-	64 S1-
880-10392-A-1-D MSD	Matrix Spike Duplicate	75	77
890-1849-1	PH16	70	70
890-1849-2	PH16A	71	69 S1-
890-1849-3	PH16B	67 S1-	63 S1-
890-1849-4	PH16C	67 S1-	65 S1-
890-1849-5	PH16D	66 S1-	63 S1-

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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Job ID: 890-1849-1 SDG: 31403236.001.0129.35.02

Percent Surrogate Recovery (Acceptance Limits)

Prep Type: Total/NA

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Drop Type: Total/NA

Prep Type: Total/NA

# **Surrogate Summary**

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

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

			Perc	ent Surrogate Red	covery (Acce
		1CO2	OTPH2		
ab Sample ID.	Client Sample ID	(70-130)	(70-130)		
LCS 880-17333/2-A	Lab Control Sample	87	88		
.CSD 880-17333/3-A	Lab Control Sample Dup	81	80		
MB 880-17333/1-A	Method Blank	95	93		
Surrogate Legend					
1CO = 1-Chlorooctane					-

OTPH = o-Terphenyl

Job ID: 890-1849-1 SDG: 31403236.001.0129.35.02

Prep Type: Total/NA

5 6 7

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Client: WSP USA Inc. Project/Site: Remuda Basin State #2

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

#### Lab Sample ID: MB 880-17169/5-A Matrix: Solid Analysis Batch: 17429

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00200	U	0.00200			01/19/22 13:48	01/21/22 12:04	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/19/22 13:48	01/21/22 12:04	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/19/22 13:48	01/21/22 12:04	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/19/22 13:48	01/21/22 12:04	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/19/22 13:48	01/21/22 12:04	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/19/22 13:48	01/21/22 12:04	1
	MB	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130			01/19/22 13:48	01/21/22 12:04	1
1,4-Difluorobenzene (Surr)	103		70 - 130			01/19/22 13:48	01/21/22 12:04	1

#### Lab Sample ID: LCS 880-17169/1-A Matrix: Solid Analysis Batch: 17429

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.08823		mg/Kg		88	70 - 130	_
Toluene	0.100	0.07876		mg/Kg		79	70 - 130	
Ethylbenzene	0.100	0.07399		mg/Kg		74	70 - 130	
m-Xylene & p-Xylene	0.200	0.1521		mg/Kg		76	70 - 130	
o-Xylene	0.100	0.08095		mg/Kg		81	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

#### Lab Sample ID: LCSD 880-17169/2-A Matrix: Solid

## Analysis Batch: 17429

Analysis Batch: 17429					Prep Batch: 17169				
	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09770		mg/Kg		98	70 - 130	10	35
Toluene	0.100	0.08720		mg/Kg		87	70 - 130	10	35
Ethylbenzene	0.100	0.08342		mg/Kg		83	70 - 130	12	35
m-Xylene & p-Xylene	0.200	0.1673		mg/Kg		84	70 - 130	9	35
o-Xylene	0.100	0.08484		mg/Kg		85	70 - 130	5	35

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

# Lab Sample ID: 890-1843-A-21-B MSD Matrix: Solid

Analysis Batch: 17429									Prep	Batch: '	17169
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U	0.0990	0.07840		mg/Kg					
Toluene	<0.00201	U	0.0990	0.06934		mg/Kg					

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# **Client Sample ID: Method Blank**

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

**Prep Type: Total/NA** 

Prep Type: Total/NA

Prep Batch: 17169

SDG: 31403236.001.0129.35.02

# Prep Batch: 17169

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

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

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

Job ID: 890-1849-1 SDG: 31403236.001.0129.35.02

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

Lab Sample ID: 890-1843-A-21-B MSD Matrix: Solid						Client Sample ID: Matrix Spike Du Prep Type: To					
Analysis Batch: 17429									Prep E	Satch: 1	17169
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Ethylbenzene	< 0.00201	U	0.0990	0.06580		mg/Kg					
m-Xylene & p-Xylene	<0.00402	U	0.198	0.1343		mg/Kg					
o-Xylene	<0.00201	U	0.0990	0.06788		mg/Kg					
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)											
	-17426/1-A					Clier	nt Sai	mple ID	: Lab Coi		
Lab Sample ID: LCS 880 Matrix: Solid	-17426/1-A		Spike	LCS	LCS	Clier	nt Sai	mple ID	Prep Ty		al/NA
Lab Sample ID: LCS 880 Matrix: Solid Analysis Batch: 17429	-17426/1-A		Spike Added		LCS Qualifier	<b>Clier</b> Unit	nt Sai D	mple ID %Rec	Prep Ty Prep E	pe: Tot	al/NA
Lab Sample ID: LCS 880 Matrix: Solid Analysis Batch: 17429 Analyte	-17426/1-A		•						Prep Ty Prep E %Rec.	pe: Tot	al/NA
Lab Sample ID: LCS 880 Matrix: Solid Analysis Batch: 17429 Analyte Benzene	-17426/1-A		Added	Result		Unit		%Rec	Prep Ty Prep E %Rec. Limits	pe: Tot	al/NA
Lab Sample ID: LCS 880 Matrix: Solid Analysis Batch: 17429 Analyte Benzene Toluene	-17426/1-A		Added	<b>Result</b> 0.09060		Unit mg/Kg		% <b>Rec</b> 91	Prep Ty Prep E %Rec. Limits 70 - 130	pe: Tot	al/NA
Lab Sample ID: LCS 880 Matrix: Solid Analysis Batch: 17429 Analyte Benzene Toluene Ethylbenzene	-17426/1-A 		Added	<b>Result</b> 0.09060 0.08073		<mark>Unit</mark> mg/Kg mg/Kg		<b>%Rec</b> 91 81	Prep Ty Prep E %Rec. Limits 70 - 130 70 - 130	pe: Tot	al/NA
Matrix: Solid Analysis Batch: 17429 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	-17426/1-A 		Added 0.100 0.100 0.100	Result           0.09060           0.08073           0.07731		Unit mg/Kg mg/Kg mg/Kg		%Rec 91 81 77	Prep Ty Prep E %Rec. Limits 70 - 130 70 - 130 70 - 130	pe: Tot	al/NA
1,4-Difluorobenzene (Surr) Lab Sample ID: LCS 880 Matrix: Solid Analysis Batch: 17429 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene			Added 0.100 0.100 0.100 0.200	Result 0.09060 0.08073 0.07731 0.1543		Unit mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 91 81 77 77	Prep Ty Prep E %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130	pe: Tot	al/NA
Lab Sample ID: LCS 880 Matrix: Solid Analysis Batch: 17429 Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene			Added 0.100 0.100 0.100 0.200	Result 0.09060 0.08073 0.07731 0.1543		Unit mg/Kg mg/Kg mg/Kg mg/Kg		%Rec 91 81 77 77	Prep Ty Prep E %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130	pe: Tot	al/NA

Lab Sample ID: LCSD 880-17426/2-A	
Matrix: Solid	
Analysis Batch: 17429	

1,4-Difluorobenzene (Surr)

#### **Client Sample ID: Lab Control Sample Dup** Prep Type: Total/NA Prep Batch: 17426

**Client Sample ID: Matrix Spike Duplicate** 

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08899		mg/Kg		89	70 - 130	2	35
Toluene	0.100	0.08118		mg/Kg		81	70 - 130	1	35
Ethylbenzene	0.100	0.07771		mg/Kg		78	70 - 130	1	35
m-Xylene & p-Xylene	0.200	0.1613		mg/Kg		81	70 - 130	4	35
o-Xylene	0.100	0.07892		mg/Kg		79	70 - 130	1	35

70 - 130

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

101

#### Lab Sample ID: 820-3188-A-21-B MSD Matrix: Solid alvaia Batahi 17400

Analysis Batch: 17429									Prep I	Batch: ˈ	17426
-	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00199	U	0.101	0.06041		mg/Kg					
Toluene	<0.00199	U	0.101	0.05726		mg/Kg					
Ethylbenzene	<0.00199	U	0.101	0.05610		mg/Kg					
m-Xylene & p-Xylene	<0.00398	U	0.201	0.1137		mg/Kg					
o-Xylene	<0.00199	U	0.101	0.05557		mg/Kg					

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Prep Type: Total/NA

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

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

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

# Lab Sample ID: 820-3188-A-21-A MS Matrix: Solid

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

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

# Lab Sample ID: MB 880-17333/1-A Matrix: Solid Analysis Batch: 17443

-	MB	МВ						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/20/22 08:53	01/21/22 12:08	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/20/22 08:53	01/21/22 12:08	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/20/22 08:53	01/21/22 12:08	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130			01/20/22 08:53	01/21/22 12:08	1
o-Terphenyl	93		70 - 130			01/20/22 08:53	01/21/22 12:08	1

#### Lab Sample ID: LCS 880-17333/2-A Matrix: Solid Analysis Batch: 17443

Allalysis Daluli. 17445							Fiep	Datch. 17333
	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	774.6		mg/Kg		77	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	750.6		mg/Kg		75	70 - 130	
C10-C28)								

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	87		70 - 130
o-Terphenyl	88		70 - 130

#### Lab Sample ID: LCSD 880-17333/3-A Matrix: Solid Analysis Batch: 17443

Analysis Batch: 17443						Prep E	atch: 1	7333
	Spike	LCSD L	CSD			%Rec.		RPD
Analyte	Added	Result C	Qualifier Un	it D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	548.1 *-	- *1 mg	/Kg	55	70 - 130	34	20
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	760.3	mg	/Kg	76	70 - 130	1	20
C10-C28)								

Prep Type: Total/NA

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**Client Sample ID: Matrix Spike** 

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

**Prep Type: Total/NA** 

Prep Batch: 17333

1/25/2022 (Rev. 1)

# Client Sample ID: Lab Control Sample

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

Prep Type: Total/NA Prep Batch: 17333

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

Lab Sample ID: LCSD 880-17333/3-A

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

LCSD LCSD %Recovery Qualifier

81

80

**Prep Type: Total/NA** 

Prep Batch: 17333

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

			СІ	ient Sar	mple ID: N	latrix Spik	e 📕
					Prep Typ	e: Total/N atch: 1733	A
MS	MS				%Rec.		
Result	Qualifier	Unit	D	%Rec	Limits		
866.1		mg/Kg	_	82	70 - 130		1
961.9		mg/Kg		96	70 - 130		
							1
		Client Sa	mp	le ID: M	atrix Spik		
						e: Total/N	
MSD	MSD				Ярес.	atch: 1733 RF	
-	-	Unit	n	% Bee	Limits	RPD Lin	
Result	Qualifier	Unit	D	%Rec	Linnits	KFU LIII	ΠL

# Lab Sample ID: 880-10392-A-1-C MS Matrix: Solid

**Matrix: Solid** 

Surrogate

o-Terphenyl

1-Chlorooctane

Analysis Batch: 17443

Analysis Batch: 17443									Prep B	atch: 17333
	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *- *1	997	866.1		mg/Kg		82	70 - 130	
Diesel Range Organics (Over C10-C28)	<49.9	U	997	961.9		mg/Kg		96	70 - 130	
	MC	Me								

Limits

70 - 130

70 - 130

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	67	S1-	70 - 130
o-Terphenyl	64	S1-	70 - 130

#### Lab Sample ID: 880-10392-A-1-D MSD Matrix: Solid

Analysis Batch: 17443									Prep Ty Prep E	pe: Tot Batch: 1	
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *- *1	996	950.0		mg/Kg		91	70 - 130	9	20
Diesel Range Organics (Over C10-C28)	<49.9	U	996	1141		mg/Kg		115	70 - 130	17	20
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	75		70 - 130								
o-Terphenyl	77		70 - 130								

# Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-17449/1-4 Matrix: Solid Analysis Batch: 17490	<b>X</b>							Clie	ent Sam	ple ID: Methoo Prep Type: \$	
	MB	MB									
Analyte	Result	Qualifier		RL		Unit		D P	repared	Analyzed	Dil Fac
Chloride	<5.00	U		5.00		mg/K	g			01/21/22 13:59	1
Lab Sample ID: LCS 880-17449/2- Matrix: Solid	Α						Clie	nt Sa	nple ID	: Lab Control S Prep Type: S	
Analysis Batch: 17490			Spike		LCS	LCS				%Rec.	
Analyte			Added			Qualifier	Unit	D	%Rec	Limits	
Chloride			250		271.8		mg/Kg		109	90 - 110	

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

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

Lab Sample ID: LCSD 880- Matrix: Solid	17449/3-A				C	lient Sam	ple	ID: Lab	Control Prep T		
Analysis Batch: 17490									Frep	ype. Sc	nuble
Analysis Batch. 17450			Spike	LCSD	LCSD				%Rec.		RPD
Analyte			Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride			250	271.9		mg/Kg		109	90 - 110	0	20
_ Lab Sample ID: 880-10451- Matrix: Solid	A-1-B MS						CI	ient Sa	mple ID: I Prep Ty		
Analysis Batch: 17490									TTOP 1	ype. oc	
Analysis Baten. 11400	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits		
Chloride	12.5	F1	250	321.4	F1	mg/Kg		124	90 - 110		
Lab Sample ID: 880-10451- Matrix: Solid	A-1-C MSD					Client Sa	amp	le ID: N	latrix Spil Prep Ty		
Analysis Batch: 17490											
	•	Sample	Spike	-	MSD				%Rec.		RPD
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	12.5	F1	250	328.4	F1	mg/Kg		126	90 - 110	2	20
Lab Sample ID: MB 880-175 Matrix: Solid	549/1-A						Clie	ent Sam	iple ID: M Prep Ty		
Analysis Batch: 17592		МВ МВ									
							_		Anaha		
Analyta	Ba	cult Qualifiar		DI	Unit	п					
Analyte Chloride Lab Sample ID: LCS 880-17 Matrix: Solid	<	5.00 U		RL 5.00	<mark>Unit</mark> mg/K	-		repared mple ID	Analyz 01/24/22 : Lab Cor	12:41	mple
Chloride Lab Sample ID: LCS 880-17 Matrix: Solid Analysis Batch: 17592	<		Spike	5.00 LCS	mg/K	g Client	Sai	nple ID	01/24/22 : Lab Cor Prep Ty %Rec.	12:41	1 mple
Chloride Lab Sample ID: LCS 880-17 Matrix: Solid Analysis Batch: 17592 Analyte	<		Spike Added	5.00 LCS Result	mg/K	g Client		mple ID	01/24/22 : Lab Cor Prep Ty %Rec. Limits	12:41	1 mple
Chloride Lab Sample ID: LCS 880-17 Matrix: Solid Analysis Batch: 17592	<		Spike	5.00 LCS	mg/K	g Client	Sai	nple ID	01/24/22 : Lab Cor Prep Ty %Rec.	12:41	1 Imple
Chloride Lab Sample ID: LCS 880-17 Matrix: Solid Analysis Batch: 17592 Analyte Chloride Lab Sample ID: LCSD 880- Matrix: Solid	/549/2-A		Spike Added	5.00 LCS Result	LCS Qualifier	g Client	Sai	mple ID <u>%Rec</u> 109	01/24/22 : Lab Cor Prep Ty %Rec. Limits 90 - 110	12:41 ntrol Sa ype: So Sample	1 Imple Iuble Dup
Chloride Lab Sample ID: LCS 880-17 Matrix: Solid Analysis Batch: 17592 Analyte Chloride Lab Sample ID: LCSD 880	/549/2-A		Spike Added	5.00 LCS Result 273.2	LCS Qualifier	Client	Sai	mple ID <u>%Rec</u> 109	01/24/22         Lab Cor         Prep Ty         %Rec.         Limits         90 - 110         Control	12:41 ntrol Sa ype: So Sample	1 Imple Iuble Dup
Chloride Lab Sample ID: LCS 880-17 Matrix: Solid Analysis Batch: 17592 Analyte Chloride Lab Sample ID: LCSD 880-7 Matrix: Solid	/549/2-A		Spike Added 250	5.00 LCS Result 273.2	LCS Qualifier	Client	Sai	mple ID <u>%Rec</u> 109	01/24/22 : Lab Cor Prep Ty %Rec. Limits 90 - 110 Control Prep Ty	12:41 ntrol Sa ype: So Sample	1 Imple Iuble Dup Iuble RPD
Chloride Lab Sample ID: LCS 880-17 Matrix: Solid Analysis Batch: 17592 Analyte Chloride Lab Sample ID: LCSD 880- Matrix: Solid Analysis Batch: 17592	/549/2-A		Spike Added 250 Spike	5.00 LCS Result 273.2	LCS Qualifier LCSD	Client Unit mg/Kg	Sai D nple	mple ID <u>%Rec</u> 109 ID: Lak	01/24/22 <b>Lab Cor</b> <b>Prep T</b> %Rec. Limits 90 - 110 <b>Control</b> <b>Prep T</b> %Rec.	12:41	1 mple pluble P Dup pluble RPD Limit
Chloride Lab Sample ID: LCS 880-17 Matrix: Solid Analysis Batch: 17592 Analyte Chloride Lab Sample ID: LCSD 880- Matrix: Solid Analysis Batch: 17592 Analyte	<pre> </pre>		Spike Added 250 Spike Added	5.00 LCS Result 273.2 LCSD Result	LCS Qualifier LCSD	Client Unit mg/Kg Client Sam	D pple	%Rec           109           ID: Lat           %Rec           110	01/24/22 : Lab Cor Prep Ty %Rec. Limits 90 - 110 0 Control Prep Ty %Rec. Limits	12:41	ample bluble P Dup bluble RPD Limit 20 Spike
Chloride Lab Sample ID: LCS 880-17 Matrix: Solid Analysis Batch: 17592 Analyte Chloride Lab Sample ID: LCSD 880- Matrix: Solid Analysis Batch: 17592 Analyte Chloride Lab Sample ID: 880-10477-	<pre> </pre>		Spike Added 250 Spike Added	5.00 LCS Result 273.2 LCSD Result	LCS Qualifier LCSD	Client Unit mg/Kg Client Sam	D pple	%Rec           109           ID: Lat           %Rec           110	01/24/22         : Lab Cor         Prep Ty         %Rec.         Limits         90 - 110         O Control         %Rec.         Limits         90 - 110         %Rec.         Limits         90 - 110         mple ID: I         Prep Ty	12:41	ample bluble P Dup bluble RPD Limit 20 Spike
Chloride Lab Sample ID: LCS 880-17 Matrix: Solid Analysis Batch: 17592 Analyte Chloride Lab Sample ID: LCSD 880-7 Matrix: Solid Analysis Batch: 17592 Analyte Chloride Lab Sample ID: 880-10477-7 Matrix: Solid Analysis Batch: 17592	<pre></pre>	5.00 U	Spike Added 250 Spike Added 250 Spike	5.00 LCS Result 273.2 LCSD Result 273.8	LCS Qualifier LCSD Qualifier MS	g Client mg/Kg Client Sam Unit mg/Kg	D pple	mple ID <u>%Rec</u> 109 ID: Lat <u>%Rec</u> 110 ient Sa	01/24/22         : Lab Cor         Prep Ty         %Rec.         Limits         90 - 110         O Control         Prep Ty         %Rec.         Limits         90 - 110         MRec.         Limits         90 - 110         Prep Ty         %Rec.         Limits         90 - 110         mple ID: I         Prep Ty         %Rec.	12:41	1 mple pluble Pluble RPD Limit 20 Spike
Chloride Lab Sample ID: LCS 880-17 Matrix: Solid Analysis Batch: 17592 Analyte Chloride Lab Sample ID: LCSD 880- Matrix: Solid Analysis Batch: 17592 Analyte Chloride Lab Sample ID: 880-10477- Matrix: Solid Analysis Batch: 17592 Analyte Chloride Lab Sample ID: 880-10477- Matrix: Solid Analysis Batch: 17592 Analyte	2549/2-A 17549/3-A A-1-B MS Sample Result	5.00 U	Spike Added 250 Spike Added 250 Spike Added	5.00 LCS Result 273.2 LCSD Result 273.8 MS Result	LCS Qualifier LCSD Qualifier	Client Unit mg/Kg Client Sam Unit mg/Kg	D pple	mple ID          %Rec         109         ID: Lak         %Rec         110         ient Sa         %Rec	01/24/22 : Lab Cor Prep Ty %Rec. Limits 90 - 110 0 Control Prep Ty %Rec. Limits 90 - 110 mple ID: I Prep Ty %Rec. Limits	12:41	1 mple pluble Pluble RPD Limit 20 Spike
Chloride Lab Sample ID: LCS 880-17 Matrix: Solid Analysis Batch: 17592 Analyte Chloride Lab Sample ID: LCSD 880-7 Matrix: Solid Analysis Batch: 17592 Analyte Chloride Lab Sample ID: 880-10477-7 Matrix: Solid Analysis Batch: 17592	<pre></pre>	5.00 U	Spike Added 250 Spike Added 250 Spike	5.00 LCS Result 273.2 LCSD Result 273.8	LCS Qualifier LCSD Qualifier MS	g Client mg/Kg Client Sam Unit mg/Kg	Sai	mple ID <u>%Rec</u> 109 ID: Lat <u>%Rec</u> 110 ient Sa	01/24/22         : Lab Cor         Prep Ty         %Rec.         Limits         90 - 110         O Control         Prep Ty         %Rec.         Limits         90 - 110         MRec.         Limits         90 - 110         Prep Ty         %Rec.         Limits         90 - 110         mple ID: I         Prep Ty         %Rec.	12:41	1 mple pluble Pluble RPD Limit 20 Spike
Chloride Lab Sample ID: LCS 880-17 Matrix: Solid Analysis Batch: 17592 Analyte Chloride Lab Sample ID: LCSD 880-7 Matrix: Solid Analysis Batch: 17592 Analyte Chloride Lab Sample ID: 880-10477-7 Matrix: Solid Analysis Batch: 17592 Analyte Chloride Lab Sample ID: 880-10477-7 Matrix: Solid Analysis Batch: 17592	2549/2-A 17549/3-A A-1-B MS Sample Result 32.9	5.00 U	Spike Added 250 Spike Added 250 Spike Added	5.00 LCS Result 273.2 LCSD Result 273.8 MS Result	LCS Qualifier LCSD Qualifier MS	g Client mg/Kg Client Sam Unit mg/Kg	D nple	%Rec           109           ID: Lak           %Rec           110           ient Sa           %Rec           107	01/24/22 : Lab Cor Prep Ty %Rec. Limits 90 - 110 0 Control Prep Ty %Rec. Limits 90 - 110 mple ID: I Prep Ty %Rec. Limits	12:41	1 mple pluble RPD Limit 20 Spike pluble
Chloride Lab Sample ID: LCS 880-17 Matrix: Solid Analysis Batch: 17592 Analyte Chloride Lab Sample ID: LCSD 880- Matrix: Solid Analysis Batch: 17592 Analyte Chloride Lab Sample ID: 880-10477- Matrix: Solid Analysis Batch: 17592 Analyte Chloride Lab Sample ID: 880-10477-	<pre></pre> 7549/2-A 17549/3-A A-1-B MS Sample Result 32.9 A-1-C MSD	5.00 U	Spike Added 250 Spike Added 250 Spike Added 250	5.00 LCS Result 273.2 LCSD Result 273.8 MS Result 300.5	LCS Qualifier C LCSD Qualifier MS Qualifier	g Client mg/Kg Client Sam Unit mg/Kg	D nple	%Rec           109           ID: Lak           %Rec           110           ient Sa           %Rec           107	01/24/22         : Lab Cor         Prep Ty         %Rec.         Limits         90 - 110         O Control Prep Ty         %Rec.         Limits         90 - 110         MRec.         Limits         90 - 110         Mple ID: I         %Rec.         Limits         90 - 110         mple ID: I         %Rec.         Limits         90 - 110         https://www.spill         %Rec.         Limits         90 - 110         Prep Ty	12:41	1 mple oluble Pluble RPD Limit 20 Spike oluble
Chloride Lab Sample ID: LCS 880-17 Matrix: Solid Analysis Batch: 17592 Analyte Chloride Lab Sample ID: LCSD 880-7 Matrix: Solid Analysis Batch: 17592 Analyte Chloride Lab Sample ID: 880-10477-7 Matrix: Solid Analysis Batch: 17592 Analyte Chloride Lab Sample ID: 880-10477-7 Matrix: Solid Analysis Batch: 17592		5.00 U	Spike Added 250 Spike Added 250 Spike Added	5.00 LCS Result 273.2 LCSD Result 273.8 MS Result 300.5	LCS Qualifier LCSD Qualifier MS	g Client mg/Kg Client Sam Unit mg/Kg	D nple	%Rec           109           ID: Lak           %Rec           110           ient Sa           %Rec           107	01/24/22         : Lab Cor         Prep Ty         %Rec.         Limits         90 - 110         O Control Prep Ty         %Rec.         Limits         90 - 110         Prep Ty         %Rec.         Limits         90 - 110         mple ID: I         %Rec.         Limits         90 - 110         Matrix Spil	12:41	e Dup bluble RPD Limit 20 Spike bluble

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Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Prep Type

Total/NA

Total/NA

Total/NA

Matrix

Solid

Solid

Solid

Solid

Solid

Solid

Solid

Solid

Solid

Matrix

Solid

Solid

Solid

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

**Client Sample ID** 

PH16

PH16A

PH16B

PH16C

PH16D

PH16

PH16A

PH16B

Method Blank

Lab Control Sample

Lab Control Sample Dup

Matrix Spike Duplicate

**Client Sample ID** 

**GC VOA** 

Prep Batch: 17169

Lab Sample ID

890-1849-1

890-1849-2

890-1849-3

890-1849-4

890-1849-5

MB 880-17169/5-A

LCS 880-17169/1-A

Lab Sample ID

890-1849-1

890-1849-2

LCSD 880-17169/2-A

890-1843-A-21-B MSD

Analysis Batch: 17403

Job ID: 890-1849-1 SDG: 31403236.001.0129.35.02

Method

5035

5035

5035

5035

5035

5035

5035

5035

5035

Method

Total BTEX

Total BTEX

Total BTEX

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Prep Batch

**Prep Batch** 

8

890-1849-3 PH16C Total/NA Solid Total BTEX 890-1849-4 Total/NA Total BTEX 890-1849-5 PH16D Solid Prep Batch: 17426 Lah Camala ID 

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	wethod	Prep Batch
LCS 880-17426/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-17426/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
820-3188-A-21-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

#### Analysis Batch: 17429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1849-1	PH16	Total/NA	Solid	8021B	17169
890-1849-2	PH16A	Total/NA	Solid	8021B	17169
890-1849-3	PH16B	Total/NA	Solid	8021B	17169
890-1849-4	PH16C	Total/NA	Solid	8021B	17169
890-1849-5	PH16D	Total/NA	Solid	8021B	17169
MB 880-17169/5-A	Method Blank	Total/NA	Solid	8021B	17169
LCS 880-17169/1-A	Lab Control Sample	Total/NA	Solid	8021B	17169
LCS 880-17426/1-A	Lab Control Sample	Total/NA	Solid	8021B	17426
LCSD 880-17169/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	17169
LCSD 880-17426/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	17426
820-3188-A-21-A MS	Matrix Spike	Total/NA	Solid	8021B	
820-3188-A-21-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	17426
890-1843-A-21-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	17169

# GC Semi VOA

#### Prep Batch: 17333

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1849-1	PH16	Total/NA	Solid	8015NM Prep	
890-1849-2	PH16A	Total/NA	Solid	8015NM Prep	
890-1849-3	PH16B	Total/NA	Solid	8015NM Prep	
890-1849-4	PH16C	Total/NA	Solid	8015NM Prep	
890-1849-5	PH16D	Total/NA	Solid	8015NM Prep	
MB 880-17333/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-17333/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	

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Client: WSP USA Inc. Project/Site: Remuda Basin State #2

# GC Semi VOA (Continued)

# Prep Batch: 17333 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-17333/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-10392-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-10392-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

# Analysis Batch: 17443

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1849-1	PH16	Total/NA	Solid	8015B NM	17333
890-1849-2	PH16A	Total/NA	Solid	8015B NM	17333
890-1849-3	PH16B	Total/NA	Solid	8015B NM	17333
890-1849-4	PH16C	Total/NA	Solid	8015B NM	17333
890-1849-5	PH16D	Total/NA	Solid	8015B NM	17333
MB 880-17333/1-A	Method Blank	Total/NA	Solid	8015B NM	17333
LCS 880-17333/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	17333
LCSD 880-17333/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	17333
880-10392-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	17333
880-10392-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	17333

# Analysis Batch: 17483

Lab Sample ID 890-1849-1	Client Sample ID PH16	Prep Type Total/NA	Matrix Solid	Method 8015 NM	Prep Batch
890-1849-2	PH16A	Total/NA	Solid	8015 NM	
890-1849-3	PH16B	Total/NA	Solid	8015 NM	
890-1849-4	PH16C	Total/NA	Solid	8015 NM	
890-1849-5	PH16D	Total/NA	Solid	8015 NM	

# HPLC/IC

# Leach Batch: 17449

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1849-1	PH16	Soluble	Solid	DI Leach	
890-1849-2	PH16A	Soluble	Solid	DI Leach	
890-1849-3	PH16B	Soluble	Solid	DI Leach	
890-1849-4	PH16C	Soluble	Solid	DI Leach	
MB 880-17449/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-17449/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-17449/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-10451-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-10451-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

# Analysis Batch: 17490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1849-1	PH16	Soluble	Solid	300.0	17449
890-1849-2	PH16A	Soluble	Solid	300.0	17449
890-1849-3	PH16B	Soluble	Solid	300.0	17449
890-1849-4	PH16C	Soluble	Solid	300.0	17449
MB 880-17449/1-A	Method Blank	Soluble	Solid	300.0	17449
LCS 880-17449/2-A	Lab Control Sample	Soluble	Solid	300.0	17449
LCSD 880-17449/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	17449
880-10451-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	17449
880-10451-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	17449

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SDG: 31403236.001.0129.35.02

Job ID: 890-1849-1

Released to Imaging: 9/22/2022 7:39:45 AM

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

Job ID: 890-1849-1 SDG: 31403236.001.0129.35.02

# HPLC/IC

# Leach Batch: 17549

_ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
390-1849-5	PH16D	Soluble	Solid	DI Leach	
MB 880-17549/1-A	Method Blank	Soluble	Solid	DI Leach	
CS 880-17549/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
CSD 880-17549/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
80-10477-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
80-10477-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Analysis Batch: 17592

Analysis Batch: 1759	2					8
Lab Sample ID 890-1849-5	Client Sample ID PH16D	Prep Type Soluble	Matrix Solid	Method 300.0	Prep Batch 17549	9
MB 880-17549/1-A	Method Blank	Soluble	Solid	300.0	17549	
LCS 880-17549/2-A	Lab Control Sample	Soluble	Solid	300.0	17549	
LCSD 880-17549/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	17549	
880-10477-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	17549	11
880-10477-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	17549	

**Eurofins Carlsbad** 

Project/Site: Remuda Basin State #2

Job ID: 890-1849-1 SDG: 31403236.001.0129.35.02

# Lab Sample ID: 890-1849-1 Matrix: Solid

Lab Sample ID: 890-1849-2

Lab Sample ID: 890-1849-3

Lab Sample ID: 890-1849-4

Matrix: Solid

Matrix: Solid

Client Sample ID: PH16 Date Collected: 01/14/22 14:20 Date Received: 01/19/22 16:16

Client: WSP USA Inc.

	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			17169	01/21/22 13:48	KL	XEN MID
Total/NA	Analysis	8021B		1	17429	01/21/22 14:39	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	17403	01/20/22 16:32	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17483	01/21/22 14:20	AJ	XEN MID
Total/NA	Prep	8015NM Prep			17333	01/20/22 12:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1	17443	01/21/22 14:13	AJ	XEN MID
Soluble	Leach	DI Leach			17449	01/21/22 11:06	СН	XEN MID
Soluble	Analysis	300.0		20	17490	01/21/22 17:08	СН	XEN MID

#### Client Sample ID: PH16A Date Collected: 01/14/22 14:50 Date Received: 01/19/22 16:16

Batch Batch Dilution Batch Prepared Ргер Туре Method Number or Analyzed Туре Run Factor Analyst Lab Total/NA Prep 5035 17169 01/21/22 13:48 KL XEN MID Total/NA 8021B XEN MID 17429 01/21/22 14:59 KL Analysis 1 Total/NA Total BTEX 17403 01/20/22 16:32 AJ XEN MID Analysis 1 Total/NA 8015 NM 17483 01/21/22 14:20 AJ XEN MID Analysis 1 Total/NA Prep 8015NM Prep 17333 01/20/22 12:53 DM XEN MID Total/NA 8015B NM 17443 01/21/22 14:34 AJ XEN MID Analysis 1 Soluble 17449 01/21/22 11:06 CH XEN MID Leach **DI Leach** Soluble 300.0 17490 01/21/22 17:15 CH XEN MID Analysis 10

# Client Sample ID: PH16B Date Collected: 01/14/22 09:30 Date Received: 01/19/22 16:16

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			17169	01/21/22 13:48	KL	XEN MID
Total/NA	Analysis	8021B		1	17429	01/21/22 15:20	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	17403	01/20/22 16:32	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17483	01/21/22 14:20	AJ	XEN MID
Total/NA	Prep	8015NM Prep			17333	01/20/22 12:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1	17443	01/21/22 14:55	AJ	XEN MID
Soluble	Leach	DI Leach			17449	01/21/22 11:06	СН	XEN MID
Soluble	Analysis	300.0		10	17490	01/21/22 17:38	СН	XEN MID

# Client Sample ID: PH16C Date Collected: 01/14/22 10:00 Date Received: 01/19/22 16:16

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			17169	01/21/22 13:48	KL	XEN MID
Total/NA	Analysis	8021B		1	17429	01/21/22 15:40	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	17403	01/20/22 16:32	AJ	XEN MID

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Matrix: Solid

5

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Project/Site: Remuda Basin State #2

Job ID: 890-1849-1 SDG: 31403236.001.0129.35.02

# Lab Sample ID: 890-1849-4 Matrix: Solid

Client Sample ID: PH16C Date Collected: 01/14/22 10:00 Date Received: 01/19/22 16:16

Client: WSP USA Inc.

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1	17483	01/21/22 14:20	AJ	XEN MID
Total/NA	Prep	8015NM Prep			17333	01/20/22 12:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1	17443	01/21/22 15:15	AJ	XEN MID
Soluble	Leach	DI Leach			17449	01/21/22 11:06	СН	XEN MID
Soluble	Analysis	300.0		10	17490	01/21/22 17:45	СН	XEN MID

# Client Sample ID: PH16D Date Collected: 01/14/22 15:00 Date Received: 01/19/22 16:16

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			17169	01/21/22 13:48	KL	XEN MID
Total/NA	Analysis	8021B		1	17429	01/21/22 16:00	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	17403	01/20/22 16:32	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17483	01/21/22 14:20	AJ	XEN MID
Total/NA	Prep	8015NM Prep			17333	01/20/22 12:53	DM	XEN MID
Total/NA	Analysis	8015B NM		1	17443	01/21/22 15:36	AJ	XEN MID
Soluble	Leach	DI Leach			17549	01/24/22 12:06	СН	XEN MID
Soluble	Analysis	300.0		1	17592	01/24/22 16:20	СН	XEN MID

### Laboratory References:

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

*of 358* 9-1 .02

Matrix: Solid

Eurofins Carlsbad

Client: WSP USA Inc.

**Accreditation/Certification Summary** 

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Job ID: 890-1849-1 SDG: 31403236.001.0129.35.02

# Project/Site: Remuda Basin State #2 Laboratory: Eurofins Midland

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

Authority	Pro	ogram	Identification Number	Expiration Date
exas	NE	LAP	T104704400-21-22	06-30-22
The following analytes	are included in this repo	rt but the laboratory is r	not certified by the governing authority.	This list may include analytes for whic
the agency does not o	•		to certified by the governing autionty.	
0,	•	Matrix	Analyte	
the agency does not o	ffer certification.			

**Eurofins Carlsbad** 

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# **Method Summary**

Job ID: 890-1849-1 SDG: 31403236.001.0129.35.02

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

#### **Protocol References:**

ASTM = ASTM International

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

#### Laboratory References:

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

Sample Summary

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Job ID: 890-1849-1 SDG: 31403236.001.0129.35.02

#### Client: WSP USA Inc. Project/Site: Remuda Basin State #2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1849-1	PH16	Solid	01/14/22 14:20	01/19/22 16:16	4
890-1849-2	PH16A	Solid	01/14/22 14:50	01/19/22 16:16	10
890-1849-3	PH16B	Solid	01/14/22 09:30	01/19/22 16:16	15
890-1849-4	PH16C	Solid	01/14/22 10:00	01/19/22 16:16	16
890-1849-5	PH16D	Solid	01/14/22 15:00	01/19/22 16:16	20

	16 AN	Relinquished by: (Signature)	volue: signature of this document and reiinquishment of samples constitutes a valic purchase order from client company to Active, its annuaces and succontractors, it easing a source 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 contra- of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed			PH16	PH16	PH16	PH16	PH16	Sample Identification	Sample Custody Seals: Yes N	1 1	Received Intact: (Yes	Temperature (°C):	SAMPLE RECEIPT Te	Sampler's Name: Conner Shore	P.O. Number:	Project Number: 31403	Project Name: Rem	Phone: 720.384.7365	City, State ZIP: Arvada, Colorado 80003	Address: 4600 West 60th Avenue	Company Name: WSP USA Inc.	Project Manager: Aimee Cole		LABORATORIES
	A.t	Received by:	quisnment or samples constitut cost of samples and shall not as be applied to each project and a	6020: 8R( s) to be analyzed T		$\left  - \right $	$\rightarrow$	_	s 1/18/2022	s 1/14/2022	s 1/14/2022	Matrix Date Sampled	No N/A Total (	NIA	NO I-NA	1.6	Temp Blank: Yes No			31403236.001.0129.35.02	Remuda Basin State #2		ado 80003	)th Avenue	0			
	A	: (Signature)	es a valid purchase order from a sume any responsibility for any charge of \$5 for each sample si	8RCRA 13PPM Texas 11 A TCLP / SPLP 6010: 8RCRA		 $\left  - \right $	-	_	930 15'	1450 10'	1420 4'	Time Depth Sampled	Total Containers:	Correction Factor: -0.2	-00-1	Thermometer ID	Wet ice: No	Due Date:	Rush: JYHE	Routine	Turn Around	Email: conner.shore	City, State ZIP:	Address:	Company Name:	Bill to: (if different)	Midiano, I A. (+32-704-34 4M (575-392-7550) Phoenix,A	MI:JIANA TV /A29-704-54
	19/19/27.4:16	Date/Time	lient company to Aenco, its a losses or expenses incurred I ubmitted to Xenco, but not ana	1 Al Sb As Ba Be B CRA Sb As Ba Be Cu			× :	1 × × ×	1 x x x	1 x x x	1 x x x	Numb TPH (E BTEX ( Chlorid	EPA 8	015)	021)		S					conner.shore@wsp.com; tacoma.morrissey@wsp.com	Carlsbad, NM 88220	3104 E Green Street	ne: XTO Energy	t) Adrian Baker	40) EL Faso, 1A (310)000-0 VZ (480-355-0900) Atlanta,G	101 EL DANA TY /015/585-3
σ	4 0	Relinquished by: (Signature)	nature of this document and reinquisionent of samples constructes a valid purchase order from client company to Acitor, its annuates and succontractors in easigns semicative vertice into control 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 A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	B Cd Ca Cr Co Cu Fe Pb Mg Mn Cd Cr Co Cu Pb Mn Mo Ni Se Ag												890-1849 Chain of Custody					ANALYSIS REQUEST						midiano, i X (1932-704-9440) EL Faso, i X (1913)203-3443 בעוטערא, i X (1907) פידי i 200 Hobbs.NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)	Midland TV (433, 704, 5440) EI Daso TV (915)585, 3443 Lubbock TV (806)794-1296
		Received by: (Signature)	umstances beyond the control s previously negotiated.	Ag SiO2											-	f Custody						Deliverables: EDD ADaPT	Reporting:Level II Level III LPST/UST		Program: UST/PST PRP Brownfields	Work Order Comments	-2000) www.xenco.com	
Revised Date 051418 Rev. 2018 1		Date/Time		Na Sr II Sn U V Zn 1631/245.1/7470 /7471: Hg								Sample Comments	lab, if received by 4:30pm	TAT starts the day recevied by the					AFE: EW.2022.00063.EXP.01		Work Order Notes	Other:		]	lds RRC Superfund	lents	Page of	-



4 5 6

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Released to Imaging: 9/22/2022 7:39:45 AM

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# Login Sample Receipt Checklist

Client: WSP USA Inc.

#### Login Number: 1849 List Number: 1 Creator: Clifton, Cloe

<6mm (1/4").

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

# Job Number: 890-1849-1

SDG Number: 31403236.001.0129.35.02

List Source: Eurofins Carlsbad

# Login Sample Receipt Checklist

Client: WSP USA Inc.

Login Number: 1849 List Number: 2 Creator: Rodriguez, Leticia

Job Number: 890-1849-1 SDG Number: 31403236.001.0129.35.02

# List Source: Eurofins Midland 5 6 7 8 9 10 11 12 13 List Creation: 01/21/22 11:59 AM

14

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

Received by OCD: 7/8/2022 8:01:28 AM

# 🔅 eurofins

# Environment Testing America

# **ANALYTICAL REPORT**

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

# Laboratory Job ID: 890-1854-1

Laboratory Sample Delivery Group: 31403236.001.0129.35.02 Client Project/Site: Remuda Basin State #2

# For:

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

Attn: Aimee Cole

RAMER

Authorized for release by: 1/25/2022 1:27:28 PM

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

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

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

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

www.eurofinsus.com/Env Released to Imaging: 9/22/2022 7:39:45 AM

•

Laboratory Job ID: 890-1854-1 SDG: 31403236.001.0129.35.02

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Job ID: 890-1854-1 SDG: 31403236.001.0129.35.02

ualifiers	
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Qualifiers		3
GC VOA Qualifier	Qualifier Description	Λ
U	Indicates the analyte was analyzed for but not detected.	
		5
GC Semi VOA Qualifier	Qualifier Description	
F1	MS and/or MSD recovery exceeds control limits.	
S1+	Surrogate recovery exceeds control limits, high biased.	
U	Indicates the analyte was analyzed for but not detected.	
HPLC/IC		
Qualifier	Qualifier Description	Q
U	Indicates the analyte was analyzed for but not detected.	0
		Q
Glossary		3
Abbreviation	These commonly used abbreviations may or may not be present in this report.	
<u>¤</u>	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)	19
Dil Fac	Dilution Factor	13
DL	Detection Limit (DoD/DOE)	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	
LOQ	Limit of Quantitation (DoD/DOE)	
MCL	EPA recommended "Maximum Contaminant Level"	
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	
MDL	Method Detection Limit	
ML	Minimum Level (Dioxin)	
MPN	Most Probable Number	
MQL	Method Quantitation Limit	
NC	Not Calculated	
ND	Not Detected at the reporting limit (or MDL or EDL if shown)	
NEG	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	Taa Numaraua Ta Caunt	

TNTC Too Numerous To Count Project/Site: Remuda Basin State #2

4

5

Job ID: 890-1854-1 SDG: 31403236.001.0129.35.02

#### Job ID: 890-1854-1

Client: WSP USA Inc.

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-1854-1

#### Receipt

The samples were received on 1/20/2022 4:05 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 4.2°C

#### GC VOA

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

#### GC Semi VOA

Method 8015MOD\_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-17533 and analytical batch 880-17546 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: Surrogate recovery for the following samples were outside control limits: (LCS 880-17533/2-A), (LCSD 880-17533/3-A), (MB 880-17533/1-A) and (890-1853-A-1-B). Evidence of matrix interferences is not obvious.

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.

Project/Site: Remuda Basin State #2

Client: WSP USA Inc.

Job ID: 890-1854-1 SDG: 31403236.001.0129.35.02

# ample ID: 890-1854-1

5

Date Collected: 01/20/22 14:05 Date Received: 01/20/22 16:05						Lab Sar	nple ID: 890- Matri	1854- x: Soli
ample Depth: 6 - Method: 8021B - Volatile Organic	Compounds (	GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00202	U	0.00202	mg/Kg		01/24/22 07:35	01/24/22 14:54	
Toluene	<0.00202	U	0.00202	mg/Kg		01/24/22 07:35	01/24/22 14:54	
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		01/24/22 07:35	01/24/22 14:54	
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		01/24/22 07:35	01/24/22 14:54	
o-Xylene	<0.00202	U	0.00202	mg/Kg		01/24/22 07:35	01/24/22 14:54	
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		01/24/22 07:35	01/24/22 14:54	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	124		70 - 130			01/24/22 07:35	01/24/22 14:54	
1,4-Difluorobenzene (Surr)	94		70 - 130			01/24/22 07:35	01/24/22 14:54	
Method: Total BTEX - Total BTEX	(Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	< 0.00403	U	0.00403	mg/Kg			01/24/22 16:52	
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Analyte Total TPH	<b>Result</b> 		<b>RL</b> 50.0	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 01/24/22 16:26	
Total TPH Method: 8015B NM - Diesel Rang	<50.0 ge Organics (D	U RO) (GC)	50.0	mg/Kg			01/24/22 16:26	
Total TPH Method: 8015B NM - Diesel Rang Analyte	<50.0 ge Organics (D Result	U RO) (GC) Qualifier	50.0 RL	mg/Kg Unit	<u>D</u>	Prepared	01/24/22 16:26 Analyzed	
Total TPH Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics	<50.0 ge Organics (D	U RO) (GC) Qualifier	50.0	mg/Kg			01/24/22 16:26	
Total TPH Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	<50.0 ge Organics (D Result	U RO) (GC) Qualifier U	50.0 RL	mg/Kg Unit		Prepared	01/24/22 16:26 Analyzed	
Total TPH Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics	e Organics (D Result <50.0	U RO) (GC) Qualifier U U	50.0 RL 50.0	mg/Kg Unit mg/Kg		Prepared 01/24/22 09:27	01/24/22 16:26 Analyzed 01/24/22 20:42	
Total TPH Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	e Organics (D) Result <50.0	U RO) (GC) Qualifier U U U	50.0 <b>RL</b> 50.0 50.0	mg/Kg Unit mg/Kg mg/Kg		Prepared 01/24/22 09:27 01/24/22 09:27	01/24/22 16:26 Analyzed 01/24/22 20:42 01/24/22 20:42	Dil Fa
Total TPH Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	<pre><s0.0 (d="" <s50.0="" <s50.0<="" ge="" organics="" pre="" result=""></s0.0></pre>	U RO) (GC) Qualifier U U U	50.0 <b>RL</b> 50.0 50.0 50.0	mg/Kg Unit mg/Kg mg/Kg		Prepared 01/24/22 09:27 01/24/22 09:27 01/24/22 09:27	01/24/22 16:26 Analyzed 01/24/22 20:42 01/24/22 20:42 01/24/22 20:42	Dil Fa Dil Fa Dil Fa
Total TPH Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	<50.0 ge Organics (D Result <50.0 <50.0 <50.0 %Recovery	U RO) (GC) Qualifier U U U	50.0 <b>RL</b> 50.0 50.0 50.0 Limits	mg/Kg Unit mg/Kg mg/Kg		Prepared 01/24/22 09:27 01/24/22 09:27 01/24/22 09:27 Prepared	01/24/22 16:26 Analyzed 01/24/22 20:42 01/24/22 20:42 01/24/22 20:42 Analyzed	Dil Fi
Total TPH Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	<50.0 ge Organics (D) Result <50.0 <50.0 <50.0 <50.0 <104 104 120	U RO) (GC) Qualifier U U U Qualifier	50.0 <b>RL</b> 50.0 50.0 50.0 <b>Limits</b> 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 01/24/22 09:27 01/24/22 09:27 01/24/22 09:27 Prepared 01/24/22 09:27	01/24/22 16:26 Analyzed 01/24/22 20:42 01/24/22 20:42 01/24/22 20:42 Analyzed 01/24/22 20:42	Dil Fa
Total TPH Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	<50.0 ge Organics (D) Result <50.0 <50.0 <50.0 <50.0 <50.0 <104 104 120 comatography -	U RO) (GC) Qualifier U U U Qualifier	50.0 <b>RL</b> 50.0 50.0 50.0 <b>Limits</b> 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 01/24/22 09:27 01/24/22 09:27 01/24/22 09:27 Prepared 01/24/22 09:27	01/24/22 16:26 Analyzed 01/24/22 20:42 01/24/22 20:42 01/24/22 20:42 Analyzed 01/24/22 20:42	Dil Fa
Total TPH Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Method: 300.0 - Anions, Ion Chro Analyte	<50.0 ge Organics (D) Result <50.0 <50.0 <50.0 <50.0 <50.0 <104 104 120 comatography -	U RO) (GC) Qualifier U U Qualifier	50.0 <b>RL</b> 50.0 50.0 50.0 <b>Limits</b> 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg mg/Kg	D	Prepared 01/24/22 09:27 01/24/22 09:27 01/24/22 09:27 Prepared 01/24/22 09:27 01/24/22 09:27	01/24/22 16:26 Analyzed 01/24/22 20:42 01/24/22 20:42 01/24/22 20:42 Analyzed 01/24/22 20:42 01/24/22 20:42	Dil Fa
Total TPH Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Method: 300.0 - Anions, Ion Chro	<50.0 ge Organics (D) Result <50.0 <50.0 <50.0 <50.0 <50.0 <104 104 120 comatography - Result	U RO) (GC) Qualifier U U Qualifier	50.0 <b>RL</b> 50.0 50.0 50.0 <u>Limits</u> 70 - 130 70 - 130 <b>RL</b>	mg/Kg Unit mg/Kg mg/Kg mg/Kg	D	Prepared           01/24/22 09:27           01/24/22 09:27           01/24/22 09:27           01/24/22 09:27           01/24/22 09:27           01/24/22 09:27           01/24/22 09:27           01/24/22 09:27           01/24/22 09:27           01/24/22 09:27           01/24/22 09:27           01/24/22 09:27	01/24/22 16:26 Analyzed 01/24/22 20:42 01/24/22 20:42 01/24/22 20:42 Analyzed Analyzed	Dil Fa Dil Fa

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00199	U	0.00199	mg/Kg		01/24/22 07:35	01/24/22 15:14	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/24/22 07:35	01/24/22 15:14	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/24/22 07:35	01/24/22 15:14	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/24/22 07:35	01/24/22 15:14	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/24/22 07:35	01/24/22 15:14	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/24/22 07:35	01/24/22 15:14	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130			01/24/22 07:35	01/24/22 15:14	1

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# Released to Imaging: 9/22/2022 7:39:45 AM

# **Client Sample Results**

Limits

70 - 130

RL

RL

RL

49.9

49.9

49.9

Limits

70 - 130

70 - 130

49.9

0.00398

Unit

Unit

mg/Kg

mg/Kg

Job ID: 890-1854-1 SDG: 31403236.001.0129.35.02

# **Client Sample ID: SW01**

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

Method: Total BTEX - Total BTEX Calculation

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

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

%Recovery Qualifier

Result Qualifier

Result Qualifier

Result Qualifier

<49.9 U

<49.9 U

<49.9 U

<49.9 U

%Recovery Qualifier

101

118

81

<0.00398 U

Project/Site: Remuda Basin State #2

Date Collected: 01/20/22 14:10 Date Received: 01/20/22 16:05

Sample Depth: 0 - 6

1,4-Difluorobenzene (Surr)

Gasoline Range Organics (GRO)-C6-C10

Diesel Range Organics (Over

Oll Range Organics (Over C28-C36)

Surrogate

Analyte

Analyte

Analyte

C10-C28)

Surrogate

o-Terphenyl

1-Chlorooctane

Total TPH

Total BTEX

Client: WSP USA Inc.

Lab Sample ID: 890-1854-2

Analyzed

01/24/22 15:14

Analyzed

01/24/22 16:52

Analyzed

01/24/22 16:26

Matrix: Solid

Dil Fac

Dil Fac

Dil Fac

1

1

1

5

Unit	D	Prepared	Analyzed	Dil Fac
mg/Kg		01/24/22 09:27	01/24/22 21:04	1
mg/Kg		01/24/22 09:27	01/24/22 21:04	1
mg/Kg		01/24/22 09:27	01/24/22 21:04	1
		Prepared	Analyzed	Dil Fac
		01/24/22 09:27	01/24/22 21:04	1
		01/24/22 09:27	01/24/22 21:04	1

Prepared

01/24/22 07:35

Prepared

Prepared

D

D

Method: 300.0 - Anions, Ion Chromato	graphy -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	317		4.98	mg/Kg			01/24/22 15:58	1

#### **Eurofins Carlsbad**

Released to Imaging: 9/22/2022 7:39:45 AM

Prep Type: Total/NA

Job ID: 890-1854-1 SDG: 31403236.001.0129.35.02

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

-				Prep Type: Total/N
				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-1841-A-1-F MS	Matrix Spike	116	103	
890-1841-A-1-G MSD	Matrix Spike Duplicate	112	95	
890-1854-1	FS01	124	94	
890-1854-2	SW01	108	81	
LCS 880-17525/1-A	Lab Control Sample	122	107	
LCSD 880-17525/2-A	Lab Control Sample Dup	123	108	
MB 880-17525/5-A	Method Blank	116	98	

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

#### Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Sample ID	Client Sample ID	(70-130)	(70-130)	
53-A-1-C MS	Matrix Spike	105	111	
353-A-1-D MSD	Matrix Spike Duplicate	103	109	
854-1	FS01	104	120	
354-2	SW01	101	118	
0-17533/2-A	Lab Control Sample	130	145 S1+	
0 880-17533/3-A	Lab Control Sample Dup	121	137 S1+	
80-17533/1-A	Method Blank	115	145 S1+	

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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5 6

> 12 13

Eurofins Carlsbad

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

# Lab Sample ID: MB 880-17525/5-A Matrix: Solid

Analysis Batch: 17527

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/24/22 07:35	01/24/22 14:04	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/24/22 07:35	01/24/22 14:04	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/24/22 07:35	01/24/22 14:04	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/24/22 07:35	01/24/22 14:04	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/24/22 07:35	01/24/22 14:04	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/24/22 07:35	01/24/22 14:04	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		70 - 130			01/24/22 07:35	01/24/22 14:04	1
1,4-Difluorobenzene (Surr)	98		70 - 130			01/24/22 07:35	01/24/22 14:04	1

#### Lab Sample ID: LCS 880-17525/1-A Matrix: Solid

#### Analysis Batch: 17527

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09114		mg/Kg		91	70 - 130	
Toluene	0.100	0.09665		mg/Kg		97	70 - 130	
Ethylbenzene	0.100	0.1011		mg/Kg		101	70 - 130	
m-Xylene & p-Xylene	0.200	0.1998		mg/Kg		100	70 - 130	
o-Xylene	0.100	0.09689		mg/Kg		97	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	122		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

# Lab Sam

# Matrix: S

Analysis Batch: 17527								Batch:	17525
	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09034		mg/Kg		90	70 - 130	1	35
Toluene	0.100	0.09847		mg/Kg		98	70 - 130	2	35
Ethylbenzene	0.100	0.1028		mg/Kg		103	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.2036		mg/Kg		102	70 - 130	2	35
o-Xylene	0.100	0.1036		mg/Kg		104	70 <sub>-</sub> 130	7	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	123		70 - 130
1,4-Difluorobenzene (Surr)	108		70 - 130

#### Lab Sam Matrix: S

#### Analysia

Analysis Batch: 17527									Prep Ba	tch: 17525
	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	< 0.00202	U	0.0996	0.08887		mg/Kg		88	70 - 130	
Toluene	<0.00202	U	0.0996	0.09492		mg/Kg		94	70 - 130	

13

# Job ID: 890-1854-1 SDG: 31403236.001.0129.35.02

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

Prep Batch: 17525

Matrix: Solid										Г <mark>уре: То</mark>	
Analysis Batch: 17527										Batch:	
			Spike	LCSD					%Rec.		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Benzene			0.100	0.09034		mg/Kg		90	70 - 130	1	35
Toluene			0.100	0.09847		mg/Kg		98	70 - 130	2	35
Ethylbenzene			0.100	0.1028		mg/Kg		103	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.2036		mg/Kg		102	70 - 130	2	35
o-Xylene			0.100	0.1036		mg/Kg		104	70 - 130	7	35
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	123		70 - 130								
1,4-Difluorobenzene (Surr)	108		70 - 130								
Lab Sample ID: 890-1841-A	-1-F MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid										Гуре: То	
Analysis Batch: 17527										Batch:	
	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Benzene	<0.00202	U	0.0996	0.08887		mg/Kg		88	70 - 130		
Toluene	<0.00202	U	0.0996	0.09492		mg/Kg		94	70 - 130		
									Eur	ofins Ca	rlsbac
			Page 8	2 of 22						1/25/	12025

Prep Type: Total/NA Prep Batch: 17525

**Client Sample ID: Lab Control Sample** 

0	-	-	 	 	 	-	 	 	 -	
0										
0										
0										
0										

Client: WSP USA Inc. Project/Site: Remuda Basin State #2 Job ID: 890-1854-1 SDG: 31403236.001.0129.35.02

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

Lab Sample ID: 890-1841-A-1-F Matrix: Solid	= MS										Client S	Sample ID Prep T	: Matrix 'ype: To	
Analysis Batch: 17527													Batch:	
	Sample	Samp	ole	Spike		MS	MS					• %Rec.		
Analyte	Result			Added		Result	Qualifier	Unit		D	%Rec	Limits		
Ethylbenzene	<0.00202	U		0.0996	(	0.09305		mg/Kg			93	70 - 130		
n-Xylene & p-Xylene	<0.00404			0.199		0.1836		mg/Kg			92	70 - 130		
p-Xylene	<0.00202			0.0996	(	0.09100		mg/Kg			90	70 - 130		
, Aller and a second seco	40.00202	0		0.0000		0.00100		mg/rtg			00	10 - 100		
	MS	MS												
Surrogate	%Recovery	Quali	ifier	Limits										
4-Bromofluorobenzene (Surr)	116			70 - 130										
1,4-Difluorobenzene (Surr)	103			70 - 130										
Lab Sample ID: 890-1841-A-1-0	G MSD								Clie	nt Sa	ample ID:	Matrix Sp	oike Du	plicat
Matrix: Solid											- i - i - i - i - i - i - i - i - i - i		ype: To	-
Analysis Batch: 17527													Batch:	
	Sample	Samp	ole	Spike		MSD	MSD					%Rec.		RP
Analyte	Result			Added			Qualifier	Unit		D	%Rec	Limits	RPD	Lin
Benzene	<0.00202			0.100	(	0.08652		mg/Kg			86	70 - 130	3	
Foluene	<0.00202			0.100		0.09056		mg/Kg			89	70 - 130 70 - 130	5	3
	<0.00202			0.100		0.09097		mg/Kg			09 91	70 - 130 70 - 130	2	
thylbenzene					'									
n-Xylene & p-Xylene	<0.00404			0.200		0.1826		mg/Kg			91	70 - 130	1	;
-Xylene	<0.00202	U		0.100	(	0.08935		mg/Kg			88	70 - 130	2	:
S	MSD		<b>e</b>	1										
Surrogate		Quali	ner	Limits										
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)	112 95			70 <sub>-</sub> 130 70 <sub>-</sub> 130										
ethod: 8015B NM - Diese	I Range Org	gan	ics (DR	20) (GC)										
Lab Sample ID: MB 880-17533/	'1-A										Client Sa	ample ID: I	Method	Blan
Matrix: Solid													ype: To	
Analysis Batch: 17546													Batch:	
		МВ	MB									inop	Datom	
Analyte			Qualifier		RL		Unit		D	D	repared	Analyz	od	Dil Fa
Gasoline Range Organics		50.0			50.0		0mit mg/K	<u>a</u>	_		4/22 09:27	01/25/22		DIF
GRO)-C6-C10		50.0	0		50.0		IIIy/K	g		01/24	4/22 09.27	01/23/22	JO.27	
Diesel Range Organics (Over	<5	50.0	U		50.0		mg/K	g		01/2	4/22 09:27	01/25/22	08:27	
C10-C28) DII Range Organics (Over C28-C36)	<5	50.0	U		50.0		mg/K	g		01/2	4/22 09:27	01/25/22	08:27	
		ΜВ	МВ											
Surrogate	%Recov	/ery	Qualifier	Limi	ts					P	repared	Analyz	ed	Dil Fa
I-Chlorooctane		115		70 - 1	130					01/2	4/22 09:27	01/25/22	08:27	
p-Terphenyl		145	S1+	70 - 1	130					01/2	4/22 09:27	01/25/22	08:27	
_ab Sample ID: LCS 880-17533	3/2-A								С	lient	Sample	ID: Lab Co	ontrol S	amp
Matrix: Solid												Prep T	ype: To	otal/N
Analysis Batch: 17546													Batch:	
				Spike		LCS	LCS					%Rec.		
Analyte				Added			Qualifier	Unit		D	%Rec	Limits		
Gasoline Range Organics				1000		845.8		mg/Kg			85	70 - 130		
Sussinie Runge Organies				1000		0.0					50			

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(GRO)-C6-C10

C10-C28)

Diesel Range Organics (Over

1254

mg/Kg

125

70 - 130

1000

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

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

Analysis Batch: 17546       Prep Batch: 17533         LCS       LCS         Surrogate       %Recovery       Qualifier       Limits         1-Chlorooctane       130       70 - 130         o-Terphenyl       145       S1+       70 - 130         Lab Sample ID: LCSD 880-17533/3-A       Client Sample ID: Lab Control Sample Dup
Surrogate       %Recovery       Qualifier       Limits         1-Chlorooctane       130       70 - 130         o-Terphenyl       145       S1+       70 - 130         Lab Sample ID: LCSD 880-17533/3-A       Client Sample ID: Lab Control Sample Dup
I-Chlorooctane         130         70 - 130           o-Terphenyl         145         S1+         70 - 130           Lab Sample ID: LCSD 880-17533/3-A         Client Sample ID: Lab Control Sample Dup
o-Terphenyl 145 S1+ 70 - 130           Lab Sample ID: LCSD 880-17533/3-A         Client Sample ID: Lab Control Sample Dup
Lab Sample ID: LCSD 880-17533/3-A       Client Sample ID: Lab Control Sample Dup
Matrix: Solid Prep Type: Total/NA
Analysis Batch: 17546 Prep Batch: 17533
Spike LCSD LCSD %Rec. RPD
Analyte         Added         Result         Qualifier         Unit         D         %Rec         Limits         RPD         Limit           Gasoline Range Organics         1000         803.5         mg/Kg         80         70 - 130         5         20
Gasoline Range Organics         1000         803.5         mg/Kg         80         70 - 130         5         20           (GRO)-C6-C10                 20
Diesel Range Organics (Over 100 1190 mg/Kg 119 70 - 130 5 20
C10-C28)
LCSD LCSD
Surrogate     %Recovery     Qualifier     Limits       1-Chlorooctane     121     70 - 130
o-Terphenyl 137 S1+ 70 - 130
Lab Sample ID: 890-1853-A-1-C MS Client Sample ID: Matrix Spike
Matrix: Solid Prep Type: Total/NA
Analysis Batch: 17546 Prep Batch: 17533
Sample Sample Spike MS MS %Rec.
Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits
Gasoline Range Organics         <49.9         U F1         997         1510         F1         mg/Kg         150         70 - 130           (GRO)-C6-C10
Diesel Range Organics (Over <49.9 U F1 997 1771 F1 mg/Kg 173 70 - 130
C10-C28)
MS MS
Surrogate %Recovery Qualifier Limits
John Starte     John Starte       1-Chlorooctane     105       70 - 130
o-Terphenyl 111 70 - 130
Lab Sample ID: 890-1853-A-1-D MSD Client Sample ID: Matrix Spike Duplicate
Matrix: Solid Prep Type: Total/NA
Analysis Batch: 17546 Prep Batch: 17533
Sample Sample Spike MSD MSD %Rec. RPD
Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits RPD Limit
Gasoline Range Organics         <49.9         U F1         996         1341         F1         mg/Kg         133         70 - 130         12         20           (GRO)-C6-C10                    20
Diesel Range Organics (Over         <49.9         U F1         996         1714         F1         mg/Kg         168         70 - 130         3         20           C10-C28)                   3         20
MSD MSD
Surrogate %Recovery Qualifier Limits
John Covery     Quanter     Linns       1-Chlorooctane     103     70 - 130

 1-Chlorooctane
 103
 70 - 130

 o-Terphenyl
 109
 70 - 130

Job ID: 890-1854-1 SDG: 31403236.001.0129.35.02 Client: WSP USA Inc.

# **QC Sample Results**

Job ID: 890-1854-1 SDG: 31403236.001.0129.35.02

Project/Site: Remuda Basin State #2

Lab Sample ID: MB 880-17549/1-A									Clion	t Sample ID:	Mothod	Plank
Matrix: Solid									Clien		Type: S	
Analysis Batch: 17592										Fieb	Type. 3	olubie
Analysis Batch. 17592		МВ МВ										
Analyte	Re	sult Qualifie	r	RL		Unit		D	Prepared	Analy	zed	Dil Fac
Chloride		5.00 U	·	5.00		mg/Kg			Tiopulot	01/24/22		1
Lab Sample ID: LCS 880-17549/2-A								Clie	nt Sam	ole ID: Lab C	ontrol S	ample
Matrix: Solid										Prep	Type: S	oluble
Analysis Batch: 17592												
			Spike		LCS	LCS				%Rec.		
Analyte			Added		Result	Qualifier	Unit		%Rec	Limits		
Chloride			250		273.2		mg/Kg		109	90 - 110		
Lab Sample ID: LCSD 880-17549/3-A							Cli	ent Sa	mple ID	: Lab Contro	ol Samp	le Dup
Matrix: Solid									- C		Type: S	
Analysis Batch: 17592												
-			Spike		LCSD	LCSD				%Rec.		RPD
Analyte			Added		Result	Qualifier	Unit	0	) %Rec	Limits	RPD	Limit
Chloride			250		273.8		mg/Kg		110	90 - 110	0	20
Lab Sample ID: 880-10477-A-1-B MS									Clie	nt Sample ID	): Matrix	Spike
Matrix: Solid											Type: S	
Analysis Batch: 17592												
	ample	Sample	Spike		MS	MS				%Rec.		
Analyte	Result	Qualifier	Added		Result	Qualifier	Unit	0	) %Rec	Limits		
Chloride	32.9	·	250		300.5		mg/Kg		107	90 - 110		
Lab Sample ID: 880-10477-A-1-C MSI	2							Client	Sample	ID: Matrix S	nike Du	plicate
Matrix: Solid											Type: S	-
											.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Analysis Batch: 17592		Samula	Spike		MSD	MSD				%Rec.		RPD
Analysis Batch: 17592 s	ample	Sample										
s	•	Qualifier	Added			Qualifier	Unit	0	) %Rec	Limits	RPD	Limit

Eurofins Carlsbad

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Matrix

Solid

Solid

Solid

Solid

Solid

Solid

Solid

Matrix

Solid

Solid

Solid

Solid

Solid

Solid

Solid

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

**Client Sample ID** 

Method Blank

Matrix Spike

Lab Control Sample

Lab Control Sample Dup

Matrix Spike Duplicate

**Client Sample ID** 

Method Blank

Matrix Spike

Lab Control Sample

Lab Control Sample Dup

Matrix Spike Duplicate

FS01

SW01

FS01

SW01

**GC VOA** 

890-1854-1

890-1854-2

Prep Batch: 17525

MB 880-17525/5-A

LCS 880-17525/1-A

890-1841-A-1-F MS

Lab Sample ID

MB 880-17525/5-A

LCS 880-17525/1-A

890-1841-A-1-F MS

LCSD 880-17525/2-A

890-1841-A-1-G MSD

890-1854-1

890-1854-2

890-1841-A-1-G MSD

Analysis Batch: 17527

LCSD 880-17525/2-A

Page 144 of 358

Prep Batch

Prep Batch

17525

17525

17525

17525

17525

17525

17525

#### Job ID: 890-1854-1 SDG: 31403236.001.0129.35.02

Method

5035

5035

5035

5035

5035

5035

5035

Method

8021B

8021B

8021B

8021B

8021B

8021B

8021B

6 7 8

Analy	/sis	Batch:	17647

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1854-1	FS01	Total/NA	Solid	Total BTEX	
890-1854-2	SW01	Total/NA	Solid	Total BTEX	

# GC Semi VOA

#### Prep Batch: 17533

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1854-1	FS01	Total/NA	Solid	8015NM Prep	
890-1854-2	SW01	Total/NA	Solid	8015NM Prep	
MB 880-17533/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-17533/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-17533/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1853-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-1853-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 17546

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1854-1	FS01	Total/NA	Solid	8015B NM	17533
890-1854-2	SW01	Total/NA	Solid	8015B NM	17533
MB 880-17533/1-A	Method Blank	Total/NA	Solid	8015B NM	17533
LCS 880-17533/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	17533
LCSD 880-17533/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	17533
890-1853-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	17533
890-1853-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	17533

#### Analysis Batch: 17641

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1854-1	FS01	Total/NA	Solid	8015 NM	
890-1854-2	SW01	Total/NA	Solid	8015 NM	
### **QC Association Summary**

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

Job ID: 890-1854-1 SDG: 31403236.001.0129.35.02

#### HPLC/IC

#### Leach Batch: 17549

ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
90-1854-1	FS01	Soluble	Solid	DI Leach	
90-1854-2	SW01	Soluble	Solid	DI Leach	
/IB 880-17549/1-A	Method Blank	Soluble	Solid	DI Leach	
CS 880-17549/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
.CSD 880-17549/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
80-10477-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
80-10477-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-1854-1	FS01	Soluble	Solid	300.0	17549	
890-1854-2	SW01	Soluble	Solid	300.0	17549	
MB 880-17549/1-A	Method Blank	Soluble	Solid	300.0	17549	
LCS 880-17549/2-A	Lab Control Sample	Soluble	Solid	300.0	17549	
LCSD 880-17549/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	17549	
880-10477-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	17549	
880-10477-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	17549	

### Lab Chronicle

Dilution

Factor

1

1

1

1

1

Run

Batch

17525

17527

17647

17641

17533

17546

17549

17592

Number

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

Batch

Туре

Prep

Analysis

Analysis

Analysis

Analysis

Analysis

Leach

Prep

Batch

5035

8021B

Total BTEX

8015NM Prep

8015B NM

DI Leach

300.0

8015 NM

Method

#### **Client Sample ID: FS01** Date Collected: 01/20/22 14:05

Date Received: 01/20/22 16:05

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Soluble

Soluble

Lab Sample ID: 890-1	85
Matrix	: Se

Analyst

KL

MR

AJ

AJ

DM

AJ

СН

СН

Lab

XEN MID

XEN MID

XEN MID

XEN MID

XEN MID

XEN MID XEN MID

XEN MID

Prepared

or Analyzed

01/24/22 07:35

01/24/22 14:54

01/24/22 16:52

01/24/22 16:26

01/24/22 09:27

01/24/22 20:42

01/24/22 10:00

01/24/22 15:50

#### 54-1 Solid

Lab Sample ID: 890-1854-2

Matrix: Solid

	ć	)		
	0	)	)	

### **Client Sample ID: SW01**

Date Collected: 01/20/22 14:10 Date Received: 01/20/22 16:05

	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			17525	01/24/22 07:35	KL	XEN MID
Total/NA	Analysis	8021B		1	17527	01/24/22 15:14	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	17647	01/24/22 16:52	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17641	01/24/22 16:26	AJ	XEN MID
Total/NA	Prep	8015NM Prep			17533	01/24/22 09:27	DM	XEN MID
Total/NA	Analysis	8015B NM		1	17546	01/24/22 21:04	AJ	XEN MID
Soluble	Leach	DI Leach			17549	01/24/22 10:00	СН	XEN MID
Soluble	Analysis	300.0		1	17592	01/24/22 15:58	СН	XEN MID

#### Laboratory References:

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

10

#### Job ID: 890-1854-1 SDG: 31403236.001.0129.35.02

Project/Site: Remuda Basin State #2

Laboratory: Eurofins Midland

Client: WSP USA Inc.

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

uthority	Pi	rogram	Identification Number	Expiration Date
exas	N	ELAP	T104704400-21-22	06-30-22
• ,	•	ut the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes for whether the second
the agency does not of		Matrix	Analyto	
Analysis Method	fer certification. Prep Method	Matrix	Analyte	
0,		Matrix Solid	Analyte Total TPH	

Project/Site: Remuda Basin State #2

Job ID: 890-1854-1 SDG: 31403236.001.0129.35.02

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

#### Protocol References:

Client: WSP USA Inc.

ASTM = ASTM International

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

Laboratory References:

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

Eurofins Carlsbad

### **Sample Summary**

Client: WSP USA Inc. Project/Site: Remuda Basin State #2 Job ID: 890-1854-1 SDG: 31403236.001.0129.35.02

ab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth	
90-1854-1	FS01	Solid	01/20/22 14:05	01/20/22 16:05	6	4
90-1854-2	SW01	Solid	01/20/22 14:10	01/20/22 16:05	0 - 6	
						5
						8
						9
						12
						1:

σω	-	Relinquished by: (Signature)	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	Total 200.7 / 6010 Circle Method(s) a			SW01	FS01	Sample Identification	Sample Custody Seals:	Cooler Custody Seals:	Received Intact:	Temperature (°C):	SAMPLE RECEIPT	Sampler's Name: C	P.O. Number:	Project Number:	Project Name:	Phone: 7:	City, State ZIP: A	Address: 4	Company Name: W	Project Manager: A			
		Signature)	ument and relinquishme ele only for the cost of si of \$75.00 will be applie	otal 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed			s	s	Ication Matrix	Yes No	ō	Yes No	14.4/4.	Temp Blank:	Conner Shore		31403236.0	Remuda B	720.384.7365	Arvada, Colorado 80003	4600 West 60th Avenue	WSP USA Inc.	Aimee Cole		BORATORIES	
	loe (	, Received by	nt of samples constitut amples and shall not as d to each project and a	양			1/20/2022	\$ 1/20/2022	trix Date Sampled	N/A Total	2		F F	ank: (Yes) No			31403236.001.0129.35.02	Remuda Basin State #2		0003	enue			Hobbs,		
-	5	Received by: (Signature)	les a valid purchase ord sume any responsibilit charge of \$5 for each s	8RCRA 13PPM Texas 11 A TCLP / SPLP 6010: 8RCRA		 	1410 0-6'	1405 6'	Time Depth Sampled	Total Containers:	Correction Factor: - 7	L COWN	Thermometer ID	Wet Ice: Kes	Due Date:	Rush: 24 Hr TAT	Routine	Turn Around	Email: conne	City, S	Address:	Compa	Bill to:	NM (575-392-7550) F	Houston,TX (281 Midland,TX (43)	
	66.00-1	Date/Time	er from client company t / for any losses or expen ample submitted to Xenc	Texas 11 Al Sb As 110: 8RCRA Sb As			0 <u>1</u>	1	S Numbe TPH (E		_	ntai	ners	No		TAT		Ind	Email: conner.shore@wsp.com; Aimee.cole@wsp.com	City, State ZIP: Carlsb		Company Name: XTO Energy	Bill to: (if different) Adrian Baker	hoenix,AZ (480-355-09	Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (2 Midland TX (432-704-5440) EL Paso TX (915)565-3443 Lubbock TX (80	Chair
	2001	ime Rel	o Xenco, its affiliates an ises incurred by the clie io, but not analyzed. The	Ba Be Ba Be			× ×		BTEX (I			-	)						Aimee.cole@wsp	Carlsbad, NM 88220	3104 E Green Street	nergy	Baker	00) Atlanta,GA (770-4	214) 902-0300 San Ar X (915)585-3443 Lubl	Chain of Custody
		Relinquished by: (Signature)	d subcontractors. It assi nt if such losses are due se terms will be enforced	Cr Co Cu Fe Cu Pb Mn M								890-1854 Ch						ANALYSIS REQUEST	.com					Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)	louston,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	ody
		ature) R	gns standard terms and to circumstances beyon I unless previously nego	Pb Mg Mn Mo Ni K o Ni Se Ag Ti U							-	0-1854 Chain of Custody						UEST	Deliverables: EDD	Reporting:Level II Level III	State of Project:	Program: UST/		13-620-2000)	4	
		Received by: (Signature)	l conditions d the control stiated.	i K Se Ag SiO2							-				-							Program: UST/PST PRP Brownfields	Work Orde	www.xenco.com		Work Order No:
Revise		ature)		Na Sr TI Sn ∪ V Zn 1631 / 245.1 / 7470 / 7471 :			COM	COMF	Sample (	lab, if receiv	TAT starts the d					AFE: EW.2022	Γ	Work Or	ADaPT Other:	HRRP	נ	RRC	Work Order Comments	n <sup>o</sup> age 1		No:
Revised Date 051418 Rev 2018 1		Date/Time		V Zn 70 / 7471 : Hg			COMPOSITE	COMPOSITE	Sample Comments	lab, if received by 4:30pm	TAT starts the day received by the					AFE: EW.2022.00063.EXP.01		Work Order Notes			]	Superfund		of 1		

Received by OCD: 7/8/2022 8:01:28 AM

Released to Imaging: 9/22/2022 7:39:45 AM

1/25/2022

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Page 150 of 358

### Received by OCD: 7/8/2022 8:01:28 AM

	Custody Seals Intact: Custody Seal No	Relinquished by		Relinvished by	Empty Kit Relynquished by	Deliverable Requested 1 II III IV Other (specify)	Vossible Hazard Identification	laboratory does not currently maintain accorditation in the State of Origin listed above for analysis/lestsmatrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central LLC attention immediately. If the accreditation status should be brought to Eurofins Environment Testing South Central LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing South Central LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing South Central LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing South Central LLC attention immediately.	Note: Since laboratory accreditations are subject to chance. Furciers Envi				SW01 (890-1854-2)	FS01 (890-1854-1)		Sample Identification - Client ID (Lab ID)	Site.	Project Name Remuda Basin State #2	Emait	Phone 432-704-5440(Tel)	State, Zip: TX, 79701	City Midland	Address 1211 W Florida Ave,	Eurofins Environment Testing South Centr	Shipping/Receiving	Client Information (Sub Contract Lab)	1089 N Canal St Carlsbad NM 86220 Phone. 575-988-3199 Fax: 575-988-3199	
		Date/Time:	Date/Time:	1/2//22	Date	Primary Deliverable Rank. 2		isted above for analysis/tests/matrix being outh Central LLC attention immediately	incoment Testing South Central LLC Along				1/20/22 14 10 Mountain	1/20/22 14 05 Mountair	X	Sample Date Time	SSOW#:	Project #: 89000004	WO #	PO #		TAT Requested (days):	Due Date Requested 1/24/2022		Phone:	Sampler		•
		Company	Company	Company	Time			analyzed, the samples must be ship f analyzed, the samples must be ship f all requested accreditations are curr					Solid	Solid	ation Code:	Sample Matrix F Type (Vi-water E (C=comp, orwested, E G=g(rab) BT-TIssue, A-Air) (L)	- I Samp	ie (Yo	s or N	0)				Accr	E-Mail jessica k	<u> </u>	Chain of Custody Record	
	Cooler Temperature(s) °C and	Received by	Received by	Received	1 1	Special Instructions/QC Requirements	Sample Disposal ( A fee m Return To Client	<ul> <li>accreatiation compliance upon our sped back to the Eurofins Environme rent to date, return the signed Chain</li> </ul>					x x x x x x	x x x x x		Perform MS/ 8015MOD_NM 8015MOD_Cal 300_ORGFM_ 8021B/5035FP Total_BTEX_C	/8015NM c 28D/DI_I Caic (I	I_S_Pr _EACH	ep (MC Chlori		I TPH		Analysis	Accreditations Required (See note): NELAP - Louisiana, NELAP - Texas	E-Mail essica kramer@eurofinset.com	Jessica	cord	
	and Other Remarks.	Date/Time	DateTime	Date/Time;	Method of Shipment:	uirements	fee may be assessed if samples are retained longer t Disposal By Lab Archive For	t subcontract laboratories Trins sample s ant Testing South Central LLC laboratory 1 of Custody attesting to said complicanc											·····				is Requested		State of Origin: New Mexico	Carrier Tracking No(s)		
Ver-		Comp	Comp	122 8:30			than 1 mo	shipment is torwarded under chain-of- y or other instructions will be provided to Eurofins Environment Testing Sou				22	<b>A</b> .	4	X	Total Numbe Special Instructions/Note:	r of col Other	L EDA Z	I Ice U J DI Water V	MeUH R - Amchlor S Ascorbic Acid T		B - NaOH N - NG	8	Job # <sup>.</sup> 890-1854-1	Page: Page 1 of 1	COC No: 890-595 1	💸 eurofins 🛛 Envi	
Ver 06/08/2021		Company	Company	- OURX			onth) Months	<ul> <li>r-of-custody If the</li> <li>ded Any changes to</li> <li>South Central LLC.</li> </ul>								uctions/Note:		v pH 4-5 other (specify)	MCAA	<ul> <li>R - Na2S2O3</li> <li>H2SO4</li> <li>TSP Dodecahvdrate</li> </ul>	Q Na2SO3	1 Hexane					Environment Testing America	

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# **Eurofins Carlsbad** 5

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Phone: 575-988-3199 Fax: 575-988-3199	Sampler			Lab PM:									-0	Carrier Tracking No(s):	Trac	king	No(s)			1		COC No:	COC No:	1							
Client Information (Sub Contract Lab)	Phone:			E-Mail:	E-Mail:	ramora			1	3			- 01	State of Origin: New Mexico		3 1					<del></del>	Page:	Page: Page 1 of 1	- 1							
					Accreditations Required (See note) NFI AP - Louisiana: NELAP	Accreditations Required (See not	ns Re	quirec	ZE (See	AF	): - Texas	xas									<u> </u>	Job #:	Job #: 890-1854-1	Ξ							
Address:	Due Date Requested:	ed:								∧	5	ò		201	2							Pres	Preservation Codes:	tion	Cod	es:					
1211 W. Florida Ave, ,	1/24/2022				-	4	1	-	-	- Ana		2	e	_ es	C		7	1	-	-	Ļ	A - HCL	2 P			23	Hexi	ane			
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State, Zip: TX, 79701						II TPH																	E - NaHSO4 F - MeOH	)4 (10		סק	Q - Na2SO3 R - Na2S2O3	SO3	30		
Phone: 432-704-5440(Tel)	PO#				o)	D) Fu		de														H-A	G - Amchlor H - Ascorbic Acid	or ic Aci		Υ Υ	S - H2SO4 T - TSP Dodecahydrate	Dodt	ecah	ydrai	ē
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Site:	SSOW#:					-					_											Other:	7								
				Motely							_001				_						per o										
	-	Sample		Matrix (W=water, S=solid, O=waste/oli,	ield Filter	015MOD_N	015MOD_C	00_ORGFM		021B/5035F	otal_BTEX_										Total Num		S	Special Instructions/Note:		stru	ictio	)ns/	Not	e	
Sample Identification - Client ID (Lap ID)	Sample Date		Preservation Code:	tion Code:	->-	-								_							$\Delta$				V	Y	1	1		11	
FS01 (890-1854-1)	1/20/22	14:05 Mountain		Solid		×	×	×		×	×										-						1				1
SW01 (890-1854-2)	1/20/22	14:10 Mountain		Solid		×	×		×	×	×										-										
					-	+-	+	+			+	+		-					+	_										1	
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										$\vdash$		$\vdash$							$\left  \right $												1
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Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratory or other instructions will be provided. Any changes to laboratory does not currently maintain accreditation in the State of Origin is the dator analysis/testis/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central, LLC. Is the current is accreditation are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing South Central, LLC.	ent Testing South Cent above for analysis/tests	ral, LLC places s/matrix being a	the ownership on inalyzed, the sa	of method, ana mples must be creditations are	lyte & shipp	accre ed ba	ditation ok to the	n com he Eu	plian rofins	ce up Envir	on out onme Chain	subc nt Tes	ontracting stody	t lab South	Cen	nies. tral, L to sai	This LC Ia	samp abora	tory ance	to E	ent is her ir urofii	s forv nstruu	varde ctions vviron	d und will t	jer ch pe pro	hain-c ovide ting S	of-cu ed. A South	stody iny ch Cen	/. If hang tral,	les to	
Possible Hazard Identification						Sample Disposal ( A fe	le D	le Disposal ( A fu	sal (	Afe	e m	d	as as	assessed if san Disposal Ry Lah	sed	ifsa	ump	es a	Пĩ	Peta	ine	<b>tained long</b> Archive For	e may be assessed if samples are retained longer than 1 month)	r tha	an 1	то	Mon	nth) Months			
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliverable Rank: 2	able Rank:			- 60	Special Instructions/QC	al Ins	struc	tions	QC QC	Requirements	uiren	nent																		
Empty Kit Rejinquished by:		Date:			Time:	<u>.</u>									Method of Shipment:	od of	Ship	nent													1
Reinausida di III	Date/Time: //77			Company	Ī	R	Received	K	M	M	\						Date/	a Time	4	12	17	H	P	K?	$\mathbb{M}$	8	Contraction of the second seco	Ь <sup>в</sup>	R	IΨ	1.1
Relinquished by	Uate/Time:			Company		교	Received by	d b	$\mathbb{N}$	$  \gamma$								Date/Time	ē.							3 8	Compan	ny.			1
Relinquished by:	Date/Time:			Company		R	Received by:	d by:									La	Date/ Fille.	ļ		1				Ł	1	Company				
Custody Seals Intact Custody Seal No.: A Yes A No						0	Cooler Temperature(s) °C	empe	ratur	)° (s)	and	and Other Remarks:	Rem	arks:		2.1			[2,1]			1.00		-			Ver Or	\$/08	000	-	
					0																					<	ř O	х		/0X/202	06/08/2021

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### Login Sample Receipt Checklist

Client: WSP USA Inc.

Login Number: 1854 List Number: 1

Creator: Clifton, Cloe

<6mm (1/4").

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

14

Job Number: 890-1854-1

List Source: Eurofins Carlsbad

SDG Number: 31403236.001.0129.35.02

### Login Sample Receipt Checklist

Client: WSP USA Inc.

Login Number: 1854 List Number: 2 Creator: Lowe, Katie

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	True	

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

14

Job Number: 890-1854-1 SDG Number: 31403236.001.0129.35.02

List Source: Eurofins Midland

List Creation: 01/24/22 08:30 AM

Received by OCD: 7/8/2022 8:01:28 AM

# 🔅 eurofins

# Environment Testing America

# **ANALYTICAL REPORT**

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

### Laboratory Job ID: 890-1866-1

Laboratory Sample Delivery Group: 31403236.001.0129.35.02 Client Project/Site: Remuda Basin State #2

### For:

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

Attn: Aimee Cole

RAMER

Authorized for release by: 1/28/2022 1:28:40 PM

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

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

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

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

Released to Imaging: 9/22/2022 7:39:45 AM

Laboratory Job ID: 890-1866-1 SDG: 31403236.001.0129.35.02

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Job ID: 890-1866-1 SDG: 31403236.001.0129.35.02

Qualifiers		3
GC VOA		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
GC Semi VOA		5
Qualifier	Qualifier Description	
S1-	Surrogate recovery exceeds control limits, low biased.	
S1+	Surrogate recovery exceeds control limits, high biased.	
U	Indicates the analyte was analyzed for but not detected.	
HPLC/IC		
Qualifier	Qualifier Description	8
U	Indicates the analyte was analyzed for but not detected.	
Glossary		9
Abbreviation	These commonly used abbreviations may or may not be present in this report.	
¤	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)	13
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	

Quality Control

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

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

QC

RER

RL

RPD

TEF

TEQ

TNTC

Project/Site: Remuda Basin State #2

4

5

Job ID: 890-1866-1 SDG: 31403236.001.0129.35.02

#### Job ID: 890-1866-1

Client: WSP USA Inc.

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-1866-1

#### Receipt

The samples were received on 1/24/2022 4:09 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: Surrogate recovery for the following samples were outside control limits: (LCS 880-17749/2-A), (LCSD 880-17749/3-A) and (890-1863-A-1-E MS). Evidence of matrix interferences is not obvious.

Method 8015MOD\_NM: Surrogate recovery for the following samples were outside control limits: (MB 880-17880/1-A) and (890-1866-A-1-J MSD). Evidence of matrix interferences is not obvious.

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.

Project/Site: Remuda Basin State #2

Job ID: 890-1866-1 SDG: 31403236.001.0129.35.02

### Lab Sample ID: 890-1866-1

Matrix: Solid

5

**Client Sample ID: PH06J** Date Collected: 01/24/22 13:00 Date Received: 01/24/22 16:09

Client: WSP USA Inc.

Method: 8021B - Volatile Organic Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00201		0.00201			01/26/22 07:25	01/26/22 12:00	
Toluene	< 0.00201		0.00201	mg/Kg		01/26/22 07:25	01/26/22 12:00	
Ethylbenzene	<0.00201		0.00201	mg/Kg		01/26/22 07:25	01/26/22 12:00	
m-Xylene & p-Xylene	< 0.00402		0.00402	mg/Kg		01/26/22 07:25	01/26/22 12:00	
o-Xylene	<0.00201		0.00201	mg/Kg		01/26/22 07:25	01/26/22 12:00	
Xylenes, Total	<0.00402		0.00402	mg/Kg		01/26/22 07:25	01/26/22 12:00	
Suma mata	% Decevery	Qualifiar	Limite			Duanawad	Analyzed	
Surrogate 4-Bromofluorobenzene (Surr)	% <b>Recovery</b> 126	Quaimer	<u>Limits</u> 70 - 130			Prepared 01/26/22 07:25	Analyzed 01/26/22 12:00	Dil Fa
1,4-Difluorobenzene (Surr)	128		70 - 130 70 - 130			01/26/22 07:25	01/26/22 12:00	
Method: Total BTEX - Total BTEX								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00402	U	0.00402	mg/Kg			01/28/22 14:15	
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<49.9	U	49.9	mg/Kg			01/26/22 16:48	·
Mothody 2015P NM Dissol Bans	o Organica (D							
Method: 8015B NM - Diesel Rang Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics			49.9			01/26/22 08:19	01/26/22 13:24	Dirta
(GRO)-C6-C10		0	-0.0	iiig/itg		01/20/22 00:10	01720722 10.24	
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		01/26/22 08:19	01/26/22 13:24	
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/26/22 08:19	01/26/22 13:24	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	86		70 - 130			01/26/22 08:19	01/26/22 13:24	
o-Terphenyl	92		70 - 130			01/26/22 08:19	01/26/22 13:24	
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	225		4.95	mg/Kg			01/27/22 13:24	
lient Sample ID: SW04						Lab Sar	nple ID: 890-	1866-
ate Collected: 01/24/22 13:10							Matri	x: Soli
ate Received: 01/24/22 16:09								
ample Depth: 0 - 4								
Method: 8021B - Volatile Organic	: Compounds (	GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00200		0.00200	mg/Kg		01/26/22 07:25	01/26/22 12:21	
Toluene	<0.00200		0.00200	mg/Kg		01/26/22 07:25	01/26/22 12:21	
				0.0				
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/26/22 07:25	01/26/22 12:21	

Surrogate %Recovery Qualifier Limits Prepared 4-Bromofluorobenzene (Surr) 117 70 - 130 01/26/22 07:25 01/26/22 12:21

<0.00400 U

<0.00200 U

<0.00400 U

1 Eurofins Carlsbad

Dil Fac

1

1

1

m-Xylene & p-Xylene

o-Xylene

Xylenes, Total

0.00400

0.00200

0.00400

mg/Kg

mg/Kg

mg/Kg

01/26/22 07:25

01/26/22 07:25

01/26/22 07:25

01/26/22 12:21

01/26/22 12:21

01/26/22 12:21

Analyzed

### **Client Sample Results**

Limits

70 - 130

Job ID: 890-1866-1 SDG: 31403236.001.0129.35.02

### **Client Sample ID: SW04**

Project/Site: Remuda Basin State #2

Date Collected: 01/24/22 13:10 Date Received: 01/24/22 16:09

Sample Depth: 0 - 4

1,4-Difluorobenzene (Surr)

Surrogate

Analyte

Analyte

Total TPH

Total BTEX

Client: WSP USA Inc.

### Lab Sample ID: 890-1866-2

Analyzed

01/26/22 12:21

Matrix: Solid

Dil Fac

1

	9

<b>RL</b> 0.00400	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 01/28/22 14:15	Dil Fac
<b>RL</b> 50.0	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 01/26/22 16:48	Dil Fac

Prepared

01/26/22 07:25

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

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

Method: Total BTEX - Total BTEX Calculation

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

%Recovery Qualifier

Result Qualifier

Result Qualifier

<50.0 U

103

<0.00400 U

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		01/26/22 08:19	01/26/22 13:46	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		01/26/22 08:19	01/26/22 13:46	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/26/22 08:19	01/26/22 13:46	1
Surrogate	%Recovery	Qualifier	Limits			Branarad	Analyzed	Dil Fac
		Quaimer				Prepared		DIIFac
1-Chlorooctane	83		70 - 130			01/26/22 08:19	01/26/22 13:46	1
o-Terphenyl	87		70 - 130			01/26/22 08:19	01/26/22 13:46	1
Γ								
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

				•	-	
Chloride	51.0	5.00	mg/Kg		01/26/22 19:52	1

Job ID: 890-1866-1

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

SDG: 31403236.001.0129.35.02

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

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
ab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-1866-1	PH06J	126	103	
890-1866-1 MS	PH06J	108	108	
890-1866-1 MSD	PH06J	103	97	
890-1866-2	SW04	117	103	
LCS 880-17744/1-A	Lab Control Sample	95	89	
LCSD 880-17744/2-A	Lab Control Sample Dup	101	104	
MB 880-17744/5-A	Method Blank	109	103	
Surrogate Legend				

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

#### Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
90-1863-A-1-E MS	Matrix Spike	73	69 S1-	
390-1863-A-1-F MSD	Matrix Spike Duplicate	77	73	
890-1866-1	PH06J	86	92	
390-1866-1 MS	PH06J	70	73	
890-1866-1 MSD	PH06J	74	65 S1-	
890-1866-2	SW04	83	87	
_CS 880-17749/2-A	Lab Control Sample	131 S1+	125	
LCSD 880-17749/3-A	Lab Control Sample Dup	137 S1+	140 S1+	
MB 880-17749/1-A	Method Blank	106	119	

1CO = 1-Chlorooctane

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

				Percent Surrogate Recovery (Acceptance Limits)
		1CO2	OTPH2	
b Sample ID	Client Sample ID	(70-130)	(70-130)	
CS 880-17880/2-A	Lab Control Sample	99	109	
CSD 880-17880/3-A	Lab Control Sample Dup	93	94	
IB 880-17880/1-A	Method Blank	159 S1+	168 S1+	

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

OTPH = o-Terphenyl

	МВ	МВ						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/26/22 07:25	01/26/22 10:46	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/26/22 07:25	01/26/22 10:46	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/26/22 07:25	01/26/22 10:46	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/26/22 07:25	01/26/22 10:46	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/26/22 07:25	01/26/22 10:46	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/26/22 07:25	01/26/22 10:46	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130			01/26/22 07:25	01/26/22 10:46	1
1,4-Difluorobenzene (Surr)	103		70 - 130			01/26/22 07:25	01/26/22 10:46	1

#### Lab Sample ID: LCS 880-17744/1-A Matrix: Solid

#### Analysis Batch: 17745

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.08925		mg/Kg		89	70 - 130	
Toluene	0.100	0.08410		mg/Kg		84	70 - 130	
Ethylbenzene	0.100	0.08085		mg/Kg		81	70 - 130	
m-Xylene & p-Xylene	0.200	0.1687		mg/Kg		84	70 - 130	
o-Xylene	0.100	0.08470		mg/Kg		85	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		70 - 130
1,4-Difluorobenzene (Surr)	89		70 - 130

#### Lab Sample ID: LCSD 880-17744/2-A

#### Matrix: Solid

Analysis Batch: 17745							Prep	Batch:	17744
	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09191		mg/Kg		92	70 - 130	3	35
Toluene	0.100	0.08406		mg/Kg		84	70 - 130	0	35
Ethylbenzene	0.100	0.08261		mg/Kg		83	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.1708		mg/Kg		85	70 - 130	1	35
o-Xylene	0.100	0.08371		mg/Kg		84	70 - 130	1	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

#### Lab Sample ID: 890-1866-1 MS Matrix: Solid

### Analysis Batch: 17745

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130

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**Client Sample ID: Method Blank** 

**Client Sample ID: Lab Control Sample** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Prep Batch: 17744

Prep Batch: 17744

5 6 7

**Client Sample ID: PH06J** 

Prep Type: Total/NA

Client: WSP USA Inc. Project/Site: Remuda Basin State #2 Job ID: 890-1866-1 SDG: 31403236.001.0129.35.02

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

Lab Sample ID: 890-1866-1 MS Matrix: Solid	j										C	lient Sample Prep Type		
Analysis Batch: 17745														
	MS	мs												
Surrogate	%Recovery	Qual	lifier	Limits										
1,4-Difluorobenzene (Surr)	108			70 - 130										
Lab Sample ID: 890-1866-1 MS	SD.										c	lient Sample	ID: F	рное
Matrix: Solid	_											Prep Type		
Analysis Batch: 17745														
	MSD	MSD	,											
Surrogate	%Recovery	Qual	lifier	Limits										
4-Bromofluorobenzene (Surr)	103			70 - 130										
1,4-Difluorobenzene (Surr)	97			70 - 130										
ethod: 8015B NM - Diese	I Range Or	gan	ics (DR	(GC) (GC)										
Lab Sample ID: MB 880-17749	/1- <b>A</b>										Client Sa	ample ID: Met	hod	Blaı
Matrix: Solid												Prep Type		
Analysis Batch: 17755												Prep Ba	tch:	1774
		MB												
Analyte			Qualifier				Unit		<u>D</u>		repared	Analyzed		Dil F
Gasoline Range Organics GRO)-C6-C10		50.0		50.0			mg/K	9			6/22 08:19	01/26/22 11:1		
Diesel Range Organics (Over C10-C28)	<	50.0	U	50.0			mg/K	9		01/2	6/22 08:19	01/26/22 11:1	0	
Oll Range Organics (Over C28-C36)	<	50.0		50.0			mg/K	9		01/2	6/22 08:19	01/26/22 11:1	0	
		MВ								_				
Surrogate I-Chlorooctane	%Reco	7ery 106	Qualifier	Limits 70 - 130							repared	Analyzed 01/26/22 11:1		Dil F
Terphenyl		119		70 - 130 70 - 130							6/22 08:19 6/22 08:19	01/26/22 11:1		
Lab Sample ID: LCS 880-1774	9/2-A								C	lient	Sample	ID: Lab Conti		
Matrix: Solid												Prep Type		
Analysis Batch: 17755				0.11								Prep Ba	tch:	1774
a se a la de				Spike		LCS		11 14			0/ <b>D</b>	%Rec.		
Analyte Gasoline Range Organics				Added	Result 1093	Qua	Inter	Unit mg/Kg		<u>D</u>	%Rec 109	Limits 70 - 130		
GRO)-C6-C10				1000	1093			iiig/Kg			109	70 - 130		
Diesel Range Organics (Over C10-C28)				1000	1153			mg/Kg			115	70 - 130		
	LCS	LCS												
Surrogate	%Recovery			Limits										
1-Chlorooctane	131	S1+		70 - 130										
p-Terphenyl	125			70 - 130										
.ab Sample ID: LCSD 880-177	49/3-A							Cli	ient	Sam	ple ID: L	ab Control Sa	ample	e Dı
Matrix: Solid												Prep Type		
Analysis Batch: 17755												Prep Ba		
				Spike	LCSD	LCS	D					%Rec.		R
Analyte				Added	Result	Qual	lifier	Unit		D	%Rec	Limits	RPD	Lin
Gasoline Range Organics		-		1000	1100			mg/Kg		_	110	70 - 130	1	

Client: WSP USA Inc. Project/Site: Remuda Basin State #2 Job ID: 890-1866-1 SDG: 31403236.001.0129.35.02

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

	0/0 A						Cile	nt San	nple ID: L	.ab Contro	i Samni	
Lab Sample ID: LCSD 880-17749	9/3-A								-			-
Matrix: Solid											ype: To	
Analysis Batch: 17755				0	1.005	1.000					Batch:	
A 1				Spike Addod		LCSD	11 14	-	% Doo	%Rec.	000	RPD
Analyte				Added	Result	Qualifier	Unit	<u>D</u>	%Rec	Limits	RPD	Limit
Diesel Range Organics (Over C10-C28)				1000	1225		mg/Kg		122	70 _ 130	6	20
510-028)												
	LCSD	LCSD	)									
Surrogate	%Recovery	Qualif	fier	Limits								
1-Chlorooctane	137	S1+		70 - 130	-							
o-Terphenyl	140	S1+		70 - 130								
Lab Sample ID: 890-1863-A-1-E	MS								Client	Sample ID:	Matrix	Spike
Matrix: Solid									-		ype: To	-
Analysis Batch: 17755											Batch:	
Analysis Batom Trice	Sample	Samp	le	Spike	MS	MS				%Rec.	Duto	1117.4
Analyte	Result	-		Added		Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics	<49.9			997	1106		mg/Kg	— <u> </u>	111	70 - 130		
(GRO)-C6-C10		C								10-100		
Diesel Range Organics (Over C10-C28)	<49.9	U		997	964.5		mg/Kg		95	70 - 130		
	MS	MS										
Surrogate	%Recovery	Qualif	fier	Limits								
				70 - 130	-							
-	73											
1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1863-A-1-F I Matrix: Solid	69	S1-		70 - 130			CI	ient Sa	ample ID		ype: To	tal/NA
1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1863-A-1-F I Matrix: Solid	69		le		MSD	MSD	CI	ient Sa	ample ID	Prep T		tal/NA
1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1863-A-1-F   Matrix: Solid Analysis Batch: 17755	69 MSD	Sampl		70 - 130	MSD Result		CI Unit	ient Sa	ample ID %Rec	Prep T Prep	ype: To	tal/NA 17749
1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1863-A-1-F   Matrix: Solid Analysis Batch: 17755 Analyte Gasoline Range Organics	69 MSD Sample	Sampl Qualif		70 - 130 Spike					-	Prep T Prep %Rec.	ype: To Batch:	tal/NA 17749 RPD
1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1863-A-1-F   Matrix: Solid Analysis Batch: 17755 Analyte Gasoline Range Organics (GRO)-C6-C10	69 MSD Sample Result <49.9	Sampl Qualif U		70 - 130 Spike Added 996	Result 1144		_ <mark>Unit</mark> mg/Kg		<b>%Rec</b>	Prep T Prep %Rec. Limits 70 - 130	ype: To Batch: RPD 3	tal/NA 17749 RPD Limit 20
1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1863-A-1-F   Matrix: Solid Analysis Batch: 17755 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	69 MSD Sample Result	Sampl Qualif U		70 - 130 Spike Added	Result		Unit		%Rec	Prep T Prep %Rec. Limits	ype: To Batch:	tal/NA 17749 RPD Limit
1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1863-A-1-F   Matrix: Solid Analysis Batch: 17755 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	69 MSD Sample Result <49.9	Sampl Qualif U U		70 - 130 Spike Added 996	Result 1144		_ <mark>Unit</mark> mg/Kg		<b>%Rec</b>	Prep T Prep %Rec. Limits 70 - 130	ype: To Batch: RPD 3	tal/NA 17749 RPD Limit 20
1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1863-A-1-F I Matrix: Solid Analysis Batch: 17755 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	69 MSD Sample Result <49.9 <49.9	Sampl Qualif U U MSD	fier	70 - 130 Spike Added 996	Result 1144		_ <mark>Unit</mark> mg/Kg		<b>%Rec</b>	Prep T Prep %Rec. Limits 70 - 130	ype: To Batch: RPD 3	tal/NA 17749 RPD Limit 20
1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1863-A-1-F I Matrix: Solid Analysis Batch: 17755 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	69 MSD Sample Result <49.9 <49.9 MSD	Sampl Qualif U U MSD	fier	70 - 130 Spike Added 996 996	Result 1144		_ <mark>Unit</mark> mg/Kg		<b>%Rec</b>	Prep T Prep %Rec. Limits 70 - 130	ype: To Batch: RPD 3	tal/NA 17749 RPD Limit 20
1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1863-A-1-F I Matrix: Solid Analysis Batch: 17755 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane	69 MSD Sample Result <49.9 <49.9 MSD %Recovery	Sampl Qualif U U MSD	fier	70 - 130 Spike Added 996 996 Limits	Result 1144		_ <mark>Unit</mark> mg/Kg		<b>%Rec</b>	Prep T Prep %Rec. Limits 70 - 130	ype: To Batch: RPD 3	tal/NA 17749 RPD Limit 20
1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1863-A-1-F I Matrix: Solid Analysis Batch: 17755 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl	69 MSD Sample Result <49.9 <49.9 <80 %Recovery 77 73	Sampl Qualif U U MSD	fier	70 - 130 Spike Added 996 996 <u>Limits</u> 70 - 130	Result 1144		_ <mark>Unit</mark> mg/Kg	<u>D</u>	%Rec 115 101	Prep T Prep %Rec. Limits 70 - 130 70 - 130	ype: To Batch: RPD 3 6	tal/NA 17749 RPD Limit 20 20
1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1863-A-1-F I Matrix: Solid Analysis Batch: 17755 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: MB 880-17880/1	69 MSD Sample Result <49.9 <49.9 <80 %Recovery 77 73	Sampl Qualif U U MSD	fier	70 - 130 Spike Added 996 996 <u>Limits</u> 70 - 130	Result 1144		_ <mark>Unit</mark> mg/Kg	<u>D</u>	%Rec 115 101	Prep T Prep %Rec. Limits 70 - 130 70 - 130	ype: To Batch: RPD 3 6 Method	tal/NA 17749 RPD Limit 20 20 Blank
1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1863-A-1-F I Matrix: Solid Analysis Batch: 17755 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: MB 880-17880/14 Matrix: Solid	69 MSD Sample Result <49.9 <49.9 <80 %Recovery 77 73	Sampl Qualif U U MSD	fier	70 - 130 Spike Added 996 996 <u>Limits</u> 70 - 130	Result 1144		_ <mark>Unit</mark> mg/Kg	<u>D</u>	%Rec 115 101	Prep T Prep %Rec. Limits 70 - 130 70 - 130 70 - 130	ype: To Batch: <u>RPD</u> 3 6 Method ype: To	tal/NA 17749 RPD Limit 20 20 Blank tal/NA
1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1863-A-1-F I Matrix: Solid Analysis Batch: 17755 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: MB 880-17880/14 Matrix: Solid	69 MSD Sample Result <49.9 <49.9 <80 %Recovery 77 73	Sampl Qualif U MSD Qualif	fier	70 - 130 Spike Added 996 996 <u>Limits</u> 70 - 130	Result 1144		_ <mark>Unit</mark> mg/Kg	<u>D</u>	%Rec 115 101	Prep T Prep %Rec. Limits 70 - 130 70 - 130 70 - 130	ype: To Batch: RPD 3 6 Method	tal/NA 17749 RPD Limit 20 20 Blank tal/NA
1-Chlorooctane p-Terphenyl Lab Sample ID: 890-1863-A-1-F I Matrix: Solid Analysis Batch: 17755 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane p-Terphenyl Lab Sample ID: MB 880-17880/13 Matrix: Solid Analysis Batch: 17882	69 MSD Sample Result <49.9 <49.9 (MSD %Recovery 77 73	Sampl Qualifi U MSD Qualifi	fier	70 - 130 Spike Added 996 996 <u>Limits</u> 70 - 130	Result 1144 1028	Qualifier	Unit mg/Kg mg/Kg	<u>D</u>	%Rec 115 101	Prep T Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 190 Prep T Prep T Prep	ype: To Batch: <u>RPD</u> 3 6 Method ype: To Batch:	tal/NA 17749 RPD Limit 20 20 Blank tal/NA 17880
1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1863-A-1-F I Matrix: Solid Analysis Batch: 17755 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: MB 880-17880/1 Matrix: Solid Analysis Batch: 17882 Analyte	69 MSD Sample Result <49.9 <49.9 %Recovery 77 73 1-A	Sampl Qualif U MSD Qualif	fier	70 - 130 Spike Added 996 996 <u>Limits</u> 70 - 130	Result 1144 1028	Qualifier	Unit mg/Kg mg/Kg	<u> </u>	%Rec 115 101 Client S	Prep T Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - Prep T Prep T Prep T Prep T	ype: To Batch: <u>RPD</u> 3 6 Method ype: To Batch: ed	tal/NA 17749 RPD Limit 20 20 20 Blank tal/NA 17880 Dil Fac
1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1863-A-1-F I Matrix: Solid Analysis Batch: 17755 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: MB 880-17880/1 Matrix: Solid Analysis Batch: 17882 Analyte Gasoline Range Organics	69 MSD Sample Result <49.9 <49.9 %Recovery 77 73 1-A	Sampl Qualifi U MSD Qualifi	fier	70 - 130 Spike Added 996 996 <u>Limits</u> 70 - 130	Result 1144 1028	Qualifier	Unit mg/Kg mg/Kg	<u> </u>	%Rec 115 101	Prep T Prep %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130 Prep T Prep T Prep	ype: To Batch: <u>RPD</u> 3 6 Method ype: To Batch: ed	tal/NA 17749 RPD Limit 20 20 Blank tal/NA 17880
1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1863-A-1-F I Matrix: Solid Analysis Batch: 17755 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: MB 880-17880/1 Matrix: Solid Analysis Batch: 17882 Analyte Gasoline Range Organics (GRO)-C6-C10	69 MSD Sample Result <49.9 <49.9 %Recovery 77 73 1-A Re	Sampl Qualif U MSD Qualif	fier fier MB Qualifier U	70 - 130 Spike Added 996 996 <u>Limits</u> 70 - 130	Result 1144 1028	Qualifier Unit mg/K	- <mark>Unit</mark> mg/Kg mg/Kg	<u> </u>	%Rec 115 101 Client S	Prep T Prep %Rec. Limits 70 - 130 70 - 130	Method ype: To Batch: 3 6 Method ype: To Batch: ed 11:24	tal/NA 17749 RPD Limit 20 20 20 Blank tal/NA 17880 Dil Fac
1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1863-A-1-F I Matrix: Solid Analysis Batch: 17755 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: MB 880-17880/1 Matrix: Solid Analysis Batch: 17882 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	69 MSD Sample Result <49.9 <49.9 %Recovery 77 73 1-A Re	Sampl Qualif U MSD Qualif	fier fier MB Qualifier U	70 - 130 Spike Added 996 996 <u>Limits</u> 70 - 130	Result           1144           1028           -           -           50.0	Qualifier	- <mark>Unit</mark> mg/Kg mg/Kg	<u> </u>	%Rec 115 101 Client S repared 77/22 09:51	Prep T Prep %Rec. Limits 70 - 130 70 - 130	Method ype: To Batch: 3 6 Method ype: To Batch: ed 11:24	tal/NA 17749 RPD Limit 20 20 20 Blank tal/NA 17880 Dil Fac 1
1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1863-A-1-F I Matrix: Solid Analysis Batch: 17755 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: MB 880-17880/12 Matrix: Solid Analysis Batch: 17882 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	69 MSD Sample Result <49.9 <49.9 (MSD %Recovery 77 73 1-A Re <4 (4)	Sampl Qualif U MSD Qualif	fier fier MB Qualifier U	70 - 130 Spike Added 996 996 <u>Limits</u> 70 - 130	Result           1144           1028           -           -           50.0	Qualifier Unit mg/K	- <mark>Unit</mark> mg/Kg mg/Kg g	<u>р</u> <u>Р</u> 01/2 01/2	%Rec 115 101 Client S repared 77/22 09:51	Prep T Prep %Rec. Limits 70 - 130 70 - 130	ype: To Batch: RPD 3 6 Method ype: To Batch: ed 11:24	tal/NA 17749 RPD Limit 20 20 20 Blank tal/NA 17880 Dil Fac 1
1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1863-A-1-F I Matrix: Solid Analysis Batch: 17755 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: MB 880-17880/13 Matrix: Solid Analysis Batch: 17882 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	69 MSD Sample Result <49.9 <49.9 (MSD %Recovery 77 73 1-A Re <4 (4)	Sampl Qualifi U MSD Qualifi esult 50.0 U	fier fier Qualifier U U U	70 - 130 Spike Added 996 996 <u>Limits</u> 70 - 130	Result           1144           1028           -           50.0           50.0	Qualifier Unit mg/Ki mg/Ki	- <mark>Unit</mark> mg/Kg mg/Kg g	<u>р</u> <u>Р</u> 01/2 01/2	%Rec 115 101 Client S repared 7/22 09:51 27/22 09:51	Prep T Prep %Rec. Limits 70 - 130 70 - 130	ype: To Batch: RPD 3 6 Method ype: To Batch: ed 11:24	tal/NA 17749 RPD Limit 20 20 20 Blank tal/NA 17880 Dil Fac 1
1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1863-A-1-F I Matrix: Solid Analysis Batch: 17755 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: MB 880-17880/12 Matrix: Solid Analysis Batch: 17882 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	69 MSD Sample Result <49.9 <49.9 (MSD %Recovery 77 73 1-A (<)	Sampl Qualifi U MSD Qualifi So.0 U So.0 U So.0 U MB I	fier fier Qualifier U U U	70 - 130 Spike Added 996 996 <u>Limits</u> 70 - 130	Result           1144           1028           50.0           50.0	Qualifier Unit mg/Ki mg/Ki	- <mark>Unit</mark> mg/Kg mg/Kg g	<u>р</u> <u>Р</u> 01/2 01/2 01/2	%Rec 115 101 Client S repared 27/22 09:51 27/22 09:51 27/22 09:51	Prep T Prep %Rec. Limits 70 - 130 70 - 100 70 - 100 - 100 70 - 100 70 - 100 70 - 100 70 - 100 70 - 100 70 - 100	Ype: To           Batch:           RPD           3           6           Method           ype: To           Batch:           ed           11:24           11:24	tal/NA 17749 RPD Limit 20 20 Blank tal/NA 17880 Dil Fac 1 1
1-Chlorooctane o-Terphenyl Lab Sample ID: 890-1863-A-1-F I Matrix: Solid Analysis Batch: 17755 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: MB 880-17880/13 Matrix: Solid Analysis Batch: 17882 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	69 MSD Sample Result <49.9 <49.9 MSD %Recovery 77 73 1-A	Sampl Qualifi U MSD Qualifi So.0 U So.0 U So.0 U MB I	fier fier Qualifier U U U WB Qualifier	70 - 130 Spike Added 996 996 Limits 70 - 130 70 - 130 70 - 130	Result           1144           1028           50.0           50.0	Qualifier Unit mg/Ki mg/Ki	- <mark>Unit</mark> mg/Kg mg/Kg g	<u>р</u> <u>Р</u> 01/2 01/2 01/2 <i>Р</i>	%Rec 115 101 Client S repared 7/22 09:51 27/22 09:51	Prep T Prep %Rec. Limits 70 - 130 70 - 127 72 - 10 71/27/22 - 10	ype: To Batch: RPD 3 6 Method ype: To Batch: ed 11:24 11:24 11:24 ed	tal/NA 17749 RPD Limit 20 20 20 Blank tal/NA 17880 Dil Fac 1 1

Job ID: 890-1866-1 SDG: 31403236.001.0129.35.02

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

Lab Sample ID: LCS 880-178	880/2-A						Client	Sampl	e ID: Lab Co		
Matrix: Solid										Type: To	
Analysis Batch: 17882			<b>.</b>							Batch:	1/88
A			Spike	LCS		11		0/ Dee	%Rec.		
Analyte			Added		Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics GRO)-C6-C10			1000	896.1		mg/Kg		90	70 - 130		
Diesel Range Organics (Over			1000	1044		mg/Kg		104	70 - 130		
C10-C28)									10 100		
,											
		LCS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	99		70 <u>-</u> 130								
o-Terphenyl	109		70 - 130								
Lab Sample ID: LCSD 880-1	7990/2 4					Clie	t Sam		Lab Contro	Sampl	0 Du
Matrix: Solid	1000/J-A					Cilei	it San	ipie iD.			
										Type: To	
Analysis Batch: 17882			Spike	1.000	LCSD				%Rec.	Batch:	1/00 RP
Analyte			Added		Qualifier	Unit	D	%Rec	%Rec.	RPD	Lim
Analyte			Added	894.5	Quaimer			% <b>кес</b> 89	70 - 130	0	2
Gasoline Range Organics GRO)-C6-C10			1000	094.0		mg/Kg		09	10 - 130	U	2
Diesel Range Organics (Over			1000	992.6		mg/Kg		99	70 - 130	5	2
C10-C28)						5.5				-	-
	LCSD										
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	93		70 - 130								
o-Terphenyl	94		70 - 130								
Lab Comple ID: 800 4866 4									Client Com		
Lab Sample ID: 890-1866-1	WI5								Client Sam	-	
Matrix: Solid										Type: To	
Analysis Batch: 17882	0	0	0							Batch:	1/00
• h.d	Sample	-	Spike	MS	MS	11	_	0/ <b>D</b> = =	%Rec.		
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics	<49.9	U	997	1202		mg/Kg		121	70 - 130		
GRO)-C6-C10 Diesel Range Organics (Over	<49.9	ш	997	1078		mg/Kg		108	70 <sub>-</sub> 130		
C10-C28)	~+3.9	0	551	1070		mynty		100	10 - 130		
	MS										
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	70		70 - 130								
o-Terphenyl	73		70 - 130								
									011-01-0		
Lab Sample ID: 890-1866-1	MSD								Client Sam	-	
Matrix: Solid										Type: To	
Analysis Batch: 17882		• ·	•							Batch:	
	Sample	-	Spike	MSD			_		%Rec.		RP
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Lim
Gasoline Range Organics	<49.9	U	996	1170		mg/Kg		117	70 - 130	3	2
GRO)-C6-C10	-10.0		006	4070		mall		100	70 420	0	
Diesel Range Organics (Over	<49.9	U	996	1078		mg/Kg		108	70 - 130	0	2
C10-C28)	MSD	MSD									
	MSD %Recovery		Limits								

#### Job ID: 890-1866-1 SDG: 31403236.001.0129.35.02

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

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

Lab Sample ID: 890-1866-1 M Matrix: Solid Analysis Batch: 17882	SD									nple ID: F Type: To Batch:	tal/NA
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
o-Terphenyl	65	S1-	70 - 130	•							
Method: 300.0 - Anions, Io	on Chromat	ography									
Lab Sample ID: MB 880-1775	7/1-A							Client S	Sample ID:	Method	Blank
Matrix: Solid										Type: So	
Analysis Batch: 17853											
-		MB MB									
Analyte	R	esult Qualifier		RL	Unit		D	Prepared	Analyz	zed	Dil Fac
Chloride	<	5.00 U		5.00	mg/K	g			01/26/22	18:06	1
Lab Sample ID: LCS 880-1775	57/2-4						Clie	nt Sample	e ID: Lab C	ontrol S	amnlo
Matrix: Solid							Unici	n oampi		Type: Se	
Analysis Batch: 17853									Fieb	Type. S	oluble
Analysis Datch. 17055			Spike	LCS	LCS				%Rec.		
Analyte			Added		Qualifier	Unit	D	%Rec	Limits		
Chloride			250	273.4		mg/Kg		109	90 - 110		
Lab Sample ID: LCSD 880-17	757/3-A					Cli	ent Sa	mple ID:	Lab Contro	ol Sampl	e Dup
Matrix: Solid									Prep	Type: Se	oluble
Analysis Batch: 17853											
			Spike	LCSD	LCSD				%Rec.		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride			250	273.4		mg/Kg		109	90 _ 110	0	20
 Lab Sample ID: 890-1868-A-3	-B MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid										Type: So	
Analysis Batch: 17853											
-	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte		Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	937		251	1203		mg/Kg		106	90 - 110		
 Lab Sample ID: 890-1868-A-3	C MSD						Client 9	Sample I	D: Matrix S	niko Dun	olicato
Matrix: Solid							Shortty			Type: So	
Analysis Batch: 17853									Fieh	Type. St	oluble
Analysis Daten. 17000	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
	•	•	opine	mol					/01.000.		
Analyte	Rocult	Qualifier	Added	Rocult	Qualifier	Unit	D	%Rec	Limits	RPD	Limit

### **QC** Association Summary

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Matrix

Solid

Solid

Solid

Solid

Solid

Matrix

Solid

Solid

Solid

Solid

Solid

Solid

Solid

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

**Client Sample ID** 

Method Blank

Lab Control Sample

**Client Sample ID** 

Method Blank

Lab Control Sample

Lab Control Sample Dup

Lab Control Sample Dup

PH06J

SW04

PH06J

SW04

PH06J

PH06J

**GC VOA** 

890-1866-1

890-1866-2

Prep Batch: 17744

MB 880-17744/5-A

LCS 880-17744/1-A

Lab Sample ID

MB 880-17744/5-A

LCS 880-17744/1-A

LCSD 880-17744/2-A

890-1866-1

890-1866-2

LCSD 880-17744/2-A

Analysis Batch: 17745

Job ID: 890-1866-1 SDG: 31403236.001.0129.35.02

Method

5035

5035

5035

5035

5035

Method

8021B

8021B

8021B

8021B

8021B

8021B

8021B

## 7 8 9 10 11

\_890-1866-1 MSD Analysis Batch: 18058

890-1866-1 MS

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	
890-1866-1	PH06J	Total/NA	Solid	Total BTEX		
890-1866-2	SW04	Total/NA	Solid	Total BTEX		

#### GC Semi VOA

#### Prep Batch: 17749

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1866-1	PH06J	Total/NA	Solid	8015NM Prep	
890-1866-2	SW04	Total/NA	Solid	8015NM Prep	
MB 880-17749/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-17749/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-17749/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1863-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-1863-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 17755

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1866-1	PH06J	Total/NA	Solid	8015B NM	17749
890-1866-2	SW04	Total/NA	Solid	8015B NM	17749
MB 880-17749/1-A	Method Blank	Total/NA	Solid	8015B NM	17749
LCS 880-17749/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	17749
LCSD 880-17749/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	17749
890-1863-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	17749
890-1863-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	17749

#### Analysis Batch: 17829

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1866-1	PH06J	Total/NA	Solid	8015 NM	
890-1866-2	SW04	Total/NA	Solid	8015 NM	
Prep Batch: 17880	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
MB 880-17880/1-A	Method Blank	Total/NA	Solid	8015NM Prep	··

**Eurofins Carlsbad** 

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Prep Batch

Prep Batch

17744

17744

17744

17744

17744

### **Released to Imaging: 9/22/2022 7:39:45 AM**

### **QC Association Summary**

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

#### GC Semi VOA (Continued)

#### Prep Batch: 17880 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-17880/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-17880/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1866-1 MS	PH06J	Total/NA	Solid	8015NM Prep	
890-1866-1 MSD	PH06J	Total/NA	Solid	8015NM Prep	
-					
Analysis Batch: 17882					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-17880/1-A	Method Blank	Total/NA	Solid	8015B NM	17880
Lab Sample ID MB 880-17880/1-A LCS 880-17880/2-A LCSD 880-17880/3-A					
MB 880-17880/1-A LCS 880-17880/2-A	Method Blank Lab Control Sample	Total/NA Total/NA	Solid Solid	8015B NM 8015B NM	17880 17880

#### HPLC/IC

#### Leach Batch: 17757

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-1866-1	PH06J	Soluble	Solid	DI Leach		
890-1866-2	SW04	Soluble	Solid	DI Leach		
MB 880-17757/1-A	Method Blank	Soluble	Solid	DI Leach		
LCS 880-17757/2-A	Lab Control Sample	Soluble	Solid	DI Leach		
LCSD 880-17757/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach		
890-1868-A-3-B MS	Matrix Spike	Soluble	Solid	DI Leach		
890-1868-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach		

#### Analysis Batch: 17853

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1866-1	PH06J	Soluble	Solid	300.0	17757
890-1866-2	SW04	Soluble	Solid	300.0	17757
MB 880-17757/1-A	Method Blank	Soluble	Solid	300.0	17757
LCS 880-17757/2-A	Lab Control Sample	Soluble	Solid	300.0	17757
LCSD 880-17757/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	17757
890-1868-A-3-B MS	Matrix Spike	Soluble	Solid	300.0	17757
890-1868-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	17757

#### Job ID: 890-1866-1 SDG: 31403236.001.0129.35.02

Job ID: 890-1866-1

Matrix: Solid

SDG: 31403236.001.0129.35.02

Lab Sample ID: 890-1866-1

### Lab Chronicle

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

#### Client Sample ID: PH06J Date Collected: 01/24/22 13:00

Date Received: 01/24/22 16:09

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			17744	01/26/22 07:25	KL	XEN MID
Total/NA	Analysis	8021B		1	17745	01/26/22 12:00	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	18058	01/28/22 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17829	01/26/22 16:48	AJ	XEN MID
Total/NA	Prep	8015NM Prep			17749	01/26/22 08:19	DM	XEN MID
Total/NA	Analysis	8015B NM		1	17755	01/26/22 13:24	AJ	XEN MID
Soluble	Leach	DI Leach			17757	01/26/22 09:42	СН	XEN MID
Soluble	Analysis	300.0		1	17853	01/27/22 13:24	СН	XEN MID

### Client Sample ID: SW04

Date Collected: 01/24/22 13:10 Date Received: 01/24/22 16:09

	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			17744	01/26/22 07:25	KL	XEN MID
Total/NA	Analysis	8021B		1	17745	01/26/22 12:21	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	18058	01/28/22 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17829	01/26/22 16:48	AJ	XEN MID
Total/NA	Prep	8015NM Prep			17749	01/26/22 08:19	DM	XEN MID
Total/NA	Analysis	8015B NM		1	17755	01/26/22 13:46	AJ	XEN MID
Soluble	Leach	DI Leach			17757	01/26/22 09:42	СН	XEN MID
Soluble	Analysis	300.0		1	17853	01/26/22 19:52	СН	XEN MID

#### Laboratory References:

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

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5 6

Lab Sample ID: 890-1866-2

10

Job ID: 890-1866-1 SDG: 31403236.001.0129.35.02

# Project/Site: Remuda Basin State #2 Laboratory: Eurofins Midland

Client: WSP USA Inc.

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

thority	Pr	rogram	Identification Number	Expiration Date
xas	N	ELAP	T104704400-21-22	06-30-22
The following analytes	are included in this report, bu	ut the laboratory is not certif	fied by the governing authority. This list ma	ay include analytes for
the agency does not o	fer certification.			
the agency does not o Analysis Method	fer certification. Prep Method	Matrix	Analyte	
0,		Matrix Solid	Analyte Total TPH	

Project/Site: Remuda Basin State #2

Job ID: 890-1866-1 SDG: 31403236.001.0129.35.02

Method	Method Description	Protocol	Laboratory
3021B	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:

Client: WSP USA Inc.

ASTM = ASTM International

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

Laboratory References:

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

Eurofins Carlsbad

*'1 of 358* 66-1 5.02 3 4 ... 6 ... 7 8 9 10

### **Sample Summary**

Client: WSP USA Inc. Project/Site: Remuda Basin State #2 Job ID: 890-1866-1 SDG: 31403236.001.0129.35.02

	Depth	Received	Collected	Matrix	Client Sample ID	Lab Sample ID
	11	01/24/22 16:09	01/24/22 13:00	Solid	PH06J	890-1866-1
	0 - 4	01/24/22 16:09	01/24/22 13:10	Solid	SW04	890-1866-2
1						
1						

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sce <u>tveu</u>	i CA	Relinquished by: (Signature)	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	Circle Method(s) and Metal(s) to be analyzed				SW04	С90на		Sample Identification	Sample Custody Seals:	Cooler Custody Seals:	Received Intact:	Temperature (°C):	SAMPLE RECEIPT	Sampler's Name: C	P.O. Number:	Project Number:	Project Name:	Phone: 7:	City, State ZIP: A			Project Manager: A			)
		Signature)	ument and relinquish sie only for the cost o e of \$75.00 will be app	0 200.8 / 6020: and Metal(s) to be		-							<u> </u>	Ves No	5	Temp Blank:	Conner Shore		31403236	Remuda	720.384.7365	Arvada, Colorado 80003	4600 West 60th Avenue	WSP USA Inc.	Aimee Cole			
	N.U	Received	ment of samples cons f samples and shall nc plied to each project ar	<b>0:</b> be analyzed		-		s 1/24/2022	S 1/24/2022	+	Matrix Date Sampled	$\mathbf{X}$				Blank: Yes) No		i	31403236.001.0129.35.02	Remuda Basin State #2	1	80003	venue			Hot		
		Received by: (Signature)	titutes a valid purch: ot assume any respo nd a charge of \$5 for	8RCRA 13PPM Te TCLP / SPLP 6010:				2 1310			Time Sampled	Total Containers:	ect		σ.	Wet Ice:	Due Date	Rush: 2	Routine	Turn	Email: C	0	A	0	в	Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)	Houston,T	
			ase order from clie nsibility for any los each sample subn	M Texas 11 <i>P</i> 6010: 8RCRA				0-4		+	Depth		1.01	tair		YEO No	ate:	Rush: 24 Hr TAT		Turn Around	Email: conner.shore@wsp.com; Aimee.cole@wsp.com	City, State ZIP:	Address:	Company Name:	Bill to: (if different)	550) Phoenix,AZ	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	
	1/24/27	Date	nt compan ises or exp nitted to X	SP S			+	×	×	+	PH (E							_			wsp.cor	Carls	3104	XTO	Adria	(480-355	Dallas,T	Cha
	2 4:00	Date/Time	y to Xenc penses inc enco, but	b As Ba As Ba I				×	×	E	BTEX (	EPA 0	=80	21)							n; Aime	Carlsbad, NM 88220	3104 E Green Street	XTO Energy	Adrian Baker	-0900) A	X (214) 9 0.TX (91)	Chain of Custody
0	4 2		o, its affili urred by t not analyz	Be B Be Cd				×	×	; c	hlorid	le (EP	A 30	0.0)							e.cole@	1 88220	n Street			tlanta,GA	02-0300 5)585-3 <b>4</b> 4	f Cu
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Received by OCD: 7/8/2022 8:01:28 AM

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Released to Imaging: 9/22/2022 7:39:45 AM

1/28/2022

### Received by OCD: 7/8/2022 8:01:28 AM

EUROTINS CARISDAQ 1089 N Canal St.				, ,		I											<b>6</b> .	a eurofins	_
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Carlsbad, NM 88220 Phone. 575-988-3199 Fax: 575-988-3199	c	Citalli of Custody Record			(ecol	ġ													America
Client Information (Sub Contract Lab)	Sampler:			Lab PM Kramer	m ner Jessica	lica						Carrier Tracking No(s)	rackin	g No(s	Ĩ			COC No <sup>-</sup> 890-600 1	
Client Contact Shipping/Receiving	Phone:			E-Mail jessic	E-Mail lessica kramer@eurofinset.com	er@et	Irofin	set.cc	ă		70	State of Origin New Mexico	Origin	Ŭ				Page Page 1 of 1	
Company Eurofins Environment Testing South Centr					Accreditations Required (See note): NELAP - Louisiana, NELAP - Texas	- Loui	quired	NEL (See	AP :	Texas								Job #: 890-1866-1	
Address 1211 W Florida Ave,	Due Date Requested 1/26/2022	ġ							Analysis	<sup>n</sup> .		Recuested	٤ļ				_	Cod	les
City Midland	TAT Requested (days)	/s):																ļ	M Hexane N - None
State Zip: TX, 79701						TPH		,						<u> </u>				C - Zn Acetate D Nitric Acid E NaHSO4	O AsNaO2 P Na2O4S Q Na2SO3
Phone: 432-704-5440(Tel)	PO#:				)	) Full	e												R Na2S2O3 S - H2SO4
Email	W0#				211/2/10/10/2010	p (MOI	hloric	EX										ce DI Water	<ul> <li>ISP Dodecanyorate</li> <li>U - Acetone</li> <li>V MCAA</li> </ul>
Project Name: Remuda Basin State #2	Project #: 89000004				dia ana dia a	S_Pre	ACH	DD) B1		÷									W pH 4-5 Z other (specify)
Site:	SSOW#:					015NM	D/DI LI	Calc (M	v								2018-84 (Sec.1)	Other-	
			Sample Type	Matrix ( <sup>W=water</sup>	iltered m MS/M	DD_NM/8	GFM_28	5035FP_0	TEX_GC								lumber		
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	= <u>0</u>	S=solid, O=waste/oll, BT=Ticoux A=AL	200000000			021B/	otal_E								'otal N	Consist Inc	
	M	$L\Delta$	1200.00	ion Code:	10007	1 722	2002/A										X		
PH06J (890-1866-1)	1/24/22	13 00 Mountain		Solid		××	×	×	×								4		
SW04 (890-1866-2)	1/24/22	13 10 Mountain		Solid		X	××	×	×								-		
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leave the subject of the state	resuring social Certifia ve for analysis/tests/r ral, LLC attention imr	natrix being an natrix being lan	alyzed, the sa requested ac	mples must be creditations ar	shipped b	ack to the date in	ne Eun sturn t	vilance ofins E Ne sign	nvironi ned Chi	ut sub hent Te lin of C	oontracting sting sting	south (	atories Sentral	This LLC I	sampl aborati mplica	e shipr vry or c nce to	nent is other is Eurofi	is forwarded under ch instructions will be pro ins Environment Testi	hain-of-custody If the ovided Any changes to ting South Central LLC.
Possible Hazard Identification					San	Sample Disposal ( A	spos	al ( )	fee	nay	)e as	sess	d if	amp	les a		aine	may be assessed if samples are retained longer than 1	than 1 month)
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Custody Seals Intact: Custody Seal No ∆ Yes ∆ No						Cooler Temperature(s	emper	ature(s	റ്	and Other Remarks.	r Rem	arks,	. 、	2	5	N	Ϋ́	$\mathbb{Z}$	
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Job Number: 890-1866-1

List Source: Eurofins Carlsbad

SDG Number: 31403236.001.0129.35.02

### Login Sample Receipt Checklist

Client: WSP USA Inc.

Login Number: 1866 List Number: 1

<6mm (1/4").

Creator: Olivas, Nathaniel

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	N/A	

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### Login Sample Receipt Checklist

Client: WSP USA Inc.

<6mm (1/4").

Job Number: 890-1866-1 SDG Number: 31403236.001.0129.35.02

List Source: Eurofins Midland

List Creation: 01/26/22 11:25 AM

Login Number: 1866 List Number: 2 Creator: Kramer, Jessica

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	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	N/A	

**Eurofins Carlsbad** Released to Imaging: 9/22/2022 7:39:45 AM Received by OCD: 7/8/2022 8:01:28 AM

# 🔅 eurofins

# Environment Testing America

# **ANALYTICAL REPORT**

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

### Laboratory Job ID: 890-1871-1

Laboratory Sample Delivery Group: 31403236.001.0129.35.02 Client Project/Site: Remuda Basin State #2

### For:

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

Attn: Aimee Cole

RAMER

Authorized for release by: 1/28/2022 12:27:24 PM

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

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

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Laboratory Job ID: 890-1871-1 SDG: 31403236.001.0129.35.02

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Qualifiana
Qualifiers

Qualifiers		3
GC VOA		
Qualifier	Qualifier Description	
F1	MS and/or MSD recovery exceeds control limits.	_
F2	MS/MSD RPD exceeds control limits	5
S1-	Surrogate recovery exceeds control limits, low biased.	
S1+	Surrogate recovery exceeds control limits, high biased.	
U	Indicates the analyte was analyzed for but not detected.	
GC Semi VO	Α.	
Qualifier	Qualifier Description	_
S1-	Surrogate recovery exceeds control limits, low biased.	8
S1+	Surrogate recovery exceeds control limits, high biased.	
U	Indicates the analyte was analyzed for but not detected.	9
HPLC/IC		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
Glossary		
Abbreviation	These commonly used abbreviations may or may not be present in this report.	
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis	
%R	Percent Recovery	
	Contains Free Liquid	

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

Project/Site: Remuda Basin State #2

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Job ID: 890-1871-1 SDG: 31403236.001.0129.35.02

#### Job ID: 890-1871-1

Client: WSP USA Inc.

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-1871-1

#### Receipt

The samples were received on 1/25/2022 4:05 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 1.8°C

#### GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-17863, 880-17863 and 880-17866 and analytical batch 880-17867 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: FS02 (890-1871-1), SW02 (890-1871-2), (LCSD 880-17886/2-A), (880-10599-A-4-B MS), (880-10599-A-4-C MSD) and (880-10654-A-21-B MSD). Evidence of matrix interferences is not obvious.

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: Surrogate recovery for the following samples were outside control limits: (MB 880-17880/1-A) and (890-1866-A-1-J MSD). Evidence of matrix interferences is not obvious.

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: WSP USA Inc.

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Job ID: 890-1871-1 SDG: 31403236.001.0129.35.02

# Lab Sample ID: 890-1871-1

Matrix: Solid

5

Client Sample ID: FS02 Date Collected: 01/25/22 13:55 Date Received: 01/25/22 16:05 Sample Depth: 6

Project/Site: Remuda Basin State #2

Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		01/27/22 08:03	01/27/22 13:03	
Toluene	<0.00202	U	0.00202	mg/Kg		01/27/22 08:03	01/27/22 13:03	
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		01/27/22 08:03	01/27/22 13:03	
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		01/27/22 08:03	01/27/22 13:03	
o-Xylene	<0.00202	U	0.00202	mg/Kg		01/27/22 08:03	01/27/22 13:03	
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		01/27/22 08:03	01/27/22 13:03	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	139	S1+	70 - 130			01/27/22 08:03	01/27/22 13:03	
1,4-Difluorobenzene (Surr)	91		70 - 130			01/27/22 08:03	01/27/22 13:03	
Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00403	U	0.00403	mg/Kg			01/27/22 20:27	
Method: 8015 NM - Diesel Range	Organics (DR	<b>) (GC)</b>						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<49.9	U	49.9	mg/Kg			01/27/22 16:10	
Method: 8015B NM - Diesel Rang	e Organics (DI	<b>RO) (GC)</b>						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics	<49.9	U	49.9	mg/Kg		01/27/22 09:51	01/27/22 13:31	
GRO)-C6-C10								
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		01/27/22 09:51	01/27/22 13:31	
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/27/22 09:51	01/27/22 13:31	
Surrogate		Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	116		70 - 130			01/27/22 09:51	01/27/22 13:31	
p-Terphenyl	117		70 - 130			01/27/22 09:51	01/27/22 13:31	
Method: 300.0 - Anions, Ion Chro						-		
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	179		4.98	mg/Kg			01/28/22 01:39	
lient Sample ID: SW02						Lab San	nple ID: 890-	1871-2
ate Collected: 01/25/22 14:00							Matri	x: Solie
ate Received: 01/25/22 16:05								
ample Depth: 0 - 6								
Method: 8021B - Volatile Organic	• •				-	<b>D</b>	A 1. ·	<b>B</b>
Analyte		Qualifier	RL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fa
Senzene			0.00200	mg/Kg		01/27/22 08:03	01/27/22 13:23	
		U	0.00200	mg/Kg		01/27/22 08:03	01/27/22 13:23	
Ethylbenzene	< 0.00200	U	0.00200	ma/Ka		01/27/22 08:03	01/27/22 13:23	

#### Ethylbenzene <0.00200 U 0.00200 mg/Kg 01/27/22 08:03 01/27/22 13:23 1 <0.00401 U 0.00401 01/27/22 08:03 01/27/22 13:23 m-Xylene & p-Xylene mg/Kg 1 01/27/22 08:03 o-Xylene <0.00200 U 0.00200 01/27/22 13:23 mg/Kg 1 Xylenes, Total <0.00401 U 0.00401 mg/Kg 01/27/22 08:03 01/27/22 13:23 1 Surrogate %Recovery Qualifier Limits Prepared Dil Fac Analyzed 4-Bromofluorobenzene (Surr) 133 S1+ 70 - 130 01/27/22 08:03 01/27/22 13:23 1

# **Client Sample Results**

Job ID: 890-1871-1 SDG: 31403236.001.0129.35.02

# Lab Sample ID: 890-1871-2

Matrix: Solid

5

Client Sample ID: SW02 Date Collected: 01/25/22 14:00 Date Received: 01/25/22 16:05

Sample Depth: 0 - 6

Client: WSP USA Inc.

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1,4-Difluorobenzene (Surr)	106		70 - 130			01/27/22 08:03	01/27/22 13:23	
Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00401	U	0.00401	mg/Kg			01/27/22 20:27	
Method: 8015 NM - Diesel Range	Organics (DR	0) (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<50.0	U	50.0	mg/Kg			01/27/22 16:10	
Method: 8015B NM - Diesel Rang	e Organics (D	RO) (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		01/27/22 09:51	01/27/22 13:52	
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		01/27/22 09:51	01/27/22 13:52	
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/27/22 09:51	01/27/22 13:52	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	127		70 - 130			01/27/22 09:51	01/27/22 13:52	
o-Terphenyl	119		70 - 130			01/27/22 09:51	01/27/22 13:52	
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	268		4.97	mg/Kg			01/28/22 01:46	
lient Sample ID: SW03						Lab San	nple ID: 890-	1871-3
ate Collected: 01/25/22 14:05							Matri	x: Solio

Sample Depth: 0 - 6

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/27/22 08:03	01/27/22 13:44	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/27/22 08:03	01/27/22 13:44	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/27/22 08:03	01/27/22 13:44	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/27/22 08:03	01/27/22 13:44	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/27/22 08:03	01/27/22 13:44	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/27/22 08:03	01/27/22 13:44	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	129		70 - 130			01/27/22 08:03	01/27/22 13:44	1
1,4-Difluorobenzene (Surr)	98		70 - 130			01/27/22 08:03	01/27/22 13:44	1
- Method: Total BTEX - Total B	TEX Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			01/27/22 20:27	1
Method: 8015 NM - Diesel Rai	nge Organics (DR	O) (GC)						
					_			
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Matrix: Solid

5

# **Client Sample Results**

Job ID: 890-1871-	1
SDG: 31403236.001.0129.35.0	2

# Client Sample ID: SW03

Date Collected: 01/25/22 14:05 Date Received: 01/25/22 16:05

# Lab Sample ID: 890-1871-3

|--|

Client: WSP USA Inc.

Method: 8015B NM - Diesel Rang	e Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/27/22 09:51	01/27/22 14:13	1
Diesel Range Organics (Over C10-C28)	60.1		50.0	mg/Kg		01/27/22 09:51	01/27/22 14:13	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/27/22 09:51	01/27/22 14:13	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	125		70 - 130			01/27/22 09:51	01/27/22 14:13	1
o-Terphenyl	123		70 - 130			01/27/22 09:51	01/27/22 14:13	1
- Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	424		4.95	mg/Kg			01/28/22 01:54	1

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# **Surrogate Summary**

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

Job ID: 890-1871-1 SDG: 31403236.001.0129.35.02

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

Γ				Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)		
880-10599-A-4-B MS	Matrix Spike	70	57 S1-		
880-10599-A-4-C MSD	Matrix Spike Duplicate	162 S1+	91		
890-1871-1	FS02	139 S1+	91		17
890-1871-2	SW02	133 S1+	106		
890-1871-3	SW03	129	98		
LCS 880-17863/1-A	Lab Control Sample	108	98		
LCSD 880-17863/2-A	Lab Control Sample Dup	105	86		
MB 880-17863/5-A	Method Blank	104	93		
Surrogate Legend					1

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

# Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
ab Sample ID	Client Sample ID	(70-130)	(70-130)	
1866-A-1-I MS	Matrix Spike	70	73	
1866-A-1-J MSD	Matrix Spike Duplicate	74	65 S1-	
871-1	FS02	116	117	
871-2	SW02	127	119	
-1871-3	SW03	125	123	

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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

Matrix: Solid				Prep Type: Total/NA
				Percent Surrogate Recovery (Acceptance Limits)
		1CO2	OTPH2	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
LCS 880-17880/2-A	Lab Control Sample	99	109	
LCSD 880-17880/3-A	Lab Control Sample Dup	93	94	
MB 880-17880/1-A	Method Blank	159 S1+	168 S1+	

# Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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Duese Truess Tetal/NLA

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

# Lab Sample ID: MB 880-17863/5-A Matrix: Solid

Analysis Batch: 17867

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/27/22 08:03	01/27/22 11:40	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/27/22 08:03	01/27/22 11:40	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/27/22 08:03	01/27/22 11:40	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/27/22 08:03	01/27/22 11:40	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/27/22 08:03	01/27/22 11:40	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/27/22 08:03	01/27/22 11:40	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130			01/27/22 08:03	01/27/22 11:40	1
1,4-Difluorobenzene (Surr)	93		70 - 130			01/27/22 08:03	01/27/22 11:40	1

# Lab Sample ID: LCS 880-17863/1-A Matrix: Solid

# Analysis Batch: 17867

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.07807		mg/Kg		78	70 - 130	
Toluene	0.100	0.07443		mg/Kg		74	70 - 130	
Ethylbenzene	0.100	0.07762		mg/Kg		78	70 - 130	
m-Xylene & p-Xylene	0.200	0.1650		mg/Kg		83	70 - 130	
o-Xylene	0.100	0.08230		mg/Kg		82	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

# Lab Sample ID: LCSD 880-17863/2-A

# Matrix: Solid

	Analysis Batch: 17867							Prep	Batch:	17863
		Spike	LCSD	LCSD				%Rec.		RPD
	Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
	Benzene	0.100	0.07959		mg/Kg		80	70 - 130	2	35
	Toluene	0.100	0.07701		mg/Kg		77	70 - 130	3	35
	Ethylbenzene	0.100	0.08359		mg/Kg		84	70 - 130	7	35
	m-Xylene & p-Xylene	0.200	0.1715		mg/Kg		86	70 - 130	4	35
	o-Xylene	0.100	0.08472		mg/Kg		85	70 - 130	3	35
I										

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	86		70 - 130

# Lab Sample ID: 880-10599-A-4-B MS Matrix: Solid

# Analysis Potoby 17967

Analysis Batch: 17867									Prep	Batch: 17863
	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00198	U F1	0.0990	0.01665	F1	mg/Kg		17	70 - 130	
Toluene	<0.00198	U F1 F2	0.0990	0.008089	F1	mg/Kg		8	70 - 130	

**Eurofins Carlsbad** 

Prep Type: Total/NA

**Client Sample ID: Matrix Spike** 

**Client Sample ID: Lab Control Sample** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Type: Total/NA

Prep Batch: 17863

Client: WSP USA Inc. Project/Site: Remuda Basin State #2 Page 186 of 358

Job ID: 890-1871-1 SDG: 31403236.001.0129.35.02

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

ab Sample ID: 880-10599-A-4-B	MS										Client S	Sample ID:	Matrix	Spike
Matrix: Solid													ype: To	
nalysis Batch: 17867													Batch:	
	Sample	Sam	ple	Spike		MS	MS					%Rec.		
nalyte	Result		-	Added		Result	Qualifier	Unit		D	%Rec	Limits		
hylbenzene	<0.00198	U F1		0.0990		0.01789	F1	mg/Kg			18	70 - 130		
Xylene & p-Xylene	<0.00397			0.198		0.02358		mg/Kg			12	70 - 130		
Xylene	< 0.00198			0.0990		0.04114		mg/Kg			42	70 - 100 70 - 130		
(yiene	-0.00100	011	12	0.0000		0.04114		mg/rtg			-12	10 - 100		
	MS	MS												
urrogate	%Recovery	Qua	lifier	Limits										
Bromofluorobenzene (Surr)	70			70 - 130										
4-Difluorobenzene (Surr)	57	S1-		70 - 130										
ab Sample ID: 880-10599-A-4-C	MSD							•	Clien	t Sa	mple ID:	: Matrix Sp	ike Dup	olicate
atrix: Solid												Prep T	ype: To	tal/NA
nalysis Batch: 17867												Prep	Batch:	17863
	Sample	Sam	ple	Spike		MSD	MSD					%Rec.		RPD
nalyte	Result	Qual	lifier	Added		Result	Qualifier	Unit		D	%Rec	Limits	RPD	Limit
enzene	<0.00198	U F1		0.0996		0.01314	F1	mg/Kg			13	70 - 130	24	35
luene	<0.00198	U F1	F2	0.0996		0.01615	F1 F2	mg/Kg			16	70 - 130	67	35
hylbenzene	<0.00198	U F1		0.0996		0.01992	F1	mg/Kg			20	70 - 130	11	35
-Xylene & p-Xylene	<0.00397	UF1	F2	0.199		0.04936	F1 F2	mg/Kg			25	70 - 130	71	35
Xylene	<0.00198			0.0996		0.02546		mg/Kg			26	70 - 130	47	35
								5 5						
	MSD	MSD	)											
urrogate	%Recovery	Qua	lifier	Limits										
Bromofluorobenzene (Surr)	162	S1+		70 _ 130										
4-Difluorobenzene (Surr)	91			70 - 130										
ethod: 8015B NM - Diesel F ab Sample ID: MB 880-17880/1-/		<u> </u>		- / ( - /							Client Sa	ample ID: I	Method	Blank
as Jampie ID. Nib 000-1/000/1-												Prep T	ype: To	
Ab Sample ID. MB 880-17880/1-/														
latrix: Solid														
latrix: Solid		МВ	МВ										Batch:	
latrix: Solid nalysis Batch: 17882	R		MB Qualifier		RL		Unit		D	Pr	epared	Prep	Batch:	
latrix: Solid nalysis Batch: 17882 nalyte		esult	Qualifier		<b>RL</b> 50.0						epared 7/22 09:51		Batch:	17880
latrix: Solid nalysis Batch: 17882 nalyte asoline Range Organics			Qualifier				Unit mg/K	g			•	Prep Analyz	Batch:	17880 Dil Fac
Iatrix: Solid         nalysis Batch: 17882         nalyte         asoline Range Organics         GRO)-C6-C10         iesel Range Organics (Over	<	esult	Qualifier U					-	(	01/27	•	Prep Analyz	Batch: ed 11:24	17880 Dil Fac
	<	sult 50.0	<b>Qualifier</b> U U		50.0		mg/K	g	(	01/27 01/27	7/22 09:51	Prep Analyz 01/27/22	Batch: ed 11:24 11:24	<b>17880</b> Dil Fac
Iatrix: Solid         nalysis Batch: 17882         nalyte         asoline Range Organics         GRO)-C6-C10         iesel Range Organics (Over         10-C28)		esult 50.0 50.0 50.0 50.0 <b>MB</b>	Qualifier U U MB		50.0 50.0		mg/K	g	(	01/27 01/27	7/22 09:51 7/22 09:51	Prep Analyz 01/27/22	Batch: ed 11:24 11:24	<b>Dil Fac</b> 1 1
latrix: Solid nalysis Batch: 17882 asoline Range Organics GRO)-C6-C10 iesel Range Organics (Over 10-C28) II Range Organics (Over C28-C36)		esult 50.0 50.0 50.0 50.0 MB overy	Qualifier U U MB Qualifier		50.0 50.0 50.0		mg/K	g	(	01/27 01/27 01/27 <b>Pr</b>	7/22 09:51 7/22 09:51 7/22 09:51 7/22 09:51	Prep <u>Analyz</u> 01/27/22 · 01/27/22 · 01/27/22 · Analyz	Batch: ed 11:24 11:24 11:24 ed	<b>Dil Fac</b> 1 1 1 1 D <i>il Fac</i>
atrix: Solid nalysis Batch: 17882 asoline Range Organics iRO)-C6-C10 esel Range Organics (Over 10-C28) Il Range Organics (Over C28-C36)		esult 50.0 50.0 50.0 50.0 MB overy 159	Qualifier U U U MB Qualifier S1+		50.0 50.0 50.0		mg/K	g	(	01/27 01/27 01/27 <b>Pr</b>	7/22 09:51 7/22 09:51 7/22 09:51	Prep Analyz 01/27/22 - 01/27/22 - 01/27/22 -	Batch: ed 11:24 11:24 11:24 ed	<b>Dil Fac</b> 1 1
atrix: Solid nalysis Batch: 17882 Isoline Range Organics RO)-C6-C10 esel Range Organics (Over 0-C28) I Range Organics (Over C28-C36) Irrogate Chlorooctane		esult 50.0 50.0 50.0 50.0 MB overy 159	Qualifier U U MB Qualifier		50.0 50.0 50.0 <i>its</i> 130		mg/K	g		01/27 01/27 01/27 <b>Pr</b> 01/27	7/22 09:51 7/22 09:51 7/22 09:51 7/22 09:51	Prep <u>Analyz</u> 01/27/22 · 01/27/22 · 01/27/22 · Analyz	<b>Batch:</b> ed 111:24 111:24 111:24 ed 111:24 	<b>Dil Fac</b> 1 1 1 1 D <i>il Fac</i>
Iatrix: Solid         nalysis Batch: 17882         nalyte         asoline Range Organics         SRO)-C6-C10         iesel Range Organics (Over         10-C28)         II Range Organics (Over C28-C36)         urrogate         Chlorooctane         Terphenyl	<	esult 50.0 50.0 50.0 50.0 MB overy 159	Qualifier U U U MB Qualifier S1+	70 -	50.0 50.0 50.0 <i>its</i> 130		mg/K	g	( ( ( ( (	01/27 01/27 01/27 01/27 01/27	7/22 09:51 7/22 09:51 7/22 09:51 7/22 09:51 7/22 09:51 7/22 09:51	Prep Analyz 01/27/22 · 01/27/22 · 01/27/22 · Analyz 01/27/22 01/27/22	<b>Batch:</b> ed 111:24 111:24 111:24 ed 111:24 111:24 111:24	<b>17880</b> <b>Dil Fac</b> 1 1 1 <b>Dil Fac</b> 1 1 1
atrix: Solid nalysis Batch: 17882 asoline Range Organics GRO)-C6-C10 esel Range Organics (Over 10-C28) Il Range Organics (Over C28-C36) Il rogate Chlorooctane Terphenyl ab Sample ID: LCS 880-17880/2	<	esult 50.0 50.0 50.0 50.0 MB overy 159	Qualifier U U U MB Qualifier S1+	70 -	50.0 50.0 50.0 <i>its</i> 130		mg/K	g	( ( ( ( (	01/27 01/27 01/27 01/27 01/27	7/22 09:51 7/22 09:51 7/22 09:51 7/22 09:51 7/22 09:51 7/22 09:51	Prep Analyz 01/27/22 - 01/27/22 - 01/27/22 - 01/27/22 - 01/27/22 01/27/22 01/27/22 - 01/27/22 -	Batch:           ed           11:24           11:24           11:24           11:24           11:24           11:24           11:24           ed           11:24           ed           11:24	17880 <u>Dil Fac</u> 1 1 1 <i>Dil Fac</i> 1 1 ample
latrix: Solid malysis Batch: 17882 asoline Range Organics GRO)-C6-C10 iesel Range Organics (Over 10-C28) Il Range Organics (Over C28-C36) urrogate Chlorooctane Terphenyl ab Sample ID: LCS 880-17880/2 latrix: Solid	<	esult 50.0 50.0 50.0 50.0 MB overy 159	Qualifier U U U MB Qualifier S1+	70 -	50.0 50.0 50.0 <i>its</i> 130		mg/K	g	( ( ( ( (	01/27 01/27 01/27 01/27 01/27	7/22 09:51 7/22 09:51 7/22 09:51 7/22 09:51 7/22 09:51 7/22 09:51	Prep Analyz 01/27/22 - 01/27/22 - 01/27/22 - 01/27/22 01/27/22 1D: Lab Cc Prep T	Batch:           ed           11:24           11:24           11:24           11:24           11:24           11:24           11:24           optrol Saturd Saturdation           Saturdation           Saturdation	17880 Dil Fac 1 1 1 1 <i>Dil Fac</i> 1 1 ample tal/NA
latrix: Solid nalysis Batch: 17882 nalyte asoline Range Organics GRO)-C6-C10 iesel Range Organics (Over 10-C28) Il Range Organics (Over C28-C36) urrogate Chlorooctane Terphenyl ab Sample ID: LCS 880-17880/2 latrix: Solid	<	esult 50.0 50.0 50.0 50.0 MB overy 159	Qualifier U U U MB Qualifier S1+	70 - 1 70 - 1	50.0 50.0 50.0 <i>its</i> 130		mg/Ki	g	( ( ( ( (	01/27 01/27 01/27 01/27 01/27	7/22 09:51 7/22 09:51 7/22 09:51 7/22 09:51 7/22 09:51 7/22 09:51	Prep Analyz 01/27/22 - 01/27/22 - 01/27/22 - 01/27/22 01/27/22 01/27/22 ID: Lab Cc Prep T Prep	Batch:           ed           11:24           11:24           11:24           11:24           11:24           11:24           11:24           ed           11:24           ed           11:24	17880 Dil Fac 1 1 1 1 <i>Dil Fac</i> 1 1 ample tal/NA
atrix: Solid nalysis Batch: 17882 asoline Range Organics (RO)-C6-C10 esel Range Organics (Over 10-C28) I Range Organics (Over C28-C36) Irrogate Chlorooctane Terphenyl ab Sample ID: LCS 880-17880/2 atrix: Solid nalysis Batch: 17882	<	esult 50.0 50.0 50.0 50.0 MB overy 159	Qualifier U U U MB Qualifier S1+	70 - 7	50.0 50.0 50.0 <i>its</i> 130	LCS	mg/K mg/K mg/K	9	( ( ( ( (	01/27 01/27 01/27 <i>Pr</i> 01/27 01/27 01/27 <b>ent</b>	7/22 09:51 7/22 09:51 7/22 09:51 7/22 09:51 7/22 09:51 7/22 09:51 Sample	Prep Analyz 01/27/22 - 01/27/22 - 01/27/22 - 01/27/22 - 01/27/22 01/27/22 1D: Lab Cc Prep T Prep %Rec.	Batch:           ed           11:24           11:24           11:24           11:24           11:24           11:24           11:24           optrol Saturd Saturdation           Saturdation           Saturdation	17880 Dil Fac 1 1 1 1 <i>Dil Fac</i> 1 1 ample tal/NA
atrix: Solid nalysis Batch: 17882 asoline Range Organics iRO)-C6-C10 esel Range Organics (Over 10-C28) Il Range Organics (Over C28-C36) Il Range Organics (Over C28-C	<	esult 50.0 50.0 50.0 50.0 MB overy 159	Qualifier U U U MB Qualifier S1+	70 - 70 - 70 - Spike Added	50.0 50.0 50.0 <i>its</i> 130	Result	mg/Ki	g g	( ( ( ( (	01/27 01/27 01/27 01/27 01/27	7/22 09:51 7/22 09:51 7/22 09:51 7/22 09:51 7/22 09:51 7/22 09:51 Sample	Prep Analyz 01/27/22 - 01/27/22 - 01/27/22 - 01/27/22 - 01/27/22 01/27/22 1D: Lab Cc Prep T Prep %Rec. Limits	Batch:           ed           11:24           11:24           11:24           11:24           11:24           11:24           11:24           optrol Saturd Saturdation           Saturdation           Saturdation	17880 Dil Fac 1 1 1 1 <i>Dil Fac</i> 1 1 ample tal/NA
latrix: Solid nalysis Batch: 17882 nalyte asoline Range Organics GRO)-C6-C10 iesel Range Organics (Over 10-C28) Il Range Organics (Over C28-C36) urrogate Chlorooctane .Terphenyl ab Sample ID: LCS 880-17880/2	<	esult 50.0 50.0 50.0 50.0 MB overy 159	Qualifier U U U MB Qualifier S1+	70 - 7	50.0 50.0 50.0 <i>its</i> 130		mg/K mg/K mg/K	9	( ( ( ( (	01/27 01/27 01/27 <i>Pr</i> 01/27 01/27 01/27 <b>ent</b>	7/22 09:51 7/22 09:51 7/22 09:51 7/22 09:51 7/22 09:51 7/22 09:51 Sample	Prep Analyz 01/27/22 - 01/27/22 - 01/27/22 - 01/27/22 - 01/27/22 01/27/22 1D: Lab Cc Prep T Prep %Rec.	Batch:           ed           11:24           11:24           11:24           11:24           11:24           11:24           11:24           optrol Saturd Saturdation           Saturdation           Saturdation	17880 Dil Fac 1 1 1 1 <i>Dil Fac</i> 1 1 ample tal/NA

Diesel Range Organics (Over

C10-C28)

1044

mg/Kg

104

70 - 130

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

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

Lab Sample ID: LCS 880-1788 Matrix: Solid Analysis Batch: 17882	0/2-A						Client	Sample		ontrol Sa ype: Tot Batch:	tal/NA
		LCS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	99		70 <u>-</u> 130								
o-Terphenyl	109		70 - 130								
Lab Sample ID: LCSD 880-178	80/3-A					Clier	nt Sam	ple ID:	Lab Contro		
Matrix: Solid										ype: Tot	
Analysis Batch: 17882										Batch:	
			Spike		LCSD				%Rec.		RPD
Analyte			Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics			1000	894.5		mg/Kg		89	70 - 130	0	20
(GRO)-C6-C10			1000	002.6		malla		00	70 120	F	20
Diesel Range Organics (Over C10-C28)			1000	992.6		mg/Kg		99	70 - 130	5	20
010-028)											
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	93		70 - 130								
o-Terphenyl	94		70 - 130								
Lab Sample ID: 890-1866-A-1- Matrix: Solid Analysis Batch: 17882		0	0- iler	мо	мо			Client	Prep	: Matrix ype: Tot Batch:	tal/NA
		Sample	Spike	MS	MS		_	~ =	%Rec.		
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics	<49.9	U	997	1202		mg/Kg		121	70 - 130		
(GRO)-C6-C10 Diesel Range Organics (Over	<49.9	U	997	1078		mg/Kg		108	70 - 130		
C10-C28)											
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	70		70 - 130								
o-Terphenyl	73		70 - 130								
Lab Sample ID: 890-1866-A-1-	J MSD					Cli	ient Sa	ample IC	): Matrix Sp	oike Dup	licate
Matrix: Solid									Prep 1	ype: Tot	tal/NA
Analysis Batch: 17882									Prep	Batch:	17880
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	<49.9	U	996	1170		mg/Kg		117	70 - 130	3	20
(GRO)-C6-C10											
Diesel Range Organics (Over	<49.9	U	996	1078		mg/Kg		108	70 - 130	0	20
C10-C28)											
	MSD	MSD									
Surrogate											
	%Recovery	Qualifier	Limits								

Job ID: 890-1871-1 SDG: 31403236.001.0129.35.02

Eurofins Carlsbad

o-Terphenyl

70 - 130

65 S1-

Client: WSP USA Inc.

# **QC Sample Results**

Job ID: 890-1871-1 SDG: 31403236.001.0129.35.02

Project/Site: Remuda Basin State #2 Method: 300.0 - Anions, Ion Chromatography

 Lab Sample ID: MB 880-17944/1-/	A							Client	Sample ID	: Method	Blank
Matrix: Solid									Prej	o Type: S	oluble
Analysis Batch: 17946											
		MB MB									
Analyte	Re	sult Qualifier	r	RL	Uni	t	D	Prepared	Anal	yzed	Dil Fac
Chloride	<	5.00 U		5.00	mg/	Кg			01/27/2	2 14:48	1
	-A						Clie	ent Samp	le ID: Lab (	Control S	ample
Matrix: Solid									Prej	o Type: S	oluble
Analysis Batch: 17946											
			Spike	LCS	LCS				%Rec.		
Analyte			Added	Resul	Qualifier	Unit		D %Rec	Limits		
Chloride			250	273.9	)	mg/Kg		110	90 - 110		
Lab Sample ID: LCSD 880-17944	′3-A					CI	ient S	ample ID	: Lab Conti	ol Sampl	le Dup
Matrix: Solid									Pre	o Type: S	oluble
Analysis Batch: 17946											
			Spike	LCSE	LCSD				%Rec.		RPD
Analyte			Added	Resul	Qualifier	Unit		D %Rec	Limits	RPD	Limit
Chloride			250	273.6	5	mg/Kg		109	90 - 110	0	20
	B MS							Clier	nt Sample I	D: Matrix	Spike
Matrix: Solid									Prej	o Type: S	oluble
Analysis Batch: 17946											
	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Resul	t Qualifier	Unit		D %Rec	Limits		
Chloride	240		248	506.7	,	mg/Kg		108	90 - 110		
	C MSD						Client	Sample	ID: Matrix S	Spike Du	plicate
Matrix: Solid										· · · · · · · · · · · · · · · · · · ·	
Analysis Batch: 17946											
-	Sample	Sample	Spike	MSE	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Resul	t Qualifier	Unit		D %Rec	Limits	RPD	Limit
Chloride	240		248	499.0	)	mg/Kg		105	90 - 110	2	20

# **QC Association Summary**

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

Job ID: 890-1871-1 SDG: 31403236.001.0129.35.02

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# 8 9 10 11 12

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
390-1871-1	FS02	Total/NA	Solid	5035	
390-1871-2	SW02	Total/NA	Solid	5035	
890-1871-3	SW03	Total/NA	Solid	5035	
MB 880-17863/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-17863/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-17863/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-10599-A-4-B MS	Matrix Spike	Total/NA	Solid	5035	
880-10599-A-4-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

# Analysis Batch: 17867

GC VOA

.ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
90-1871-1	FS02	Total/NA	Solid	8021B	17863
90-1871-2	SW02	Total/NA	Solid	8021B	17863
90-1871-3	SW03	Total/NA	Solid	8021B	17863
/IB 880-17863/5-A	Method Blank	Total/NA	Solid	8021B	17863
.CS 880-17863/1-A	Lab Control Sample	Total/NA	Solid	8021B	17863
CSD 880-17863/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	17863
80-10599-A-4-B MS	Matrix Spike	Total/NA	Solid	8021B	17863
80-10599-A-4-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	17863

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1871-1	FS02	Total/NA	Solid	Total BTEX	
890-1871-2	SW02	Total/NA	Solid	Total BTEX	
890-1871-3	SW03	Total/NA	Solid	Total BTEX	

# GC Semi VOA

# Prep Batch: 17880

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1871-1	FS02	Total/NA	Solid	8015NM Prep	
890-1871-2	SW02	Total/NA	Solid	8015NM Prep	
890-1871-3	SW03	Total/NA	Solid	8015NM Prep	
MB 880-17880/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-17880/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-17880/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1866-A-1-I MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-1866-A-1-J MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

# Analysis Batch: 17882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1871-1	FS02	Total/NA	Solid	8015B NM	17880
890-1871-2	SW02	Total/NA	Solid	8015B NM	17880
890-1871-3	SW03	Total/NA	Solid	8015B NM	17880
MB 880-17880/1-A	Method Blank	Total/NA	Solid	8015B NM	17880
LCS 880-17880/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	17880
LCSD 880-17880/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	17880
890-1866-A-1-I MS	Matrix Spike	Total/NA	Solid	8015B NM	17880
890-1866-A-1-J MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	17880

**Client Sample ID** 

**Client Sample ID** 

FS02

SW02 SW03

FS02

SW02

SW03

Method Blank

Matrix Spike

Lab Control Sample

Lab Control Sample Dup

Matrix Spike Duplicate

GC Semi VOA

Lab Sample ID

890-1871-1

890-1871-2

890-1871-3 HPLC/IC

Analysis Batch: 17951

Leach Batch: 17944

Lab Sample ID

890-1871-1

890-1871-2

890-1871-3

MB 880-17944/1-A

LCS 880-17944/2-A

LCSD 880-17944/3-A

880-10422-A-20-B MS

SDG: 31403236.001.0129.35.02

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Prep Type	Matrix	Method	Prep Batch	
 Total/NA	Solid	8015 NM		
Total/NA	Solid	8015 NM		5
Total/NA	Solid	8015 NM		6
Ргер Туре	Matrix	Method	Prep Batch	8
 Soluble	Solid	DI Leach		
Soluble	Solid	DI Leach		0
Soluble	Solid	DI Leach		3
Soluble	Solid	DI Leach		
Soluble	Solid	DI Leach		
Soluble	Solid	DI Leach		
Soluble	Solid	DI Leach		
Soluble	Solid	DI Leach		
Prep Type	Matrix	Method	Prep Batch	13
 Soluble	Solid	300.0	17944	

# 880-10422-A-20-C MSD Analysis Batch: 17946

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1871-1	FS02	Soluble	Solid	300.0	17944
890-1871-2	SW02	Soluble	Solid	300.0	17944
890-1871-3	SW03	Soluble	Solid	300.0	17944
MB 880-17944/1-A	Method Blank	Soluble	Solid	300.0	17944
LCS 880-17944/2-A	Lab Control Sample	Soluble	Solid	300.0	17944
LCSD 880-17944/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	17944
880-10422-A-20-B MS	Matrix Spike	Soluble	Solid	300.0	17944
880-10422-A-20-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	17944

Job ID: 890-1871-1 SDG: 31403236.001.0129.35.02

# Lab Sample ID: 890-1871-1 Matrix: Solid

Client Sample ID: FS02 Date Collected: 01/25/22 13:55 Date Received: 01/25/22 16:05

Client: WSP USA Inc.

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			17863	01/27/22 08:03	KL	XEN MID
Total/NA	Analysis	8021B		1	17867	01/27/22 13:03	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	17973	01/27/22 20:27	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17951	01/27/22 16:10	AJ	XEN MID
Total/NA	Prep	8015NM Prep			17880	01/27/22 09:51	DM	XEN MID
Total/NA	Analysis	8015B NM		1	17882	01/27/22 13:31	AJ	XEN MID
Soluble	Leach	DI Leach			17944	01/27/22 14:21	СН	XEN MID
Soluble	Analysis	300.0		1	17946	01/28/22 01:39	СН	XEN MID

# Client Sample ID: SW02

# Date Collected: 01/25/22 14:00

Date Received: 01/25/22 16:05

	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			17863	01/27/22 08:03	KL	XEN MID
Total/NA	Analysis	8021B		1	17867	01/27/22 13:23	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	17973	01/27/22 20:27	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17951	01/27/22 16:10	AJ	XEN MID
Total/NA	Prep	8015NM Prep			17880	01/27/22 09:51	DM	XEN MID
Total/NA	Analysis	8015B NM		1	17882	01/27/22 13:52	AJ	XEN MID
Soluble	Leach	DI Leach			17944	01/27/22 14:21	СН	XEN MID
Soluble	Analysis	300.0		1	17946	01/28/22 01:46	СН	XEN MID

# Client Sample ID: SW03

# Date Collected: 01/25/22 14:05 Date Received: 01/25/22 16:05

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			17863	01/27/22 08:03	KL	XEN MID
Total/NA	Analysis	8021B		1	17867	01/27/22 13:44	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	17973	01/27/22 20:27	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	17951	01/27/22 16:10	AJ	XEN MID
Total/NA	Prep	8015NM Prep			17880	01/27/22 09:51	DM	XEN MID
Total/NA	Analysis	8015B NM		1	17882	01/27/22 14:13	AJ	XEN MID
Soluble	Leach	DI Leach			17944	01/27/22 14:21	СН	XEN MID
Soluble	Analysis	300.0		1	17946	01/28/22 01:54	СН	XEN MID

#### Laboratory References:

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

Lab Sample ID: 890-1871-2 Matrix: Solid

Lab Sample ID: 890-1871-3

Matrix: Solid

: Solid

10

Job ID: 890-1871-1 SDG: 31403236.001.0129.35.02

# Project/Site: Remuda Basin State #2 Laboratory: Eurofins Midland

Client: WSP USA Inc.

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

uthority	P	rogram	Identification Number	Expiration Date 06-30-22	
exas	N	ELAP	T104704400-21-22		
The following analytes	are included in this report, b	ut the laboratory is not certifi	ied by the governing authority. This list ma	ay include analytes for v	
the agency does not o		Matrix	Analyta		
the agency does not o Analysis Method	fer certification. Prep Method	Matrix	Analyte		
the agency does not o		Matrix Solid	Analyte Total TPH		

Job ID: 890-1871-1 SDG: 31403236.001.0129.35.02

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

#### Protocol References:

Client: WSP USA Inc.

ASTM = ASTM International

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

Laboratory References:

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

Eurofins Carlsbad

Released to Imaging: 9/22/2022 7:39:45 AM

Job ID: 890-1871-1 SDG: 31403236.001.0129.35.02

# Client: WSP USA Inc. Project/Site: Remuda Basin State #2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1871-1	FS02	Solid	01/25/22 13:55	01/25/22 16:05	6
890-1871-2	SW02	Solid	01/25/22 14:00	01/25/22 16:05	0 - 6
890-1871-3	SW03	Solid	01/25/22 14:05	01/25/22 16:05	0 - 6

Relinquished by: (Signature)	Circled within       Treating again value value again value value va	Droipot Namo:	Phone:	City, State ZIP:	Address:	Company Name:	Project Manager:	
y: (Signature)	Ct Number:       31403236.001.0129.35         Number:       31403236.001.0129.35         Number:       Conner Shore         Imple RECEIPT       Temp Blank:         verature (°C):       Z.O         ived Intact:       Yes         r Custody Seals:       Yes         r Custody Seals:       Yes         sample Identification       Matrix         SW02       S         SW02       S         SW03       S         SW04	Remin	720.384.7365	Arvada, Colorado 80003	4600 West 60th Avenue	WSP USA Inc.	Aimee Cole	
	Shore Tepp Blank: Tes) No Tepp Blank: Tes) No Tepp Blank: Tes) No Tes No NIA Tota Yes No NIA Tota Sampled Samp	a Racin State #		o 80003	Avenue			
Received by: (Signature	Thermometer ID     No     Wet Ice:     Yesponsibility       No     Wet Ice:     Yesponsibility       Thermometer ID     No     Performance       No     Wet Ice:     Yesponsibility       Thermometer ID     No     Performance       No     Thermometer ID     No       No     Thermometer ID     Performance       No     Total Containers:     Depth       2022     1355     6'       2022     1400     0-6'       2022     1405     0-6'       2022     1405     0-6'       2022     1405     0-6'       2022     1405     0-6'       2022     1405     0-6'       2022     1405     0-6'       2022     1405     0-6'       2022     1405     0-6'       2022     1405     0-6'       2022     1405     0-6'       2022     1405     0-6'       2021     1405     0-6'       2022     1405     0-6'       2021     1405     0-6'		Email					<b>Chain of Custody</b> Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334 Midland,TX (432-704-5440) EL Paso.TX (915)585-3443 Lubbock,TX (806)794-1296 Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)
ure)	Routine     Image: Containers       The Due Date:     No       The Due Date:     No <tr< td=""><td>Irn Around</td><td>Email: conner.shore@wsp.com;</td><td>City, State ZIP:</td><td>Address:</td><td>Company Name:</td><td>Bill to: (if different)</td><td>Chain of Custody 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 (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (81:</td></tr<>	Irn Around	Email: conner.shore@wsp.com;	City, State ZIP:	Address:	Company Name:	Bill to: (if different)	Chain of Custody 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 (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (81:
	OCIENT     Image: Section of Containers		@wsp.cc		310	×	Adr	Ch2 00 Dallas, 140) EL P2 AZ (480-35
Date/Time	As Ba X × × BTEX (EPA 0=8021)			Carlsbad, NM 88220	3104 E Green Street	XTO Energy	Adrian Baker	<b>Ain O</b> TX (214) 9 150,TX (911 5-0900) A
6 4 2	Curred Berger     Chloride (EPA 300.0)       Carred Berger     Carred Berger		e.cole@	A 88220	n Street			<b>f Cus</b> 02-0300 S 5)585-3443 tlanta,GA (
Relinquishe	A Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag	ANAL	Aimee.cole@wsp.com					Chain of Custody Dallas,TX (214) 902-0300 San Antonio,TX (2 EL Paso,TX (915)585-3443 Lubbock,TX (80 (480-355-0900) Allanta,GA (770-449-8800) 1
Relinquished by: (Signature)	890-1871 Chain of Custody	YSIS REQUEST						10) 509-3334 06)794-1296 Fampa,FL (813-6
ure)	20-1871 Chain of Custody 20-1871 Chain of Custody 30-1871 Chain of Custody Cur Fe Pb Mg Mn Mo Ni K Se 5 Cu Fe Pb Mg Mn Mo Ni K Se 5 Mn Mo Ni Se Ag Tl U 5 Mn Mo Ni Se Ag Tl U	EST	Deliverables: EDD	Reporting:Level II	State of Project:	Program: UST/PST		s20-2000)
Receive	U Vi K Se			_				ww Vo
Received by: (Signature)				] evel III			Work Ore	Work Order No:
ynature)			ADaPT L			rownfields	Work Order Comments	
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Date/Time Revised Date 051418 Rev 2018	AFE: EW.2022.00063.EXP.01	Work Order Notes	ēr:		)	perfund		-1 Of -1

1/28/2022

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Job Number: 890-1871-1

List Source: Eurofins Carlsbad

SDG Number: 31403236.001.0129.35.02

# Login Sample Receipt Checklist

Client: WSP USA Inc.

Login Number: 1871 List Number: 1 Creator: Olivas, Nathaniel

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	
s 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	

N/A

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

# Login Sample Receipt Checklist

N/A

Client: WSP USA Inc.

Login Number: 1871 List Number: 2

Question

Creator: Rodriguez, Leticia

Job Number: 890-1871-1 SDG Number: 31403236.001.0129.35.02

N/A			
Answer	Comment		
		List Creation: 01/27/22 11:48 AM	
		List Source: Eurofins Midland	

The cooler's custody seal, if present, is intact.
Sample custody seals, if present, are intact.
The cooler or samples do not appear to have a tampered with.
Samples were received on ice.
Cooler Temperature is acceptable.
Cooler Temperature is recorded.
COC is present.
COC is filled out in ink and legible.

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

Received by OCD: 7/8/2022 8:01:28 AM

# 🔅 eurofins

# Environment Testing America

# **ANALYTICAL REPORT**

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

# Laboratory Job ID: 890-1889-1

Laboratory Sample Delivery Group: 31403236.001.0129.35.02 Client Project/Site: Remuda Basin State #2

# For:

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

Attn: Aimee Cole

RAMER

Authorized for release by: 2/1/2022 9:43:45 PM

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

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

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

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

Released to Imaging: 9/22/2022 7:39:45 AM

Laboratory Job ID: 890-1889-1 SDG: 31403236.001.0129.35.02

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Sample Summary	18
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Client: WSP USA Inc. Project/Site: Remuda Basin State #2 Page 200 of 358

Job ID: 890-1889-1 SDG: 31403236.001.0129.35.02

# Qualifiers

NC

ND

NEG

POS

PQL

QC

RER

RPD TEF

TEQ

TNTC

RL

PRES

Qualifiers		 3
GC VOA		
Qualifier	Qualifier Description	
S1+	Surrogate recovery exceeds control limits, high biased.	
U	Indicates the analyte was analyzed for but not detected.	5
GC Semi VO		
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	8
U	Indicates the analyte was analyzed for but not detected.	
Glossary		 9
Abbreviation	These commonly used abbreviations may or may not be present in this report.	
¤	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)	10
Dil Fac	Dilution Factor	13
DL	Detection Limit (DoD/DOE)	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	
LOQ	Limit of Quantitation (DoD/DOE)	
MCL	EPA recommended "Maximum Contaminant Level"	
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	
MDL	Method Detection Limit	
ML	Minimum Level (Dioxin)	
MPN	Most Probable Number	
MQL	Method Quantitation Limit	

Not Calculated

Negative / Absent

Positive / Present

Presumptive

**Quality Control** 

Practical Quantitation Limit

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

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

Reporting Limit or Requested Limit (Radiochemistry)

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

4

5

# Job ID: 890-1889-1

Client: WSP USA Inc.

# Laboratory: Eurofins Carlsbad

# Narrative

Job Narrative 890-1889-1

# Receipt

The samples were received on 1/28/2022 3:49 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 4.2°C

# GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-10734-A-1-B MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

# GC Semi VOA

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

# HPLC/IC

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

# **Client Sample Results**

Method: 8021B - Volatile Organic Compounds (GC)

# Lab Sample ID: 890-1889-1

Matrix: Solid

Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		02/01/22 07:30	02/01/22 12:19	1
Toluene	<0.00198	U	0.00198	mg/Kg		02/01/22 07:30	02/01/22 12:19	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		02/01/22 07:30	02/01/22 12:19	1
m-Xylene & p-Xylene	<0.00397	U	0.00397	mg/Kg		02/01/22 07:30	02/01/22 12:19	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		02/01/22 07:30	02/01/22 12:19	1
Xylenes, Total	<0.00397	U	0.00397	mg/Kg		02/01/22 07:30	02/01/22 12:19	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130			02/01/22 07:30	02/01/22 12:19	1
1,4-Difluorobenzene (Surr)	104		70 - 130			02/01/22 07:30	02/01/22 12:19	1
Method: Total BTEX - Total B	TEX Calcula	tion						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397	mg/Kg			02/01/22 16:53	1
Method: 8015 NM - Diesel Rai	nge Organic	s (DRO) (0	SC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			01/31/22 13:14	1
Method: 8015B NM - Diesel R	ange Organ	ics (DRO)	(GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		02/01/22 11:05	02/01/22 12:56	1
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		02/01/22 11:05	02/01/22 12:56	1
C10-C28) Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/01/22 11:05	02/01/22 12:56	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	85		70 - 130			02/01/22 11:05	02/01/22 12:56	1
o-Terphenyl	82		70 - 130			02/01/22 11:05	02/01/22 12:56	1
Method: 300.0 - Anions, Ion C	hromatogra	iphy - Solu	ıble					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	802		49.6	mg/Kg			02/01/22 17:51	10
lient Sample ID: PH14F						Lab Samp	le ID: 890-1	889-2
ate Collected: 01/28/22 13:20								c: Solid
ate Received: 01/28/22 15:49								
ample Depth: 7								
Method: 8021B - Volatile Orga	anic Compo	unds (GC)						
		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte Benzene			RL	Unit mg/Kg	<u>D</u>	Prepared 02/01/22 11:00	Analyzed 02/01/22 12:39	Dil Fac

4-Bromofluorobenzene (Surr)			70 - 130		02/01/22 11:00	02/01/22 12:39	1
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
Xylenes, Total	<0.00399	U	0.00399	mg/Kg	02/01/22 11:00	02/01/22 12:39	1
o-Xylene	<0.00200	U	0.00200	mg/Kg	02/01/22 11:00	02/01/22 12:39	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg	02/01/22 11:00	02/01/22 12:39	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg	02/01/22 11:00	02/01/22 12:39	1
Toluene	<0.00200	U	0.00200	mg/Kg	02/01/22 11:00	02/01/22 12:39	1
Delizerie	~0.00200	0	0.00200	ing/itg	02/01/22 11.00	02/01/22 12.55	

**Eurofins Carlsbad** 

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**Client Sample ID: PH14F** 

# **Client Sample Results**

Job ID: 890-1889-1
SDG: 31403236.001.0129.35.02

# Lab Sample ID: 890-1889-2

Matrix: Solid

5

Date Collected: 01/28/22 13:20 Date Received: 01/28/22 15:49 Sample Depth: 7

Client: WSP USA Inc.

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1,4-Difluorobenzene (Surr)	82		70 - 130			<u> </u>	02/01/22 12:39	
Method: Total BTEX - Total B	TEX Calcula	tion						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00399	U	0.00399	mg/Kg			02/01/22 16:53	
Method: 8015 NM - Diesel Rai	nge Organic	s (DRO) (0	SC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			01/31/22 13:14	
Method: 8015B NM - Diesel R	ange Organi	ics (DRO)	(GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		02/01/22 11:05	02/01/22 13:18	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		02/01/22 11:05	02/01/22 13:18	
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/01/22 11:05	02/01/22 13:18	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	69	S1-	70 - 130			02/01/22 11:05	02/01/22 13:18	
o-Terphenyl	67	S1-	70 - 130			02/01/22 11:05	02/01/22 13:18	
Method: 300.0 - Anions, Ion C	hromatogra	phy - Solu	ıble					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	412		5.04	mg/Kg			02/01/22 19:45	
Client Sample ID: SW05						I ah Samn	le ID: 890-1	889-7

# Sample Depth: 0 - 4

Method: 8021B - Volatile O	rganic Compo	unds (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/01/22 11:00	02/01/22 13:00	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/01/22 11:00	02/01/22 13:00	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/01/22 11:00	02/01/22 13:00	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		02/01/22 11:00	02/01/22 13:00	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/01/22 11:00	02/01/22 13:00	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		02/01/22 11:00	02/01/22 13:00	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			02/01/22 11:00	02/01/22 13:00	1
1,4-Difluorobenzene (Surr)	101		70 - 130			02/01/22 11:00	02/01/22 13:00	1
Method: Total BTEX - Total	BTEX Calcula	tion						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			02/01/22 16:53	1
Method: 8015 NM - Diesel I	Range Organic	s (DRO) (0	SC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			01/31/22 13:14	1

RL

50.0

50.0

50.0

RL

4.99

Limits

70 - 130

70 - 130

Unit

mg/Kg

mg/Kg

mg/Kg

Unit

mg/Kg

D

D

Prepared

Prepared

Prepared

Job ID: 890-1889-1 SDG: 31403236.001.0129.35.02

Analyzed

Analyzed

Analyzed

02/01/22 18:21

# Client Sample ID: SW05

Project/Site: Remuda Basin State #2

Client: WSP USA Inc.

Gasoline Range Organics

Diesel Range Organics (Over

Oll Range Organics (Over C28-C36)

Analyte

C10-C28)

Surrogate 1-Chlorooctane

o-Terphenyl

Analyte

Chloride

(GRO)-C6-C10

Date Collected: 01/27/22 13:15 Date Received: 01/28/22 15:49 Sample Depth: 0 - 4

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

Method: 300.0 - Anions, Ion Chromatography - Soluble

Result Qualifier

<50.0 U

<50.0 U

<50.0 U

%Recovery Qualifier

75

70

677

**Result Qualifier** 

Lah Sample I	D: 890-1889-3
	D. 000-1000-0
	Materia: Calid

02/01/22 11:05 02/01/22 13:39

02/01/22 11:05 02/01/22 13:39

02/01/22 11:05 02/01/22 13:39

02/01/22 11:05 02/01/22 13:39

02/01/22 11:05 02/01/22 13:39

Matrix: Solid

Dil Fac

1

1

1

1

1

1

Dil Fac

Dil Fac

# **Surrogate Summary**

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

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

		BFB1	DFBZ1	Ū	•	,
Lab Sample ID	Client Sample ID	(70-130)	(70-130)			
880-10734-A-1-A MS	Matrix Spike	115	106		 	
880-10734-A-1-B MSD	Matrix Spike Duplicate	152 S1+	113			
890-1889-1	PH14E	109	104			
890-1889-2	PH14F	113	82			
890-1889-3	SW05	113	101			
LCS 880-18173/1-A	Lab Control Sample	103	95			
LCSD 880-18173/2-A	Lab Control Sample Dup	97	105			

100

Surrogate Legend BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Method Blank

Matrix: Solid

MB 880-18173/5-A

			Perc	ent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-10650-A-1-I MS	Matrix Spike	75	74	
880-10650-A-1-J MSD	Matrix Spike Duplicate	74	68 S1-	
890-1889-1	PH14E	85	82	
890-1889-2	PH14F	69 S1-	67 S1-	
890-1889-3	SW05	75	70	

100

#### Surrogate Legend

1CO = 1-Chlorooctane OTPH = o-Terphenyl

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

			Perce	nt Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	1CO2 (70-130)	OTPH2 (70-130)	
LCS 880-18142/2-A	Lab Control Sample	$-\frac{(10,100)}{71}$	67 S1-	
LCSD 880-18142/3-A	Lab Control Sample Dup	76	73	
MB 880-18142/1-A	Method Blank	88	86	

# Surrogate Legend

1CO = 1-Chlorooctane OTPH = o-Terphenyl

**Eurofins Carlsbad** 

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Job ID: 890-1889-1 SDG: 31403236.001.0129.35.02

Percent Surrogate Recovery (Acceptance Limits)

Prep Type: Total/NA

Prep Type: Total/NA

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

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

# Lab Sample ID: MB 880-18173/5-A **Matrix: Solid** Analysis Batch: 18229

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		02/01/22 07:30	02/01/22 11:16	1
Toluene	<0.00199	U	0.00199	mg/Kg		02/01/22 07:30	02/01/22 11:16	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		02/01/22 07:30	02/01/22 11:16	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		02/01/22 07:30	02/01/22 11:16	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		02/01/22 07:30	02/01/22 11:16	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		02/01/22 07:30	02/01/22 11:16	1
	MB	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130			02/01/22 07:30	02/01/22 11:16	1
1,4-Difluorobenzene (Surr)	100		70 - 130			02/01/22 07:30	02/01/22 11:16	1

# Lab Sample ID: LCS 880-18173/1-A Matrix: Solid Analysis Batch: 18229

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.08127		mg/Kg		81	70 - 130	
Toluene	0.100	0.07937		mg/Kg		79	70 - 130	
Ethylbenzene	0.100	0.07385		mg/Kg		74	70 - 130	
m-Xylene & p-Xylene	0.200	0.1487		mg/Kg		74	70 - 130	
o-Xylene	0.100	0.07610		mg/Kg		76	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

# Lab Sample ID: LCSD 880-18173/2-A Matrix: Solid

# Analysis Batch: 18229

Analysis Batch: 18229							Prep E	-	
-	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08507		mg/Kg		85	70 - 130	5	35
Toluene	0.100	0.07653		mg/Kg		77	70 - 130	4	35
Ethylbenzene	0.100	0.07328		mg/Kg		73	70 - 130	1	35
m-Xylene & p-Xylene	0.200	0.1480		mg/Kg		74	70 - 130	0	35
o-Xylene	0.100	0.07261		mg/Kg		73	70 - 130	5	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		70 - 130
1,4-Difluorobenzene (Surr)	105		70 - 130

# Lab Sample ID: 880-10734-A-1-A MS Matrix: Solid

Matrix: Solid Analysis Batch: 18229									Prep Type: Total/NA Prep Batch: 18173
	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	<0.00202	U	0.100	0.07517		mg/Kg		75	70 - 130
Toluene	<0.00202	U	0.100	0.07063		mg/Kg		70	70 - 130

# **Eurofins Carlsbad**

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

Prep Batch: 18173

# **Prep Type: Total/NA** Prep Batch: 18173

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

**Client Sample ID: Lab Control Sample** 

<b>Client Sample ID: Matrix Spike</b>

Prep Type: Total/NA

Client: WSP USA Inc. Project/Site: Remuda Basin State #2 Job ID: 890-1889-1 SDG: 31403236.001.0129.35.02

**Client Sample ID: Method Blank** 

Analyzed

Prep Type: Total/NA

01/31/22 11:05 02/01/22 09:44

01/31/22 11:05 02/01/22 09:44

**Client Sample ID: Lab Control Sample** 

Prepared

Prep Type: Total/NA

Prep Batch: 18142

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

Lab Sample ID: 880-1073 Matrix: Solid	84-A-1-A MS						CI	ient Sa	mple ID: I Prep Ty	pe: Tot	al/NA
Analysis Batch: 18229 Analyte	•	Sample Qualifier	Spike Added	_	MS Qualifier	Unit	D	%Rec	Prep E %Rec. Limits	Batch: '	18173
Ethylbenzene	< 0.00202	U	0.100	0.07058		mg/Kg		71	70 - 130		
m-Xylene & p-Xylene	<0.00404	U	0.200	0.1505		mg/Kg		75	70 - 130		
o-Xylene	<0.00202	U	0.100	0.07254		mg/Kg		73	70 - 130		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	115		70 - 130								
1,4-Difluorobenzene (Surr)	106		70 - 130								
Analysis Batch: 18229	Sample	Sample	Spike	-	MSD				%Rec.	Batch: '	RPD
											1 1 m 14
		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00202	U	0.0998	0.08802	Qualifier	mg/Kg	<u>D</u>	88	70 - 130	16	35
Benzene Toluene	<0.00202 <0.00202	U U	0.0998	0.08802 0.09875	Qualifier	mg/Kg mg/Kg	<u>D</u>	88 98	70 - 130 70 - 130	16 33	35 35
Benzene Toluene Ethylbenzene	<0.00202 <0.00202 <0.00202	U U U	0.0998 0.0998 0.0998	0.08802 0.09875 0.09415	Qualifier	mg/Kg mg/Kg mg/Kg	<u>D</u>	88 98 94	70 - 130 70 - 130 70 - 130	16 33 29	35 35 35
Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	<0.00202 <0.00202 <0.00202 <0.00202 <0.00404	U U U U	0.0998 0.0998 0.0998 0.200	0.08802 0.09875 0.09415 0.1890	Qualifier	mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	88 98 94 95	70 - 130 70 - 130 70 - 130 70 - 130	16 33 29 23	35 35 35 35
Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	<0.00202 <0.00202 <0.00202	U U U U	0.0998 0.0998 0.0998	0.08802 0.09875 0.09415	Qualifier	mg/Kg mg/Kg mg/Kg	<u>D</u>	88 98 94	70 - 130 70 - 130 70 - 130	16 33 29	35 35 35
Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	<0.00202 <0.00202 <0.00202 <0.00404 <0.00202	U U U U	0.0998 0.0998 0.0998 0.200	0.08802 0.09875 0.09415 0.1890	Qualifier	mg/Kg mg/Kg mg/Kg mg/Kg	<u> </u>	88 98 94 95	70 - 130 70 - 130 70 - 130 70 - 130	16 33 29 23	35 35 35 35
Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene	<0.00202 <0.00202 <0.00202 <0.00404 <0.00202 <i>MSD</i>	U U U U U U MSD	0.0998 0.0998 0.0998 0.200	0.08802 0.09875 0.09415 0.1890	Qualifier	mg/Kg mg/Kg mg/Kg mg/Kg	<u> </u>	88 98 94 95	70 - 130 70 - 130 70 - 130 70 - 130	16 33 29 23	35 35 35 35
Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene <b>Surrogate</b>	<0.00202 <0.00202 <0.00202 <0.00404 <0.00202 <i>MSD</i> % <i>Recovery</i>	U U U U U U MSD	0.0998 0.0998 0.0998 0.200 0.0998	0.08802 0.09875 0.09415 0.1890	Qualifier	mg/Kg mg/Kg mg/Kg mg/Kg	<u> </u>	88 98 94 95	70 - 130 70 - 130 70 - 130 70 - 130	16 33 29 23	35 35 35 35
Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)	<0.00202 <0.00202 <0.00202 <0.00404 <0.00202 <i>MSD</i> % <i>Recovery</i>	U U U U U MSD Qualifier	0.0998 0.0998 0.0998 0.200 0.0998 <i>Limits</i>	0.08802 0.09875 0.09415 0.1890	Qualifier	mg/Kg mg/Kg mg/Kg mg/Kg	<u> </u>	88 98 94 95	70 - 130 70 - 130 70 - 130 70 - 130	16 33 29 23	35 35 35 35

# Lab Sample ID: MB 880-18142/1-A Matrix: Solid Analysis Batch: 18228

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/31/22 11:05	02/01/22 09:44	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/31/22 11:05	02/01/22 09:44	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/31/22 11:05	02/01/22 09:44	1
	MB	MB						

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	88		70 - 130
o-Terphenyl	86		70 - 130

# Lab Sample ID: LCS 880-18142/2-A Matrix: Solid Analysis Batch: 18228

Analysis Batch: 18228							Prep B	atch: 18142
	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	1035		mg/Kg		104	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	834.6		mg/Kg		83	70 - 130	
C10-C28)								

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Dil Fac

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Client: WSP USA Inc. Project/Site: Remuda Basin State #2

Lab Sample ID: LCS 880-18142/2-A

Matrix: Solid

o-Terphenyl

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

Job ID: 890-1889-1 SDG: 31403236.001.0129.35.02

Prep Type: Total/NA

**Client Sample ID: Lab Control Sample** 

Matrix: Solid									Prep Ty		
Analysis Batch: 18228									Prep E	Batch: "	18142
	LCS	LCS									
Surrogate	%Recovery		Limits								
1-Chlorooctane			70 - 130								
o-Terphenyl		S1-	70 - 130								
	•	•									
Lab Sample ID: LCSD 88	0-18142/3-A				C	Client Sa	mple	ID: Lat	Control	Sample	e Dup
Matrix: Solid							÷.,		Prep Ty		
Analysis Batch: 18228										atch:	
			Spike	LCSD	LCSD				%Rec.		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics			1000	1059		mg/Kg		106	70 - 130	2	20
(GRO)-C6-C10						5. 5					
Diesel Range Organics (Over			1000	855.5		mg/Kg		86	70 - 130	2	20
C10-C28)											
	LCSD	LCSD									
Surrogate	%Recovery		Limits								
1-Chlorooctane		Quanner	70 - 130								
o-Terphenyl	73		70 - 130 70 - 130								
o-respirently	75		70-750								
Lab Sample ID: 880-1065	0-A-1-I MS						C	lient Sa	mple ID: I	Matrix :	Spike
Matrix: Solid	• • • • • • • •								Prep Ty		
Analysis Batch: 18228										Batch:	
	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics	<49.9		997	1023		mg/Kg		100	70 - 130		
(GRO)-C6-C10											
Diesel Range Organics (Over	<49.9	U	997	929.5		mg/Kg		91	70 - 130		
C10-C28)											
	MS	MS									
Surrogate	%Recovery		Limits								
1-Chlorooctane	75	Quaimer	70 - 130								
o-Terphenyl	73		70 - 130 70 - 130								
o-respirently	74		70-750								
Lab Sample ID: 880-1065	0-A-1-1 MSD					Client S	Samn	le ID <sup>.</sup> N	latrix Spil	ce Dun	licate
Matrix: Solid							, and		Prep Ty		
Analysis Batch: 18228										Batch: '	
Analysis Batch. 10220	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	•	Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics			996	1112	Quaimer	mg/Kg		109	70 - 130	8	20
(GRO)-C6-C10	~+3.5	5	330	1112		mgrivy		103	10-100	0	20
Diesel Range Organics (Over	<49.9	U	996	852.6		mg/Kg		83	70 - 130	9	20
C10-C28)						55				-	
	1100	MOD									
0		MSD Overlifier	1								
Surrogate 1-Chlorooctane	% <b>Recovery</b> 74	Qualifier	Limits 70 - 130								

**Eurofins Carlsbad** 

70 - 130

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Client: WSP USA Inc.

# **QC Sample Results**

Job ID: 890-1889-1 SDG: 31403236.001.0129.35.02

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-18269/1-A								С	lient Sar	nple ID: N	lethod	Blank	
Matrix: Solid									our our	-	ype: So		
Analysis Batch: 18297										i i cp i	Jbc. 0.	orabic	2
Analysis Batch. 10257	MF	3 MB											
Analyte		t Qualifier		RL		Unit		D	Prepared	Analy	zed	Dil Fac	2
Chloride	<5.00	U		5.00		mg/K	g			02/01/22	2 15:09	1	
							0						
Lab Sample ID: LCS 880-18269/2-/	•						Cli	ent S	ample IE	): Lab Co	ntrol Sa	ample	
Matrix: Solid										Prep T	ype: So	oluble	
Analysis Batch: 18297													
-			Spike		LCS	LCS				%Rec.			
Analyte			Added		Result	Qualifier	Unit	I	D %Rec	Limits			
Chloride			250		272.3		mg/Kg		109	90 - 110			
Lab Sample ID: LCSD 880-18269/3	- <b>A</b>					C	Client S	Sampl	e ID: La	b Control			
Matrix: Solid										Prep T	ype: So	oluble	
Analysis Batch: 18297													
			Spike		LCSD	LCSD				%Rec.		RPD	
Analyte			Added			Qualifier	Unit		D %Rec	Limits	RPD	Limit	
Chloride			250		271.6		mg/Kg		109	90 - 110	0	20	ŝ
Lab Sample ID: 890-1883-A-1-G M	\$								Client Sa	ample ID:	Matrix	Spike	
Matrix: Solid											ype: So		ï
Analysis Batch: 18297											<b>J P C C</b>		
-	ple Sa	mple	Spike		MS	MS				%Rec.			
	ult Qu	-	Added		Result	Qualifier	Unit	I	D %Rec	Limits			
	7.4 F1		248		321.4		mg/Kg		107	90 - 110			
							0						
Lab Sample ID: 890-1883-A-1-H M	עמ						Clien	t Sam	ipie iD: I	Matrix Spi			
Matrix: Solid										Prep I	ype: So	eiduio	
Analysis Batch: 18297			0			MSD				%Rec.		RPD	
	ple Sa	-	Spike					_					
Analyte Re:	ple Sa sult Qu 7.4 F1	-	Added			Qualifier	Unit mg/Kg	[	<b>D</b> %Rec 105	Limits	<b>RPD</b>	Limit 20	

# **QC Association Summary**

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

Job ID: 890-1889-1 SDG: 31403236.001.0129.35.02

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# Prep Batch: 18173

GC VOA

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1889-1	PH14E	Total/NA	Solid	5035	
890-1889-2	PH14F	Total/NA	Solid	5035	
890-1889-3	SW05	Total/NA	Solid	5035	
MB 880-18173/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-18173/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-18173/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-10734-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-10734-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

# Analysis Batch: 18229

880-10734-A-1-A MS	Matrix Spike	Iotal/NA	Solid	5035		
880-10734-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035		8
Analysis Batch: 1822	9					0
Lab Sample ID 890-1889-1	Client Sample ID	Prep Type Total/NA	Matrix Solid	Method 8021B	Prep Batch 18173	40
890-1889-2	PH14F	Total/NA	Solid	8021B	18173	10
890-1889-3	SW05	Total/NA	Solid	8021B	18173	11
MB 880-18173/5-A	Method Blank	Total/NA	Solid	8021B	18173	
LCS 880-18173/1-A	Lab Control Sample	Total/NA	Solid	8021B	18173	19
LCSD 880-18173/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	18173	
880-10734-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	18173	40
880-10734-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	18173	13
Analysis Batch: 1831	3					14

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1889-1	PH14E	Total/NA	Solid	Total BTEX	
890-1889-2	PH14F	Total/NA	Solid	Total BTEX	
890-1889-3	SW05	Total/NA	Solid	Total BTEX	

# GC Semi VOA

# Prep Batch: 18142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1889-1	PH14E	Total/NA	Solid	8015NM Prep	
890-1889-2	PH14F	Total/NA	Solid	8015NM Prep	
890-1889-3	SW05	Total/NA	Solid	8015NM Prep	
MB 880-18142/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-18142/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-18142/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-10650-A-1-I MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-10650-A-1-J MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

# Analysis Batch: 18170

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1889-1	PH14E	Total/NA	Solid	8015 NM	
890-1889-2	PH14F	Total/NA	Solid	8015 NM	
890-1889-3	SW05	Total/NA	Solid	8015 NM	

# Analysis Batch: 18228

Lab Sample ID 890-1889-1	Client Sample ID	Prep Type Total/NA	Matrix	Method 8015B NM	Prep Batch 18142
890-1889-2	PH14F	Total/NA	Solid	8015B NM	18142
890-1889-3	SW05	Total/NA	Solid	8015B NM	18142
MB 880-18142/1-A	Method Blank	Total/NA	Solid	8015B NM	18142

# **QC Association Summary**

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

# GC Semi VOA (Continued)

# Analysis Batch: 18228 (Continued)

Lab Sample ID LCS 880-18142/2-A	Client Sample ID Lab Control Sample	Prep Type Total/NA	Matrix Solid	Method 8015B NM	Prep Batch 18142
LCSD 880-18142/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	18142
880-10650-A-1-I MS	Matrix Spike	Total/NA	Solid	8015B NM	18142
880-10650-A-1-J MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	18142

# HPLC/IC

# Leach Batch: 18269

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1889-1	PH14E	Soluble	Solid	DI Leach	
890-1889-2	PH14F	Soluble	Solid	DI Leach	
890-1889-3	SW05	Soluble	Solid	DI Leach	
MB 880-18269/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-18269/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-18269/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1883-A-1-G MS	Matrix Spike	Soluble	Solid	DI Leach	
890-1883-A-1-H MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

# Analysis Batch: 18297

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1889-1	PH14E	Soluble	Solid	300.0	18269
890-1889-2	PH14F	Soluble	Solid	300.0	18269
890-1889-3	SW05	Soluble	Solid	300.0	18269
MB 880-18269/1-A	Method Blank	Soluble	Solid	300.0	18269
LCS 880-18269/2-A	Lab Control Sample	Soluble	Solid	300.0	18269
LCSD 880-18269/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	18269
890-1883-A-1-G MS	Matrix Spike	Soluble	Solid	300.0	18269
890-1883-A-1-H MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	18269

Job ID: 890-1889-1

SDG: 31403236.001.0129.35.02

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Job ID: 890-1889-1 SDG: 31403236.001.0129.35.02

# Lab Sample ID: 890-1889-1 Matrix: Solid

**Client Sample ID: PH14E** Date Collected: 01/28/22 12:30 Date Received: 01/28/22 15:49

Client: WSP USA Inc.

	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			18173	02/01/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	18229	02/01/22 12:19	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	18313	02/01/22 16:53	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	18170	01/31/22 13:14	AJ	XEN MID
Total/NA	Prep	8015NM Prep			18142	02/01/22 11:05	DM	XEN MID
Total/NA	Analysis	8015B NM		1	18228	02/01/22 12:56	AJ	XEN MID
Soluble	Leach	DI Leach			18269	02/01/22 14:25	SC	XEN MID
Soluble	Analysis	300.0		10	18297	02/01/22 17:51	SC	XEN MID

# **Client Sample ID: PH14F** Date Collected: 01/28/22 13:20

Date Received: 01/28/22 15:49

	Batch	Batch		Dilution	Batch	Prepared		
Prep Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			18173	02/01/22 11:00	KL	XEN MID
Total/NA	Analysis	8021B		1	18229	02/01/22 12:39	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	18313	02/01/22 16:53	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	18170	01/31/22 13:14	AJ	XEN MID
Total/NA	Prep	8015NM Prep			18142	02/01/22 11:05	DM	XEN MID
Total/NA	Analysis	8015B NM		1	18228	02/01/22 13:18	AJ	XEN MID
Soluble	Leach	DI Leach			18269	02/01/22 14:25	SC	XEN MID
Soluble	Analysis	300.0		1	18297	02/01/22 19:45	SC	XEN MID

# **Client Sample ID: SW05** Date Collected: 01/27/22 13:15 Date Received: 01/28/22 15:49

# Lab Sample ID: 890-1889-3

Lab Sample ID: 890-1889-2

Matrix: Solid

Matrix: Solid

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			18173	02/01/22 11:00	KL	XEN MID
Total/NA	Analysis	8021B		1	18229	02/01/22 13:00	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	18313	02/01/22 16:53	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	18170	01/31/22 13:14	AJ	XEN MID
Total/NA	Prep	8015NM Prep			18142	02/01/22 11:05	DM	XEN MID
Total/NA	Analysis	8015B NM		1	18228	02/01/22 13:39	AJ	XEN MID
Soluble	Leach	DI Leach			18269	02/01/22 14:25	SC	XEN MID
Soluble	Analysis	300.0		1	18297	02/01/22 18:21	SC	XEN MID

# Laboratory References:

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

Client: WSP USA Inc.

**Accreditation/Certification Summary** 

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Job ID: 890-1889-1 SDG: 31403236.001.0129.35.02

# Project/Site: Remuda Basin State #2 Laboratory: Eurofins Midland

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

Authority		ogram	Identification Number	Expiration Date
exas	INE	ELAP	T104704400-21-22	06-30-22
The following enalyter	are included in this rene	rt but the leberatory is r	not certified by the governing authority.	This list may include analytes for which
0,		in, but the laboratory is r	ior certified by the governing autionty.	This list may include analytes for which
the agency does not of Analysis Method		Matrix	Analyte	
the agency does not o	ffer certification.		, , , , ,	

**Eurofins Carlsbad** 

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# **Method Summary**

Client: WSP USA Inc. Project/Site: Remuda Basin State #2 Job ID: 890-1889-1 SDG: 31403236.001.0129.35.02

Method	Method Description	Protocol	Laboratory
3021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
3015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
3015B 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
3015NM Prep	Microextraction	SW846	XEN MID
OI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

# **Protocol References:**

ASTM = ASTM International

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

#### Laboratory References:

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

**Sample Summary** 

Solid

Solid

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Job ID: 890-1889-1 SDG: 31403236.001.0129.35.02

# Client: WSP USA Inc. Project/Site: Remuda Basin State #2

PH14E

PH14F

SW05

Lab Sample ID

890-1889-1

890-1889-2

890-1889-3

**Client Sample ID** Matrix Collected Received Depth Solid 01/28/22 12:30 01/28/22 15:49 6

01/28/22 13:20 01/28/22 15:49 7

01/27/22 13:15 01/28/22 15:49 0 - 4

5
8
9
12
13

Revised Date 051418 Rev. 2018 1			6				σ
			4		Z		3
			1-28-22 1549		be and	C	1052
Date/Time	<ol> <li>Received by: (Signature)</li> </ol>	Relinquished by: (Signature)	Date/Time	ure)	, Received by: (Signature)	y: (Signature)	Relinquished by: (Signature)
	be enforced unless previously negotlated.	=	omitted to Xenco, but not analy	5 for each sample sut	each project and a charge of \$	A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms wi	of Xenco. A minimum c
	ctors. It assigns standard terms and conditions ses are due to circumstances beyond the control		ient company to Xenco, its affil osses or expenses incurred by	urchase order from clusponsibility for any l	samples constitutes a valid p s and shall not assume any r	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontra 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 los	Notice: Signature of this of service. Xenco will b
1631/245.1//4/0//4/1:Hg		Cr Co Cu Pb Mn Mo Ni	RA Sb As Ba Be Cd Cr Co Cu P	TCLP / SPLP 6010: 8RCRA	alyzed TCLP / SP	Circle Method(s) and Metal(s) to be analyzed	Circle Metho
TI Sn U V Zn	Mn Mo Ni K Se Ag SiO2	o Cu Fe Pb	~ ~	13PPM Texas 11		5010 200.8 / 6020:	Total 200.7 / 6010
.20							
.45							
				0-4	1/27/2022 13/5	05 s	SW05
			×	7		4F s	PH14F
				σ	1/28/2022 17-30	4E s	PH14E
			Т				
Sample Comments	San		HUMD PH (E TEX (	Depth		ntification Matrix	Sample Identification
lab, if received by 4:30pm 21			PA 8 EPA		Total Containers:	als: Yes No WA	Sample Custody Seals:
TAT starts the day recevied by the	Chain of Custody TAT start	890-1889 (	015) 0=8	-0.2	Correction Factor:	Ye	Cooler Custody Seals:
			021)		too m MI	Yes No	Received Intact:
					Thermometer, ID	1.4/4.C	Temperature (°C):
			S	No	(Yes) No Wet Ice: (Yes)	Temp Blank:	SAMPLE RECEIPT
				Due Date:	Due	Conner Shore	Sampler's Name:
AFE: EW.2022.00063.EXP.01	AFE: EV			Rush: 24 Hr TAT	Rus		P.O. Number:
				line	129.35.02 Routine	31403236.001.0129.35.02	Project Number:
Work Order Notes		ANALYSIS REQUEST		Turn Around		Remuda Basin State #2	Project Name:
Other:	Deliverables: EDDADaPT	2)wsp.com	Email: conner.shore@wsp.com; Aimee.cole@wsp.com	conner.shore	Emai	720.384.7365	Phone:
			Carlsbad, NM 88220	City, State ZIP:		Arvada, Colorado 80003	City, State ZIP:
]			3104 E Green Street	Address:		4600 West 60th Avenue	Address:
c ()perfund	Program: UST/PST PRP rownfields F		: XTO Energy	Company Name:		WSP USA Inc.	Company Name:
	Work Order Comments		Adrian Baker	Bill to: (if different)		Aimee Cole	Project Manager:
	-2000) <u>www.xenco.com</u> <sup>2</sup> age	(770-449-8800) Tampa,FL (813-620-2000)	Hobbs.NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta.GA (770-449-8800)	2-7550) Phoenix,A	Hobbs,NM (575-39		
2/1/2		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	0 Dallas,TX (214) 902-0300 0) EL Paso,TX (915)585-34	n,TX (281) 240-420 nd.TX (432-704-544	Midla		
2022	Work Order No:	istody	Chain of Custody				

Released to Imaging: 9/22/2022 7:39:45 AM

2/1/2022

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# Login Sample Receipt Checklist

Client: WSP USA Inc.

#### Login Number: 1889 List Number: 1 Creator: Clifton, Cloe

<6mm (1/4").

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

Job Number: 890-1889-1 SDG Number: 31403236.001.0129.35.02

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# Login Sample Receipt Checklist

Client: WSP USA Inc.

Login Number: 1889 List Number: 2 Creator: Rodriguez, Leticia Job Number: 890-1889-1 SDG Number: 31403236.001.0129.35.02

# List Source: Eurofins Midland List Creation: 02/01/22 11:35 AM

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

Received by OCD: 7/8/2022 8:01:28 AM

# 🔅 eurofins

# Environment Testing America

# **ANALYTICAL REPORT**

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

# Laboratory Job ID: 890-1916-1

Laboratory Sample Delivery Group: 31403236.001.0129.35.02 Client Project/Site: Remuda Basin State #2

# For:

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

Attn: Aimee Cole

RAMER

Authorized for release by: 2/11/2022 7:07:37 PM

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

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

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

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

Released to Imaging: 9/22/2022 7:39:45 AM

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Laboratory Job ID: 890-1916-1 SDG: 31403236.001.0129.35.02

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Job ID: 890-1916-1 SDG: 31403236.001.0129.35.02

Qualifiers		3
GC VOA		
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
GC Semi VOA		5
Qualifier	Qualifier Description	
F1	MS and/or MSD recovery exceeds control limits.	
F2	MS/MSD RPD exceeds control limits	
U	Indicates the analyte was analyzed for but not detected.	
HPLC/IC		
Qualifier	Qualifier Description	8
U	Indicates the analyte was analyzed for but not detected.	
Glossary		9
Abbreviation	These commonly used abbreviations may or may not be present in this report.	
¤	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)	12
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 ND	Not Calculated	
NEG	Not Detected at the reporting limit (or MDL or EDL if shown)	
POS	Negative / Absent 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		

TNTC Too Numerous To Count

4

5

Job ID: 890-1916-1 SDG: 31403236.001.0129.35.02

#### Job ID: 890-1916-1

Client: WSP USA Inc.

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-1916-1

#### Receipt

The samples were received on 2/7/2022 3:51 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.0°C

#### GC VOA

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

#### GC Semi VOA

Method 8015MOD\_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-18883 and analytical batch 880-18891 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.

#### HPLC/IC

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

Job ID: 890-1916-1 SDG: 31403236.001.0129.35.02

# Lab Sample ID: 890-1916-1

Matrix: Solid

5

**Client Sample ID: SW05** Date Collected: 02/07/22 13:35 Date Received: 02/07/22 15:51 Sample Depth: 0 - 4

Client: WSP USA Inc.

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00198	U	0.00198	mg/Kg		02/09/22 08:00	02/09/22 13:00	1
Toluene	<0.00198	U	0.00198	mg/Kg		02/09/22 08:00	02/09/22 13:00	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		02/09/22 08:00	02/09/22 13:00	1
m-Xylene & p-Xylene	<0.00397	U	0.00397	mg/Kg		02/09/22 08:00	02/09/22 13:00	
o-Xylene	<0.00198	U	0.00198	mg/Kg		02/09/22 08:00	02/09/22 13:00	1
Xylenes, Total	<0.00397	U	0.00397	mg/Kg		02/09/22 08:00	02/09/22 13:00	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	123		70 - 130			02/09/22 08:00	02/09/22 13:00	1
1,4-Difluorobenzene (Surr)	128		70 - 130			02/09/22 08:00	02/09/22 13:00	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			02/09/22 17:04	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			02/08/22 16:56	1
Method: 8015B NM - Diesel Rang	je Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		02/09/22 08:38	02/09/22 13:17	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		02/09/22 08:38	02/09/22 13:17	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/09/22 08:38	02/09/22 13:17	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	81		70 - 130			02/09/22 08:38	02/09/22 13:17	1
o-Terphenyl	82		70 - 130			02/09/22 08:38	02/09/22 13:17	1
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	110		4.97	mg/Kg			02/10/22 23:48	1
lient Sample ID: SW07						Lab San	nple ID: 890-	1916-2
ate Collected: 02/07/22 14:30							Matri	x: Solid
ate Received: 02/07/22 15:51								
ample Depth: 0 - 4								
Method: 8021B - Volatile Organic	: Compounds (	(GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00200	U	0.00200	mg/Kg		02/09/22 08:00	02/09/22 13:21	1
Delizene	-0.00200	•	0.00200			02/00/22 00:00	02/00/22 10.21	
Toluene	<0.00200		0.00200	mg/Kg		02/09/22 08:00	02/09/22 13:21	1

#### Ethylbenzene 0.00200 02/09/22 08:00 <0.00200 U mg/Kg 02/09/22 13:21 1 m-Xylene & p-Xylene <0.00400 U 0.00400 mg/Kg 02/09/22 08:00 02/09/22 13:21 1 o-Xylene <0.00200 U 0.00200 02/09/22 08:00 02/09/22 13:21 mg/Kg 1 Xylenes, Total <0.00400 U 0.00400 mg/Kg 02/09/22 08:00 02/09/22 13:21 1 Surrogate %Recovery Qualifier Limits Prepared Dil Fac Analyzed 4-Bromofluorobenzene (Surr) 115 70 - 130 02/09/22 08:00 02/09/22 13:21 1

Released to Imaging: 9/22/2022 7:39:45 AM

Eurofins Carlsbad

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# **Client Sample Results**

Job ID: 890-1916-1 SDG: 31403236.001.0129.35.02

# Lab Sample ID: 890-1916-2 Matrix: Solid

Date Collected: 02/07/22 14:30 Date Received: 02/07/22 15:51

Client Sample ID: SW07

Sample Depth: 0 - 4

Client: WSP USA Inc.

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	94		70 - 130			02/09/22 08:00	02/09/22 13:21	1
Method: Total BTEX - Total BTE	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			02/09/22 17:04	1
- Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			02/08/22 16:56	1
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		02/09/22 08:38	02/09/22 13:38	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		02/09/22 08:38	02/09/22 13:38	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/09/22 08:38	02/09/22 13:38	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	79		70 - 130			02/09/22 08:38	02/09/22 13:38	1
o-Terphenyl	79		70 - 130			02/09/22 08:38	02/09/22 13:38	1
-	omatography -	Soluble						
Method: 300.0 - Anions, Ion Chro	Jinalography -	CONTRACTO						
Method: 300.0 - Anions, Ion Chro Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

# **Surrogate Summary**

Client: WSP USA Inc. Project/Site: Remuda Basin State #2 Job ID: 890-1916-1 SDG: 31403236.001.0129.35.02

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

#### Matrix: Solid

-				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
ab Sample ID	Client Sample ID	(70-130)	(70-130)	
30-10991-A-1-F MS	Matrix Spike	97	94	
80-10991-A-1-G MSD	Matrix Spike Duplicate	99	101	
0-1916-1	SW05	123	128	
0-1916-2	SW07	115	94	
S 880-18817/1-A	Lab Control Sample	99	108	
SD 880-18817/2-A	Lab Control Sample Dup	92	104	
3 880-18817/5-A	Method Blank	97	99	
Surrogate Legend				
BFB = 4-Bromofluorober	izene (Surr)			

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

#### Matrix: Solid

					Percent Surrogate Recovery (Acceptance Limits)	
	Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)		
	880-11024-A-1-G MS	Matrix Spike	84	86		-
8	880-11024-A-1-H MSD	Matrix Spike Duplicate	70	74		
8	890-1916-1	SW05	81	82		
8	890-1916-2	SW07	79	79		

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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

		1CO2	OTPH2
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
LCS 880-18883/2-A	Lab Control Sample	113	114
LCSD 880-18883/3-A	Lab Control Sample Dup	102	108
MB 880-18883/1-A	Method Blank	81	82

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Prep Type: Total/NA

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Prep Type: Total/NA

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

# Lab Sample ID: MB 880-18817/5-A

#### Matrix: Solid Analysis Batch: 18880

-								
	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/09/22 08:00	02/09/22 10:34	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/09/22 08:00	02/09/22 10:34	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/09/22 08:00	02/09/22 10:34	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/09/22 08:00	02/09/22 10:34	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/09/22 08:00	02/09/22 10:34	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/09/22 08:00	02/09/22 10:34	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130			02/09/22 08:00	02/09/22 10:34	1
1,4-Difluorobenzene (Surr)	99		70 - 130			02/09/22 08:00	02/09/22 10:34	1

#### Lab Sample ID: LCS 880-18817/1-A Matrix: Solid

# Analysis Batch: 18880

	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	0.100	0.09932		mg/Kg		99	70 - 130
Toluene	0.100	0.09427		mg/Kg		94	70 - 130
Ethylbenzene	0.100	0.1041		mg/Kg		104	70 <sub>-</sub> 130
m-Xylene & p-Xylene	0.200	0.1935		mg/Kg		97	70 - 130
o-Xylene	0.100	0.1004		mg/Kg		100	70 <sub>-</sub> 130

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	108		70 - 130

#### Lab Sample ID: LCSD 880-18817/2-A

#### Matrix: Solid

Analysis Batch: 18880							Prep	Batch:	18817
	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09160		mg/Kg		92	70 - 130	8	35
Toluene	0.100	0.08864		mg/Kg		89	70 - 130	6	35
Ethylbenzene	0.100	0.09563		mg/Kg		96	70 - 130	8	35
m-Xylene & p-Xylene	0.200	0.1828		mg/Kg		91	70 - 130	6	35
o-Xylene	0.100	0.09275		mg/Kg		93	70 - 130	8	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	92		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

# Lab Sample ID: 880-10991-A-1-F MS

# Matrix: Solid

Analysis Batch: 18880									Prep	Batch: 18817
	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00199	U	0.101	0.09593		mg/Kg		95	70 - 130	
Toluene	<0.00199	U	0.101	0.09474		mg/Kg		94	70 - 130	

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Prep Type: Total/NA

**Client Sample ID: Matrix Spike** 

# SDG: 31403236.001.0129.35.02

**Client Sample ID: Method Blank** 

Job ID: 890-1916-1

Prep Type: Total/NA

Prep Batch: 18817

	02/0	9/22 08:00	02/09/22	10:34	1
	02/0	9/22 08:00	02/09/22	10:34	1
	02/0	9/22 08:00	02/09/22	10:34	1
	_				
		repared	Analyz		Dil Fac
		9/22 08:00	02/09/22		1
	02/0	9/22 08:00	02/09/22	10:34	1
	Client	Sample	ID: Lab C	ontrol	Sample
			Prep 1	Type: To	otal/NA
			Prep	Batch	: 18817
			%Rec.		
t	D	%Rec	Limits		
Kg		99	70 - 130		
Kg		94	70 - 130		
Кg		104	70 - 130		
Kg		97	70 - 130		
Кg		100	70 - 130		
Clier	nt Sam	ple ID: L	ab Contro		
				- · · ·	otal/NA
				Batch	: 18817
			%Rec.		RPD

Client: WSP USA Inc. Project/Site: Remuda Basin State #2 Job ID: 890-1916-1 SDG: 31403236.001.0129.35.02

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

Lab Sample ID: 880-10991-A-1-	FMS								Client S	Sample ID: Mat	rix Spik
Matrix: Solid										Prep Type:	Total/N
Analysis Batch: 18880										Prep Batc	h: 1881
	Sample	Sam	ple	Spike	MS	MS				%Rec.	
Analyte	Result	Qua	lifier	Added	Result	Qualifier	Unit		D %Rec	Limits	
Ethylbenzene	<0.00199	U		0.101	0.09881		mg/Kg		98	70 - 130	
m-Xylene & p-Xylene	<0.00398	U		0.202	0.1857		mg/Kg		92	70 - 130	
p-Xylene	<0.00199	U		0.101	0.09491		mg/Kg		94	70 - 130	
	MS	мs									
Surrogate	%Recovery	Qua	lifier	Limits							
4-Bromofluorobenzene (Surr)	97			70 - 130							
1,4-Difluorobenzene (Surr)	94			70 - 130							
Lab Sample ID: 880-10991-A-1-	G MSD							Client	t Sample ID:	Matrix Spike D	ouplicat
Matrix: Solid										Prep Type:	Total/N
Analysis Batch: 18880										Prep Batc	<mark>h: 188</mark> 1
	Sample	Sam	ple	Spike	MSD	MSD				%Rec.	RF
Analyte	Result	Qua	lifier	Added	Result	Qualifier	Unit		D %Rec	Limits RP	D Lin
Benzene	<0.00199	U		0.0996	0.08727		mg/Kg		87	70 - 130	9
Toluene	<0.00199	U		0.0996	0.08557		mg/Kg		85	70 - 130 1	0 3
Ethylbenzene	<0.00199	U		0.0996	0.08563		mg/Kg		86	70 - 130 1	4
m-Xylene & p-Xylene	<0.00398	U		0.199	0.1658		mg/Kg		83	70 <sub>-</sub> 130	1
p-Xylene	<0.00199	U		0.0996	0.08387		mg/Kg		84	70 - 130 1	2
	MSD	MSD	)								
Surrogate	%Recovery	Qua	lifier	Limits							
4-Bromofluorobenzene (Surr)	99			70 _ 130							
1,4-Difluorobenzene (Surr)	101			70 - 130							
ethod: 8015B NM - Diese	Range Or	rgar	nics (DF	RO) (GC)							
Lab Sample ID: MB 880-18883/	1_A								Client S:	ample ID: Meth	od Blar
Matrix: Solid										Prep Type:	
Analysis Batch: 18891										Prep Batc	
Analysis Batch. 10001		мв	мв							Trop Bate	
Analyte	R		Qualifier	RL		Unit		D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics		<50.0		50.0		mg/K			02/09/22 08:38	02/09/22 11:13	
(GRO)-C6-C10 Diesel Range Organics (Over	<	<50.0	U	50.0	)	mg/K	ζg	(	02/09/22 08:38	02/09/22 11:13	
C10-C28) Oll Range Organics (Over C28-C36)	<	<50.0	U	50.0	)	mg/K	ζg	(	02/09/22 08:38	02/09/22 11:13	
			МВ			Ŭ	-				
Surrogate	%Reco	verv	Qualifier	imits					Prepared	Analyzed	Dil F
-	%Reco	-	Qualifier	<i>Limits</i>	-			_	Prepared	Analyzed	Dil Fa
Surrogate 1-Chlorooctane o-Terphenyl	%Reco	81 82	Qualifier	<u>Limits</u> 70 - 130 70 - 130	-				Prepared 02/09/22 08:38 02/09/22 08:38	Analyzed 02/09/22 11:13 02/09/22 11:13	Dil Fa

# Client Sample ID: Lab Control Sample Prep Type: Total/NA Prep Batch: 18883

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	1150		mg/Kg		115	70 _ 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	1152		mg/Kg		115	70 - 130	
C10-C28)								

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Lab Sample ID: LCS 880-18883/2-A

Matrix: Solid

Analysis Batch: 18891

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

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

Lab Sample ID: LCS 880-188 Matrix: Solid	83/2 <b>-A</b>						Client	t Sample		Type: Tot	tal/NA
Analysis Batch: 18891									Prep	Batch:	10003
	LCS	LCS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	113		70 - 130								
o-Terphenyl	114		70 - 130								
	000/0 4					0					. D
Lab Sample ID: LCSD 880-18	003/3-A					Clien	it San	ipie iD:	Lab Contro		
Matrix: Solid										Type: Tot	
Analysis Batch: 18891			Spike	1.060	LCSD				%Rec.	Batch:	RPD
Analyte			Spike Added	Result		Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics			1000	1099	Quaimer	mg/Kg		110	70 - 130	5	20
(GRO)-C6-C10			1000	1035		mg/itg		110	70 - 150	5	20
Diesel Range Organics (Over			1000	1086		mg/Kg		109	70 - 130	6	20
C10-C28)						0 0					
	1000	LCSD									
Surrogata			Limits								
Surrogate 1-Chlorooctane	% <b>Recovery</b> 102	Qualifier	70 - 130								
o-Terphenyl	102		70 - 130 70 - 130								
	100		10 - 100								
Lab Sample ID: 880-11024-A-	1-G MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid										Type: Tot	-
Analysis Batch: 18891										Batch:	
-	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics	<50.0	U F1 F2	1000	1889	F1	mg/Kg		185	70 - 130		
(GRO)-C6-C10											
Diesel Range Organics (Over	<50.0	U	1000	1100		mg/Kg		110	70 - 130		
C10-C28)											
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	84		70 - 130								
o-Terphenyl	86		70 - 130								
Lab Sample ID: 880-11024-A-	1-H MSD					Cli	ent Sa	ample IC	D: Matrix S		
Matrix: Solid										Type: Tot	
Analysis Batch: 18891									Prep	Batch:	18883
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1 F2	998	1078	F2	mg/Kg		104	70 _ 130	55	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	934.8		mg/Kg		94	70 <sub>-</sub> 130	16	20
	MSD	MSD									
Surrogate	%Recovery		Limits								
1-Chlorooctane	70		70 - 130								

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o-Terphenyl

70 - 130

Client: WSP USA Inc.

# **QC Sample Results**

Job ID: 890-1916-1 SDG: 31403236.001.0129.35.02

Project/Site: Remuda Basin State #2 Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-19050	11 A							Client	Sample ID:	Mothod	Plank
Matrix: Solid	/1-A							Chefft			
									Prep	Type: So	eldulo
Analysis Batch: 19051											
	_	MB MB					_			-	
Analyte		esult Qualifier		RL	Unit		<u>D</u>	Prepared	Analyz		Dil Fac
Chloride	<	5.00 U		5.00	mg/K	g			02/10/22	22:37	1
Lab Sample ID: LCS 880-1905	0/2-A						Clie	nt Sample	BID: Lab Co	ontrol Sa	ample
Matrix: Solid										Type: So	
Analysis Batch: 19051											
			Spike	LCS	LCS				%Rec.		
Analyte			Added	Result	Qualifier	Unit	0	%Rec	Limits		
Chloride			250	259.2		mg/Kg		104	90 - 110		
Lab Sample ID: LCSD 880-190	50/3-A					CI	ient Sa	mple ID:	Lab Contro		
Matrix: Solid									Prep	Type: So	oluble
Analysis Batch: 19051											
			Spike	LCSD	LCSD				%Rec.		RPD
Analyte			Added	Result	Qualifier	Unit		%Rec	Limits	RPD	Limit
Chloride			250	259.7		mg/Kg		104	90 - 110	0	20
Lab Sample ID: 880-11062-A-1	-B MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid										Type: So	
Analysis Batch: 19051										.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Analysis Baton. 10001	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	0	%Rec	Limits		
Chloride	8640		2520	11270		mg/Kg		105	90 _ 110		
Lab Sample ID: 880-11062-A-1	CMED						Client	Comple II	). Motrix Cr	siko Dun	lieste
Matrix: Solid							Chent	Sample II	D: Matrix Sp Brop		
									Fieb	Type: So	oiuble
Analysis Batch: 19051	Sample	Sample	Spike	Men	MSD				%Rec.		RPD
Analyte		Qualifier	Added		Qualifier	Unit	0	) %Rec	Limits	RPD	Limit
Chloride			Auueu		Quannel			/01100	Linnta		LIIIII
	8640		2520	11260		mg/Kg		104	90 - 110	0	20

**Released to Imaging: 9/22/2022 7:39:45 AM** 

# **QC Association Summary**

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

Job ID: 890-1916-1 SDG: 31403236.001.0129.35.02

GC VC	AC

#### Prep Batch: 18817

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1916-1	SW05	Total/NA	Solid	5035	
890-1916-2	SW07	Total/NA	Solid	5035	
MB 880-18817/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-18817/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-18817/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-10991-A-1-F MS	Matrix Spike	Total/NA	Solid	5035	
880-10991-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
nalysis Batch: 18880					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
000 4040 4	014/05	T-1-1/010	0	00040	

890-1916-1	SW05	Total/NA	Solid	8021B	18817	
890-1916-2	SW07	Total/NA	Solid	8021B	18817	
MB 880-18817/5-A	Method Blank	Total/NA	Solid	8021B	18817	
LCS 880-18817/1-A	Lab Control Sample	Total/NA	Solid	8021B	18817	
LCSD 880-18817/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	18817	
880-10991-A-1-F MS	Matrix Spike	Total/NA	Solid	8021B	18817	
880-10991-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	18817	
—						

#### Analysis Batch: 18942

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1916-1	SW05	Total/NA	Solid	Total BTEX	
890-1916-2	SW07	Total/NA	Solid	Total BTEX	

### GC Semi VOA

#### Analysis Batch: 18870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1916-1	SW05	Total/NA	Solid	8015 NM	
890-1916-2	SW07	Total/NA	Solid	8015 NM	
Prep Batch: 18883					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1916-1	SW05	Total/NA	Solid	8015NM Prep	
890-1916-2	SW07	Total/NA	Solid	8015NM Prep	
MB 880-18883/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-18883/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-18883/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-11024-A-1-G MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-11024-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 18891

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1916-1	SW05	Total/NA	Solid	8015B NM	18883
890-1916-2	SW07	Total/NA	Solid	8015B NM	18883
MB 880-18883/1-A	Method Blank	Total/NA	Solid	8015B NM	18883
LCS 880-18883/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	18883
LCSD 880-18883/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	18883
880-11024-A-1-G MS	Matrix Spike	Total/NA	Solid	8015B NM	18883
880-11024-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	18883

# **QC** Association Summary

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

Job ID: 890-1916-1 SDG: 31403236.001.0129.35.02

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### HPLC/IC

### Leach Batch: 19050

ab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
390-1916-1	SW05	Soluble	Solid	DI Leach	
890-1916-2	SW07	Soluble	Solid	DI Leach	
/IB 880-19050/1-A	Method Blank	Soluble	Solid	DI Leach	
CS 880-19050/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
CSD 880-19050/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-11062-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-11062-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
nalysis Batch: 19051			Madein	Mathad	Draw Datab
nalysis Batch: 19051			Matrix	Method	Pren Batch
nalysis Batch: 19051 .ab Sample ID	Client Sample ID SW05	Prep Type Soluble	Matrix Solid	Method 300.0	Prep Batch 19050
	Client Sample ID	Ргер Туре			
nalysis Batch: 19051 ab Sample ID 390-1916-1	Client Sample ID	Prep Type Soluble	Solid	300.0	19050
nalysis Batch: 19051 Lab Sample ID 390-1916-1 390-1916-2	Client Sample ID SW05 SW07	Prep Type Soluble Soluble Soluble Soluble	Solid Solid	300.0 300.0	19050 19050
nalysis Batch: 19051 Lab Sample ID 190-1916-1 190-1916-2 //B 880-19050/1-A	Client Sample ID SW05 SW07 Method Blank	Prep Type Soluble Soluble Soluble Soluble Soluble	Solid Solid Solid	300.0 300.0 300.0	19050 19050 19050
<b>ab Sample ID</b> 390-1916-1 390-1916-2 VIB 880-19050/1-A .CS 880-19050/2-A	Client Sample ID SW05 SW07 Method Blank Lab Control Sample	Prep Type Soluble Soluble Soluble Soluble	Solid Solid Solid Solid	300.0 300.0 300.0 300.0	19050 19050 19050 19050 19050

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-1916-1	SW05	Soluble	Solid	300.0	19050	
890-1916-2	SW07	Soluble	Solid	300.0	19050	
MB 880-19050/1-A	Method Blank	Soluble	Solid	300.0	19050	
LCS 880-19050/2-A	Lab Control Sample	Soluble	Solid	300.0	19050	
LCSD 880-19050/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	19050	
880-11062-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	19050	
880-11062-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	19050	
880-11062-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	19050	

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Released to Imaging: 9/22/2022 7:39:45 AM

# Lab Chronicle

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

# Client Sample ID: SW05

Date Collected: 02/07/22 13:35 Date Received: 02/07/22 15:51

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			18817	02/09/22 08:00	KL	XEN MID
Total/NA	Analysis	8021B		1	18880	02/09/22 13:00	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	18942	02/09/22 17:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	18870	02/08/22 16:56	AJ	XEN MID
Total/NA	Prep	8015NM Prep			18883	02/09/22 08:38	DM	XEN MID
Total/NA	Analysis	8015B NM		1	18891	02/09/22 13:17	AJ	XEN MID
Soluble	Leach	DI Leach			19050	02/10/22 14:03	СН	XEN MID
Soluble	Analysis	300.0		1	19051	02/10/22 23:48	SC	XEN MID

# Client Sample ID: SW07

Date Collected: 02/07/22 14:30 Date Received: 02/07/22 15:51

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			18817	02/09/22 08:00	KL	XEN MID
Total/NA	Analysis	8021B		1	18880	02/09/22 13:21	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	18942	02/09/22 17:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	18870	02/08/22 16:56	AJ	XEN MID
Total/NA	Prep	8015NM Prep			18883	02/09/22 08:38	DM	XEN MID
Total/NA	Analysis	8015B NM		1	18891	02/09/22 13:38	AJ	XEN MID
Soluble	Leach	DI Leach			19050	02/10/22 14:03	СН	XEN MID
Soluble	Analysis	300.0		10	19051	02/10/22 23:57	SC	XEN MID

#### Laboratory References:

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

Job ID: 890-1916-1 SDG: 31403236.001.0129.35.02

# Lab Sample ID: 890-1916-1 Matrix: Solid

Lab Sample ID: 890-1916-2

Matrix: Solid

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Job ID: 890-1916-1 SDG: 31403236.001.0129.35.02

# Project/Site: Remuda Basin State #2 Laboratory: Eurofins Midland

Client: WSP USA Inc.

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

uthority	P	rogram	Identification Number	Expiration Date			
exas	N	ELAP T104704400-21-22		06-30-22			
The following analytes	are included in this report b	ut the laboratory is not certifi	ied by the governing authority. This list ma	w include analytes for w			
the agency does not o	fer certification.						
the agency does not of Analysis Method	•	Matrix	Analyte				
the agency does not o	fer certification.						

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Job ID: 890-1916-1 SDG: 31403236.001.0129.35.02

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

#### Protocol References:

Client: WSP USA Inc.

ASTM = ASTM International

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

Laboratory References:

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

Eurofins Carlsbad

# **Sample Summary**

Client: WSP USA Inc. Project/Site: Remuda Basin State #2 Job ID: 890-1916-1 SDG: 31403236.001.0129.35.02

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth	
390-1916-1	SW05	Solid	02/07/22 13:35	02/07/22 15:51	0 - 4	4
390-1916-2	SW07	Solid	02/07/22 14:30	02/07/22 15:51	0 - 4	
						5
						8
						9
						12
						13

3	Relinquished by: (Signature)	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its aniliates and subcontractors, it assigns summare terms and continuous of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the contro of Xenco. A minimum charge of \$75,00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	Total 200.7 / 6010 Circle Method(s) a				SW07	SW05	Sample Identification	Sample Custody Seals:	Cooler Custody Seals:	Received Intact:	Temperature (°C):	SAMPLE RECEIPT	Sampler's Name:	P.O. Number:	Project Number:	Project Name:	Phone:	City, State ZIP:			Project Manager:		X	
	: (Signature)	gnature of this document and relinquishment of samples constitutes a valid purchase order from citent company to xenco, its annuates and succontractors. It assigns semulate terms and communic . 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 A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	otal 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed				17	5		ls: Yes No	S: Yes No	Yes	5.0	3	Conner Shore		31403236	Remuda	720.384.7365	Arvada, Colorado 80003	4600 West 60th Avenue	WSP USA Inc.	Aimee Cole			
V.CO	Recei	hment of samples c of samples and shal oplied to each projec	20: be analyzed				s 2/7/2022	s 2/7/2022	Matrix Date Sampled	NIA 3		1-ic	0.0	Temp Blank: Yes h			31403236.001.0129.35.02	Remuda Basin State #2		80003	Avenue			т		
a	Received by: (Signature)	onstitutes a valid pu li not assume any re ct and a charge of \$5	8RCRA 13F TCLP / SP		_		022 1430	022 1335	Time ed Sampled	Total Containers:	Correction Factor:	NNO01		No Wet Ice:	Due	Rust			Email					lobbs,NM (575-392	Houston	
	ure)	sponsibility for any for each sample such as the sa	RCRA 13PPM Texas 11 AI TCLP / SPLP 6010: 8RCRA				0-4'	0-4"	Depth		0.4		ō	: Tes No	Due Date:	Rush: 24 Hr TAT		Turn Around	: conner.shore(	City, State ZIP:	Address:	Company Name:	Bill to: (if different)	2-7550) Phoenix,A	1.TX (281) 240-420	
2517/2	Date/Time	lient company to xend losses or expenses inc lomitted to Xenco, but r	Al Sb As Ba RA Sb As Ba				-1 × ×	1 × ×	Numb TPH (E BTEX (	PA 8	015	i)		rs					Email: conner.shore@wsp.com; Aimee.cole@wsp.com	Carlsbad, NM 88220	3104 E Green Street	e: XTO Energy	) Adrian Baker	Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)	Houston,TX (281) 240-4200 Dailas,TX (214) 902-0300 San Antonio,TX (210) 509-333	Chain of
4:102	Relinquished	o, its arrillates and su urred by the client if tot analyzed. These t	Sb As Ba Be B Cd Ca Cr Co Sb As Ba Be Cd Cr Co Cu Pl				×	×	Chlorid	de (E	PA	300.	0)						e.cole@wsp.cor	88220	1 Street			anta,GA (770-449-8	2-0300 San Antonic	Chain of Custody
	by:	erms will be enforced	Cr Co Cu Fe F Cu Pb Mn Mo									-	890-1916 (					ANALYSIS REQUEST						800) Tampa,FL (81	5,TX (210) 509-3334 TX (806)794-1296	<
	(Signature)	ises are due to circumstances beyond the ci be enforced unless previously negotiated.	Cu Fe Pb Mg Mn Mo Ni b Mn Mo Ni Se Ag Tl U				-						Chain of Custody					UEST	Deliverables: EDD	Reporting:Le	State of Project:	Program: U		13-620-2000)	4	
	Received by: (Signature)	regotiated.	∏ §															-		Reporting:Level II	Project:	Program: UST/PST PRP Brownfields	Work	www.xenco.com		Work O
	(Signature)		SiO2 Na Sr Ti 1631 / 245.				_				TAT	T	_			AFE			AUaPI -	HPST/UST	2		Work Order Comments	ico.com <sup>D</sup> age		Work Order No:
	Date/Time		Na Sr Ti Sn U V Zn 1631/245.1/7470 /7471:				COMPOSITE	COMPOSITE	Sample Comments	lab, if received by 4:30pm	TAT starts the day recevied by the					AFE: EW.2022.00063.EXP.0		Work Order Notes	Other:			RRC Superfund	1	ge <u>1</u> of_		
	ne		1 : Hg						nts	Opm	ed by the					5.EXP.0	   	tes			_	nd □				

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# Received by OCD: 7/8/2022 8:01:28 AM

Page 236 of 358

# Received by OCD: 7/8/2022 8:01:28 AM

Custody Seals Intact: Custody Seal No ∆ Yes ∆ No	Relinquished by Da		()u (2 2 5 22	linquished by	I III IV Other (specify)		Note: Since laboratory accreditation is a subject to change. Eurofins Environment Testing South Central, LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Environment Testing South Central. LLC attention immediately. If all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing South Central. LLC attention immediately. If all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing South Central. LLC attention immediately. If all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing South Central. LLC attention immediately. If all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing South Central. LLC attention immediately. If all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing South Central. LLC							SW07 (890-1916-2)	SW05 (890-1916-1)		Sample Identification - Client ID (Lab ID) S		r vysou vonie Remuda Basin State #2 89 Site: 62		9 704-5440(Tel)	9701		11 W Florida Ave,	y s Environment Testing South Centr	y/Receiving	ormation (Sub Contract Lab)	1089 N Canal St Carlsbad NM 88220 Phone. 575-988-3199 Fax. 575-988-3199	Eurofins Carlsbad
	Date/Time <sup>.</sup>	Date/Time	Date/Time		Primary Deliverable Rank. 2		sting South Centra for analysis/tests/ , LLC attention imu							2/7/22	2/7/22	X	Sample Date	000W#	8900004	WO#	PO <b>*</b>		TAT Requested (days):	Due Date Requested 2/9/2022		Prione:	Sampler	0	
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	Company	Company	Company				f method analy nples must be a reditations are							Solid	Solid	- Maria	(W=water S=solid, O=waste/oli, BT=Tissue, A=Air)									E-Mail jessic	Lab PM <sup>-</sup> Kramer	ody R	
				Time	Spe	San	rte & acc shipped I current t									$\bigotimes$	Field Filter Perform M		iocontont/ contest	000000000000000000000000000000000000000	0)				Accreditations Required (See note): NELAP - Louisiana, NELAP -	E-Mail essica.kramer@eurofinset.com		eco	
Cooler Temperature(s)	Received by	Receive	Received b		Special Instructions/QC Requirements	Sample Disposal ( A	preditation or date			 				×	×		8015MOD_N		M_S_P	ep (MC	D) Ful	ТРН			- Lou	ier@e	Jessica	đ	
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$\sim$			Re			े द	forwarded under o structions will be p s Environment Te										Special I	Other.	EDA		Amchlor Ascorbic Acid	Nitric Acid NaHSO4	B NaOH	Preservation Codes	Job #: 890-1916-1	Page <sup>.</sup> Page 1 of 1	COC No: 890-615 1	្ទុះ eurotins	2
Ver 06/08/2021	Company	Company	Company			than 1 month) Months	chain-of-custody If t provided. Any change sting South Central I										Special Instructions/Note		Z other (specify)	U - Acetone V MCAA	R Nazszus S - H2SO4 T TSP Dodecahi	P Na2O4S Q - Na2SO3	N None					Environment Testing America	
-							he sto LC									and the second se	U				rdrate							esting	

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12 13

Job Number: 890-1916-1

List Source: Eurofins Carlsbad

SDG Number: 31403236.001.0129.35.02

# Login Sample Receipt Checklist

Client: WSP USA Inc.

Login Number: 1916 List Number: 1

Creator: Clifton, Cloe

<6mm (1/4").

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

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

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

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

Samples are received within Holding Time (excluding tests with immediate

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

Containers requiring zero headspace have no headspace or bubble is

Sample custody seals, if present, are intact.

# Login Sample Receipt Checklist

Answer

True

N/A

Comment

Client: WSP USA Inc.

Login Number: 1916

Creator: Kramer, Jessica

Samples were received on ice.

Cooler Temperature is acceptable.

COC is filled out in ink and legible.

Sample containers have legible labels.

Containers are not broken or leaking.

Sample bottles are completely filled.

Sample Preservation Verified.

Sample collection date/times are provided.

Appropriate sample containers are used.

COC is filled out with all pertinent information.

Is the Field Sampler's name present on COC?

Cooler Temperature is recorded.

List Number: 2

tampered with.

COC is present.

HTs)

MS/MSDs

R

<6mm (1/4").

Question

Job Number: 890-1916-1 SDG Number: 31403236.001.0129.35.02 14

List Source: Eurofins Midland

List Creation: 02/09/22 11:55 AM

Eurofins Carlsbad			
eleased to Imaging:	9/22/2022	7:39:45 AM	

Received by OCD: 7/8/2022 8:01:28 AM

# 🔅 eurofins

# Environment Testing America

# **ANALYTICAL REPORT**

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

# Laboratory Job ID: 890-1934-1

Laboratory Sample Delivery Group: 31403236.001.0129.35.02 Client Project/Site: Remuda Basin State #2

# For:

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

Attn: Aimee Cole

RAMER

Authorized for release by: 2/17/2022 2:37:39 PM

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

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

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

LINKS **Review your project** results through Total Access **Have a Question?** Ask-The Expert Visit us at: www.eurofinsus.com/Env Released to Imaging: 9/22/2022 7:39:45 AM

Laboratory Job ID: 890-1934-1 SDG: 31403236.001.0129.35.02

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2

Job ID: 890-1934-1 SDG: 31403236.001.0129.35.02

# Qualifiers

Dil Fac

Qualifiers		3
GC VOA Qualifier	Qualifier Description	4
S1+	Surrogate recovery exceeds control limits, high biased.	
U	Indicates the analyte was analyzed for but not detected.	5
GC Semi VO	Α	
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	8
F1	MS and/or MSD recovery exceeds control limits.	
U	Indicates the analyte was analyzed for but not detected.	9
Glossary		10
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	10
DER	Duplicate Error Ratio (normalized absolute difference)	13

DLDetection Limit (DoD/DOE)DL, RA, RE, INIndicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sampleDLCDecision Level Concentration (Radiochemistry)EDLEstimated Detection Limit (Dioxin)LODLimit of Detection (DoD/DOE)

**Dilution Factor** 

LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

MDLMethod Detection LimitMLMinimum Level (Dioxin)MPNMost Probable NumberMQLMethod Quantitation LimitNCNot 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

4

Job ID: 890-1934-1 SDG: 31403236.001.0129.35.02

#### Job ID: 890-1934-1

Client: WSP USA Inc.

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-1934-1

#### Receipt

The samples were received on 2/11/2022 4:16 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.0°C

#### GC VOA

Method 8021B: Surrogate recovery for the following samples were outside control limits: SW08 (890-1934-1) and SW09 (890-1934-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

#### GC Semi VOA

Method 8015MOD\_NM: Surrogate recovery for the following samples were outside control limits: SW08 (890-1934-1), SW09 (890-1934-2), (MB 880-19554/1-A), (880-11287-A-35-E), (880-11287-A-35-F MS) and (880-11287-A-35-G MSD). Evidence of matrix interferences is not obvious.

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 880-19617 and analytical batch 880-19618 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.

Job ID: 890-1934-1 SDG: 31403236.001.0129.35.02

# Lab Sample ID: 890-1934-1

Matrix: Solid

5

Date Collected: 02/11/22 12:20 Date Received: 02/11/22 16:16 Sample Depth: 0 - 4

Client Sample ID: SW08

Analyte	Compounds ( Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00201	U	0.00201	mg/Kg		02/16/22 07:11	02/16/22 15:05	
Toluene	<0.00201	U	0.00201	mg/Kg		02/16/22 07:11	02/16/22 15:05	
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		02/16/22 07:11	02/16/22 15:05	
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		02/16/22 07:11	02/16/22 15:05	
o-Xylene	<0.00201	U	0.00201	mg/Kg		02/16/22 07:11	02/16/22 15:05	
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		02/16/22 07:11	02/16/22 15:05	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	139	S1+	70 - 130			02/16/22 07:11	02/16/22 15:05	
1,4-Difluorobenzene (Surr)	99		70 - 130			02/16/22 07:11	02/16/22 15:05	
Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00402	U	0.00402	mg/Kg			02/16/22 16:56	
Method: 8015 NM - Diesel Range	Organics (DR	0) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<49.9	U	49.9	mg/Kg			02/17/22 13:52	
Method: 8015B NM - Diesel Rang	e Organics (D	RO) (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		02/16/22 08:36	02/16/22 14:13	
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		02/16/22 08:36	02/16/22 14:13	
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/16/22 08:36	02/16/22 14:13	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	68	S1-	70 - 130			02/16/22 08:36	02/16/22 14:13	
o-Terphenyl	79		70 - 130			02/16/22 08:36	02/16/22 14:13	
Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
							00/10/00 10 10	
Analyte	362		25.2	mg/Kg			02/16/22 16:48	
Analyte Chloride Client Sample ID: SW09 Pate Collected: 02/11/22 13:00 Pate Received: 02/11/22 16:16			25.2	mg/Kg		Lab Sar	nple ID: 890-	1934-2
Analyte Chloride Client Sample ID: SW09 Pate Collected: 02/11/22 13:00 Pate Received: 02/11/22 16:16 Cample Depth: 0 - 4	362		25.2	mg/Kg		Lab San	nple ID: 890-	1934-2
Analyte Chloride Client Sample ID: SW09 late Collected: 02/11/22 13:00 late Received: 02/11/22 16:16 ample Depth: 0 - 4 Method: 8021B - Volatile Organic	362						nple ID: 890- Matri	1934-/ x: Soli
Analyte Chloride Client Sample ID: SW09 late Collected: 02/11/22 13:00 late Received: 02/11/22 16:16 lample Depth: 0 - 4 Method: 8021B - Volatile Organic Analyte	362 Compounds ( Result	Qualifier	RL	Unit	<u>D</u>	Prepared	nple ID: 890- Matri Analyzed	1934-2 x: Solic Dil Fa
Analyte Chloride Client Sample ID: SW09 ate Collected: 02/11/22 13:00 ate Received: 02/11/22 16:16 ample Depth: 0 - 4 Method: 8021B - Volatile Organic	362	Qualifier			<u>D</u>		nple ID: 890- Matri	1934-; x: Soli Dil Fa

Surrogate 4-Bromofluorobenzene (Surr)	%Recovery 147	Qualifier	Limits 70 - 130		Prepared 02/16/22 07:11	Analyzed 02/16/22 15:25	Dil Fac 1
Xylenes, Total	< 0.00402	U	0.00402	mg/Kg	02/16/22 07:11	02/16/22 15:25	1
o-Xylene	<0.00201	U	0.00201	mg/Kg	02/16/22 07:11	02/16/22 15:25	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg	02/16/22 07:11	02/16/22 15:25	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg	02/16/22 07:11	02/16/22 15:25	1
Toluene	<0.00201	U	0.00201	mg/Kg	02/16/22 07:11	02/16/22 15:25	1

Eurofins Carlsbad

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

Released to Imaging: 9/22/2022 7:39:45 AM

# **Client Sample Results**

Limits

70 - 130

RL

RL

50.0

RL

50.0

50.0

50.0

RL

25.0

Limits

70 - 130

70 - 130

0.00402

Unit

Unit

Unit

mg/Kg

mg/Kg

mg/Kg

Unit

mg/Kg

mg/Kg

mg/Kg

Job ID: 890-1934-1 004 0420 25 SDG: .02

Prepared

02/16/22 07:11

Prepared

Prepared

Prepared

02/16/22 08:36

02/16/22 08:36

02/16/22 08:36

Prepared

02/16/22 08:36

02/16/22 08:36

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# **Client Sample ID: SW09**

Method: Total BTEX - Total BTEX Calculation

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

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

Method: 300.0 - Anions, Ion Chromatography - Soluble

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

%Recovery

100

<0.00402 U

Result Qualifier

Result Qualifier

Result Qualifier

<50.0 U

<50.0 U

<50.0 U

<50.0 U

%Recovery Qualifier

69 S1-

82

Result Qualifier

432 F1

Qualifier

Date Collected: 02/11/22 13:00 Date Received: 02/11/22 16:16

Sample Depth: 0 - 4

1,4-Difluorobenzene (Surr)

Gasoline Range Organics

Diesel Range Organics (Over

Oll Range Organics (Over C28-C36)

Surrogate

Analyte

Analyte

Analyte

C10-C28)

Surrogate

o-Terphenyl

Analyte

Chloride

1-Chlorooctane

(GRO)-C6-C10

Total TPH

Total BTEX

Client: WSP USA Inc.

Analyzed

02/16/22 15:25

Analyzed

02/16/22 16:56

Analyzed

02/17/22 13:52

Analyzed

02/16/22 14:34

02/16/22 14:34

02/16/22 14:34

Analyzed

02/16/22 14:34

02/16/22 14:34

Analyzed

02/16/22 15:08

Matrix: Solid

Dil Fac

Dil Fac

Dil Fac

1

1

5

oona	
	5
Dil Fac 1	
Dil Fac	
1	8
Dil Fac	ç
1	

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Prep Type: Total/NA

Prep Type: Total/NA

Job ID: 890-1934-1 SDG: 31403236.001.0129.35.02

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

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
.ab Sample ID	Client Sample ID	(70-130)	(70-130)	
320-3407-A-1-G MS	Matrix Spike	130	99	
820-3407-A-1-H MSD	Matrix Spike Duplicate	100	99	
890-1934-1	SW08	139 S1+	99	
890-1934-2	SW09	147 S1+	100	
LCS 880-19550/1-A	Lab Control Sample	128	107	
LCSD 880-19550/2-A	Lab Control Sample Dup	122	96	
MB 880-19550/5-A	Method Blank	120	92	
Surrogate Legend				

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

#### Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
880-11287-A-35-F MS	Matrix Spike	64 S1-	57 S1-		
880-11287-A-35-G MSD	Matrix Spike Duplicate	66 S1-	59 S1-		
890-1934-1	SW08	68 S1-	79		
890-1934-2	SW09	69 S1-	82		
LCS 880-19554/2-A	Lab Control Sample	107	111		
LCSD 880-19554/3-A	Lab Control Sample Dup	101	103		
MB 880-19554/1-A	Method Blank	59 S1-	68 S1-		

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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

Lab Sample ID: MB 880-19550/5-A
Matrix: Solid

Matrix: Solid Analysis Batch: 19551

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/16/22 07:11	02/16/22 10:27	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/16/22 07:11	02/16/22 10:27	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/16/22 07:11	02/16/22 10:27	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/16/22 07:11	02/16/22 10:27	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/16/22 07:11	02/16/22 10:27	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/16/22 07:11	02/16/22 10:27	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	120		70 - 130			02/16/22 07:11	02/16/22 10:27	1
1,4-Difluorobenzene (Surr)	92		70 - 130			02/16/22 07:11	02/16/22 10:27	1

#### Lab Sample ID: LCS 880-19550/1-A Matrix: Solid

#### Analysis Batch: 19551

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09140		mg/Kg		91	70 - 130	
Toluene	0.100	0.1084		mg/Kg		108	70 - 130	
Ethylbenzene	0.100	0.1057		mg/Kg		106	70 - 130	
m-Xylene & p-Xylene	0.200	0.2056		mg/Kg		103	70 - 130	
o-Xylene	0.100	0.1068		mg/Kg		107	70 - 130	

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

#### Lab Sample ID: LCSD 880-19550/2-A

### Matrix: Solid

Analysis Batch: 19551							Prep	Batch:	19550
	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08812		mg/Kg		88	70 - 130	4	35
Toluene	0.100	0.09782		mg/Kg		98	70 - 130	10	35
Ethylbenzene	0.100	0.09610		mg/Kg		96	70 - 130	9	35
m-Xylene & p-Xylene	0.200	0.1958		mg/Kg		98	70 - 130	5	35
o-Xylene	0.100	0.09318		mg/Kg		93	70 - 130	14	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	122		70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

#### Lab Sample ID: 820-3407-A-1-G MS Matrix: Solid

#### Analysis Batch: 19551

Analysis Batch: 19551									Prep Batch: 19550	
	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	< 0.00202	U	0.0996	0.09093		mg/Kg		91	70 - 130	
Toluene	<0.00202	U	0.0996	0.09748		mg/Kg		98	70 - 130	

ad

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

Prep Batch: 19550

#### **Client Sample ID: Lab Control Sample**

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Type: Total/NA

Prep Batch: 19550

Eur	ofir	ns (	Car	lst	)a

Prep Type: Total/NA

**Client Sample ID: Matrix Spike** 

Client: WSP USA Inc. Project/Site: Remuda Basin State #2 Job ID: 890-1934-1 SDG: 31403236.001.0129.35.02

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

Lab Sample ID: 820-3407-A-1	-G MS									Cheffit .	Sample ID:		-
Matrix: Solid											Prep Ty		
Analysis Batch: 19551											Prep	Batch:	1955
	Sample	Samp	ole	Spike	MS	MS					%Rec.		
Analyte	Result		fier	Added	Result	Qualifier	Unit		D	%Rec	Limits		
Ethylbenzene	<0.00202			0.0996	0.1000		mg/Kg			100	70 - 130		
n-Xylene & p-Xylene	<0.00404	U		0.199	0.1942		mg/Kg			98	70 - 130		
-Xylene	<0.00202	U		0.0996	0.09250		mg/Kg			93	70 - 130		
		MS											
Surrogate	%Recovery	Quali	fier	Limits									
1-Bromofluorobenzene (Surr)	130			70 - 130									
,4-Difluorobenzene (Surr)	99			70 - 130									
_ab Sample ID: 820-3407-A-1	-H MSD							Clie	nt Sa	mple ID:	: Matrix Sp	ike Dup	olicat
Matrix: Solid											Prep Ty	ype: To	tal/N
Analysis Batch: 19551											Prep	Batch:	1955
	Sample	Samp	ole	Spike	MSD	MSD					%Rec.		RP
Analyte	Result	Quali	fier	Added	Result	Qualifier	Unit		D	%Rec	Limits	RPD	Lim
Benzene	<0.00202	U		0.100	0.08564		mg/Kg			86	70 - 130	6	3
oluene	<0.00202	U		0.100	0.09258		mg/Kg			93	70 - 130	5	3
thylbenzene	<0.00202	U		0.100	0.1031		mg/Kg			103	70 - 130	3	3
n-Xylene & p-Xylene	<0.00404	U		0.200	0.1916		mg/Kg			96	70 - 130	1	3
-Xylene	<0.00202	U		0.100	0.09194		mg/Kg			92	70 _ 130	1	3
	MSD	MSD											
Surrogate	%Recovery	Quali	fier	Limits									
4-Bromofluorobenzene (Surr)	100			70 - 130									
	99			70 - 130									
1,4-Difluorobenzene (Surr)													
ethod: 8015B NM - Dies Lab Sample ID: MB 880-1955 Matrix: Solid	el Range Or									Client Sa	ample ID: M Prep Ty Prep		tal/N/
ethod: 8015B NM - Dies Lab Sample ID: MB 880-1955 Matrix: Solid Analysis Batch: 19566	el Range Or 4/1-A	мв	мв	O) (GC)		11:0:14					Prep Ty Prep	ype: To Batch:	tal/N/ 1955
ethod: 8015B NM - Dies Lab Sample ID: MB 880-1955 Matrix: Solid Analysis Batch: 19566 Analyte	el Range Or 4/1-A 	MB				<u>Unit</u>	q	D	Pr	epared	Prep Ty	ype: To Batch:	tal/N/ 1955 Dil Fa
ethod: 8015B NM - Dies Lab Sample ID: MB 880-1955 Matrix: Solid Analysis Batch: 19566 Analyte Basoline Range Organics GRO)-C6-C10	el Range Or 4/1-A 	MB esult 50.0	MB Qualifier U	O) (GC)		mg/K	-	D	<b>Pr</b> 02/16	<b>epared</b> /22 08:36	Prep Ty Prep Analyze	ype: To Batch: ed 1:26	tal/N/ 1955 Dil Fa
ethod: 8015B NM - Dies Lab Sample ID: MB 880-1955 Matrix: Solid Analysis Batch: 19566 Analyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over	el Range Or 4/1-A 	MB	MB Qualifier U	O) (GC)			-	<u>D</u>	<b>Pr</b> 02/16	epared	Prep Ty Prep Analyze	ype: To Batch: ed 1:26	tal/N
ethod: 8015B NM - Dies Lab Sample ID: MB 880-1955 Matrix: Solid Analysis Batch: 19566 Analyte Basoline Range Organics GRO)-C6-C10	el Range Or 4/1-A 	MB esult 50.0	MB Qualifier U	O) (GC)		mg/K	g	D	Pr 02/16 02/16	<b>epared</b> /22 08:36	Prep Ty Prep Analyze	ype: To Batch: ed 1:26 1:26	tal/N/ 1955 Dil Fa
ethod: 8015B NM - Dies Lab Sample ID: MB 880-1955 Matrix: Solid Analysis Batch: 19566 Malyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	el Range Or 4/1-A 	MB esult 50.0	MB Qualifier U U	O) (GC) 		mg/K	g	D	Pr 02/16 02/16	<b>epared</b> //22 08:36 5/22 08:36	Prep Ty Prep 02/16/22 1 02/16/22 1	ype: To Batch: ed 1:26 1:26	tal/N/ 1955 Dil Fa
ethod: 8015B NM - Dies Lab Sample ID: MB 880-1955 Matrix: Solid Analysis Batch: 19566 Malyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Dil Range Organics (Over C28-C36)	el Range Or 4/1-A 	MB 50.0 50.0 50.0 MB very	MB Qualifier U U U MB Qualifier	O) (GC) 		mg/K	g	<u>D</u>	Pr 02/16 02/16 02/16	<b>epared</b> //22 08:36 5/22 08:36	Prep Ty Prep 02/16/22 1 02/16/22 1	ype: To Batch: ad 1:26 1:26 1:26	tal/N/ 1955 Dil Fa
ethod: 8015B NM - Dies Lab Sample ID: MB 880-1955 Matrix: Solid Analysis Batch: 19566 Malyte Basoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	el Range Or 4/1-A 	MB esult 50.0 50.0 50.0 <i>MB</i>	MB Qualifier U U U MB Qualifier	O) (GC) 		mg/K	g	D	Pr 02/16 02/16 02/16 Pr	<b>epared</b> /22 08:36 /22 08:36 /22 08:36	Prep Ty Prep 02/16/22 1 02/16/22 1 02/16/22 1 02/16/22 1	ype: To Batch: ad 1:26 1:26 1:26 2:26	tal/N, 1955 Dil Fa

#### Lab Sample ID: LCS 880-19554/2-A Matrix: Solid Analysis Batch: 19566 Spike LCS LCS

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	844.6		mg/Kg		84	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	909.4		mg/Kg		91	70 _ 130	
C10-C28)								

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Prep Type: Total/NA

Prep Batch: 19554

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

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

Lab Sample ID: LCS 880-199 Matrix: Solid Analysis Batch: 19566	554/2-A						Client	t Sample		ontrol Sa Type: Tot Batch:	tal/NA
		LCS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	107		70 - 130 70 - 130								
o-Terphenyl	111		70 - 130								
Lab Sample ID: LCSD 880-1	9554/3-A					Clier	nt San	nple ID:	Lab Contro	Sample	e Dup
Matrix: Solid										Type: Tot	
Analysis Batch: 19566										Batch:	
			Spike	LCSD	LCSD				%Rec.		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics			1000	792.3		mg/Kg		79	70 - 130	6	20
(GRO)-C6-C10											
Diesel Range Organics (Over			1000	839.6		mg/Kg		84	70 - 130	8	20
C10-C28)											
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	101		70 - 130								
o-Terphenyl	103		70 - 130								
Lab Sample ID: 880-11287-A Matrix: Solid Analysis Batch: 19566	Sample	Sample	Spike		MS				Prep %Rec.	: Matrix Type: Tot Batch:	tal/NA
Analyte		Qualifier	Added		Qualifier	Unit	<u>D</u>	%Rec	Limits		
Gasoline Range Organics	<50.0	U	1000	922.5		mg/Kg		92	70 - 130		
(GRO)-C6-C10 Diesel Range Organics (Over	<50.0	u	1000	945.4		mg/Kg		90	70 - 130		
C10-C28)	400.0	0	1000	0-101		mg/rtg		50	70 - 100		
,											
		MS									
Surrogate	%Recovery		Limits								
1-Chlorooctane	64		70 - 130 70 - 130								
o-Terphenyl	57	S1-	70 - 130								
Lab Sample ID: 880-11287-A Matrix: Solid	A-35-G MSD					CI	ient S	ample IC	): Matrix Sp Prep 1	oike Dup Type: Tot	
Analysis Batch: 19566										Batch:	
-	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	948.8		mg/Kg		95	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	983.0		mg/Kg		94	70 - 130	4	20
	MSD	MSD									
Surrogate	%Recovery		Limits								
1-Chlorooctane		S1-	70 - 130								

7

Job ID: 890-1934-1 SDG: 31403236.001.0129.35.02

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o-Terphenyl

70 - 130

59 S1-

Client: WSP USA Inc.

# **QC Sample Results**

Job ID: 890-1934-1 SDG: 31403236.001.0129.35.02

Project/Site: Remuda Basin State #2 Method: 300.0 - Anions, Ion Chromatography

											<u></u>			
Lab Sample ID: MB 880-19617/1-A											Client	Sample ID:		
Matrix: Solid												Prep	Type: S	
Analysis Batch: 19618														
	_		MB						_	_			_	
Analyte			Qualifier		RL		Unit		<u>D</u>	Pr	repared	Analy		Dil Fac
Chloride	•	<5.00	U		5.00		mg/K	g				02/16/22	14:42	1
Lab Sample ID: LCS 880-19617/2-A									Cli	ont	Sample	e ID: Lab C	ontrol S	amnia
Matrix: Solid	•										Campi		Type: S	
Analysis Batch: 19618												Trop	Type. O	olubic
Analysis Batch. 19010				Spike		LCS	LCS					%Rec.		
Analyte				Added			Qualifier	Unit		D	%Rec	Limits		
Chloride				250		262.7		mg/Kg		-	105	90 - 110		
								5 5						
Lab Sample ID: LCSD 880-19617/3	A							Cli	ient S	am	ple ID:	Lab Contro	ol Sampl	e Dup
Matrix: Solid												Prep	Type: S	oluble
Analysis Batch: 19618														
				Spike		LCSD	LCSD					%Rec.		RPD
Analyte				Added		Result	Qualifier	Unit		D	%Rec	Limits	RPD	Limit
Chloride				250		261.7		mg/Kg			105	90 - 110	0	20
Lab Sample ID: 890-1934-2 MS												Client Sa		
Matrix: Solid												Prep	Type: S	oluble
Analysis Batch: 19618														
	Sample	Samp	ple	Spike		MS	MS					%Rec.		
Analyte	Result		ifier	Added		Result		Unit		D	%Rec	Limits		
Analyte Chloride	Result 432		ifier	<b>Added</b> 1250		Result 1974	Qualifier F1	Unit mg/Kg		<u>D</u>	%Rec 123	Limits 90 - 110		
Chloride			ifier							<u>D</u>		90 - 110		
Chloride			ifier							<u>D</u>		90 - 110 Client Sar		
Chloride Lab Sample ID: 890-1934-2 MSD Matrix: Solid			ifier							<u>D</u>		90 - 110 Client Sar	nple ID: Type: S	
Chloride	432	F1		1250		1974	F1			<u>D</u> .		90 - 110 Client Sar Prep		oluble
Chloride Lab Sample ID: 890-1934-2 MSD Matrix: Solid Analysis Batch: 19618	432 Sample	F1	ple	1250 Spike		1974 MSD	F1 MSD	mg/Kg			123	90 - 110 Client San Prep %Rec.	Type: S	oluble RPD
Chloride Lab Sample ID: 890-1934-2 MSD Matrix: Solid	432	F1 Samı Quali	ple	1250		1974 MSD Result	F1			<u>D</u>		90 - 110 Client Sar Prep		oluble

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Pag

# **QC** Association Summary

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Matrix

Solid

Solid

Solid

Solid

Solid

Solid

Solid

Matrix

Solid

Solid

Solid

Solid

Solid

Solid

Solid

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

**Client Sample ID** 

Method Blank

Matrix Spike

Lab Control Sample

Lab Control Sample Dup

Matrix Spike Duplicate

**Client Sample ID** 

Method Blank

Matrix Spike

Lab Control Sample

Lab Control Sample Dup

Matrix Spike Duplicate

SW08

SW09

SW08

SW09

**GC VOA** 

890-1934-1

890-1934-2

Prep Batch: 19550

MB 880-19550/5-A

LCS 880-19550/1-A

LCSD 880-19550/2-A

820-3407-A-1-G MS

820-3407-A-1-H MSD

Lab Sample ID

MB 880-19550/5-A

LCS 880-19550/1-A

LCSD 880-19550/2-A

820-3407-A-1-G MS

820-3407-A-1-H MSD

890-1934-1

890-1934-2

Analysis Batch: 19551

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Prep Batch

Prep Batch

19550

19550

19550

19550

19550

19550

19550

#### Job ID: 890-1934-1 SDG: 31403236.001.0129.35.02

Method

5035

5035

5035

5035

5035

5035

5035

Method

8021B

8021B

8021B

8021B

8021B

8021B

8021B

#### Analysis Batch: 19643

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1934-1	SW08	Total/NA	Solid	Total BTEX	
890-1934-2	SW09	Total/NA	Solid	Total BTEX	

### GC Semi VOA

#### Prep Batch: 19554

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1934-1	SW08	Total/NA	Solid	8015NM Prep	
890-1934-2	SW09	Total/NA	Solid	8015NM Prep	
MB 880-19554/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-19554/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-19554/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-11287-A-35-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-11287-A-35-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 19566

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1934-1	SW08	Total/NA	Solid	8015B NM	19554
890-1934-2	SW09	Total/NA	Solid	8015B NM	19554
MB 880-19554/1-A	Method Blank	Total/NA	Solid	8015B NM	19554
LCS 880-19554/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	19554
LCSD 880-19554/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	19554
880-11287-A-35-F MS	Matrix Spike	Total/NA	Solid	8015B NM	19554
880-11287-A-35-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	19554

#### Analysis Batch: 19712

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1934-1	SW08	Total/NA	Solid	8015 NM	
890-1934-2	SW09	Total/NA	Solid	8015 NM	

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# **QC Association Summary**

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

Job ID: 890-1934-1 SDG: 31403236.001.0129.35.02

# HPLC/IC

### Leach Batch: 19617

ach Batch: 19617					
_ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
390-1934-1	SW08	Soluble	Solid	DI Leach	
390-1934-2	SW09	Soluble	Solid	DI Leach	
MB 880-19617/1-A	Method Blank	Soluble	Solid	DI Leach	
_CS 880-19617/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
-CSD 880-19617/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
390-1934-2 MS	SW09	Soluble	Solid	DI Leach	
390-1934-2 MSD	SW09	Soluble	Solid	DI Leach	

#### Analysis Batch: 19618

890-1934-2 MSD	5009	Soluble	Solid	DI Leach		0
Analysis Batch: 19618						8
Lab Sample ID 890-1934-1	Client Sample ID SW08	Prep Type Soluble	Matrix Solid	Method 300.0	Prep Batch 19617	9
890-1934-2 MB 880-19617/1-A	SW09 Method Blank	Soluble Soluble	Solid Solid	300.0 300.0	19617 19617	
LCS 880-19617/2-A	Lab Control Sample	Soluble	Solid	300.0	19617	
LCSD 880-19617/3-A 890-1934-2 MS	Lab Control Sample Dup SW09	Soluble Soluble	Solid Solid	300.0 300.0	19617 19617	
890-1934-2 MSD	SW09	Soluble	Solid	300.0	19617	
						13

Eurofins Carlsbad
Job ID: 890-1934-1 SDG: 31403236.001.0129.35.02

# Lab Sample ID: 890-1934-1 Matrix: Solid

Lab Sample ID: 890-1934-2

Matrix: Solid

Client Sample ID: SW08 Date Collected: 02/11/22 12:20 Date Received: 02/11/22 16:16

Client: WSP USA Inc.

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			19550	02/16/22 07:11	KL	XEN MID
Total/NA	Analysis	8021B		1	19551	02/16/22 15:05	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	19643	02/16/22 16:56	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	19712	02/17/22 13:52	AJ	XEN MID
Total/NA	Prep	8015NM Prep			19554	02/16/22 08:36	DM	XEN MID
Total/NA	Analysis	8015B NM		1	19566	02/16/22 14:13	AJ	XEN MID
Soluble	Leach	DI Leach			19617	02/16/22 14:00	СН	XEN MID
Soluble	Analysis	300.0		5	19618	02/16/22 16:48	СН	XEN MID

Lab Chronicle

# Client Sample ID: SW09

Date Collected: 02/11/22 13:00 Date Received: 02/11/22 16:16

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			19550	02/16/22 07:11	KL	XEN MID
Total/NA	Analysis	8021B		1	19551	02/16/22 15:25	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	19643	02/16/22 16:56	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	19712	02/17/22 13:52	AJ	XEN MID
Total/NA	Prep	8015NM Prep			19554	02/16/22 08:36	DM	XEN MID
Total/NA	Analysis	8015B NM		1	19566	02/16/22 14:34	AJ	XEN MID
Soluble	Leach	DI Leach			19617	02/16/22 14:00	СН	XEN MID
Soluble	Analysis	300.0		5	19618	02/16/22 15:08	СН	XEN MID

#### Laboratory References:

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

10

Job ID: 890-1934-1 SDG: 31403236.001.0129.35.02

# Project/Site: Remuda Basin State #2 Laboratory: Eurofins Midland

Client: WSP USA Inc.

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

uthority	P	rogram	Identification Number	Expiration Date
xas	N	ELAP	T104704400-21-22	06-30-22
The following analytes	are included in this report, b	ut the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes for v
the agency does not o				
the agency does not o Analysis Method	ffer certification. Prep Method	Matrix	Analyte	
6 ,		Matrix Solid	Analyte Total TPH	

Job ID: 890-1934-1 SDG: 31403236.001.0129.35.02

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

#### Protocol References:

Client: WSP USA Inc.

ASTM = ASTM International

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

Laboratory References:

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

Eurofins Carlsbad

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# **Sample Summary**

Client: WSP USA Inc. Project/Site: Remuda Basin State #2 Job ID: 890-1934-1 SDG: 31403236.001.0129.35.02

Matrix Collected Receive	Client Sample ID Matrix	Sample ID
Solid 02/11/22 12:20 02/11/22 1	SW08 Solid	1934-1
Solid 02/11/22 13:00 02/11/22 1	SW09 Solid	1934-2

Chain Of Cluster         Chain Of Cluster         Work Order Loss         Work Ord		Reli	Notice: Signature of this of service. Xenco will be of Xenco. A minimum chi	Total 200.7 / 6010 Circle Method(s) a				60MS	SMO8	Sample Identification	Sample Custody Seals:	Cooler Custody Seals:	Received Intact:	Temperature (°C):	SAMPLE RECEIPT	Sampler's Name:	P.O. Number:	Project Number:	Project Name:	Phone:	City, State ZIP:	Address:		Project Manager:	rage 2	3	
rk Order No: Nork Order Comments RP [rownfields f]C []perfund [] ADaPT [] Other: ADaPT [] Other: ADaPT [] Other: AFE: EW.2022.00063.EXP.01 Freeaived by 4:30pm TAT starts the day received by the iab. if received by 4:30pm Sample Comments COMPOSITE COMPOSITE COMPOSITE 1631/245.1/7470 /7471 : Hg By: (Signature) Date/Time		/: (Signature)	document and relinquis liable only for the cost arge of \$75.00 will be ap	010 200.8 / 60; ((s) and Metal(s) tc				90	8		Yes	Yes No		2.2/2		Conner Shore		31403236	Remuda	720.384.7365	Arvada, Colorado	4600 West 60th /	WSP USA Inc.	Aimee Cole	BORATORIES		
rk Order No: Nork Order Comments RP [rownfields f]C []perfund [] ADaPT [] Other: ADaPT [] Work Order Notes TAT starts the day received by the lab, if received by 4:30pm Sample Comments COMPOSITE COMPOSITE COMPOSITE 1631/245.1/7470 /7471 : Hg Revised Date 051419 Rev. 2019 1	lap		hment of samples of of samples and sha oplied to each proje	20: be analyzed					_		N/A)		1	CO.	Ves			3.001.0129.35.	Basin State #		80003	Avenue					
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Released to Imaging: 9/22/2022 7:39:45 AM

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# Received by OCD: 7/8/2022 8:01:28 AM

Eurofins Carlsbad 1089 N Canal St		ř.		- - - -	) ) 	<u>.</u>													8 .	📽 eurofins		
Phone: 575-988-3199 Fax: 575-988-3199	Sampler:			I sh DM								2									-	Allerica
Client Information (Sub Contract Lab)	7522			Kramer,	ter, Jessica	Ga							;					[	88	890-624 1		
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Company Eurofins Environment Testing South Centr					Accreditations Required (See n NELAP - Louisiana, NEL	ons Rec	quired	(See 1	₽ P.	<sub>iote):</sub> AP - Texas	as								Job #	Job # <sup>.</sup> 890-1934-1		
Address 1211 W Florida Ave, ,	Due Date Requested 2/15/2022	4							Inal	nalvsis	Requested	11 A	Ťad					1	Pa	Preservation Codes	des	
City Midland	TAT Requested (days):	's):					-								-			Ø	) 00 >	A HCL B - NaOH		- None
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			Sample Type	Matrix (W=water	Filtered rm MS/N	IOD_NM/8  IOD_Calc	RGFM_28	/5036FP_	BTEX_GO									Number				
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	(C=comp, G=grab)	O≕waste/oli, BT=Tissue, A≈Air)	Perfo			8021B	Total_									Total		Special	nstr	Special Instructions/Note:
	X		1000	on Code:	XX		D	13							7.1	6.1		X		V		
SW08 (890-1934-1)	2/11/22	12 20 Mountain		Solid		××	×	×	×									-				
SW09 (890-1934-2)	2/11/22	13 00 Mountain		Solid		××	×	×	×									4				
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Note Since laboratory accreditations are subject to change Eurofins Environment Testing South Central LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories This sample shipment is forwarded under chain-of-custody. If the laboratory occurrently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central LLC laboratory or other instructions will be provided. Any changes to	t Testing South Centra	I LLC places t natrix being ar	he ownership on the same the s	of method ana nples must be	yte & accre shipped ba	ditation ck to th	e Euro	liance ofins E	upon	out su	Ibcont	g Sou	borat th Ce	ntral	This	borat	e ship bry or	other	l is fo	nuctions will be	chain- provid	-of-custody If the ed. Any changes to
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14

Job Number: 890-1934-1

List Source: Eurofins Carlsbad

SDG Number: 31403236.001.0129.35.02

# Login Sample Receipt Checklist

Client: WSP USA Inc.

Login Number: 1934 List Number: 1

Creator: Clifton, Cloe

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

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

# Login Sample Receipt Checklist

Client: WSP USA Inc.

List Source: Eurofins Midland

List Creation: 02/16/22 11:59 AM

Job Number: 890-1934-1
SDG Number: 31403236.001.0129.35.02

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	N/A	

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

Received by OCD: 7/8/2022 8:01:28 AM

# 🔅 eurofins

# Environment Testing America

# **ANALYTICAL REPORT**

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

# Laboratory Job ID: 890-1940-1

Laboratory Sample Delivery Group: 31403236.001.0129.35.02 Client Project/Site: Remuda Basin State #2

# For:

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

Attn: Aimee Cole

RAMER

Authorized for release by: 2/18/2022 5:17:29 PM

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

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

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

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

Visit us at: www.eurofinsus.com/Env Released to Imaging: 9/22/2022 7:39:45 AM

Laboratory Job ID: 890-1940-1 SDG: 31403236.001.0129.35.02

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QC Sample Results	11
QC Association Summary	15
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Sample Summary	22
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Job ID: 890-1940-1 SDG: 31403236.001.0129.35.02

## Qualifiers

Qualifiers		3
GC VOA		
Qualifier	Qualifier Description	
S1+	Surrogate recovery exceeds control limits, high biased.	
U	Indicates the analyte was analyzed for but not detected.	5
GC Semi VOA	N Contraction of the second	
Qualifier	Qualifier Description	
F1	MS and/or MSD recovery exceeds control limits.	
F2	MS/MSD RPD exceeds control limits	
S1-	Surrogate recovery exceeds control limits, low biased.	
U	Indicates the analyte was analyzed for but not detected.	8
HPLC/IC		
Qualifier	Qualifier Description	9
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	4.0
CNF	Contains No Free Liquid	
DER	Duplicate Error Ratio (normalized absolute difference)	

	,
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

4

5

Job ID: 890-1940-1 SDG: 31403236.001.0129.35.02

#### Job ID: 890-1940-1

Client: WSP USA Inc.

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-1940-1

#### Receipt

The samples were received on 2/14/2022 4:42 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.8°C

#### GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: SW15 (890-1940-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

#### GC Semi VOA

Method 8015MOD\_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-19555 and analytical batch 880-19569 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: Surrogate recovery for the following sample was outside control limits: (880-11287-A-38-E MS). Evidence of matrix interferences is not obvious.

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.

Job ID: 890-1940-1 SDG: 31403236.001.0129.35.02

# Lab Sample ID: 890-1940-1

02/16/22 13:03

Lab Sample ID: 890-1940-2

Matrix: Solid

02/16/22 07:11

Matrix: Solid

Dil Fac

1

1

1

1

1

1

1

Dil Fac

5

**Client Sample ID: SW11** Date Collected: 02/14/22 11:50 Date Received: 02/14/22 16:42 Sample Depth: 0 - 4

Client: WSP USA Inc.

1,4-Difluorobenzene (Surr)

Sample Depth: 0 - 4								
Method: 8021B - Volatile Orga	anic Compounds (	(GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	
Benzene	<0.00199	U	0.00199	mg/Kg		02/16/22 07:11	02/16/22 13:03	
Toluene	<0.00199	U	0.00199	mg/Kg		02/16/22 07:11	02/16/22 13:03	
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		02/16/22 07:11	02/16/22 13:03	
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		02/16/22 07:11	02/16/22 13:03	
o-Xylene	<0.00199	U	0.00199	mg/Kg		02/16/22 07:11	02/16/22 13:03	
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		02/16/22 07:11	02/16/22 13:03	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	
4-Bromofluorobenzene (Surr)	120		70 - 130			02/16/22 07:11	02/16/22 13:03	

	Method: Total BTEX - Total BTEX Calc	ulation							
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
L	Total BTEX	<0.00398	U	0.00398	mg/Kg			02/16/22 16:56	1

70 - 130

74

Method: 8015 NM - Diesel Range O	rganics (DR	D) (GC)							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	<49.9	U	49.9	mg/Kg			02/17/22 13:29	1	

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U	49.9	mg/Kg		02/16/22 08:38	02/16/22 14:26	1
(GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		02/16/22 08:38	02/16/22 14:26	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/16/22 08:38	02/16/22 14:26	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	88		70 - 130			02/16/22 08:38	02/16/22 14:26	1
o-Terphenyl	95		70 - 130			02/16/22 08:38	02/16/22 14:26	1

	Method: 300.0 - Anions, Ion Chrom	atography -	Soluble						
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
l	Chloride	525		4.99	mg/Kg			02/17/22 20:19	1

# **Client Sample ID: SW12** Date Collected: 02/14/22 11:55 Date Received: 02/14/22 16:42

Sample Depth: 0 - 4

Method: 8021B - Volatile Orga	nic Compounds (	(GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00199	U	0.00199	mg/Kg		02/16/22 07:11	02/16/22 13:23	1
Toluene	<0.00199	U	0.00199	mg/Kg		02/16/22 07:11	02/16/22 13:23	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		02/16/22 07:11	02/16/22 13:23	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		02/16/22 07:11	02/16/22 13:23	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		02/16/22 07:11	02/16/22 13:23	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		02/16/22 07:11	02/16/22 13:23	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	128		70 - 130			02/16/22 07:11	02/16/22 13:23	1

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# Released to Imaging: 9/22/2022 7:39:45 AM

# **Client Sample Results**

Job ID: 890-1940-1 SDG: 31403236.001.0129.35.02

# Lab Sample ID: 890-1940-2

Matrix: Solid

5

Date Collected: 02/14/22 11:55 Date Received: 02/14/22 16:42

Client Sample ID: SW12

Sample Depth: 0 - 4

Client: WSP USA Inc.

4-Difluorobenzene (Surr)		Qualifier	Limits			Prepared	Analyzed	Dil Fa
	92		70 - 130			02/16/22 07:11	02/16/22 13:23	
lethod: Total BTEX - Total BTE	X Calculation							
nalyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
otal BTEX	<0.00398	U	0.00398	mg/Kg			02/16/22 16:56	
lethod: 8015 NM - Diesel Range	e Organics (DR	)) (GC)						
nalyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
otal TPH	<49.9	U	49.9	mg/Kg			02/17/22 13:29	
lethod: 8015B NM - Diesel Ran	ge Organics (DI	<b>RO) (GC)</b>						
nalyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
asoline Range Organics	<49.9	U	49.9	mg/Kg		02/16/22 08:38	02/16/22 14:47	
GRO)-C6-C10 Viesel Range Organics (Over	<49.9		49.9	mg/Kg		02/16/22 08:38	02/16/22 14:47	
ilesel Range Organics (Over 10-C28)	<b>~49.9</b>	J	43.3	iiiy/Ng		JZI 10122 00.38	02/10/22 14.4/	
II Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/16/22 08:38	02/16/22 14:47	
urrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
-Chlorooctane	98		70 - 130			02/16/22 08:38	02/16/22 14:47	
Terphenyl	103		70 - 130			02/16/22 08:38	02/16/22 14:47	
lethod: 300.0 - Anions, Ion Chr	omatography -	Soluble						
nalyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
hloride	483		5.05	mg/Kg			02/17/22 20:25	
ient Sample ID: SW13						Lab San	nple ID: 890-	1940-:
te Collected: 02/14/22 11:35								ix: Soli

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		02/16/22 07:11	02/16/22 13:43	1
Toluene	<0.00199	U	0.00199	mg/Kg		02/16/22 07:11	02/16/22 13:43	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		02/16/22 07:11	02/16/22 13:43	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		02/16/22 07:11	02/16/22 13:43	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		02/16/22 07:11	02/16/22 13:43	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		02/16/22 07:11	02/16/22 13:43	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	133	S1+	70 - 130			02/16/22 07:11	02/16/22 13:43	1
1,4-Difluorobenzene (Surr)	102		70 - 130			02/16/22 07:11	02/16/22 13:43	1
Method: Total BTEX - Total B1	EX Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/16/22 16:56	1
Method: 8015 NM - Diesel Rar	ige Organics (DR	0) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0		50.0	mg/Kg			02/17/22 13:29	

# **Client Sample Results**

Job ID: 890-1940-1 SDG: 31403236.001.0129.35.02

Lab Sample ID: 890-1940-3

Lab Sample ID: 890-1940-4

# Client Sample ID: SW13

Date Collected: 02/14/22 11:35 Date Received: 02/14/22 16:42

Sample Depth: 0 - 4

Client: WSP USA Inc.

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		02/16/22 08:38	02/16/22 15:07	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		02/16/22 08:38	02/16/22 15:07	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/16/22 08:38	02/16/22 15:07	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130			02/16/22 08:38	02/16/22 15:07	1
o-Terphenyl	98		70 - 130			02/16/22 08:38	02/16/22 15:07	1
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble						
	Desult	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte	Result	Quaimer		Onit		Fiepaieu	Analyzeu	Dirruc

#### Client Sample ID: SW14

Date Collected: 02/14/22 12:15 Date Received: 02/14/22 16:42

Sample Depth: 0 - 4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/16/22 07:11	02/16/22 14:04	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/16/22 07:11	02/16/22 14:04	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/16/22 07:11	02/16/22 14:04	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		02/16/22 07:11	02/16/22 14:04	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/16/22 07:11	02/16/22 14:04	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		02/16/22 07:11	02/16/22 14:04	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130			02/16/22 07:11	02/16/22 14:04	1
1,4-Difluorobenzene (Surr)	118		70 - 130			02/16/22 07:11	02/16/22 14:04	1
Method: 8015 NM - Diesel Range			-		_	- ·		
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			02/17/22 13:29	1
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		02/16/22 08:38	02/16/22 15:28	1
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		02/16/22 08:38	02/16/22 15:28	1
C10-C28)								
010-020)			=	malla		02/16/22 08:38	02/16/22 15:28	
/	<50.0	U	50.0	mg/Kg		02/10/22 00.30	02/10/22 15.20	1
Oll Range Organics (Over C28-C36) Surrogate	<50.0 <b>%Recovery</b>		50.0 Limits	ilig/Kg		Prepared	Analyzed	1 Dil Fac

02/16/22 15:28

02/16/22 08:38

o-Terphenyl

70 - 130

95

		Clien	t Sample Re	sults				
Client: WSP USA Inc.							Job ID: 890	
Project/Site: Remuda Basin State	e #2					SDG: 314	403236.001.012	29.35.02
Client Sample ID: SW14						Lab San	nple ID: 890-	1940-4
Date Collected: 02/14/22 12:15								x: Solid
Date Received: 02/14/22 16:42								
Sample Depth: 0 - 4								
		Coluble						
Method: 300.0 - Anions, Ion Cl Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	34.2		4.99	mg/Kg			02/17/22 20:51	1
Client Sample ID: SW15						Lab San	nple ID: 890-	
Date Collected: 02/14/22 12:20							Matri	x: Solid
Date Received: 02/14/22 16:42								
Sample Depth: 0 - 4								
Method: 8021B - Volatile Orga	nic Compounds (	GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		02/16/22 07:11	02/16/22 14:24	1
Toluene	<0.00202	U	0.00202	mg/Kg		02/16/22 07:11	02/16/22 14:24	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		02/16/22 07:11	02/16/22 14:24	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		02/16/22 07:11	02/16/22 14:24	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		02/16/22 07:11	02/16/22 14:24	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		02/16/22 07:11	02/16/22 14:24	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	144	S1+	70 - 130			02/16/22 07:11	02/16/22 14:24	1
1,4-Difluorobenzene (Surr)	110		70 - 130			02/16/22 07:11	02/16/22 14:24	1
– Method: Total BTEX - Total BT	EX Calculation							
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg		·	02/16/22 16:56	1
Ξ								
Method: 8015 NM - Diesel Ran		O) (GC) Qualifier	RL	Unit	D	Propared	Analyzed	Dil Fac
Analyte Total TPH	Kesuit <49.9		49.9			Prepared	02/17/22 13:29	1
	\$49.9	0	45.5	mg/Kg			02/17/22 13.29	'
Method: 8015B NM - Diesel Ra	nge Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		02/16/22 08:38	02/16/22 15:49	1
Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		02/16/22 08:38	02/16/22 15:49	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/16/22 08:38	02/16/22 15:49	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	92		70 - 130			02/16/22 08:38	02/16/22 15:49	1
o-Terphenyl	91		70 - 130			02/16/22 08:38	02/16/22 15:49	1
_ Method: 300.0 - Anions, Ion Cl	romatography -	Soluble						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Job ID: 890-1940-1 SDG: 31403236.001.0129.35.02

# Lab Sample ID: 890-1940-6

Matrix: Solid

Client Sample ID: SW06 Date Collected: 02/14/22 15:10 Date Received: 02/14/22 16:42 Sample Depth: 0 - 4

Client: WSP USA Inc.

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00202	U	0.00202	mg/Kg		02/16/22 07:11	02/16/22 14:45	
Toluene	<0.00202	U	0.00202	mg/Kg		02/16/22 07:11	02/16/22 14:45	
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		02/16/22 07:11	02/16/22 14:45	
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		02/16/22 07:11	02/16/22 14:45	
o-Xylene	<0.00202	U	0.00202	mg/Kg		02/16/22 07:11	02/16/22 14:45	
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		02/16/22 07:11	02/16/22 14:45	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	103		70 - 130			02/16/22 07:11	02/16/22 14:45	
1,4-Difluorobenzene (Surr)	119		70 - 130			02/16/22 07:11	02/16/22 14:45	
Method: Total BTEX - Total BTE)	(Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00404	U	0.00404	mg/Kg			02/16/22 16:56	
Method: 8015 NM - Diesel Range			DI	11		Duonousd	Analyzad	
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<50.0	U	50.0	mg/Kg			02/17/22 13:29	
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		02/16/22 08:38	02/16/22 16:10	
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		02/16/22 08:38	02/16/22 16:10	
C10-C28)	~50.0		50.0	ma/Ka		02/16/22 08:38	02/16/22 16:10	
C10-C28)	<50.0	U	50.0	mg/Kg		02/16/22 08:38	02/16/22 16:10	
C10-C28) Oll Range Organics (Over C28-C36)	<50.0 <b>%Recovery</b>		50.0 <i>Limits</i>	mg/Kg		02/16/22 08:38 <b>Prepared</b>	02/16/22 16:10 Analyzed	Dil Fa
C10-C28) Oll Range Organics (Over C28-C36) Surrogate				mg/Kg				Dil Fa
C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	%Recovery		Limits	mg/Kg		Prepared	Analyzed	Dil Fa
C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	% <b>Recovery</b> 93 98	Qualifier	Limits 70 - 130	mg/Kg		Prepared	Analyzed 02/16/22 16:10	Dil Fa
C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Method: 300.0 - Anions, Ion Chro Analyte	%Recovery 93 98 Domatography -	Qualifier	Limits 70 - 130	mg/Kg Unit	D	Prepared	Analyzed 02/16/22 16:10	Dil Fa

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## **Surrogate Summary**

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

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

Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		Ę
820-3407-A-1-G MS	Matrix Spike	130	99	·	
820-3407-A-1-H MSD	Matrix Spike Duplicate	100	99		6
890-1940-1	SW11	120	74		
890-1940-2	SW12	128	92		
890-1940-3	SW13	133 S1+	102		
890-1940-4	SW14	99	118		5
890-1940-5	SW15	144 S1+	110		
890-1940-6	SW06	103	119		6
LCS 880-19550/1-A	Lab Control Sample	128	107		
LCSD 880-19550/2-A	Lab Control Sample Dup	122	96		
MB 880-19550/5-A	Method Blank	120	92		
Surrogate Legend BFB = 4-Bromofluorobe	nzene (Surr)				

DFBZ = 1,4-Difluorobenzene (Surr)

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

#### Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-11287-A-38-E MS	Matrix Spike	71	66 S1-	
880-11287-A-38-F MSD	Matrix Spike Duplicate	84	77	
890-1940-1	SW11	88	95	
390-1940-2	SW12	98	103	
390-1940-3	SW13	93	98	
390-1940-4	SW14	91	95	
390-1940-5	SW15	92	91	
890-1940-6	SW06	93	98	

1CO = 1-Chlorooctane

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

Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)
		1CO2	OTPH2	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
LCS 880-19555/2-A	Lab Control Sample	108	123	
LCSD 880-19555/3-A	Lab Control Sample Dup	102	118	
MB 880-19555/1-A	Method Blank	82	91	

#### Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Prep Type: Total/NA

# SDG: 31403236.001.0129.35.02

Prep Type: Total/NA

OTPH = o-Terphenyl

# **QC Sample Results**

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

Lab Sample ID: MB 880-19550/5-A
Matrix: Solid

Matrix: Solid Analysis Batch: 19551

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/16/22 07:11	02/16/22 10:27	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/16/22 07:11	02/16/22 10:27	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/16/22 07:11	02/16/22 10:27	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/16/22 07:11	02/16/22 10:27	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/16/22 07:11	02/16/22 10:27	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/16/22 07:11	02/16/22 10:27	1
	MB	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	120		70 - 130			02/16/22 07:11	02/16/22 10:27	1
1,4-Difluorobenzene (Surr)	92		70 - 130			02/16/22 07:11	02/16/22 10:27	1

#### Lab Sample ID: LCS 880-19550/1-A Matrix: Solid

#### Analysis Batch: 19551

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09140		mg/Kg		91	70 - 130	
Toluene	0.100	0.1084		mg/Kg		108	70 - 130	
Ethylbenzene	0.100	0.1057		mg/Kg		106	70 - 130	
m-Xylene & p-Xylene	0.200	0.2056		mg/Kg		103	70 - 130	
o-Xylene	0.100	0.1068		mg/Kg		107	70 - 130	

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

### Lab Sample ID: LCSD 880-19550/2-A

### Matrix: Solid

Analysis Batch: 19551							Prep	Batch:	19550
	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08812		mg/Kg		88	70 - 130	4	35
Toluene	0.100	0.09782		mg/Kg		98	70 - 130	10	35
Ethylbenzene	0.100	0.09610		mg/Kg		96	70 - 130	9	35
m-Xylene & p-Xylene	0.200	0.1958		mg/Kg		98	70 - 130	5	35
o-Xylene	0.100	0.09318		mg/Kg		93	70 - 130	14	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	122		70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

# Lab Sample ID: 820-3407-A-1-G MS

#### Matrix: Solid Analysis Batch: 19551

Analysis Batch: 19551									Prep Ba	tch: 19550
	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00202	U	0.0996	0.09093		mg/Kg		91	70 - 130	
Toluene	<0.00202	U	0.0996	0.09748		mg/Kg		98	70 - 130	

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Prep Type: Total/NA

**Client Sample ID: Matrix Spike** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

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# **QC Sample Results**

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

Job ID: 890-1940-1 SDG: 31403236.001.0129.35.02

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

Lab Sample ID: 820-3407-A- Matrix: Solid	1-G MS								Client	Sample ID: I Prep Ty		-
Analysis Batch: 19551										Prep E	atch:	1955
-	Sample	Sam	ple	Spike	MS	MS				%Rec.		
Analyte	Result	Qual	ifier	Added	Result	Qualifier	Unit		D %Rec	Limits		
Ethylbenzene	<0.00202	U		0.0996	0.1000		mg/Kg			70 _ 130		
n-Xylene & p-Xylene	<0.00404			0.199	0.1942		mg/Kg		98	70 - 130		
p-Xylene	< 0.00202			0.0996	0.09250		mg/Kg		93	70 - 130		
<b>,</b>							5 5					
Surrogate	MS %Recovery	MS Qual	ifior	Limits								
4-Bromofluorobenzene (Surr)		Quui		70 - 130								
1,4-Difluorobenzene (Surr)	99			70 - 130 70 - 130								
								<b></b>			_	
Lab Sample ID: 820-3407-A-	1-H MSD							Clier	nt Sample II	D: Matrix Spil		
Matrix: Solid										Prep Ty		
Analysis Batch: 19551	_	_	_							Prep E	atch:	
	Sample			Spike	MSD					%Rec.		RP
Analyte	Result		ifier	Added		Qualifier	Unit		D %Rec	Limits	RPD	Lim
Benzene	<0.00202			0.100	0.08564		mg/Kg		86	70 - 130	6	3
Toluene	<0.00202	U		0.100	0.09258		mg/Kg		93	70 - 130	5	3
Ethylbenzene	<0.00202	U		0.100	0.1031		mg/Kg		103	70 - 130	3	3
m-Xylene & p-Xylene	<0.00404	U		0.200	0.1916		mg/Kg		96	70 - 130	1	3
o-Xylene	<0.00202	U		0.100	0.09194		mg/Kg		92	70 - 130	1	3
	MSD	MSD										
Surrogate	%Recovery	Qual	ifier	Limits								
4-Bromofluorobenzene (Surr)	100			70 - 130								
1,4-Difluorobenzene (Surr)	99			70 - 130								
ethod: 8015B NM - Dies	sel Range Or	gan	ics (DR	RO) (GC)								
Lab Sample ID: MB 880-195	55/1-A								Client	Sample ID: M	ethod	Blan
Matrix: Solid										Prep Ty		
Analysis Batch: 19569										Prep E		
·····, ··· ····		мв	МВ									
Analyte	Re	sult	Qualifier	R	L	Unit		D	Prepared	Analyzed		Dil Fa
Gasoline Range Organics		50.0		50		mg/K	(q	·	02/16/22 08:3			
GRO)-C6-C10			-	00	-		5					
Diesel Range Organics (Over	<	50.0	U	50	.0	mg/K	ίg		02/16/22 08:3	3 02/16/22 11	:41	
C10-C28)						-						
Oll Range Organics (Over C28-C36)	<	50.0	U	50	.0	mg/K	(g		02/16/22 08:3	3 02/16/22 11	:41	
			МВ									
			Qualifier	Limits					Prepared	Analyzed		Dil Fa
	%Reco	<u> </u>	quamer		_				00/40/00 00 0			
I-Chlorooctane	%Reco	82	quamer	70 - 130					02/16/22 08:3			
-Chlorooctane	%Reco	<u> </u>		70 - 130 70 - 130					02/16/22 08:3			
1-Chlorooctane o-Terphenyl		82						C	02/16/22 08:3		:41	
1-Chlorooctane o-Terphenyl Lab Sample ID: LCS 880-195		82						C	02/16/22 08:3	8 02/16/22 11	:41 trol S	
Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: LCS 880-195 Matrix: Solid Analysis Batch: 19569		82						CI	02/16/22 08:3	8 02/16/22 11 • ID: Lab Cor	:41 trol S pe: To	ampl

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	1005		mg/Kg		100	70 - 130	 
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	1044		mg/Kg		104	70 - 130	
C10-C28)								

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# **QC Sample Results**

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

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

Lab Sample ID: LCS 880-1955 Matrix: Solid Analysis Batch: 19569	5/2-A						Client	Sample		ontrol Sa Type: Tot Batch:	al/NA
Analysis Daten. 19909									Tieb	Daten.	13333
	LCS	LCS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	108		70 - 130								
o-Terphenyl	123		70 - 130								
						Cliev			l ch Contro	Commi	. D
Lab Sample ID: LCSD 880-195	000/3-A					Clier	it San	ipie iD:	Lab Contro		
Matrix: Solid										ype: Tot	
Analysis Batch: 19569			<b>•</b> "							Batch:	
Australia			Spike		LCSD	11	-	0/ D	%Rec.		RPD
Analyte			Added		Qualifier	Unit	<u>D</u>	%Rec	Limits		Limit
Gasoline Range Organics (GRO)-C6-C10			1000	975.8		mg/Kg		98	70 - 130	3	20
Diesel Range Organics (Over			1000	1013		mg/Kg		101	70 - 130	3	20
C10-C28)			1000	1010		mg/rtg		101	70 - 100	0	20
0.00020)											
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	102		70 - 130								
o-Terphenyl	118		70 - 130								
Lab Sample ID: 880-11287-A-3								Client	Sample ID	Motrix	Spiko
Matrix: Solid								Client			-
										ype: Tot	
Analysis Batch: 19569	Commis	Comula	Calles	ме	ме					Batch:	19000
Amelia	-	Sample	Spike		MS	11	-	0/ <b>D</b> = =	%Rec.		
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F2	1000	933.5		mg/Kg		91	70 - 130		
Diesel Range Organics (Over	<50.0	LI F1	1000	1195		mg/Kg		120	70 - 130		
C10-C28)	-00.0	011	1000	1100		mg/rtg		120	70 - 100		
,											
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	71		70 - 130								
o-Terphenyl	66	S1-	70 - 130								
						0			Mateix Cr		lleste
Lab Sample ID: 880-11287-A-3	INSD					CI	ient Sa	ample IL	): Matrix Sp		
Matrix: Solid										ype: Tot	
Analysis Batch: 19569	<u> </u>	<u> </u>	<b>.</b>							Batch:	
	-	Sample	Spike		MSD		_		%Rec.		RPD
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F2	998	1256	F2	mg/Kg		123	70 <sub>-</sub> 130	29	20
Diesel Range Organics (Over	<50.0		998	1394	⊑1	mg/Kg		140	70 <sub>-</sub> 130	15	20
C10-C28)	-50.0	511	330	1004		mynyy		170	10 - 100	15	20
,											
		MSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	84		70 - 130								

Job ID: 890-1940-1

SDG: 31403236.001.0129.35.02

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o-Terphenyl

70 - 130

Client: WSP USA Inc.

# **QC Sample Results**

Job ID: 890-1940-1 SDG: 31403236.001.0129.35.02

Method: 300.0 - Anions, Ion Chromatography

- Lab Comple ID: MD 000 4004	00/4							Olient	Dominia (D. 1		Diant
Lab Sample ID: MB 880-1960	U9/1-A							Client	Sample ID: I		
Matrix: Solid Analysis Batch: 19681									Prep	Type: S	OIUDIe
Analysis Batch. 19001		MB MB									
Analyte	D	esult Qualifier		RL	Unit		D	Prepared	Analyz	od	Dil Fac
Chloride		5.00 U		5.00	0mit mg/K		<u> </u>	Fiepaieu			
		5.00 0		5.00	iiig/it	.9			02/11/22	19.04	I
Lab Sample ID: LCS 880-196	609/2-A						Clier	nt Sample	e ID: Lab Co	ontrol S	ample
Matrix: Solid									Prep	Type: S	oluble
Analysis Batch: 19681											
			Spike	LCS	LCS				%Rec.		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride			250	254.7		mg/Kg		102	90 - 110		
Lab Sample ID: LCSD 880-1	9609/3-A					CI	ient Sa	mple ID:	Lab Contro	l Sampl	e Dur
Matrix: Solid										Type: S	
Analysis Batch: 19681										.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
			Spike	LCSD	LCSD				%Rec.		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Chloride			250	258.7		mg/Kg		103	90 _ 110	2	20
Lab Sample ID: 880-11208-A	-2-C MS							Client	Sample ID:	· Matrix	Snik
Matrix: Solid	-2-0 10							onem		Type: S	
Analysis Batch: 19681									Пер	Type. O	olubi
Analysis Batch. 19001	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	-	Qualifier	Added		Qualifier	Unit	D	%Rec	Limits		
Chloride	446		248	706.4		mg/Kg		105	90 - 110		
- Lob Sample ID: 990 11209 A							Client	Comple II	). Motrix Cr	iko Dur	liest
Lab Sample ID: 880-11208-A Matrix: Solid	-2-0 10130						chefit d	sample i	D: Matrix Sp	Type: S	
Analysis Batch: 19681									Fieh	Type. 5	olubi
Analysis Datch. 19001	Sample	Sample	Spike	MSD	MSD				%Rec.		RPI
Analyte	-	Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Chloride	446		248	716.5		mg/Kg		109	90 - 110	1	20
- - 	4 D MO							Oliont	Completio	Mateix	Omile
Lab Sample ID: 880-11277-A Matrix: Solid								Chem	Sample ID:	Type: S	
Analysis Batch: 19681									Fieh	Type. 5	olubi
-marysis Datoll. 19001	Sample	Sample	Spike	MS	MS				%Rec.		
	-	Qualifier	Added		Qualifier	Unit	D	%Rec	Limits		
Analyte				6069		mg/Kg		109	90 - 110		
Analyte Chloride	3330		2500	0000							
Chloride			2500	0000				Dominia II	D. Matelia Ca		linet
Chloride Lab Sample ID: 880-11277-A			2500	0000			Client S	Sample II	D: Matrix Sp		
Chloride Lab Sample ID: 880-11277-A Matrix: Solid			2500	0000			Client S	Sample II		oike Dup Type: S	
Chloride Lab Sample ID: 880-11277-A	-1-C MSD	Sample	2500 Spike		MSD		Client S	Sample II			oluble
Chloride Lab Sample ID: 880-11277-A Matrix: Solid	<b>-1-C MSD</b> Sample	Sample Qualifier		MSD	MSD Qualifier	Unit	Client S	-	Prep		

# **QC Association Summary**

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

Job ID: 890-1940-1 SDG: 31403236.001.0129.35.02

## **GC VOA**

## Prep Batch: 19550

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1940-1	SW11	Total/NA	Solid	5035	
890-1940-2	SW12	Total/NA	Solid	5035	
890-1940-3	SW13	Total/NA	Solid	5035	
890-1940-4	SW14	Total/NA	Solid	5035	
890-1940-5	SW15	Total/NA	Solid	5035	
890-1940-6	SW06	Total/NA	Solid	5035	
MB 880-19550/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-19550/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-19550/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
820-3407-A-1-G MS	Matrix Spike	Total/NA	Solid	5035	
820-3407-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

#### Analysis Batch: 19551

MB 000-19550/5-A	Method Blank	TOTAI/INA	5010	5035		
LCS 880-19550/1-A	Lab Control Sample	Total/NA	Solid	5035		8
LCSD 880-19550/2-A	Lab Control Sample Dup	Total/NA	Solid	5035		
820-3407-A-1-G MS	Matrix Spike	Total/NA	Solid	5035		9
820-3407-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035		
Analysis Batch: 19551						10
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	11
890-1940-1	SW11	Total/NA	Solid	8021B	19550	
890-1940-2	SW12	Total/NA	Solid	8021B	19550	12
890-1940-3	SW13	Total/NA	Solid	8021B	19550	
890-1940-4	SW14	Total/NA	Solid	8021B	19550	4.9
890-1940-5	SW15	Total/NA	Solid	8021B	19550	13
890-1940-6	SW06	Total/NA	Solid	8021B	19550	
MB 880-19550/5-A	Method Blank	Total/NA	Solid	8021B	19550	14
LCS 880-19550/1-A	Lab Control Sample	Total/NA	Solid	8021B	19550	
LCSD 880-19550/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	19550	
820-3407-A-1-G MS	Matrix Spike	Total/NA	Solid	8021B	19550	
820-3407-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	19550	

#### Analysis Batch: 19642

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1940-1	SW11	Total/NA	Solid	Total BTEX	
890-1940-2	SW12	Total/NA	Solid	Total BTEX	
890-1940-3	SW13	Total/NA	Solid	Total BTEX	
890-1940-4	SW14	Total/NA	Solid	Total BTEX	
890-1940-5	SW15	Total/NA	Solid	Total BTEX	
890-1940-6	SW06	Total/NA	Solid	Total BTEX	

## GC Semi VOA

#### Prep Batch: 19555

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1940-1	SW11	Total/NA	Solid	8015NM Prep	
890-1940-2	SW12	Total/NA	Solid	8015NM Prep	
890-1940-3	SW13	Total/NA	Solid	8015NM Prep	
890-1940-4	SW14	Total/NA	Solid	8015NM Prep	
890-1940-5	SW15	Total/NA	Solid	8015NM Prep	
890-1940-6	SW06	Total/NA	Solid	8015NM Prep	
MB 880-19555/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-19555/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-19555/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-11287-A-38-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-11287-A-38-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

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# **QC Association Summary**

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

Job ID: 890-1940-1 SDG: 31403236.001.0129.35.02

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# 3 4 5 6 7 8

# GC Semi VOA Analysis Batch: 19569

890-1940-1	SW11	Total/NA	Solid	8015B NM	19555
890-1940-2	SW12	Total/NA	Solid	8015B NM	19555
890-1940-3	SW13	Total/NA	Solid	8015B NM	19555
890-1940-4	SW14	Total/NA	Solid	8015B NM	19555
890-1940-5	SW15	Total/NA	Solid	8015B NM	19555
890-1940-6	SW06	Total/NA	Solid	8015B NM	19555
MB 880-19555/1-A	Method Blank	Total/NA	Solid	8015B NM	19555
LCS 880-19555/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	19555
LCSD 880-19555/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	19555
880-11287-A-38-E MS	Matrix Spike	Total/NA	Solid	8015B NM	19555
880-11287-A-38-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	19555
nalysis Batch: 19697					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-1940-1	SW11	Total/NA	Solid	8015 NM		
890-1940-2	SW12	Total/NA	Solid	8015 NM		
890-1940-3	SW13	Total/NA	Solid	8015 NM		
890-1940-4	SW14	Total/NA	Solid	8015 NM		
890-1940-5	SW15	Total/NA	Solid	8015 NM		
890-1940-6	SW06	Total/NA	Solid	8015 NM		
<u> </u>						

## HPLC/IC

### Leach Batch: 19609

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1940-1	SW11	Soluble	Solid	DI Leach	
890-1940-2	SW12	Soluble	Solid	DI Leach	
890-1940-3	SW13	Soluble	Solid	DI Leach	
890-1940-4	SW14	Soluble	Solid	DI Leach	
890-1940-5	SW15	Soluble	Solid	DI Leach	
890-1940-6	SW06	Soluble	Solid	DI Leach	
MB 880-19609/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-19609/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-19609/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-11208-A-2-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-11208-A-2-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
880-11277-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-11277-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Analysis Batch: 19681

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1940-1	SW11	Soluble	Solid	300.0	19609
890-1940-2	SW12	Soluble	Solid	300.0	19609
890-1940-3	SW13	Soluble	Solid	300.0	19609
890-1940-4	SW14	Soluble	Solid	300.0	19609
890-1940-5	SW15	Soluble	Solid	300.0	19609
890-1940-6	SW06	Soluble	Solid	300.0	19609
MB 880-19609/1-A	Method Blank	Soluble	Solid	300.0	19609
LCS 880-19609/2-A	Lab Control Sample	Soluble	Solid	300.0	19609
LCSD 880-19609/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	19609
880-11208-A-2-C MS	Matrix Spike	Soluble	Solid	300.0	19609

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# **QC Association Summary**

Client: WSP USA Inc. Project/Site: Remuda Basin State #2 Job ID: 890-1940-1 SDG: 31403236.001.0129.35.02

# HPLC/IC (Continued)

## Analysis Batch: 19681 (Continued)

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
880-11208-A-2-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	19609
880-11277-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	19609
880-11277-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	19609

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# Lab Chronicle

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

## Client Sample ID: SW11 Date Collected: 02/14/22 11:50

Date Received: 02/14/22 16:42

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			19550	02/16/22 07:11	KL	XEN MID
Total/NA	Analysis	8021B		1	19551	02/16/22 13:03	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	19642	02/16/22 16:56	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	19697	02/17/22 13:29	AJ	XEN MID
Total/NA	Prep	8015NM Prep			19555	02/16/22 08:38	DM	XEN MID
Total/NA	Analysis	8015B NM		1	19569	02/16/22 14:26	AJ	XEN MID
Soluble	Leach	DI Leach			19609	02/16/22 12:17	СН	XEN MID
Soluble	Analysis	300.0		1	19681	02/17/22 20:19	СН	XEN MID

# Client Sample ID: SW12

#### Date Collected: 02/14/22 11:55 Date Received: 02/14/22 16:42

Date Received: 02/14/22 16:42

	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			19550	02/16/22 07:11	KL	XEN MID
Total/NA	Analysis	8021B		1	19551	02/16/22 13:23	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	19642	02/16/22 16:56	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	19697	02/17/22 13:29	AJ	XEN MID
Total/NA	Prep	8015NM Prep			19555	02/16/22 08:38	DM	XEN MID
Total/NA	Analysis	8015B NM		1	19569	02/16/22 14:47	AJ	XEN MID
Soluble	Leach	DI Leach			19609	02/16/22 12:17	СН	XEN MID
Soluble	Analysis	300.0		1	19681	02/17/22 20:25	СН	XEN MID

# Client Sample ID: SW13

#### Date Collected: 02/14/22 11:35 Date Received: 02/14/22 16:42

	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			19550	02/16/22 07:11	KL	XEN MID
Total/NA	Analysis	8021B		1	19551	02/16/22 13:43	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	19642	02/16/22 16:56	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	19697	02/17/22 13:29	AJ	XEN MID
Total/NA	Prep	8015NM Prep			19555	02/16/22 08:38	DM	XEN MID
Total/NA	Analysis	8015B NM		1	19569	02/16/22 15:07	AJ	XEN MID
Soluble	Leach	DI Leach			19609	02/16/22 12:17	СН	XEN MID
Soluble	Analysis	300.0		1	19681	02/17/22 20:32	СН	XEN MID

#### Client Sample ID: SW14 Date Collected: 02/14/22 12:15 Date Received: 02/14/22 16:42

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			19550	02/16/22 07:11	KL	XEN MID
Total/NA	Analysis	8021B		1	19551	02/16/22 14:04	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	19642	02/16/22 16:56	AJ	XEN MID

**Eurofins Carlsbad** 

Matrix: Solid

1

Job ID: 890-1940-1 SDG: 31403236.001.0129.35.02

## Lab Sample ID: 890-1940-1 Matrix: Solid

Lab Sample ID: 890-1940-2

Lab Sample ID: 890-1940-3

Lab Sample ID: 890-1940-4

Matrix: Solid

Matrix: Solid

Job ID: 890-1940-1

Matrix: Solid

Matrix: Solid

Matrix: Solid

SDG: 31403236.001.0129.35.02

Lab Sample ID: 890-1940-4

Lab Sample ID: 890-1940-5

Lab Sample ID: 890-1940-6

## Lab Chronicle

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

# Client Sample ID: SW14

Date Collected: 02/14/22 12:15 Date Received: 02/14/22 16:42

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1	19697	02/17/22 13:29	AJ	XEN MID
Total/NA	Prep	8015NM Prep			19555	02/16/22 08:38	DM	XEN MID
Total/NA	Analysis	8015B NM		1	19569	02/16/22 15:28	AJ	XEN MID
Soluble	Leach	DI Leach			19609	02/16/22 12:17	СН	XEN MID
Soluble	Analysis	300.0		1	19681	02/17/22 20:51	СН	XEN MID

# Client Sample ID: SW15

#### Date Collected: 02/14/22 12:20 Date Received: 02/14/22 16:42

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			19550	02/16/22 07:11	KL	XEN MID
Total/NA	Analysis	8021B		1	19551	02/16/22 14:24	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	19642	02/16/22 16:56	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	19697	02/17/22 13:29	AJ	XEN MID
Total/NA	Prep	8015NM Prep			19555	02/16/22 08:38	DM	XEN MID
Total/NA	Analysis	8015B NM		1	19569	02/16/22 15:49	AJ	XEN MID
Soluble	Leach	DI Leach			19609	02/16/22 12:17	СН	XEN MID
Soluble	Analysis	300.0		5	19681	02/18/22 16:34	СН	XEN MID

### Client Sample ID: SW06

Date Collected: 02/14/22 15:10 Date Received: 02/14/22 16:42

Batch Batch Dilution Batch Prepared Prep Type Туре Method Run Factor Number or Analyzed Lab Analyst Total/NA Prep 5035 19550 02/16/22 07:11 KL XEN MID Total/NA 8021B 19551 02/16/22 14:45 MR XEN MID Analysis 1 Total/NA Total BTEX XEN MID Analysis 1 19642 02/16/22 16:56 AJ Total/NA Analysis 8015 NM 19697 02/17/22 13:29 AJ XEN MID 1 XEN MID Total/NA Prep 8015NM Prep 19555 02/16/22 08:38 DM Total/NA Analysis 8015B NM 19569 02/16/22 16:10 AJ XEN MID 1 Soluble Leach DI Leach 19609 02/16/22 12:17 СН XEN MID Soluble Analysis 300.0 5 19681 02/17/22 21:03 СН XEN MID

#### Laboratory References:

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

10

Job ID: 890-1940-1 SDG: 31403236.001.0129.35.02

# Project/Site: Remuda Basin State #2 Laboratory: Eurofins Midland

Client: WSP USA Inc.

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

uthority	Pr	rogram	Identification Number	Expiration Date
xas	N	ELAP	T104704400-21-22	06-30-22
The following analytes	are included in this report, bu	ut the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes for v
the agency does not of	fer certification.			
the agency does not of Analysis Method	fer certification. Prep Method	Matrix	Analyte	
0,		Matrix Solid	Analyte Total TPH	

5

11 12 13

Job ID: 890-1940-1 SDG: 31403236.001.0129.35.02

XEN MID

ASTM

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

#### Protocol References:

DI Leach

Client: WSP USA Inc.

ASTM = ASTM International

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

Laboratory References:

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

Deionized Water Leaching Procedure

# **Sample Summary**

Client: WSP USA Inc. Project/Site: Remuda Basin State #2 Job ID: 890-1940-1 SDG: 31403236.001.0129.35.02

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth	
890-1940-1	SW11	Solid	02/14/22 11:50	02/14/22 16:42	0 - 4	Λ
890-1940-2	SW12	Solid	02/14/22 11:55	02/14/22 16:42	0 - 4	
890-1940-3	SW13	Solid	02/14/22 11:35	02/14/22 16:42	0 - 4	5
890-1940-4	SW14	Solid	02/14/22 12:15	02/14/22 16:42	0 - 4	
890-1940-5	SW15	Solid	02/14/22 12:20	02/14/22 16:42	0 - 4	
890-1940-6	SW06	Solid	02/14/22 15:10	02/14/22 16:42	0 - 4	
						8
						9
						12
						13

Project Manager: Alma			Houston, I Midland	Houston, I X (281) 240-4200 Midland T X (432-704-5440		TX (915)5	35-3443 Lubbo	louston, IX (281) 240-4200 DBIIBS, IX (214) 902-0300 SBN ANTONIO, IX (210) 509-5354 Mirland TX (432-704-5440) El Paso TX (915)585-3443 Lubbock TX (806)794-1296				
		Hobbs, N	VM (575-392-7	Hobbs,NM (575-392-7550) Phoenix,AZ		900) Atlar	ta, GA (770-44	(480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)		www.xenco.com	<sup>2</sup> age 1 of 1	
	Aimee Cole		B	Bill to: (if different)		Adrian Baker			-	Work Order Comments	ments	
Company Name: WSF	WSP USA Inc.		C	Company Name:		XTO Energy			Program: UST/PST	CRP Crownfields	s fLC Dperfund	
	4600 West 60th Avenue	0	A	Address:	3104	3104 E Green Street	treet		State of Project:			
te ZIP:	Arvada, Colorado 80003	e	<u> </u>	City, State ZIP:		Carlsbad, NM 88220	3220		/el II			_
Phone: 720.	720.384.7365		Email: <u>C</u>	Email: conner.shore@w	@wsp.com	Aimee.o	vsp.com; Aimee.cole@wsp.com	E	Deliverables: EDD	ADaPT	Other:	
Project Name:	Remuda Basin State #2	I State #2	Turn	Turn Around				ANALYSIS REQUEST	T		Work Order Notes	
Project Number:	31403236.001.0129.35.02	129.35.02	Routine Rush: 24	Routine						~		AM
P.O. Number: Sampler's Name: Con	Conner Shore		Due Date	ate:						ζ -	E. EW.2022.00003.EA	5
SAMPLE RECEIPT	Temp Blank:	Yes No	Wet Ice:	Ro No	S							
Temperature (°C):	2.0 / .C	The	Thermometer ID		tainet	-	(0:0	890-1940 Ch	890-1940 Chain of Custody			-
Received milact. Cooler Custody Seals:	Ž	Correcti	Correction Factor:	2.0-	1000 <b>1</b> 000		0E A9				TAT starts the day recevied by the	ę
Sample Custody Seals:	Yes No N/A	/ Total C	Total Containers:			-					lab, if received by 4:30pm	Τ
Sample Identification	tion Matrix	Date Sampled	Time Sampled	Depth	dmuN 3) H9T	ХЭТВ					Sample Comments	
SW11	S	2/14/2022	1150	0-4'	1 X	×	×				COMPOSITE	
SW12	v	2/14/2022	1155	0-4'	1 ×	×	×				COMPOSITE	
SW13	s	2/14/2022	1135	0-4'	1 X	*					COMPOSITE	
SW14	S	2/14/2022	1215	0-4'	۲ ×	×	×			-	COMPOSITE	
SW15	S	2/14/2022	1220	0-4'	×	×	×				COMPOSITE	7
SW06	S	2/14/2022	1510	0-4'	× -	×					COMPOSITE	
												<b>T</b> -
												$\Box$
Total 200.7 / 6010	200.8 / 6020:	- I	BRCRA 13PPM	M Texas 11	-  ₹	Sb As Ba Be B	8	Ca Cr Co Cu Fe Pb Mg	Mn Mo Ni K Se	Ag SiO2 Na Sr	TI Sn U V Zn	
Circle Method(s) a	Circle Method(s) and Metal(s) to be analyzed	nalyzed T	CLP / SPLF	TCLP / SPLP 6010: 8RCR/	RA Sb As	s Ba Be	Cd Cr Co	Cu Pb Mn Mo Ni	Se Ag TI U	1631 /	245.117470 17471 : Hg	
e: Signature of this docur vice. Xenco will be liable nco. A minimum charge o	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from clien of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any los of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample subm	f samples constitute les and shall not as each project and a	es a valid purch sume any respo charge of \$5 fo	lase order from c onsibility for any r each sample su	t com ses or itted t	t company to Xenco, it ses or expenses incurr itted to Xenco, but not	is affiliates and e ed by the client analyzed. These	s and subcontractors. It assigns stu client if such losses are due to circ These terms will be enforced unles	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the contro of service. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotialed.			
Relinquished by: (Signature)	gnature)	Received by: (Signature)	: (Signature	()	Date	Date/Time	Relir	Relinquished by: (Signature)		Received by: (Signature)	Date/Time	
arte		<u>/(</u>	()		2/11/2	2 4:4	-					
			)				4 U					e 28
	_						2				Revised Cate 051418 Dav. 2010	٦.

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Z/ 10/ZUZZ

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# Login Sample Receipt Checklist

Client: WSP USA Inc.

Login Number: 1940 List Number: 1

Creator: Clifton, Cloe

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

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

**Eurofins Carlsbad** Released to Imaging: 9/22/2022 7:39:45 AM Job Number: 890-1940-1

List Source: Eurofins Carlsbad

SDG Number: 31403236.001.0129.35.02

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

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

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

Samples are received within Holding Time (excluding tests with immediate

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

Containers requiring zero headspace have no headspace or bubble is

Sample custody seals, if present, are intact.

# Login Sample Receipt Checklist

Answer

True

N/A

Comment

Client: WSP USA Inc.

Login Number: 1940

Creator: Kramer, Jessica

Samples were received on ice.

Cooler Temperature is acceptable.

COC is filled out in ink and legible.

Sample containers have legible labels.

Containers are not broken or leaking.

Sample bottles are completely filled.

Sample Preservation Verified.

Sample collection date/times are provided.

Appropriate sample containers are used.

COC is filled out with all pertinent information.

Is the Field Sampler's name present on COC?

Cooler Temperature is recorded.

List Number: 2

tampered with.

COC is present.

HTs)

MS/MSDs

<6mm (1/4").

Question

List Source: Eurofins Midland

List Creation: 02/16/22 12:10 PM

	Job Number: 890-1940-1
SDG Number:	31403236.001.0129.35.02

Page 25 of 25
0

Received by OCD: 7/8/2022 8:01:28 AM

# 🔅 eurofins

# Environment Testing America

# **ANALYTICAL REPORT**

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

# Laboratory Job ID: 890-1951-1

Laboratory Sample Delivery Group: 31403236.001.0129.35.02 Client Project/Site: Remuda Basin State #2 Revision: 1

# For:

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

Attn: Aimee Cole

RAMER

Authorized for release by: 2/28/2022 1:27:53 PM

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

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

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

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

Visit us at: <u>www.eurofinsus.com/Env</u> Released to Imaging: 9/22/2022 7:39:45 AM

Laboratory Job ID: 890-1951-1 SDG: 31403236.001.0129.35.02

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2

Client: WSP USA Inc. Project/Site: Remuda Basin State #2 Job ID: 890-1951-1 SDG: 31403236.001.0129.35.02

# Qualifiers

GC VOA		
Qualifier	Qualifier Description	
F1	MS and/or MSD recovery exceeds control limits.	_
F2	MS/MSD RPD exceeds control limits	5
S1+	Surrogate recovery exceeds control limits, high biased.	
U	Indicates the analyte was analyzed for but not detected.	
GC Semi VC	AC	
Qualifier	Qualifier Description	
S1-	Surrogate recovery exceeds control limits, low biased.	 _
U	Indicates the analyte was analyzed for but not detected.	8
HPLC/IC		
Qualifier	Qualifier Description	9
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	
a / <b>-</b>		

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	
#### Job ID: 890-1951-1

Client: WSP USA Inc.

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-1951-1

#### REVISION

The report being provided is a revision of the original report sent on 2/18/2022. The report (revision 1) is being revised due to Per client requesting we review chloride data for PH01E @ 6'.

Report revision history

#### Receipt

The samples were received on 2/15/2022 4:16 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 8.6°C

#### GC VOA

Method 8021B: The following sample was diluted due to the nature of the sample matrix: PH18E (890-1951-5) at 1.0. Elevated reporting limits (RLs) are provided.

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: Surrogate recovery for the following samples were outside control limits: PH01D (890-1951-1), PH01E (890-1951-2), PH17D (890-1951-3), PH17E (890-1951-4), PH18E (890-1951-5), PH18F (890-1951-6), (MB 880-19728/1-A), (890-1951-A-1-D MS) and (890-1951-A-1-E MSD). Evidence of matrix interferences is not obvious.

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**

### Lab Sample ID: 890-1951-1

Matrix: Solid

5

11 12 13

Method: 8021B - Volatile Orga Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200		0.00200	mg/Kg		02/17/22 08:20		1
Toluene	<0.00200	U	0.00200	mg/Kg		02/17/22 08:20	02/17/22 17:08	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/17/22 08:20	02/17/22 17:08	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/17/22 08:20	02/17/22 17:08	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/17/22 08:20	02/17/22 17:08	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/17/22 08:20	02/17/22 17:08	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	121		70 - 130			02/17/22 08:20	02/17/22 17:08	1
1,4-Difluorobenzene (Surr)	86		70 - 130			02/17/22 08:20	02/17/22 17:08	1
Method: Total BTEX - Total B	<b>FEX Calcula</b>	tion						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			02/17/22 21:03	1
Method: 8015 NM - Diesel Rar	nge Organic	s (DRO) (G	C)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			02/18/22 19:48	1
Method: 8015B NM - Diesel Ra	ange Organ	ics (DRO) (	GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		02/17/22 14:29	02/18/22 10:24	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		02/17/22 14:29	02/18/22 10:24	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/17/22 14:29	02/18/22 10:24	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	66	S1-	70 - 130			02/17/22 14:29	02/18/22 10:24	1
o-Terphenyl	75		70 - 130			02/17/22 14:29	02/18/22 10:24	1
Method: 300.0 - Anions, Ion C	hromatogra	phy - Solu	ble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1120		49.5	mg/Kg			02/18/22 13:35	10
lient Sample ID: PH01E						Lab Samp	le ID: 890-1	951-2
ate Collected: 02/15/22 12:35 ate Received: 02/15/22 16:16 ample Depth: 6							Matrix	: Solic
Method: 8021B - Volatile Orga	nic Compo	unde (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00198		0.00198	mg/Kg		-	02/17/22 17:28	
	<0.00130		0.00190	ing/itg			02/17/22 17:20	

4-Bromofluorobenzene (Surr)	123		70 - 130		02/17/22 08:20	02/17/22 17:28	1
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
Xylenes, Total	<0.00397	U	0.00397	mg/Kg	02/17/22 08:20	02/17/22 17:28	1
o-Xylene	<0.00198	-	0.00198	mg/Kg		02/17/22 17:28	1
m-Xylene & p-Xylene	<0.00397	U	0.00397	mg/Kg	02/17/22 08:20	02/17/22 17:28	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg	02/17/22 08:20	02/17/22 17:28	1
Toluene	<0.00198	U	0.00198	mg/Kg	02/17/22 08:20	02/17/22 17:28	1
Benzene	<0.00198	U	0.00198	mg/Kg	02/17/22 08:20	02/17/22 17:28	1

		Client	Sample Re	esults				
lient: WSP USA Inc. roject/Site: Remuda Basin State	.e #2					SDG: 3140	Job ID: 890- 3236.001.0129	
Client Sample ID: PH01E Date Collected: 02/15/22 12:35 Date Received: 02/15/22 16:16 Dample Depth: 6						Lab Samp	le ID: 890-1 Matrix	1951-2 x: Solid
Method: 8021B - Volatile Orga	anic Compo	unds (GC)	(Continued)					
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	84		70 - 130			02/17/22 08:20		1
Method: Total BTEX - Total B		tion						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397		0.00397	mg/Kg		<b>-</b>	02/17/22 21:03	1
Nothed: 9045 NM Discol Da	Organic		20)					
Method: 8015 NM - Diesel Rar Analyte		CS (DRO) (C Qualifier	GC) RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	Kesult <50.0	-	50.0	mg/Kg	<u> </u>	Fieparea	02/18/22 19:48	1
Method: 8015B NM - Diesel Ra Analyte Gasoline Range Organics		Qualifier	(GC) <u>RL</u> <u>50.0</u>	Unit mg/Kg	D	Prepared 02/17/22 14:29	Analyzed	Dil Fac
(GRO)-C6-C10 Diesel Range Organics (Over	<50.0		50.0	mg/Kg				1
C10-C28) Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/17/22 14:29	02/18/22 11:31	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane		S1-	70 - 130			02/17/22 14:29	02/18/22 11:31	1
o-Terphenyl	73		70 - 130			02/17/22 14:29	02/18/22 11:31	1
Method: 300.0 - Anions, Ion C	Shromatogra	aphy - Solu	aldu					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24.2		5.02	mg/Kg			02/23/22 14:48	1
Client Sample ID: PH17D Date Collected: 02/15/22 13:45 Date Received: 02/15/22 16:16 Sample Depth: 5						Lab Samp	le ID: 890-1 Matrix	1951-3 x: Solid
Method: 8021B - Volatile Orga Analyte		unds (GC) Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
					<u> </u>	00/47/00.00.00		

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/17/22 08:20	02/17/22 17:49	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/17/22 08:20	02/17/22 17:49	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/17/22 08:20	02/17/22 17:49	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		02/17/22 08:20	02/17/22 17:49	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/17/22 08:20	02/17/22 17:49	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		02/17/22 08:20	02/17/22 17:49	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	133	S1+	70 - 130			02/17/22 08:20	02/17/22 17:49	1
1,4-Difluorobenzene (Surr)	93		70 - 130			02/17/22 08:20	02/17/22 17:49	1
_ Method: Total BTEX - Tota	BTEX Calcula	tion						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			02/17/22 21:03	1
Method: 8015 NM - Diesel	Range Organic	s (DRO) (0	SC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			02/18/22 19:48	1

Client: WSP USA Inc.

#### **Client Sample Results**

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lah ID: 800 1051 1
Job ID: 890-1951-1
SDG: 31403236.001.0129.35.02

#### **Client Sample ID: PH17D** Date Collected: 02/15/22 13:45 Date Received: 02/15/22 16:16

Project/Site: Remuda Basin State #2

Sample Depth: 5								
Method: 8015B NM - Diesel R Analyte		ics (DRO) Qualifier	( <mark>GC)</mark> RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics	<49.9		49.9	mg/Kg		02/17/22 14:29	02/18/22 11:53	
(GRO)-C6-C10			1010			02/11/22 11:20	02, 0, 2200	
Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		02/17/22 14:29	02/18/22 11:53	
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/17/22 14:29	02/18/22 11:53	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	65	S1-	70 - 130			02/17/22 14:29	02/18/22 11:53	
o-Terphenyl	73		70 - 130			02/17/22 14:29	02/18/22 11:53	
Method: 300.0 - Anions, Ion C		Qualifier	RL	Unit	<b>_</b>	Broporod	Apolyzod	Dil Fa
Analyte Chloride	603	Quaimer	49.8	mg/Kg	D	Prepared	Analyzed 02/18/22 14:10	
Chioride	603		49.0	ilig/itg			02/10/22 14.10	
lient Sample ID: PH17E						Lab Samp	le ID: 890-1	951-
ate Collected: 02/15/22 14:00							Matrix	
ate Received: 02/15/22 16:16								
ample Depth: 6								
Method: 8021B - Volatile Orga								
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00200		0.00200	mg/Kg		02/17/22 08:00	02/17/22 18:08	
Toluene	<0.00200	U	0.00200	mg/Kg		02/17/22 08:00	02/17/22 18:08	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/17/22 08:00	02/17/22 18:08	
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		02/17/22 08:00	02/17/22 18:08	
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/17/22 08:00	02/17/22 18:08	
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		02/17/22 08:00	02/17/22 18:08	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	•	<u>S1+</u>	70 - 130			02/17/22 08:00	02/17/22 18:08	
1,4-Difluorobenzene (Surr)	72		70 - 130				02/17/22 18:08	
Method: Total BTEX - Total B								
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00401	U	0.00401	mg/Kg			02/17/22 21:03	
Method: 8015 NM - Diesel Rai	ngo Organic		ec)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<49.9		49.9	mg/Kg			02/18/22 19:48	
		C C	1010				02, 10, 22 10110	
Method: 8015B NM - Diesel R	ange Organ	ics (DRO)	(GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics	<49.9	U	49.9	mg/Kg		02/17/22 14:29	02/18/22 12:14	
(GRO)-C6-C10								
Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		02/17/22 14:29	02/18/22 12:14	
C10-C28) Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/17/22 14.20	02/18/22 12:14	
		5	-0.0			52/11/22 17.23	52/10/22 12.14	
Surrogate	%Recovery		Limits			Prepared	Analyzed	Dil Fa
Surrogate 1-Chlorooctane	-	<b>Qualifier</b> S1-	Limits 70 - 130			Prepared 02/17/22 14:29		Dil Fa

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		Client	Sample Re	esults				
Client: WSP USA Inc. Project/Site: Remuda Basin State	e #2		•			SDG: 3140	Job ID: 890- 3236.001.012	
Client Sample ID: PH17E Date Collected: 02/15/22 14:00 Date Received: 02/15/22 16:16 Sample Depth: 6						Lab Samp	le ID: 890-1 Matrix	<b>951-4</b> :: Solid
Method: 300.0 - Anions, Ion C Analyte		phy - Solu Qualifier	<mark>ıble</mark> RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	467		4.95	mg/Kg			02/18/22 19:33	1
Client Sample ID: PH18E Date Collected: 02/15/22 12:55 Date Received: 02/15/22 16:16 Sample Depth: 6						Lab Samp	le ID: 890-1 Matrix	951-5 :: Solid
Method: 8021B - Volatile Orga	nic Compo	unds (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		02/17/22 08:00	02/17/22 18:34	1
Toluene	<0.00199	U	0.00199	mg/Kg		02/17/22 08:00	02/17/22 18:34	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		02/17/22 08:00	02/17/22 18:34	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		02/17/22 08:00	02/17/22 18:34	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		02/17/22 08:00	02/17/22 18:34	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		02/17/22 08:00	02/17/22 18:34	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	142	S1+	70 - 130			02/17/22 08:00	02/17/22 18:34	1
1,4-Difluorobenzene (Surr)	89		70 - 130			02/17/22 08:00	02/17/22 18:34	1
Method: Total BTEX - Total B	<b>FEX Calcula</b>	tion						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/17/22 21:03	1
Method: 8015 NM - Diesel Ran Analyte		<mark>s (DRO) ((</mark> Qualifier	GC) RL	Unit	D	Prepared	Analyzod	Dil Fac
Total TPH	<50.0		50.0	mg/Kg			Analyzed 02/18/22 19:48	1
Method: 8015B NM - Diesel R				ing/itg			02/10/22 13.40	I
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		02/17/22 14:29	02/18/22 12:35	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		02/17/22 14:29	02/18/22 12:35	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/17/22 14:29	02/18/22 12:35	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	64	S1-	70 - 130			02/17/22 14:29	02/18/22 12:35	1
o-Terphenyl	73		70 - 130			02/17/22 14:29	02/18/22 12:35	1
Method: 300.0 - Anions, Ion C Analyte	•	phy - Solu Qualifier	ible RL	Unit	D	Prepared	Analyzed	Dil Fac
		quainter						

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02/18/22 14:28

Chloride

49.7

mg/Kg

#### **Client Sample Results**

#### Client Sample ID: PH18F Date Collected: 02/15/22 13:35 Date Received: 02/15/22 16:16 Sample Depth: 7

Job ID: 890-1951-1
SDG: 31403236.001.0129.35.02

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Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		02/17/22 08:00	02/17/22 19:01	1
Toluene	<0.00198	U	0.00198	mg/Kg		02/17/22 08:00	02/17/22 19:01	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		02/17/22 08:00	02/17/22 19:01	1
m-Xylene & p-Xylene	<0.00397	U	0.00397	mg/Kg		02/17/22 08:00	02/17/22 19:01	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		02/17/22 08:00	02/17/22 19:01	1
Xylenes, Total	<0.00397	U	0.00397	mg/Kg		02/17/22 08:00	02/17/22 19:01	1
Surrogate	%Recovery		Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	147	S1+	70 - 130			02/17/22 08:00	02/17/22 19:01	1
1,4-Difluorobenzene (Surr)	77		70 - 130			02/17/22 08:00	02/17/22 19:01	1
_ Method: Total BTEX - Total B	TEX Calcula	tion						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397	mg/Kg			02/17/22 21:03	1
Method: 8015 NM - Diesel Ra Analyte	-	Qualifier	RL	11	_	Drenered	A seal sea a'	
				Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0		50.0	mg/Kg	D	Prepared	Analyzed 02/18/22 19:48	Dil Fac 1
Total TPH Method: 8015B NM - Diesel R	<50.0	U	50.0		D			Dil Fac
 Method: 8015B NM - Diesel R Analyte	<50.0	U	50.0		D	Prepared		Dil Fac
_ Method: 8015B NM - Diesel R	<50.0	U ics (DRO) Qualifier	<u> </u>	mg/Kg			02/18/22 19:48	1
Method: 8015B NM - Diesel R Analyte Gasoline Range Organics	<50.0 Cange Organ Result	U ics (DRO) Qualifier U	50.0 (GC) RL	mg/Kg Unit		Prepared 02/17/22 14:29	02/18/22 19:48 Analyzed	1
Method: 8015B NM - Diesel R Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	<50.0 cange Organ Result <50.0	U ics (DRO) Qualifier U	50.0 (GC) RL 50.0	mg/Kg Unit mg/Kg		Prepared 02/17/22 14:29 02/17/22 14:29	02/18/22 19:48 <b>Analyzed</b> 02/18/22 12:56	1
Method: 8015B NM - Diesel R Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	<50.0 ange Organ Result <50.0 <50.0 <50.0	U ics (DRO) Qualifier U U U Qualifier	50.0 (GC) RL 50.0 50.0	mg/Kg Unit mg/Kg mg/Kg		Prepared 02/17/22 14:29 02/17/22 14:29	02/18/22 19:48 <b>Analyzed</b> 02/18/22 12:56 02/18/22 12:56	1
Method: 8015B NM - Diesel R Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	<50.0 ange Organ Result <50.0 <50.0 <50.0	U ics (DRO) Qualifier U U U Qualifier	50.0 (GC) RL 50.0 50.0 50.0	mg/Kg Unit mg/Kg mg/Kg		<b>Prepared</b> 02/17/22 14:29 02/17/22 14:29 02/17/22 14:29	02/18/22 19:48 Analyzed 02/18/22 12:56 02/18/22 12:56 02/18/22 12:56 Analyzed	1 Dil Fac 1 1 1
Method: 8015B NM - Diesel R Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	<50.0 cange Organ Result <50.0 <50.0 <50.0 %Recovery	U ics (DRO) Qualifier U U U Qualifier	50.0 (GC) RL 50.0 50.0 50.0 Limits	mg/Kg Unit mg/Kg mg/Kg		Prepared 02/17/22 14:29 02/17/22 14:29 02/17/22 14:29 02/17/22 14:29 Prepared 02/17/22 14:29	02/18/22 19:48 Analyzed 02/18/22 12:56 02/18/22 12:56 02/18/22 12:56 Analyzed	1 Dil Fac 1 1 1 1 Dil Fac
Method: 8015B NM - Diesel R Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	<50.0 cange Organ Result <50.0 <50.0 <50.0 %Recovery 65 71	U ics (DRO) Qualifier U U U U Qualifier S1-	50.0 (GC) RL 50.0 50.0 50.0 <u>Limits</u> 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 02/17/22 14:29 02/17/22 14:29 02/17/22 14:29 02/17/22 14:29 Prepared 02/17/22 14:29	02/18/22 19:48 Analyzed 02/18/22 12:56 02/18/22 12:56 02/18/22 12:56 Analyzed 02/18/22 12:56	1 Dil Fac 1 1 1 1 Dil Fac
Method: 8015B NM - Diesel R Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	<50.0 ange Organ Result <50.0 <50.0 <50.0 <50.0 %Recovery 65 71 Chromatogram	U ics (DRO) Qualifier U U U U Qualifier S1-	50.0 (GC) RL 50.0 50.0 50.0 <u>Limits</u> 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 02/17/22 14:29 02/17/22 14:29 02/17/22 14:29 02/17/22 14:29 Prepared 02/17/22 14:29	02/18/22 19:48 Analyzed 02/18/22 12:56 02/18/22 12:56 02/18/22 12:56 Analyzed 02/18/22 12:56	1 Dil Fac 1 1 1 1 Dil Fac

#### **Surrogate Summary**

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

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

		ID.	000	101

Percent Surrogate Recovery (Acceptance Limits)

Job ID: 890-1951-1 SDG: 31403236.001.0129.35.02

Prep Type: Total/NA

Prep Type: Total/NA

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		BFB1	DFBZ1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		5
880-11300-A-1-B MS	Matrix Spike	140 S1+	119	·	
880-11300-A-1-C MSD	Matrix Spike Duplicate	110	88		6
880-11386-A-9-B MS	Matrix Spike	124	97		
880-11386-A-9-C MSD	Matrix Spike Duplicate	133 S1+	91		
890-1951-1	PH01D	121	86		
890-1951-2	PH01E	123	84		9
890-1951-3	PH17D	133 S1+	93		
890-1951-4	PH17E	159 S1+	72		C
890-1951-5	PH18E	142 S1+	89		ž
890-1951-6	PH18F	147 S1+	77		
LCS 880-19557/1-A	Lab Control Sample	122	95		
LCS 880-19658/1-A	Lab Control Sample	117	95		
LCSD 880-19557/2-A	Lab Control Sample Dup	120	78		
LCSD 880-19658/2-A	Lab Control Sample Dup	121	106		
MB 880-19557/5-A	Method Blank	99	79		
MB 880-19658/5-A	Method Blank	128	97		
Cumonoto Longerd					
Surrogate Legend	(0,)				
BFB = 4-Bromofluorob	enzene (Surr)				

DFBZ = 1,4-Difluorobenzene (Surr)

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

Percent Surrogate Recovery (Acceptance Limits) 1CO1 OTPH1 (70-130) (70-130) Lab Sample ID **Client Sample ID** 890-1951-1 PH01D 66 S1-75 890-1951-1 MS PH01D 62 S1-57 S1-890-1951-1 MSD PH01D 63 S1-59 S1-PH01E 890-1951-2 65 S1-73 890-1951-3 PH17D 65 S1-73 890-1951-4 PH17E 66 S1-75 PH18E 73 890-1951-5 64 S1-890-1951-6 PH18F 65 S1-71 LCS 880-19728/2-A Lab Control Sample 107 111 LCSD 880-19728/3-A Lab Control Sample Dup 102 107 MB 880-19728/1-A Method Blank 58 S1-66 S1-

#### Surrogate Legend

1CO = 1-Chlorooctane OTPH = o-Terphenyl

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

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

#### Lab Sample ID: MB 880-19557/5-A Matrix: Solid Analysis Batch: 19654

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/17/22 08:00	02/17/22 11:55	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/17/22 08:00	02/17/22 11:55	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/17/22 08:00	02/17/22 11:55	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/17/22 08:00	02/17/22 11:55	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/17/22 08:00	02/17/22 11:55	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/17/22 08:00	02/17/22 11:55	1
	MB	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130			02/17/22 08:00	02/17/22 11:55	1
1,4-Difluorobenzene (Surr)	79		70 - 130			02/17/22 08:00	02/17/22 11:55	1

#### Lab Sample ID: LCS 880-19557/1-A Matrix: Solid Analysis Batch: 19654

Analysis Batch: 19654							Prep Batch: 19557
	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	0.100	0.09985		mg/Kg		100	70 - 130
Toluene	0.100	0.1030		mg/Kg		103	70 - 130
Ethylbenzene	0.100	0.1034		mg/Kg		103	70 - 130
m-Xylene & p-Xylene	0.200	0.2192		mg/Kg		110	70 - 130
o-Xylene	0.100	0.1125		mg/Kg		112	70 - 130

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	122		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

#### Lab Sample ID: LCSD 880-19557/2-A Matrix: Solid

#### Analysis Batch: 19654

Analysis Batch: 19654							Prep E	-	
	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09609		mg/Kg		96	70 - 130	4	35
Toluene	0.100	0.09313		mg/Kg		93	70 - 130	10	35
Ethylbenzene	0.100	0.09581		mg/Kg		96	70 - 130	8	35
m-Xylene & p-Xylene	0.200	0.2014		mg/Kg		101	70 - 130	8	35
o-Xylene	0.100	0.1033		mg/Kg		103	70 - 130	9	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	120		70 - 130
1,4-Difluorobenzene (Surr)	78		70 - 130

#### Lab Sample ID: 880-11386-A-9-B MS Matrix: Solid

Matrix: Solid Analysis Batch: 19654									Prep Type: Total/NA Prep Batch: 19557
	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	<0.00198	U	0.100	0.09492		mg/Kg		95	70 - 130
Toluene	<0.00198	U	0.100	0.08886		mg/Kg		89	70 - 130

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**Client Sample ID: Matrix Spike** 

**Client Sample ID: Method Blank** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

**Prep Type: Total/NA** 

Prep Batch: 19557

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

Job ID: 890-1951-1 SDG: 31403236.001.0129.35.02

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

Lab Sample ID: 880-1138 Matrix: Solid Analysis Batch: 19654	6-A-9-B MS								CI		ple ID: M Prep Typ Prep Ba	e: To	tal/NA
	Sample	Sam	ple	Spike	MS	MS					%Rec.		
Analyte	Result	Qua	lifier	Added	Result	Qualifier	Unit		D	%Rec	Limits		
Ethylbenzene	<0.00198	U		0.100	0.09004		mg/Kg			90	70 - 130		
m-Xylene & p-Xylene	<0.00397	U		0.201	0.1888		mg/Kg			94	70 - 130		
o-Xylene	<0.00198	U		0.100	0.09841		mg/Kg			98	70 - 130		
	MS	MS											
Surrogate	%Recovery	Qua	lifier	Limits									
4-Bromofluorobenzene (Surr)	124			70 - 130									
1,4-Difluorobenzene (Surr)	97			70 - 130									
Lab Sample ID: 880-1138 Matrix: Solid Analysis Batch: 19654	86-A-9-C MSE	)					Clien	t Sa	amp		trix Spike Prep Typ Prep Ba	e: To	tal/NA
	Sample	Sam	ple	Spike	MSD	MSD					%Rec.		RPD
Analyte	Result		•	Added	Result	Qualifier	Unit		D	%Rec	Limits	RPD	Limi
Benzene	<0.00198	U		0.101	0.09055		mg/Kg			90	70 - 130	5	35
Toluene	<0.00198	U		0.101	0.09669		mg/Kg			96	70 - 130	8	3
Ethylbenzene	<0.00198	U		0.101	0.09666		mg/Kg			96	70 - 130	7	3
m-Xylene & p-Xylene	<0.00397	U		0.201	0.2042		mg/Kg			101	70 - 130	8	3
o-Xylene	<0.00198	U		0.101	0.1038		mg/Kg			103	70 - 130	5	3
	MSD	MSD	)										
Surrogate	%Recovery	Qua	lifier	Limits									
4-Bromofluorobenzene (Surr)	133	S1+		70 - 130									
1,4-Difluorobenzene (Surr)	91			70 - 130									
Lab Sample ID: MB 880- Matrix: Solid Analysis Batch: 19659	19658/5-A	МВ	мв						Clie		ole ID: Me Prep Typ Prep Ba	e: To	tal/N/
Analyte	Re		Qualifier		RL	Unit		D	Р	repared	Analyze	ed	Dil Fa
Benzene			U	0.002		mg/k		—		7/22 08:20			
Toluene		0200	U	0.002		mg/k	-			7/22 08:20		1:45	
Ethylbenzene			U	0.002		mg/k	-				02/17/22 1	1:45	
m-Xylene & p-Xylene		0400	U	0.004		mg/k					02/17/22 1		
						5	-						

	МВ	МВ			
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed
4-Bromofluorobenzene (Surr)	128		70 - 130	02/17/22 08:20	02/17/22 11:45
1,4-Difluorobenzene (Surr)	97		70 - 130	02/17/22 08:20	02/17/22 11:45

0.00200

0.00400

mg/Kg

mg/Kg

<0.00200 U

<0.00400 U

#### Lab Sample ID: LCS 880-19658/1-A Matrix: Solid Analysis Batch: 19659

o-Xylene

Xylenes, Total

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.08334		mg/Kg		83	70 - 130	 
Toluene	0.100	0.08855		mg/Kg		89	70 - 130	
Ethylbenzene	0.100	0.1017		mg/Kg		102	70 - 130	
m-Xylene & p-Xylene	0.200	0.1866		mg/Kg		93	70 - 130	

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Prep Type: Total/NA

Prep Batch: 19658

1

1

1

1

Dil Fac

02/17/22 08:20 02/17/22 11:45

02/17/22 08:20 02/17/22 11:45

**Client Sample ID: Lab Control Sample** 

Client: WSP USA Inc. Project/Site: Remuda Basin State #2 Job ID: 890-1951-1 SDG: 31403236.001.0129.35.02

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

Lab Sample ID: LCS 880- Matrix: Solid								-	: Lab Coi Prep Ty	pe: Tot	tal/NA
Analysis Batch: 19659									Prep E	Batch:	19658
			Spike	LCS	LCS				%Rec.		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
o-Xylene			0.100	0.09302		mg/Kg		93	70 - 130		
	LCS	LCS									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	117		70 - 130								
1,4-Difluorobenzene (Surr)	95		70 - 130								
Lab Sample ID: LCSD 88	0_19658/2_A					Client Sa	mnlo	ID: Lak	o Control	Sample	
Matrix: Solid	0-19030/2-A					Sherit Sa	inpie		Prep Ty		
Analysis Batch: 19659										Batch:	
Analysis Baten. 19005			Spike	LCSD	LCSD				%Rec.	Jaton.	RPE
Analyte			Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Benzene			0.100	0.08866	Guunner	mg/Kg		89	70 - 130	6	3
Toluene			0.100	0.09804		mg/Kg		98	70 - 130	10	3
Ethylbenzene			0.100	0.1063		mg/Kg		106	70 - 130	4	3
m-Xylene & p-Xylene			0.200	0.2051		mg/Kg		100	70 - 130	9	3
o-Xylene			0.200	0.2031		mg/Kg		98	70 - 130	5	3
у-дуюте			0.100	0.09797		iiig/itg		30	70-150	5	5
<b>0</b>		LCSD	l inside								
Surrogate	% <b>Recovery</b> 121	Qualifier	Limits 70 - 130								
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)	121 106		70 - 130 70 - 130								
Lab Sample ID: 880-1130 Matrix: Solid	0-A-1-B MS						CI	ient Sa	mple ID:		
Analysis Batch: 19659									Prep Ty	Batch:	
Analysis Batch. 19039	Samplo	Sample	Spike	МЗ	MS				%Rec.	Jaten.	19050
Analyte	•	Qualifier	Added	-	Qualifier	Unit	D	%Rec	Limits		
Benzene	0.00986		0.100	0.07382		mg/Kg		64	70 - 130		
Toluene	0.0336		0.100	0.09393		mg/Kg		60	70 - 130		
Ethylbenzene	0.0155		0.100	0.09043	•••	mg/Kg		75	70 - 130		
m-Xylene & p-Xylene	0.0245		0.201	0.1643		mg/Kg		70	70 - 130		
o-Xylene	0.0245		0.201	0.08287		mg/Kg		70	70 - 130 70 - 130		
	Me	MS									
Surrogate	%Recovery		Limits								
4-Bromofluorobenzene (Surr)		S1+	70 - 130								
1,4-Difluorobenzene (Surr)	110		70 - 130 70 - 130								
Lab Sample ID: 880-1130	U-A-1-C MSD					Client S	samp	ie ID: N	latrix Spi		
									Prep Ty	-	
Matrix: Solid											
Matrix: Solid Analysis Batch: 19659	Comple	Sample	Spike	Men	Med					Batch:	
Matrix: Solid Analysis Batch: 19659		Sample	Spike	-	MSD Qualifier	Unit	~	% D	%Rec.		RPE
Matrix: Solid Analysis Batch: 19659 Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPE Limi
Matrix: Solid Analysis Batch: 19659		Qualifier F1	-	-	Qualifier F1	Unit mg/Kg mg/Kg	<u>D</u>	%Rec 57 52	%Rec.		RPE

41

38

42

35

35

35

5 6

0.0155 F1 F2

0.0245 F1 F2

0.0116 F1 F2

Ethylbenzene

o-Xylene

m-Xylene & p-Xylene

0.05971 F1 F2

0.05390 F1 F2

0.1119 F1 F2

mg/Kg

mg/Kg

mg/Kg

44

43

42

70 - 130

70 - 130

70 - 130

0.101

0.202

0.101

Client: WSP USA Inc.

#### **QC Sample Results**

Job ID: 890-1951-1 SDG: 31403236.001.0129.35.02

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

Matrix: Solid Analysis Batch: 19659	A-1-C MSD						CHEII	. Ja	···Ρ	le ID: Ma	Prep Ty Prep E	pe: To	tal/N/
	MSD	MSI	כ										
Surrogate	%Recovery			Limits									
4-Bromofluorobenzene (Surr)	110	<u></u>		70 - 130									
1,4-Difluorobenzene (Surr)	88			70 - 130									
lethod: 8015B NM - Die	esel Rang	je (	Organic	s (DRO) (	GC)								
Lab Sample ID: MB 880-19	728/1-A							(	Clie	nt Samp			
Matrix: Solid											Prep Ty		
Analysis Batch: 19779											Prep E	Batch:	1972
		MB	MB										
Analyte	Re	sult	Qualifier	RL		Unit		D	Pr	repared	Analy	zed	Dil Fa
Gasoline Range Organics GRO)-C6-C10	<	50.0	U	50.0		mg/ł	ζg	_ (	02/1	7/22 14:29	02/18/22	09:18	
Diesel Range Organics (Over C10-C28)	<	50.0	U	50.0		mg/ł	ζg	(	02/1	7/22 14:29	02/18/22	09:18	
Oll Range Organics (Over C28-C36	š) </td <td>50.0</td> <td></td> <td>50.0</td> <td></td> <td>mg/ł</td> <td>ξg</td> <td>(</td> <td>02/1</td> <td>7/22 14:29</td> <td>02/18/22</td> <td>09:18</td> <td></td>	50.0		50.0		mg/ł	ξg	(	02/1	7/22 14:29	02/18/22	09:18	
									_	-	<b>.</b> .		<b>.</b> –
Surrogate	%Recov	-	Qualifier	Limits				-		repared	Analy		Dil Fa
1-Chlorooctane p-Terphenyl			S1- S1-	70 - 130 70 - 130						7/22 14:29 7/22 14:29			
	9728/2-A						Cli	ent	Sar	nple ID:			
Matrix: Solid	9728/2-A			Spike	LCS	LCS	Cli	ent	Sar		Prep Ty		tal/N
Matrix: Solid Analysis Batch: 19779	9728/2-A			Spike Added		LCS Qualifier	Cli Unit	ent	Sar D		Prep Ty Prep E	pe: To	tal/N
Matrix: Solid Analysis Batch: 19779 Analyte Gasoline Range Organics	9728/2-A 			•				ent			Prep Ty Prep E %Rec.	pe: To	tal/N
Matrix: Solid Analysis Batch: 19779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	9728/2-A			Added	Result		Unit	ent		%Rec	Prep Ty Prep E %Rec. Limits	pe: To	tal/N
Matrix: Solid Analysis Batch: 19779 Analyte Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over	9728/2-A	LCS		Added	<b>Result</b> 933.9		Unit mg/Kg	ent :		% <b>Rec</b>	Prep Ty Prep E %Rec. Limits 70 - 130	pe: To	tal/N
Matrix: Solid Analysis Batch: 19779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)				Added	<b>Result</b> 933.9		Unit mg/Kg	ent		% <b>Rec</b>	Prep Ty Prep E %Rec. Limits 70 - 130	pe: To	tal/N
Matrix: Solid Analysis Batch: 19779 Analyte Gasoline Range Organics GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	LCS			Added 1000	<b>Result</b> 933.9		Unit mg/Kg	ent		% <b>Rec</b>	Prep Ty Prep E %Rec. Limits 70 - 130	pe: To	tal/N
Matrix: Solid Analysis Batch: 19779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane	LCS %Recovery			Added 1000 1000 Limits	<b>Result</b> 933.9		Unit mg/Kg	ent		% <b>Rec</b>	Prep Ty Prep E %Rec. Limits 70 - 130	pe: To	tal/N
Matrix: Solid Analysis Batch: 19779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane p-Terphenyl	LCS %Recovery 107 111			Added           1000           1000           Limits           70 - 130	<b>Result</b> 933.9	Qualifier	- <mark>Unit</mark> mg/Kg mg/Kg		<u>D</u>	<b>%Rec</b> 93 100	Prep Ty Prep F %Rec. Limits 70 - 130 70 - 130	rpe: To Batch:	tal/N. 1972
Matrix: Solid Analysis Batch: 19779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880- Matrix: Solid	LCS %Recovery 107 111			Added           1000           1000           Limits           70 - 130	<b>Result</b> 933.9	Qualifier	- <mark>Unit</mark> mg/Kg mg/Kg		<u>D</u>	%Rec 93 100	Prep Ty Prep E %Rec. Limits 70 - 130 70 - 130 70 - 130	Sampl pe: To	le Du tal/N
Matrix: Solid Analysis Batch: 19779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane p-Terphenyl Lab Sample ID: LCSD 880- Matrix: Solid	LCS %Recovery 107 111			Added           1000	<b>Result</b> 933.9 1003	Qualifier	- <mark>Unit</mark> mg/Kg mg/Kg		<u>D</u>	%Rec 93 100	Prep Ty Prep E %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130	pe: To Batch:	tal/N, 1972  tal/N, 1972
Matrix: Solid Analysis Batch: 19779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane D-Terphenyl Lab Sample ID: LCSD 880- Matrix: Solid Analysis Batch: 19779	LCS %Recovery 107 111			Added 1000 1000 <i>Limits</i> 70 - 130 70 - 130 <b>Spike</b>	<b>Result</b> 933.9 1003	Qualifier	- <mark>Unit</mark> mg/Kg mg/Kg		D_ ple	%Rec         93         100         ID: Lab	Prep Ty Prep E %Rec. Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 190 70 - 100 70	Sampl pe: To Satch: Sampl pe: To Satch:	tal/N, 1972  tal/N, 1972  RP
Matrix: Solid Analysis Batch: 19779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane D-Terphenyl Lab Sample ID: LCSD 880- Matrix: Solid Analysis Batch: 19779 Analyte	LCS %Recovery 107 111			Added 1000 1000 <i>Limits</i> 70 - 130 70 - 130 70 - 130	Result 933.9 1003 LCSD Result	Qualifier	Unit mg/Kg mg/Kg		<u>D</u>	%Rec         93         100         ID: Lab         %Rec	Prep Ty Prep E %Rec. Limits 70 - 130 70 - 130	Sampl ype: To Batch:  Satch:  	le Du tal/N/ 1972 
Matrix: Solid Analysis Batch: 19779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880- Matrix: Solid Analysis Batch: 19779 Analyte Gasoline Range Organics (GRO)-C6-C10	LCS %Recovery 107 111			Added           1000           1000           1000           1000           1000           1000           5pike           Added           1000	Result           933.9           1003           LCSD           Result           898.3	Qualifier	- <mark>Unit</mark> mg/Kg mg/Kg Client S		D_ ple	%Rec         93         100         ID: Lab         %Rec         90	Prep Ty Prep F %Rec. Limits 70 - 130 70 - 130 70 - 130 Prep Ty Prep F %Rec. Limits 70 - 130	Sampl pe: To Satch: pe: To Satch: <u>RPD</u> 4	le Du 1972 
Matrix: Solid Analysis Batch: 19779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane D-Terphenyl Lab Sample ID: LCSD 880- Matrix: Solid Analysis Batch: 19779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	LCS %Recovery 107 111			Added 1000 1000 <i>Limits</i> 70 - 130 70 - 130 70 - 130	Result 933.9 1003 LCSD Result	Qualifier	Unit mg/Kg mg/Kg		D_ ple	%Rec         93         100         ID: Lab         %Rec         90	Prep Ty Prep E %Rec. Limits 70 - 130 70 - 130	Sampl ype: To Batch:  Satch:  	le Du 1972 
Lab Sample ID: LCS 880-19 Matrix: Solid Analysis Batch: 19779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880- Matrix: Solid Analysis Batch: 19779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	LCS %Recovery 107 111	Qua	lifier	Added           1000           1000           1000           1000           1000           1000           5pike           Added           1000	Result           933.9           1003           LCSD           Result           898.3	Qualifier	- <mark>Unit</mark> mg/Kg mg/Kg Client S		D_ ple	%Rec         93         100         ID: Lab         %Rec         90	Prep Ty Prep F %Rec. Limits 70 - 130 70 - 130 70 - 130 Prep Ty Prep F %Rec. Limits 70 - 130	Sampl pe: To Satch: pe: To Satch: <u>RPD</u> 4	le Du 1972 
Matrix: Solid Analysis Batch: 19779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane 0-Terphenyl Lab Sample ID: LCSD 880- Matrix: Solid Analysis Batch: 19779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	LCS <u>%Recovery</u> 107 111 <b>19728/3-A</b>	Qua	SD	Added           1000           1000           1000           1000           1000           1000           5pike           Added           1000	Result           933.9           1003           LCSD           Result           898.3	Qualifier	- <mark>Unit</mark> mg/Kg mg/Kg Client S		D_ ple	%Rec         93         100         ID: Lab         %Rec         90	Prep Ty Prep F %Rec. Limits 70 - 130 70 - 130 70 - 130 Prep Ty Prep F %Rec. Limits 70 - 130	Sampl pe: To Satch: pe: To Satch: <u>RPD</u> 4	tal/N/ 1972 
Matrix: Solid Analysis Batch: 19779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Lab Sample ID: LCSD 880- Matrix: Solid Analysis Batch: 19779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	LCS %Recovery 107 111 <b>19728/3-A</b>	Qua	SD	Added           1000           1000           1000           1000 <i>Limits</i> 70 - 130           70 - 130           70 - 130           1000           1000           1000	Result           933.9           1003           LCSD           Result           898.3	Qualifier	- <mark>Unit</mark> mg/Kg mg/Kg Client S		D_ ple	%Rec         93         100         ID: Lab         %Rec         90	Prep Ty Prep F %Rec. Limits 70 - 130 70 - 130 70 - 130 Prep Ty Prep F %Rec. Limits 70 - 130	Sampl pe: To Satch: pe: To Satch: <u>RPD</u> 4	tal/N/ 1972 

Client: WSP USA Inc. Project/Site: Remuda Basin State #2 Job ID: 890-1951-1 SDG: 31403236.001.0129.35.02

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

Matrix: Solid Analysis Batch: 19779									Prep Ty Prep E	pe: lot Batch: '	
-	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	928.3		mg/Kg		93	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	907.9		mg/Kg		89	70 - 130		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	62	S1-	70 - 130								
o-Terphenyl	57	S1-	70 - 130								
										pe: Tot Batch: '	
Matrix: Solid Analysis Batch: 19779	Sample	Sample	Spike	MSD	MSD					-	19728
	•	Sample Qualifier	Spike Added		MSD Qualifier	Unit	D	%Rec	Prep E	-	19728 RPD
Analysis Batch: 19779	•	Qualifier	•			Unit mg/Kg	<u>D</u>	<b>%Rec</b> 97	Prep E %Rec.	Batch: '	19728 RPD Limit
Analysis Batch: 19779 Analyte Gasoline Range Organics	Result	Qualifier	Added	Result			<u>D</u>		Prep E %Rec. Limits	Batch: "	19728 RPD Limit
Analysis Batch: 19779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <50.0	<b>Qualifier</b> U	<b>Added</b> 998	<b>Result</b> 970.6		mg/Kg	D	97	Prep E %Rec. Limits 70 - 130	Batch: 7	19728 RPD Limit
Analysis Batch: 19779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <50.0 <50.0	Qualifier U U MSD	<b>Added</b> 998	<b>Result</b> 970.6		mg/Kg	<u>D</u>	97	Prep E %Rec. Limits 70 - 130	Batch: 7	19728 RPD Limit
Analysis Batch: 19779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <50.0 <50.0 %SD %Recovery	Qualifier U U MSD	<b>Added</b> 998 998	<b>Result</b> 970.6		mg/Kg	<u>D</u>	97	Prep E %Rec. Limits 70 - 130	Batch: 7	19728 RPD Limit
Analysis Batch: 19779 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	Result           <50.0	Qualifier U U MSD Qualifier	Added 998 998 Limits	<b>Result</b> 970.6		mg/Kg	<u>D</u>	97	Prep E %Rec. Limits 70 - 130	Batch: 7	

-	MB	MB								
Analyte	Result	Qualifier		RL	Unit		D P	repared	Analyzed	Dil Fa
Chloride	<5.00	U		5.00	mg/K	g			02/18/22 10:04	
Lab Sample ID: LCS 880-19773/2- Matrix: Solid	Α					Clie	nt Sa	mple ID	Lab Control S Prep Type: S	
									тертурс. с	Joiubie
Analysis Batch: 19832			Spike	LCS	LCS				%Rec.	Soluble
			Spike Added	-	LCS Qualifier	Unit	D	%Rec		JUIUDIE
Analysis Batch: 19832			•	-	Qualifier	Unit mg/Kg	<u>D</u>	% <b>Rec</b>	%Rec.	

Analysis Batch: 19832									
	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	250	270.7		mg/Kg	_	108	90 - 110	0	20

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Client: WSP USA Inc. Project/Site: Remuda Basin State #2 Job ID: 890-1951-1 SDG: 31403236.001.0129.35.02

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

Lab Sample ID: 880-11404 Matrix: Solid	-A-11-H MS						C	lient Sa	mple ID: Prep T		
Analysis Batch: 19832	Commun	Commun	0		мо				0/ D		
Analyte	Sample Result	Qualifier	Spike Added	-	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	<4.95	U F1	248	292.6	F1	mg/Kg		117	90 - 110		
Lab Sample ID: 880-11404 Matrix: Solid Analysis Batch: 19832	-A-11-I MSD	)				Client S	Samp	ole ID: N	latrix Spi Prep T		
-	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	<4.95	U F1	248	284.4	F1	mg/Kg		114	90 - 110	3	20

#### **QC Association Summary**

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

GC VOA

Job ID: 890-1951-1 SDG: 31403236.001.0129.35.02

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Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1951-4	PH17E	Total/NA	Solid	5035	
390-1951-5	PH18E	Total/NA	Solid	5035	
390-1951-6	PH18F	Total/NA	Solid	5035	
MB 880-19557/5-A	Method Blank	Total/NA	Solid	5035	
_CS 880-19557/1-A	Lab Control Sample	Total/NA	Solid	5035	
_CSD 880-19557/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
380-11386-A-9-B MS	Matrix Spike	Total/NA	Solid	5035	
380-11386-A-9-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
nalysis Batch: 1965	4				
₋ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
390-1951-4	PH17E	Total/NA	Solid	8021B	1955
390-1951-5	PH18E	Total/NA	Solid	8021B	19557
390-1951-6	PH18F	Total/NA	Solid	8021B	19557
MB 880-19557/5-A	Method Blank	Total/NA	Solid	8021B	19557
-CS 880-19557/1-A	Lab Control Sample	Total/NA	Solid	8021B	1955
_CSD 880-19557/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	1955
380-11386-A-9-B MS	Matrix Spike	Total/NA	Solid	8021B	1955
880-11386-A-9-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	1955
ep Batch: 19658					
ab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batcl
390-1951-1	PH01D	Total/NA	Solid	5035	
390-1951-2	PH01E	Total/NA	Solid	5035	
390-1951-3	PH17D	Total/NA	Solid	5035	
MB 880-19658/5-A	Method Blank	Total/NA	Solid	5035	
_CS 880-19658/1-A	Lab Control Sample	Total/NA	Solid	5035	
_CSD 880-19658/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
380-11300-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
880-11300-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
nalysis Batch: 1965	9				
ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1951-1	PH01D	Total/NA	Solid	8021B	19658
390-1951-2	PH01E	Total/NA	Solid	8021B	19658
390-1951-3	PH17D	Total/NA	Solid	8021B	19658
MB 880-19658/5-A	Method Blank	Total/NA	Solid	8021B	19658
_CS 880-19658/1-A	Lab Control Sample	Total/NA	Solid	8021B	19658
_CSD 880-19658/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	19658
380-11300-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	19658
380-11300-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	19658
nalysis Batch: 1976	0				
₋ab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
390-1951-1	PH01D	Total/NA	Solid	Total BTEX	
390-1951-2	PH01E	Total/NA	Solid	Total BTEX	
890-1951-3	PH17D	Total/NA	Solid	Total BTEX	
390-1951-4	PH17E	Total/NA	Solid	Total BTEX	
890-1951-5	PH18E	Total/NA	Solid	Total BTEX	
890-1951-6	PH18F	Total/NA	Solid	Total BTEX	

**Eurofins Carlsbad** 

#### **QC** Association Summary

Prep Type

Total/NA

Prep Type

Total/NA

Total/NA

Total/NA

Matrix

Solid

Matrix

Solid

Solid

Solid

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

**Client Sample ID** 

PH01D

PH01E

PH17D

PH17E

PH18E

PH18F

PH01D

PH01D

PH01D

PH01E

PH17D

Method Blank

Lab Control Sample

**Client Sample ID** 

Lab Control Sample Dup

GC Semi VOA Prep Batch: 19728 Lab Sample ID

890-1951-1

890-1951-2

890-1951-3

890-1951-4

890-1951-5

890-1951-6

MB 880-19728/1-A

LCS 880-19728/2-A

890-1951-1 MS

Lab Sample ID

890-1951-1

890-1951-2

890-1951-3

890-1951-1 MSD

LCSD 880-19728/3-A

Analysis Batch: 19779

Job ID: 890-1951-1 SDG: 31403236.001.0129.35.02

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Prep Batch

Prep Batch

19728

19728

19728

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19728 19728

19728

19728

19728

19728

19728

3

Method 8015B NM 8015B NM 8015B NM ١M ١M

Method

8015NM Prep

890-1951-4	PH17F	Total/NA	Solid	8015B NM
690-1951-4	FHILE	TOtal/INA	Soliu	
890-1951-5	PH18E	Total/NA	Solid	8015B NM
890-1951-6	PH18F	Total/NA	Solid	8015B NM
MB 880-19728/1-A	Method Blank	Total/NA	Solid	8015B NM
LCS 880-19728/2-A	Lab Control Sample	Total/NA	Solid	8015B NM
LCSD 880-19728/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM
890-1951-1 MS	PH01D	Total/NA	Solid	8015B NM
890-1951-1 MSD	PH01D	Total/NA	Solid	8015B NM

#### Analysis Batch: 19855

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1951-1	PH01D	Total/NA	Solid	8015 NM	
890-1951-2	PH01E	Total/NA	Solid	8015 NM	
890-1951-3	PH17D	Total/NA	Solid	8015 NM	
890-1951-4	PH17E	Total/NA	Solid	8015 NM	
890-1951-5	PH18E	Total/NA	Solid	8015 NM	
890-1951-6	PH18F	Total/NA	Solid	8015 NM	

#### HPLC/IC

#### Leach Batch: 19773

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1951-1	PH01D	Soluble	Solid	DI Leach	
890-1951-2	PH01E	Soluble	Solid	DI Leach	
890-1951-3	PH17D	Soluble	Solid	DI Leach	
890-1951-4	PH17E	Soluble	Solid	DI Leach	
890-1951-5	PH18E	Soluble	Solid	DI Leach	
890-1951-6	PH18F	Soluble	Solid	DI Leach	
MB 880-19773/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-19773/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-19773/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-11404-A-11-H MS	Matrix Spike	Soluble	Solid	DI Leach	
880-11404-A-11-I MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

**Eurofins Carlsbad** 

#### **QC Association Summary**

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

Job ID: 890-1951-1 SDG: 31403236.001.0129.35.02

#### HPLC/IC

#### Analysis Batch: 19832

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-1951-1	PH01D	Soluble	Solid	300.0	19773	
890-1951-3	PH17D	Soluble	Solid	300.0	19773	5
890-1951-4	PH17E	Soluble	Solid	300.0	19773	
890-1951-5	PH18E	Soluble	Solid	300.0	19773	
890-1951-6	PH18F	Soluble	Solid	300.0	19773	
MB 880-19773/1-A	Method Blank	Soluble	Solid	300.0	19773	
LCS 880-19773/2-A	Lab Control Sample	Soluble	Solid	300.0	19773	
LCSD 880-19773/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	19773	8
880-11404-A-11-H MS	Matrix Spike	Soluble	Solid	300.0	19773	
880-11404-A-11-I MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	19773	9
Analysis Batch: 1993 –	8					10
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-1951-2	PH01E	Soluble	Solid	300.0	19773	

5

9

Job ID: 890-1951-1 SDG: 31403236.001.0129.35.02

#### Lab Sample ID: 890-1951-1 Matrix: Solid

Lab Sample ID: 890-1951-2

**Client Sample ID: PH01D** Date Collected: 02/15/22 12:30 Date Received: 02/15/22 16:16

Client: WSP USA Inc.

	Batch	Batch		Dilution	Batch	Prepared		
Prep Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			19658	02/17/22 08:20	KL	XEN MID
Total/NA	Analysis	8021B		1	19659	02/17/22 17:08	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	19760	02/17/22 21:03	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	19855	02/18/22 19:48	AJ	XEN MID
Total/NA	Prep	8015NM Prep			19728	02/17/22 14:29	DM	XEN MID
Total/NA	Analysis	8015B NM		1	19779	02/18/22 10:24	AJ	XEN MID
Soluble	Leach	DI Leach			19773	02/17/22 21:46	СН	XEN MID
Soluble	Analysis	300.0		10	19832	02/18/22 13:35	СН	XEN MID

#### **Client Sample ID: PH01E** Date Collected: 02/15/22 12:35 Date Received: 02/15/22 16:16

	Batch	Batch		Dilution	Batch	Prepared		
Prep Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			19658	02/17/22 08:20	KL	XEN MID
Total/NA	Analysis	8021B		1	19659	02/17/22 17:28	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	19760	02/17/22 21:03	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	19855	02/18/22 19:48	AJ	XEN MID
Total/NA	Prep	8015NM Prep			19728	02/17/22 14:29	DM	XEN MID
Total/NA	Analysis	8015B NM		1	19779	02/18/22 11:31	AJ	XEN MID
Soluble	Leach	DI Leach			19773	02/17/22 21:46	СН	XEN MID
Soluble	Analysis	300.0		1	19938	02/23/22 14:48	СН	XEN MID

#### **Client Sample ID: PH17D** Date Collected: 02/15/22 13:45 Date Received: 02/15/22 16:16

# Lab Sample ID: 890-1951-3

Lab Sample ID: 890-1951-4

Matrix: Solid

**Matrix: Solid** 

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			19658	02/17/22 08:20	KL	XEN MID
Total/NA	Analysis	8021B		1	19659	02/17/22 17:49	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	19760	02/17/22 21:03	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	19855	02/18/22 19:48	AJ	XEN MID
Total/NA	Prep	8015NM Prep			19728	02/17/22 14:29	DM	XEN MID
Total/NA	Analysis	8015B NM		1	19779	02/18/22 11:53	AJ	XEN MID
Soluble	Leach	DI Leach			19773	02/17/22 21:46	СН	XEN MID
Soluble	Analysis	300.0		10	19832	02/18/22 14:10	СН	XEN MID

#### **Client Sample ID: PH17E** Date Collected: 02/15/22 14:00 Date Received: 02/15/22 16:16

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			19557	02/17/22 08:00	KL	XEN MID
Total/NA	Analysis	8021B		1	19654	02/17/22 18:08	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	19760	02/17/22 21:03	AJ	XEN MID

**Eurofins Carlsbad** 

Matrix: Solid

9

Matrix: Solid

Job ID: 890-1951-1 SDG: 31403236.001.0129.35.02

#### Lab Sample ID: 890-1951-4 Matrix: Solid

Client Sample ID: PH17E Date Collected: 02/15/22 14:00 Date Received: 02/15/22 16:16

Client: WSP USA Inc.

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1	19855	02/18/22 19:48	AJ	XEN MID
Total/NA	Prep	8015NM Prep			19728	02/17/22 14:29	DM	XEN MID
Total/NA	Analysis	8015B NM		1	19779	02/18/22 12:14	AJ	XEN MID
Soluble	Leach	DI Leach			19773	02/17/22 21:46	СН	XEN MID
Soluble	Analvsis	300.0		1	19832	02/18/22 19:33	СН	XEN MID

#### Client Sample ID: PH18E Date Collected: 02/15/22 12:55 Date Received: 02/15/22 16:16

	Batch	Batch		Dilution	Batch	Prepared		
Prep Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			19557	02/17/22 08:00	KL	XEN MID
Total/NA	Analysis	8021B		1	19654	02/17/22 18:34	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	19760	02/17/22 21:03	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	19855	02/18/22 19:48	AJ	XEN MID
Total/NA	Prep	8015NM Prep			19728	02/17/22 14:29	DM	XEN MID
Total/NA	Analysis	8015B NM		1	19779	02/18/22 12:35	AJ	XEN MID
Soluble	Leach	DI Leach			19773	02/17/22 21:46	СН	XEN MID
Soluble	Analysis	300.0		10	19832	02/18/22 14:28	СН	XEN MID

#### Client Sample ID: PH18F Date Collected: 02/15/22 13:35 Date Received: 02/15/22 16:16

Lab Sample ID: 890-1951-6 Matrix: Solid

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			19557	02/17/22 08:00	KL	XEN MID
Total/NA	Analysis	8021B		1	19654	02/17/22 19:01	KL	XEN MID
Total/NA	Analysis	Total BTEX		1	19760	02/17/22 21:03	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	19855	02/18/22 19:48	AJ	XEN MID
Total/NA	Prep	8015NM Prep			19728	02/17/22 14:29	DM	XEN MID
Total/NA	Analysis	8015B NM		1	19779	02/18/22 12:56	AJ	XEN MID
Soluble	Leach	DI Leach			19773	02/17/22 21:46	СН	XEN MID
Soluble	Analysis	300.0		1	19832	02/18/22 19:42	СН	XEN MID

#### Laboratory References:

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

Client: WSP USA Inc.

**Accreditation/Certification Summary** 

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10

Job ID: 890-1951-1 SDG: 31403236.001.0129.35.02

# Project/Site: Remuda Basin State #2 Laboratory: Eurofins Midland

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

Authority		ogram	Identification Number	Expiration Date
exas	INE	ELAP	T104704400-21-22	06-30-22
The following enalyter	are included in this rene	rt but the leberatory is r	not certified by the governing authority.	This list may include analytes for which
0,		in, but the laboratory is r	ior certified by the governing autionty.	This list may include analytes for which
the agency does not of Analysis Method		Matrix	Analyte	
the agency does not o	ffer certification.		, , , , ,	

**Eurofins Carlsbad** 

#### **Method Summary**

Job ID: 890-1951-1 SDG: 31403236.001.0129.35.02

Method	Method Description	Protocol	Laboratory
3021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
3015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
3015B 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
3015NM Prep	Microextraction	SW846	XEN MID
OI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

#### Protocol References:

ASTM = ASTM International

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

#### Laboratory References:

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

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Sample Summary

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Job ID: 890-1951-1 SDG: 31403236.001.0129.35.02

#### Client: WSP USA Inc. Project/Site: Remuda Basin State #2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1951-1	PH01D	Solid	02/15/22 12:30	02/15/22 16:16	5
890-1951-2	PH01E	Solid	02/15/22 12:35	02/15/22 16:16	6
890-1951-3	PH17D	Solid	02/15/22 13:45	02/15/22 16:16	5
890-1951-4	PH17E	Solid	02/15/22 14:00	02/15/22 16:16	6
890-1951-5	PH18E	Solid	02/15/22 12:55	02/15/22 16:16	6
890-1951-6	PH18F	Solid	02/15/22 13:35	02/15/22 16:16	7

1 dours	Relinquished by: (Si	of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be employed unless previously negoviewed.	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 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 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 service.	Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed		11101		DH18E	PH17E	PH17D	PH01E	PH01D	Sample Identification	Sample Custody Seals:	Cooler Custody Seals:	Received Intact:	Temperature (°C):	SAMPLE RECEIPT	Sampler's Name: Cor	P.O. Number:	Project Number:	Project Name:	Phone: 720	City, State ZIP: Arvi	Address: 460	Company Name: WS	Project Manager: Aim				
	(Signature)	of \$75.00 will be ap	ment and relinquist	200.8 / 6020: and Metal(s) to be										No	đ	(Yeg	0 0 0 0 0		Conner Shore		31403236.001.0129.35.02	Remuda Basin State #2	720.384.7365	Arvada, Colorado 80003	4600 West 60th Avenue	WSP USA Inc.	Aimee Cole				ļ
		plied to ea	nment of s of samples	20: be ana		Ű	, ,	'n	Ś	s	s	s	Matrix	NIA	Ð	No	0°.6				.001.01	Basin S		80003	venue						
LUN ()	Received by:	ich project and	amples constit	e e		211012022	0/4 5/0000	2/15/2022	2/15/2022	2/15/2022	2/15/2022	2/15/2022	Date Sampled	Total	Сопе	NW		Yes No			29.35.02	State #2						Hobbs,			ļ
D	by: (Signature)	a charge of \$5	utes a valid pur	8RCRA 13PPM Tex TCLP / SPLP 6010:		1.000	1000	1255	1400	1345	1235	1230	Time Sampled	Total Containers:	1	W-00	Thermometer ID	Wet Ice:	Due Date	Rush	Routine		Email:					NM (575-392-	Houston,		
	ıre)	tor each sample	rchase order fro	13PPM Texas 11 / SPLP 6010: 8RC			1 I	σ	ō	Ω	ō	ŋ	Depth		-0.2		ō	Yea No	Date:	Rush: 24 Hr TAT		Turn Around	Email: conner.shore@wsp.com; Aimee.cole@wsp.com	City, State ZIP:	Address:	Company Name:	Bill to: (if different)	Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800)	Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334		
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# **Eurofins Carlsbad** 5 6 7 8 9

1089 N Canal St.

Carlsbad, NM 88220

# **Chain of Custody Record**

**13** 14

Seurofins Environment Testing

Empty Kit Relingvished by

Deliverable Requested 1 II III IV Other (specify)

Relinquished by

Custody Seals Intact. ∆ Yes ∆ No

Custody Seal No

elinquished by telinquished by

een-ea

Date/Time Date/Time:

Company Company

Cooler Temperature(s) °C and Other Remarks.

Received b Received t

Date/Time: Date/Time

> Company Company

Company

Ver 06/08/2021

Company

Received

Time

Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)
Return To Client Disposal By Lab Archive For Mont
Special Instructions/QC Requirements

Months

Method of Shipment Date/Time

Date/Time:

Date

Primary Deliverable Rank. 2

Possible Hazard Identification

nconfirmed

#### Login Sample Receipt Checklist

Client: WSP USA Inc.

#### Login Number: 1951 List Number: 1 **Creator: Clifton, Cloe**

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

<6mm (1/4").

Job Number: 890-1951-1

List Source: Eurofins Carlsbad

SDG Number: 31403236.001.0129.35.02

#### Login Sample Receipt Checklist

Client: WSP USA Inc.

#### Login Number: 1951 List Number: 2 Creator: Kramer, Jessica

Job Number: 890-1951-1
SDG Number: 31403236.001.0129.35.02

Login Number: 1951			List Source: Eurofins Midland	
List Number: 2 Creator: Kramer, Jessica			List Creation: 02/17/22 01:10 PM	5
Question	Answer	Comment		
The cooler's custody seal, if present, is intact.	True			
Sample custody seals, if present, are intact.	True			
The cooler or samples do not appear to have been compromised or tampered with.	True			8
Samples were received on ice.	True			
Cooler Temperature is acceptable.	True			9
Cooler Temperature is recorded.	True			
COC is present.	True			

ine cooler o caelea j coal, il procent, le intacti	
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").	N/A

Received by OCD: 7/8/2022 8:01:28 AM

# 🔅 eurofins

# Environment Testing America

# **ANALYTICAL REPORT**

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

#### Laboratory Job ID: 890-1961-1

Laboratory Sample Delivery Group: 31403236.001.0129.35.02 Client Project/Site: Remuda Basin State #2 Revision: 1

#### For:

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

Attn: Aimee Cole

RAMER

Authorized for release by: 2/28/2022 4:59:57 PM

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

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

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

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

Visit us at: www.eurofinsus.com/Env Released to Imaging: 9/22/2022 7:39:45 AM

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Laboratory Job ID: 890-1961-1 SDG: 31403236.001.0129.35.02

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2

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

Job ID: 890-1961-1 SDG: 31403236.001.0129.35.02

#### Qualifiers

Qualifiers		3
GC VOA		
Qualifier	Qualifier Description	
F1	MS and/or MSD recovery exceeds control limits.	
F2	MS/MSD RPD exceeds control limits	5
S1-	Surrogate recovery exceeds control limits, low biased.	
S1+	Surrogate recovery exceeds control limits, high biased.	
U	Indicates the analyte was analyzed for but not detected.	
GC Semi VC	Α	
Qualifier	Qualifier Description	
*+	LCS and/or LCSD is outside acceptance limits, high biased.	8
*1	LCS/LCSD RPD exceeds control limits.	0
S1-	Surrogate recovery exceeds control limits, low biased.	Q
S1+	Surrogate recovery exceeds control limits, high biased.	3
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		12
Abbreviation	These commonly used abbreviations may or may not be present in this report.	4.0
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis	13
%R	Percent Recovery	
CFL	Contains Free Liquid	
CFU	Colony Forming Unit	

С CNF Contains No Free Liquid

Duplicate Error Ratio (normalized absolute difference) DER

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

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

NEG Negative / Absent

POS Positive / Present

Practical Quantitation Limit PQL

PRES Presumptive

QC **Quality Control** 

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

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

TEF Toxicity Equivalent Factor (Dioxin)

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

**Eurofins Carlsbad** 

Page 316 of 358

Client: WSP USA Inc. Project/Site: Remuda Basin State #2 Job ID: 890-1961-1 SDG: 31403236.001.0129.35.02

#### Job ID: 890-1961-1

#### Laboratory: Eurofins Carlsbad

#### Narrative

Job Narrative 890-1961-1

#### REVISION

The report being provided is a revision of the original report sent on 2/22/2022. The report (revision 1) is being revised due to Per client email, requesting chloride re run on sample SS22.

Report revision history

#### Receipt

The samples were received on 2/16/2022 4:22 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.4°C

#### GC VOA

Method 8021B: Surrogate recovery for the following samples were outside control limits: SW21 (890-1961-6), SW22 (890-1961-7), SW23 (890-1961-8), SW24 (890-1961-9), SW25 (890-1961-10), SW26 (890-1961-11), SW27 (890-1961-12) and SW10 (890-1961-13). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-19708 and analytical batch 880-19796 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

#### GC Semi VOA

Method 8015MOD\_NM: The laboratory control sample (LCS) associated with preparation batch 880-19786 and analytical batch 880-19782 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

Method 8015MOD\_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-19786/2-A), (LCSD 880-19786/3-A), (890-1957-A-1-C MS) and (890-1957-A-1-D MSD). Evidence of matrix interferences is not obvious.

Method 8015MOD\_NM: The laboratory control sample (LCS) associated with preparation batch 880-19786 and analytical batch 880-19782 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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

#### HPLC/IC

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

#### **Client Sample Results**

Job ID: 890-1961-1 SDG: 31403236.001.0129.35.02

### Lab Sample ID: 890-1961-1

Matrix: Solid

5

alu	~~					
ate	Re	ceiv	ved:	02/	16/22	1
am	ple	De	oth:	0 - 4	4	

	anic Compo Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Analyte Benzene	<0.00202	-	0.00202	mg/Kg		02/18/22 08:00	02/19/22 01:48	Dirra
Toluene	<0.00202		0.00202	mg/Kg		02/18/22 08:00	02/19/22 01:48	
Ethylbenzene	<0.00202		0.00202	mg/Kg		02/18/22 08:00	02/19/22 01:48	
m-Xylene & p-Xylene	<0.00202 <0.00404		0.00202	mg/Kg mg/Kg		02/18/22 08:00		
o-Xylene & p-Xylene	<0.00404		0.00404			02/18/22 08:00	02/19/22 01:48	
-			0.00202 0.00404	mg/Kg mg/Kg				
Xylenes, Total	<0.00404	0	0.00404	mg/Kg		UZI 10/22 U8:00	02/19/22 01:48	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	111		70 - 130			02/18/22 08:00	02/19/22 01:48	
1,4-Difluorobenzene (Surr)	93		70 - 130			02/18/22 08:00	02/19/22 01:48	
Method: Total BTEX - Total B		tion						
Method: Iotal BIEX - Iotal BI Analyte		tion Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00404		0.00404	mg/Kg			02/21/22 19:46	2010
· _ ·	0.00404	-	5.00 r0-T					
Method: 8015 NM - Diesel Rar	nge Organic	s (DRO) (6	SC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<50.0		50.0	mg/Kg			02/18/22 17:26	
				_ 0				
Method: 8015B NM - Diesel Ra			• •					
Analyte	Result	Qualifier		Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *+ *1	50.0	mg/Kg	. —	02/18/22 08:34	02/18/22 11:52	
Diesel Range Organics (Over	<50.0	U *+ *1	50.0	mg/Kg		02/18/22 08:34	02/18/22 11:52	
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/18/22 08:34	02/18/22 11:52	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	83		70 - 130			02/18/22 08:34	02/18/22 11:52	
			70 - 130				02/18/22 11:52	
o-Terphenyl	85		10-150			· · · · · ·		
o-Terphenyl								
Method: 300.0 - Anions, Ion C	hromatogra		ıble	1]!4	-			
Method: 300.0 - Anions, Ion C Analyte	hromatogra Result	phy - Solu Qualifier	Ible RL	Unit	D	Prepared	Analyzed	Dil Fa
Method: 300.0 - Anions, Ion C Analyte	hromatogra		ıble	Unit mg/Kg	<u>D</u>			
Method: 300.0 - Anions, Ion C Analyte Chloride	hromatogra Result		Ible RL		<u>D</u>	Prepared	Analyzed	Dil Fa
Method: 300.0 - Anions, Ion C Analyte Chloride Client Sample ID: SW17	chromatogra Result 66.9		Ible RL		<u>D</u>	Prepared	Analyzed 02/18/22 19:50	961-2
Method: 300.0 - Anions, Ion C Analyte Chloride Client Sample ID: SW17 vate Collected: 02/16/22 09:55	chromatogra Result 66.9		Ible RL		<u>D</u>	Prepared	Analyzed 02/18/22 19:50	
Method: 300.0 - Anions, Ion C Analyte Chloride C	chromatogra Result 66.9		Ible RL		<u>D</u>	Prepared	Analyzed 02/18/22 19:50	961-2
Method: 300.0 - Anions, Ion C Analyte Chloride lient Sample ID: SW17 ate Collected: 02/16/22 09:55 ate Received: 02/16/22 16:22 ample Depth: 0 - 4	Chromatogra Result 66.9	Qualifier	Ible 		<u>D</u>	Prepared	Analyzed 02/18/22 19:50	961-2
Method: 300.0 - Anions, Ion C Analyte Chloride lient Sample ID: SW17 ate Collected: 02/16/22 09:55 ate Received: 02/16/22 16:22	Chromatogra Result 66.9	Qualifier unds (GC)	1 <b>ble</b> <u><b>RL</b></u> 4.98	mg/Kg	D	Prepared Lab Samp	Analyzed 02/18/22 19:50 le ID: 890-1 Matrix	961-2
Method: 300.0 - Anions, Ion C Analyte Chloride lient Sample ID: SW17 ate Collected: 02/16/22 09:55 ate Received: 02/16/22 16:22 ample Depth: 0 - 4	Chromatogra Result 66.9	Qualifier unds (GC) Qualifier	Ible 	mg/Kg	D	Prepared Lab Samp	Analyzed 02/18/22 19:50	961-2
Method: 300.0 - Anions, Ion C Analyte Chloride lient Sample ID: SW17 ate Collected: 02/16/22 09:55 ate Received: 02/16/22 16:22 ample Depth: 0 - 4 Method: 8021B - Volatile Orga	Chromatogra Result 66.9	Qualifier unds (GC) Qualifier	1 <b>ble</b> <u><b>RL</b></u> 4.98	mg/Kg		Prepared Lab Samp	Analyzed 02/18/22 19:50 le ID: 890-1 Matrix	961- : Soli
Method: 300.0 - Anions, Ion C Analyte Chloride C	Chromatogra Result 66.9	Qualifier unds (GC) Qualifier U	Ible 	mg/Kg		Prepared Lab Samp	Analyzed 02/18/22 19:50 le ID: 890-1 Matrix Analyzed	961- : Soli
Method: 300.0 - Anions, Ion C Analyte Chloride C	Chromatogra Result 66.9 Anic Compor Result <0.00199	Qualifier unds (GC) Qualifier U U	RL         4.98	mg/Kg		Prepared Lab Samp	Analyzed 02/18/22 19:50 le ID: 890-1 Matrix Analyzed 02/19/22 02:08	961- : Soli
Method: 300.0 - Anions, Ion C Analyte Chloride lient Sample ID: SW17 ate Collected: 02/16/22 09:55 ate Received: 02/16/22 16:22 ample Depth: 0 - 4 Method: 8021B - Volatile Orga Analyte Benzene Toluene	Anic Comport Result <0.00199 <0.00199	Qualifier unds (GC) Qualifier U U U	RL         4.98         0.00199         0.00199	Unit mg/Kg mg/Kg mg/Kg		Prepared Lab Samp Prepared 02/18/22 08:00 02/18/22 08:00	Analyzed 02/18/22 19:50 le ID: 890-1 Matrix Analyzed 02/19/22 02:08 02/19/22 02:08	961-2 :: Soli
Method: 300.0 - Anions, Ion C Analyte Chloride lient Sample ID: SW17 ate Collected: 02/16/22 09:55 ate Received: 02/16/22 16:22 ample Depth: 0 - 4 Method: 8021B - Volatile Orga Analyte Benzene Toluene Ethylbenzene	Anic Comport Control 100 Control 100	Qualifier unds (GC) Qualifier U U U U	RL         4.98         0.00199         0.00199         0.00199         0.00199	Unit mg/Kg mg/Kg mg/Kg mg/Kg		Prepared Lab Samp  Prepared  02/18/22 08:00 02/18/22 08:00 02/18/22 08:00	Analyzed 02/18/22 19:50 le ID: 890-1 Matrix Analyzed 02/19/22 02:08 02/19/22 02:08 02/19/22 02:08	961-/ : Soli

Prepared	Analyzed	Dil Fac
02/18/22 08:00	02/19/22 02:08	1

**Eurofins Carlsbad** 

Surrogate

4-Bromofluorobenzene (Surr)

Limits

70 - 130

%Recovery Qualifier

		Client	t Sample Re	sults				
lient: WSP USA Inc. roject/Site: Remuda Basin State	ə #2					SDG: 3140	Job ID: 890- 3236.001.0129	
Client Sample ID: SW17 Lab Sample ID: 89 Date Collected: 02/16/22 09:55 Ma								1961-2 c: Solid
ate Received: 02/16/22 16:22 Sample Depth: 0 - 4								
Method: 8021B - Volatile Orga	anic Compo	unds (GC)	(Continued)					
Surrogate	%Recovery		Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	97		70 - 130			02/18/22 08:00	02/19/22 02:08	1
Method: Total BTEX - Total BT					_			
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/21/22 19:46	1
Method: 8015 NM - Diesel Ran	nge Organic	:s (DRO) ((	GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			02/18/22 17:26	1
Method: 8015B NM - Diesel Ra	ange Organ	vice (DRO)	(60)					
Analyte		Qualifier		Unit	D		Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	) U*+ *1	50.0	mg/Kg		02/18/22 08:34	02/18/22 12:13	1
Diesel Range Organics (Over C10-C28)	<50.0	) U *+ *1	50.0	mg/Kg		02/18/22 08:34	02/18/22 12:13	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/18/22 08:34	02/18/22 12:13	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	90	r -	70 - 130			02/18/22 08:34	02/18/22 12:13	1
o-Terphenyl	91		70 - 130			02/18/22 08:34	02/18/22 12:13	1
Method: 300.0 - Anions, Ion C	hromatour?	enhv - Soli	uhle					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	46.6		5.00	mg/Kg			02/18/22 20:09	1
- Client Sample ID: SW18						Lab Samn	le ID: 890-1	961-7
								c: Solic
							IVICILI I A	30110
Date Collected: 02/16/22 14:20 Date Received: 02/16/22 16:22								

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/18/22 08:00	02/19/22 02:29	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/18/22 08:00	02/19/22 02:29	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/18/22 08:00	02/19/22 02:29	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		02/18/22 08:00	02/19/22 02:29	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/18/22 08:00	02/19/22 02:29	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		02/18/22 08:00	02/19/22 02:29	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		70 - 130			02/18/22 08:00	02/19/22 02:29	1
1,4-Difluorobenzene (Surr)	90		70 - 130			02/18/22 08:00	02/19/22 02:29	1
Method: Total BTEX - Total	BTEX Calcula	tion						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			02/21/22 19:46	1
Method: 8015 NM - Diesel F	Range Organic	s (DRO) (G	SC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			02/18/22 17:26	1

#### **Client Sample Results**

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Job ID: 890-1961-1
SDG: 31403236.001.0129.35.02

# Lab Sample ID: 890-1961-3

Matrix: Solid

Matrix: Solid

Client Sample ID: SW18 Date Collected: 02/16/22 14:20 Date Received: 02/16/22 16:22

Client: WSP USA Inc.

Sample Depth: 0 - 4								
Method: 8015B NM - Diesel R	ange Organ	ics (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		02/18/22 08:34	02/18/22 12:34	1
Diesel Range Organics (Over C10-C28)	<50.0	U *+ *1	50.0	mg/Kg		02/18/22 08:34	02/18/22 12:34	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/18/22 08:34	02/18/22 12:34	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	88		70 - 130			02/18/22 08:34	02/18/22 12:34	1
o-Terphenyl	91		70 - 130			02/18/22 08:34	02/18/22 12:34	1
Method: 300.0 - Anions, Ion C	hromatogra	phy - Solu	uble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	41.2		4.95	mg/Kg			02/18/22 20:15	1
Client Sample ID: SW19						Lab Samp	le ID: 890-1	961-4

Date Collected: 02/16/22 14:25 Date Received: 02/16/22 16:22 Sample Depth: 0 - 4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		02/18/22 08:00	02/19/22 02:49	1
Toluene	<0.00201	U	0.00201	mg/Kg		02/18/22 08:00	02/19/22 02:49	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		02/18/22 08:00	02/19/22 02:49	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		02/18/22 08:00	02/19/22 02:49	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		02/18/22 08:00	02/19/22 02:49	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		02/18/22 08:00	02/19/22 02:49	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		70 - 130			02/18/22 08:00	02/19/22 02:49	1
1,4-Difluorobenzene (Surr)	70		70 - 130			02/18/22 08:00	02/19/22 02:49	1
Method: Total BTEX - Total B	<b>TEX Calcula</b>	tion						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00402	11	0.00402				02/21/22 19:46	
	S0.00402	0	0.00402	mg/Kg			02/21/22 19.40	1
				ing/Kg			02/21/22 19.40	1
Method: 8015 NM - Diesel Rar	nge Organic			Unit	D	Prepared	Analyzed	Dil Fac
Method: 8015 NM - Diesel Rar Analyte Total TPH	nge Organic	s (DRO) (C Qualifier	SC)		D	Prepared		Dil Fac
Method: 8015 NM - Diesel Rar Analyte Total TPH	nge Organic Result <49.9	s (DRO) (C Qualifier U	GC) 	Unit	D	Prepared	Analyzed	Dil Fac
Method: 8015 NM - Diesel Rar Analyte Total TPH Method: 8015B NM - Diesel Ra	nge Organic Result <49.9 ange Organ	s (DRO) (C Qualifier U	GC) 	Unit	<u>D</u> 	Prepared Prepared	Analyzed	1
Method: 8015 NM - Diesel Rar Analyte Total TPH Method: 8015B NM - Diesel Ra Analyte Gasoline Range Organics	nge Organic Result <49.9 ange Organ Result	s (DRO) (C Qualifier U	GC) <u>RL</u> 49.9 (GC)	Unit mg/Kg		<u>.</u>	Analyzed 02/18/22 17:26	1
Method: 8015 NM - Diesel Rar Analyte Total TPH Method: 8015B NM - Diesel Ra Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	ange Organic Result <49.9 ange Organ Result <49.9	s (DRO) (C Qualifier U ics (DRO) Qualifier	GC) <u>RL</u> 49.9 (GC) <u>RL</u>	Unit mg/Kg		Prepared 02/18/22 08:34	Analyzed 02/18/22 17:26 Analyzed	1
Method: 8015 NM - Diesel Rar Analyte Total TPH Method: 8015B NM - Diesel Ra Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	ange Organic Result <49.9 ange Organ Result <49.9	s (DRO) (C Qualifier U ics (DRO) Qualifier U *+ *1 U *+ *1	GC) <u>RL</u> 49.9 (GC) <u>RL</u> 49.9	Unit mg/Kg Unit mg/Kg		Prepared 02/18/22 08:34	Analyzed 02/18/22 17:26 Analyzed 02/18/22 12:55 02/18/22 12:55	1 Dil Fac 1
Method: 8015 NM - Diesel Rar Analyte Total TPH Method: 8015B NM - Diesel Ra Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	ange Organic Result <49.9 ange Organ Result <49.9 <49.9	<b>s (DRO) (C</b> Qualifier U <b>ics (DRO)</b> Qualifier U *+ *1 U *+ *1 U	GC) <u>RL</u> 49.9 (GC) <u>RL</u> 49.9 49.9	Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 02/18/22 08:34 02/18/22 08:34	Analyzed 02/18/22 17:26 Analyzed 02/18/22 12:55 02/18/22 12:55	1 Dil Fac 1
Method: 8015 NM - Diesel Rar Analyte	nge Organic Result <49.9 ange Organ Result <49.9 <49.9 <49.9	<b>s (DRO) (C</b> Qualifier U <b>ics (DRO)</b> Qualifier U *+ *1 U *+ *1 U	C) RL 49.9 (GC) RL 49.9 49.9 49.9	Unit mg/Kg Unit mg/Kg mg/Kg		<b>Prepared</b> 02/18/22 08:34 02/18/22 08:34 02/18/22 08:34	Analyzed 02/18/22 17:26 Analyzed 02/18/22 12:55 02/18/22 12:55 02/18/22 12:55	1 Dil Fac 1 1

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961-1 35.02 2 61-3 Solid 3

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		Client	Sample Re	esults				
Client: WSP USA Inc. Project/Site: Remuda Basin State	e #2		-			SDG: 3140	Job ID: 890- 3236.001.012	
Client Sample ID: SW19 Date Collected: 02/16/22 14:25 Date Received: 02/16/22 16:22 Sample Depth: 0 - 4	Lab Sample ID: 890-1961-4 Matrix: Solid							
Method: 300.0 - Anions, Ion C Analyte		phy - Solu Qualifier	u <mark>ble</mark> RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	80.6		5.02	mg/Kg			02/18/22 20:34	1
Client Sample ID: SW20 Date Collected: 02/16/22 11:00 Date Received: 02/16/22 16:22 Sample Depth: 0 - 4						Lab Samp	le ID: 890-1 Matrix	961-5 : Solid
Method: 8021B - Volatile Orga	anic Compo	unds (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/18/22 08:00	02/19/22 08:52	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/18/22 08:00	02/19/22 08:52	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/18/22 08:00	02/19/22 08:52	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/18/22 08:00	02/19/22 08:52	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/18/22 08:00	02/19/22 08:52	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/18/22 08:00	02/19/22 08:52	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	144	S1+	70 - 130			02/18/22 08:00	02/19/22 08:52	1
1,4-Difluorobenzene (Surr)	89		70 - 130			02/18/22 08:00	02/19/22 08:52	1
Method: Total BTEX - Total B	TEX Calcula	tion						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			02/21/22 19:46	1
Method: 8015 NM - Diesel Rai				1114		Duran and	Amelyneed	
Analyte Total TPH	Kesult <50.0	Qualifier		Unit	D	Prepared	Analyzed 02/18/22 17:26	Dil Fac
Method: 8015B NM - Diesel R				mg/Kg			02/10/22 17.20	·
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *+ *1	50.0	mg/Kg		02/18/22 08:34	02/18/22 13:15	1
Diesel Range Organics (Over C10-C28)	<50.0	U *+ *1	50.0	mg/Kg		02/18/22 08:34	02/18/22 13:15	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/18/22 08:34	02/18/22 13:15	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	79		70 - 130			02/18/22 08:34	02/18/22 13:15	1
o-Terphenyl	78		70 - 130			02/18/22 08:34	02/18/22 13:15	1
Method: 300.0 - Anions, Ion C Analyte	-	phy - Solu Qualifier	uble RL	Unit	D	Prepared	Analyzed	Dil Fac
		444110					7.1101 <b>72</b> 00	2

Eurofins Carlsbad

02/20/22 12:22

1

Released to Imaging: 9/22/2022 7:39:45 AM

Chloride

4.99

mg/Kg

56.3

#### **Client Sample Results**

#### **Client Sample ID: SW21** Date Collected: 02/16/22 14:00 Date Received: 02/16/22 16:22 Sample Depth: 0 - 4

Job ID: 890-1961-1
SDG: 31403236.001.0129.35.02

## Lab Sample ID: 890-1961-6

Matrix: Solid

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Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00199	U	0.00199	mg/Kg		02/18/22 08:00	02/19/22 09:20	
Toluene	<0.00199	U	0.00199	mg/Kg		02/18/22 08:00	02/19/22 09:20	
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		02/18/22 08:00	02/19/22 09:20	
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		02/18/22 08:00	02/19/22 09:20	
o-Xylene	<0.00199	U	0.00199	mg/Kg		02/18/22 08:00	02/19/22 09:20	
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		02/18/22 08:00	02/19/22 09:20	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	146	S1+	70 - 130			02/18/22 08:00	02/19/22 09:20	
1,4-Difluorobenzene (Surr)	93		70 - 130			02/18/22 08:00	02/19/22 09:20	
Method: Total BTEX - Total B	TEX Calcula	tion						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/21/22 19:46	
Method: 8015 NM - Diesel Rai	nge Organic	s (DRO) (0	GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<50.0	U	50.0	mg/Kg			02/18/22 17:26	
Method: 8015B NM - Diesel R	ange Organ	ics (DRO)	(GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *+ *1	50.0	mg/Kg		02/18/22 08:34	02/18/22 13:36	
Diesel Range Organics (Over C10-C28)	<50.0	U *+ *1	50.0	mg/Kg		02/18/22 08:34	02/18/22 13:36	
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/18/22 08:34	02/18/22 13:36	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	100		70 - 130			02/18/22 08:34	02/18/22 13:36	
o-Terphenyl	98		70 - 130			02/18/22 08:34	02/18/22 13:36	
Method: 300.0 - Anions, Ion C								
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	555		25.0	mg/Kg			02/18/22 20:47	
lient Sample ID: SW22						Lab Samp	le ID: 890-1	961-
ate Collected: 02/16/22 14:05						-	Matrix	: Soli
ate Received: 02/16/22 16:22								
ample Depth: 0 - 4								
Method: 8021B - Volatile Orga Analyte		unds (GC) Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00198		0.00198	mg/Kg		02/18/22 08:00	02/19/22 09:49	
Toluene	<0.00198		0.00198	mg/Kg			02/19/22 09:49	
Ethylbenzene	< 0.00198		0.00198	mg/Kg			02/19/22 09:49	
m-Xylene & p-Xylene o-Xylene	<0.00397 <0.00198	U	0.00397 0.00198	mg/Kg mg/Kg		02/18/22 08:00	02/19/22 09:49 02/19/22 09:49	

Xylenes, Total	<0.00397	U	0.00397	mg/Kg	02/18/22 08:00	02/19/22 09:49	1
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	142	S1+	70 - 130		02/18/22 08:00	02/19/22 09:49	1

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

#### **Client Sample Results**

Job ID: 890-1961-1 SDG: 31403236.001.0129.35.02

# Lab Sample ID: 890-1961-7

**Client Sample ID: SW22** Date Collected: 02/16/22 14:05 Date Received: 02/16/22 16:22 Sample Depth: 0 - 4

Client: WSP USA Inc.

Matri	X.	Sol	id
math	~	00.	

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	87		70 - 130			02/18/22 08:00	02/19/22 09:49	1
		e						
Method: Total BTEX - Total B								
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397	mg/Kg			02/21/22 19:46	1
	nge Organic	s (DRO) (0	SC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	72.1		50.0	mg/Kg			02/18/22 17:26	1
Method: 8015B NM - Diesel R	ango Organ		(60)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U *+ *1	50.0	mg/Kg		02/18/22 08:34	02/18/22 13:57	1
(GRO)-C6-C10								
<b>Diesel Range Organics (Over</b>	72.1	*+ *1	50.0	mg/Kg		02/18/22 08:34	02/18/22 13:57	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/18/22 08:34	02/18/22 13:57	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	90		70 - 130			02/18/22 08:34	02/18/22 13:57	1
o-Terphenyl	89		70 - 130			02/18/22 08:34	02/18/22 13:57	1
Method: 300.0 - Anions, Ion C	`hromatoara	nhy - Solu	ublo					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	455		24.9	mg/Kg			02/25/22 16:50	5
L			-	J. J				-
Client Sample ID: SW23						Lab Samp	le ID: 890-1	961-8
Date Collected: 02/16/22 11:05						_	Matrix	: Solid

#### Date Collected: 02/16/22 11:05 Date Received: 02/16/22 16:22 Sample Depth: 0 - 4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		02/18/22 08:00	02/19/22 10:17	1
Toluene	<0.00199	U	0.00199	mg/Kg		02/18/22 08:00	02/19/22 10:17	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		02/18/22 08:00	02/19/22 10:17	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		02/18/22 08:00	02/19/22 10:17	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		02/18/22 08:00	02/19/22 10:17	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		02/18/22 08:00	02/19/22 10:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	138	S1+	70 - 130			02/18/22 08:00	02/19/22 10:17	1
1,4-Difluorobenzene (Surr)	89		70 - 130			02/18/22 08:00	02/19/22 10:17	1
Method: Total BTEX - Total	BTEX Calcula	tion						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/21/22 19:46	1
Method: 8015 NM - Diesel I	Range Organic	s (DRO) (0	SC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9		49.9	mg/Kg			02/18/22 17:26	

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#### **Client Sample Results**

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Job ID: 890-1961-1
SDG: 31403236.001.0129.35.02

# Lab Sample ID: 890-1961-8

Matrix: Solid

Date Collected: 02/16/22 11:05 Date Received: 02/16/22 16:22 Sample Depth: 0 - 4

**Client Sample ID: SW23** 

Client: WSP USA Inc.

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *+ *1	49.9	mg/Kg		02/18/22 08:34	02/18/22 14:18	1
Diesel Range Organics (Over C10-C28)	<49.9	U *+ *1	49.9	mg/Kg		02/18/22 08:34	02/18/22 14:18	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/18/22 08:34	02/18/22 14:18	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	88		70 - 130			02/18/22 08:34	02/18/22 14:18	1
o-Terphenyl	89		70 - 130			02/18/22 08:34	02/18/22 14:18	1

Method: 500.0 - Amons, 1011 0	monialography - oolab						
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	304	5.03	mg/Kg			02/20/22 12:29	1

#### **Client Sample ID: SW24** Date Collected: 02/16/22 12:05

#### Date Received: 02/16/22 16:22 Sample Depth: 0 - 4

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/18/22 08:00	02/19/22 10:45	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/18/22 08:00	02/19/22 10:45	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/18/22 08:00	02/19/22 10:45	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		02/18/22 08:00	02/19/22 10:45	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/18/22 08:00	02/19/22 10:45	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		02/18/22 08:00	02/19/22 10:45	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	139	S1+	70 - 130			02/18/22 08:00	02/19/22 10:45	1
1,4-Difluorobenzene (Surr)	91		70 - 130			02/18/22 08:00	02/19/22 10:45	1
Method: Total BTEX - Total B1	EX Calcula	tion						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			02/21/22 19:46	1
Method: 8015 NM - Diesel Rar	nge Organic	s (DRO) (0	SC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			02/18/22 17:26	1
Method: 8015B NM - Diesel Ra	ange Organ	ics (DRO)	(GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *+ *1	49.9	mg/Kg		02/18/22 08:34	02/18/22 14:38	1
Diesel Range Organics (Over C10-C28)	<49.9	U *+ *1	49.9	mg/Kg		02/18/22 08:34	02/18/22 14:38	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/18/22 08:34	02/18/22 14:38	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	94		70 - 130			02/18/22 08:34	02/18/22 14:38	1
I-Chioloclane	37		70-750			02/10/22 00.01	02/10/22 14.00	
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		Client	Sample Re	esults				
Client: WSP USA Inc. Project/Site: Remuda Basin State	a #2		-			SDC: 3140	Job ID: 890- 3236.001.012	
Client Sample ID: SW24	5 #2						le ID: 890-1	
Date Collected: 02/16/22 12:05 Date Received: 02/16/22 16:22 Sample Depth: 0 - 4						Lab Samp		: Solid
Method: 300.0 - Anions, Ion C Analyte		i <mark>phy - Solı</mark> Qualifier	uble RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	224		24.9	mg/Kg			02/18/22 21:06	5
Client Sample ID: SW25 Date Collected: 02/16/22 12:00 Date Received: 02/16/22 16:22 Sample Depth: 0 - 4					L	ab Sample.	e ID: 890-19 Matrix	061-10 :: Solid
Method: 8021B - Volatile Orga	anic Compo	unds (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		02/18/22 08:00	02/19/22 11:13	1
Toluene	<0.00199	U	0.00199	mg/Kg		02/18/22 08:00	02/19/22 11:13	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		02/18/22 08:00	02/19/22 11:13	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		02/18/22 08:00	02/19/22 11:13	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		02/18/22 08:00	02/19/22 11:13	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		02/18/22 08:00	02/19/22 11:13	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	146	S1+	70 - 130			02/18/22 08:00	02/19/22 11:13	1
1,4-Difluorobenzene (Surr)	77		70 - 130			02/18/22 08:00	02/19/22 11:13	1
Method: Total BTEX - Total B	<b>TEX Calcula</b>	tion						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/21/22 19:46	1
Method: 8015 NM - Diesel Rar	nge Organic	s (DRO) (0	GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			02/18/22 17:26	1
Method: 8015B NM - Diesel R	ange Organ	ics (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		02/18/22 08:34	02/18/22 15:19	1
Diesel Range Organics (Over C10-C28)	<49.9	U *+ *1	49.9	mg/Kg		02/18/22 08:34	02/18/22 15:19	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/18/22 08:34	02/18/22 15:19	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	98		70 - 130			02/18/22 08:34	02/18/22 15:19	1
o-Terphenyl	98		70 - 130			02/18/22 08:34	02/18/22 15:19	1
Method: 300.0 - Anions, Ion C				11 14	_	Duese and d	A	
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

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02/20/22 12:35

Released to Imaging: 9/22/2022 7:39:45 AM

Chloride

5.00

mg/Kg

# **Client Sample Results**

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Job ID: 890-1961-1 SDG: 31403236.001.0129.35.02

# Lab Sample ID: 890-1961-11

Matrix: Solid

-								
Method: 8021B - Volatile Orga								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00202	U	0.00202	mg/Kg		02/18/22 08:00	02/19/22 11:40	
Toluene	<0.00202	U	0.00202	mg/Kg		02/18/22 08:00	02/19/22 11:40	
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		02/18/22 08:00	02/19/22 11:40	
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		02/18/22 08:00	02/19/22 11:40	
o-Xylene	<0.00202	U	0.00202	mg/Kg		02/18/22 08:00	02/19/22 11:40	
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		02/18/22 08:00	02/19/22 11:40	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	140	S1+	70 - 130			02/18/22 08:00	02/19/22 11:40	
1,4-Difluorobenzene (Surr)	91		70 - 130			02/18/22 08:00	02/19/22 11:40	
Method: Total BTEX - Total BT	EX Calcula	tion						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			02/21/22 19:46	1
- Method: 8015 NM - Diesel Ran	ige Organic	s (DRO) (0	SC)					
Analyte	• •	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			02/18/22 17:26	1
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over		U *+ *1 U *+ *1	50.0	mg/Kg		02/18/22 08:34	02/18/22 15:40	
C10-C28) Oll Range Organics (Over C28-C36)	<50.0		50.0 50.0	mg/Kg mg/Kg		02/18/22 08:34 02/18/22 08:34	02/18/22 15:40	
C10-C28) Oll Range Organics (Over C28-C36)	<50.0	U	50.0			02/18/22 08:34	02/18/22 15:40	1 Dil Fa
C10-C28)		U						
C10-C28) Oll Range Organics (Over C28-C36) Surrogate	<50.0 <b>%Recovery</b>	U	50.0 			02/18/22 08:34 Prepared 02/18/22 08:34	02/18/22 15:40 	Dil Fac
C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	<50.0 <u>%Recovery</u> 98 98	U Qualifier	50.0 Limits 70 - 130 70 - 130			02/18/22 08:34 Prepared 02/18/22 08:34	02/18/22 15:40 <u>Analyzed</u> 02/18/22 15:40	Dil Fa
C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	<50.0 <u>%Recovery</u> 98 98 hromatogra	U Qualifier	50.0 Limits 70 - 130 70 - 130		D	02/18/22 08:34 Prepared 02/18/22 08:34	02/18/22 15:40 <u>Analyzed</u> 02/18/22 15:40	Dil Fac
C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Method: 300.0 - Anions, Ion C	<50.0 <u>%Recovery</u> 98 98 hromatogra	U Qualifier phy - Solu	50.0 <u>Limits</u> 70 - 130 70 - 130	mg/Kg	<u>D</u>	02/18/22 08:34 <b>Prepared</b> 02/18/22 08:34 02/18/22 08:34	02/18/22 15:40 <b>Analyzed</b> 02/18/22 15:40 02/18/22 15:40	Dil Fa
C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Method: 300.0 - Anions, Ion C Analyte	<50.0 <u>%Recovery</u> 98 98 hromatogra Result	U Qualifier phy - Solu	50.0 	mg/Kg		02/18/22 08:34 Prepared 02/18/22 08:34 02/18/22 08:34 Prepared	02/18/22 15:40 Analyzed 02/18/22 15:40 02/18/22 15:40 Analyzed	Dil Fa Dil Fa
C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Method: 300.0 - Anions, Ion C Analyte Chloride Client Sample ID: SW27 Date Collected: 02/16/22 13:25 Date Received: 02/16/22 16:22 Sample Depth: 0 - 4 Method: 8021B - Volatile Orga	<50.0 <u>%Recovery</u> 98 98 hromatogra <u>Result</u> 91.3	U Qualifier phy - Solu Qualifier unds (GC)	50.0 <u>Limits</u> 70 - 130 70 - 130 tble <u>RL</u> 5.00	mg/Kg	L	02/18/22 08:34 Prepared 02/18/22 08:34 02/18/22 08:34 Prepared Ab Sample	02/18/22 15:40 Analyzed 02/18/22 15:40 02/18/22 15:40 Analyzed 02/19/22 06:45 D: 890-19 Matrix	Dil Fa Dil Fa 061-12 :: Solic
C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Method: 300.0 - Anions, Ion C Analyte Chloride Client Sample ID: SW27 Date Collected: 02/16/22 13:25 Date Received: 02/16/22 16:22 Sample Depth: 0 - 4 Method: 8021B - Volatile Orga Analyte	<50.0 <u>%Recovery</u> 98 98 hromatogra <u>Result</u> 91.3 nic Comport Result	U Qualifier phy - Solu Qualifier unds (GC) Qualifier	50.0 <u>Limits</u> 70 - 130 70 - 130 tble <u>RL</u> 5.00 <u>RL</u>	mg/Kg Unit mg/Kg		02/18/22 08:34 Prepared 02/18/22 08:34 02/18/22 08:34 Prepared Ab Sample Prepared	02/18/22 15:40 Analyzed 02/18/22 15:40 02/18/22 15:40 Analyzed 02/19/22 06:45 D: 890-19 Matrix Analyzed	Dil Fa Dil Fa 061-12 :: Solic
C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Method: 300.0 - Anions, Ion C Analyte Chloride Chloride Chloride Client Sample ID: SW27 Date Collected: 02/16/22 13:25 Date Received: 02/16/22 16:22 Sample Depth: 0 - 4 Method: 8021B - Volatile Orga Analyte Benzene	<50.0 <u>%Recovery</u> 98 98 hromatogra Result 91.3 nic Compo Result <0.00202	U Qualifier phy - Solu Qualifier unds (GC) Qualifier U	50.0 <u>Limits</u> 70 - 130 70 - 130 <b>ible</b> <u>RL</u> 5.00 <u>RL</u> 0.00202	<pre> Unit  Unit  Unit  Unit  mg/Kg</pre>	L	02/18/22 08:34  Prepared 02/18/22 08:34 02/18/22 08:34  Prepared  ab Sample  Prepared 02/18/22 08:00	02/18/22 15:40 Analyzed 02/18/22 15:40 02/18/22 15:40 Analyzed 02/19/22 06:45 D: 890-19 Matrix Analyzed 02/19/22 12:08	Dil Fa Dil Fa 061-12 c: Solic Dil Fa
C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Method: 300.0 - Anions, Ion C Analyte Chloride Client Sample ID: SW27 Date Collected: 02/16/22 13:25 Date Received: 02/16/22 16:22 Sample Depth: 0 - 4 Method: 8021B - Volatile Orga Analyte Benzene Toluene	<50.0 <u>%Recovery</u> 98 98 hromatogra Result 91.3 91.3 nic Compor Result <0.00202 <0.00202 <0.00202	U Qualifier phy - Solu Qualifier unds (GC) Qualifier U	50.0 Limits 70 - 130 70 - 130 able <u>RL</u> 5.00 <u>RL</u> 0.00202 0.00202	Unit mg/Kg	L	02/18/22 08:34  Prepared 02/18/22 08:34 02/18/22 08:34  Prepared  ab Sample  Prepared 02/18/22 08:00 02/18/22 08:00	02/18/22 15:40 Analyzed 02/18/22 15:40 02/18/22 15:40 Analyzed 02/19/22 06:45 DI: 890-19 Matrix Analyzed 02/19/22 12:08 02/19/22 12:08	Dil Fa Dil Fa 061-12 c: Solic Dil Fa
C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Method: 300.0 - Anions, Ion C Analyte Chloride Client Sample ID: SW27 Date Collected: 02/16/22 13:25 Date Received: 02/16/22 16:22 Sample Depth: 0 - 4 Method: 8021B - Volatile Orga Analyte Benzene Toluene Ethylbenzene	<50.0 <u>%Recovery</u> 98 98 hromatogra Result 91.3 nic Compo Result <0.00202	U Qualifier phy - Solu Qualifier unds (GC) Qualifier U	50.0 <u>Limits</u> 70 - 130 70 - 130 <b>ible</b> <u>RL</u> 5.00 <u>RL</u> 0.00202	<pre> Unit  Unit  Unit  Unit  mg/Kg</pre>	L	02/18/22 08:34  Prepared   02/18/22 08:34 02/18/22 08:34 Prepared ab Sample 02/18/22 08:00 02/18/22 08:00 02/18/22 08:00 02/18/22 08:00	02/18/22 15:40 Analyzed 02/18/22 15:40 02/18/22 15:40 Analyzed 02/19/22 06:45 DID: 890-19 Matrix Analyzed 02/19/22 12:08 02/19/22 12:08	Dil Fa Dil Fa 061-12 (: Solic Dil Fa
C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Method: 300.0 - Anions, Ion C Analyte Chloride Client Sample ID: SW27 Date Collected: 02/16/22 13:25 Date Received: 02/16/22 16:22 Sample Depth: 0 - 4 Method: 8021B - Volatile Orga Analyte Benzene Toluene	<50.0 <u>%Recovery</u> 98 98 hromatogra Result 91.3 91.3 nic Compor Result <0.00202 <0.00202 <0.00202	U Qualifier phy - Solu Qualifier U U U U	50.0 Limits 70 - 130 70 - 130 able <u>RL</u> 5.00 <u>RL</u> 0.00202 0.00202	Unit mg/Kg	L	02/18/22 08:34  Prepared   02/18/22 08:34 02/18/22 08:34 Prepared ab Sample 02/18/22 08:00 02/18/22 08:00 02/18/22 08:00 02/18/22 08:00	02/18/22 15:40 Analyzed 02/18/22 15:40 02/18/22 15:40 Analyzed 02/19/22 06:45 DI: 890-19 Matrix Analyzed 02/19/22 12:08 02/19/22 12:08	Dil Fa Dil Fa 061-12 :: Solic
C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl Method: 300.0 - Anions, Ion C Analyte Chloride Client Sample ID: SW27 Date Collected: 02/16/22 13:25 Date Received: 02/16/22 16:22 Sample Depth: 0 - 4 Method: 8021B - Volatile Orga Analyte Benzene Toluene Ethylbenzene	<50.0 <u>%Recovery</u> 98 98 hromatogra Result 91.3 91.3 0.00202 <0.00202 <0.00202 <0.00202	U Qualifier phy - Solu Qualifier unds (GC) Qualifier U U U	50.0 Limits 70 - 130 70 - 130 able <u>RL</u> 5.00 <u>RL</u> 0.00202 0.00202 0.00202	Unit mg/Kg Unit mg/Kg mg/Kg mg/Kg mg/Kg	L	02/18/22 08:34  Prepared   02/18/22 08:34 02/18/22 08:34 Prepared ab Sample 02/18/22 08:00 02/18/22 08:00 02/18/22 08:00 02/18/22 08:00	02/18/22 15:40 Analyzed 02/18/22 15:40 02/18/22 15:40 Analyzed 02/19/22 06:45 DID: 890-19 Matrix Analyzed 02/19/22 12:08 02/19/22 12:08	Dil Fa Dil Fa 061-12 (: Solic Dil Fa

Prepared

**Eurofins Carlsbad** 

Dil Fac

Surrogate

4-Bromofluorobenzene (Surr)

Limits

70 - 130

%Recovery Qualifier

150 S1+

# **Client Sample Results**

Limits

70 - 130

RL

RL

-----

0.00403

Job ID: 890-1961-1 SDG: 31403236.001.0129.35.02

Analyzed

Analyzed

02/21/22 19:46

Analyzed

00/40/00 47 00

# **Client Sample ID: SW27**

Project/Site: Remuda Basin State #2

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

Method: Total BTEX - Total BTEX Calculation

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

%Recovery Qualifier

**Result Qualifier** 

Result Qualifier

-----

74

<0.00403 U

Client: WSP USA Inc.

1,4-Difluorobenzene (Surr)

Surrogate

Analyte

Analyte

Total TPH

Total BTEX

Date Collected: 02/16/22 13:25
Date Received: 02/16/22 16:22
Sample Depth: 0 - 4

# Lab Sample ID: 890-1961-12

02/18/22 08:00 02/19/22 12:08

Prepared

Prepared

Prepared

D

D

Matrix: Solid

Dil Fac

Dil Fac

Dil Fac

1

1

5

Total TPH	<50.0	U	50.0	mg/Kg			02/18/22 17:26	1	
Method: 8015B NM - Diesel R Analyte		i <mark>cs (DRO)</mark> Qualifier	(GC) RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *+ *1	50.0	mg/Kg		02/18/22 08:34	02/18/22 16:01	1	
Diesel Range Organics (Over C10-C28)	<50.0	U *+ *1	50.0	mg/Kg		02/18/22 08:34	02/18/22 16:01	1	
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/18/22 08:34	02/18/22 16:01	1	13
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	101		70 - 130			02/18/22 08:34	02/18/22 16:01	1	
o-Terphenyl	103		70 - 130			02/18/22 08:34	02/18/22 16:01	1	
Method: 300.0 - Anions, Ion C		aphy - Solu	uble	Unit	Р	Propared	Applyzod	Dil Eso	

Unit

Unit

mg/Kg

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	206		5.00	mg/Kg			02/19/22 07:01	1

# **Client Sample ID: SW10** Date Collected: 02/16/22 14:15

## Lab Sample ID: 890-1961-13 Matrix: Solid

Date Received: 02/16/22 16:22 Sample Depth: 0 - 4

Method: 8021B - Volatile O	rganic Compo	unds (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		02/18/22 08:00	02/19/22 12:34	1
Toluene	<0.00202	U	0.00202	mg/Kg		02/18/22 08:00	02/19/22 12:34	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		02/18/22 08:00	02/19/22 12:34	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		02/18/22 08:00	02/19/22 12:34	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		02/18/22 08:00	02/19/22 12:34	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		02/18/22 08:00	02/19/22 12:34	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	156	S1+	70 - 130			02/18/22 08:00	02/19/22 12:34	1
1,4-Difluorobenzene (Surr)	76		70 - 130			02/18/22 08:00	02/19/22 12:34	1
_ Method: Total BTEX - Tota	BTEX Calcula	tion						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			02/21/22 19:46	1
Method: 8015 NM - Diesel	Range Organic	s (DRO) (0	SC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			02/18/22 17:26	1

**Eurofins Carlsbad** 

Matrix: Solid

5

Job ID: 890-1961-1 SDG: 31403236.001.0129.35.02

Lab Sample ID: 890-1961-13

# Client Sample ID: SW10 Date Collected: 02/16/22 14:15 Date Received: 02/16/22 16:22

Project/Site: Remuda Basin State #2

# Sample Depth: 0 - 4

Client: WSP USA Inc.

Method: 8015B NM - Diesel R Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *+ *1	50.0	mg/Kg		02/18/22 08:34	02/18/22 16:21	1
Diesel Range Organics (Over C10-C28)	<50.0	U *+ *1	50.0	mg/Kg		02/18/22 08:34	02/18/22 16:21	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/18/22 08:34	02/18/22 16:21	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	88		70 - 130			02/18/22 08:34	02/18/22 16:21	1
1-Chlorooctane o-Terphenyl	88 90		70 - 130 70 - 130			02/18/22 08:34 02/18/22 08:34		1 1
o-Terphenyl	90	iphy - Soli	70 - 130					1 1
	90 Chromatogra	a <mark>phy - Solu</mark> Qualifier	70 - 130	Unit	D			1 1 Dil Fac

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# **Surrogate Summary**

DFBZ1

(70-130)

96

83

78

89

98

77

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

Lab Sample ID

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

**Client Sample ID** 

•	•		. ,	
880-11270-A-1-F MS	Matrix Spike	146 S1+	96	
880-11270-A-1-G MSD	Matrix Spike Duplicate	132 S1+	88	
880-11436-A-2-C MS	Matrix Spike	132 S1+	97	
880-11436-A-2-D MSD	Matrix Spike Duplicate	155 S1+	44 S1-	
890-1961-1	SW16	111	93	
890-1961-2	SW17	120	97	
890-1961-3	SW18	89	90	
890-1961-4	SW19	116	70	
890-1961-5	SW20	144 S1+	89	
890-1961-6	SW21	146 S1+	93	
890-1961-7	SW22	142 S1+	87	
890-1961-8	SW23	138 S1+	89	
890-1961-9	SW24	139 S1+	91	
890-1961-10	SW25	146 S1+	77	
890-1961-11	SW26	140 S1+	91	
890-1961-12	SW27	150 S1+	74	
890-1961-13	SW10	156 S1+	76	
LCS 880-19696/1-A	Lab Control Sample	112	99	
LCS 880-19707/1-A	Lab Control Sample	108	98	
LCS 880-19708/1-A	Lab Control Sample	122	77	
LCSD 880-19696/2-A	Lab Control Sample Dup	113	91	

109

130

101

116

119

102

BFB1

(70-130)

LCSD 880-19707/2-A

LCSD 880-19708/2-A

MB 880-19684/5-A

MB 880-19696/5-A

MB 880-19707/5-A

MB 880-19708/5-A

890-1961-10

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Lab Control Sample Dup

Lab Control Sample Dup

Method Blank

Method Blank

Method Blank

Method Blank

Percent Surrogate Recovery (Acceptance Limits) 1001 OTPH1 Lab Sample ID **Client Sample ID** (70-130) (70-130) 890-1957-A-1-C MS Matrix Spike 71 66 S1-890-1957-A-1-D MSD Matrix Spike Duplicate 68 S1-62 S1-890-1961-1 SW16 83 85 SW17 890-1961-2 91 90 890-1961-3 SW18 88 91 SW19 94 890-1961-4 92 890-1961-5 SW20 79 78 890-1961-6 SW21 100 98 890-1961-7 SW22 90 89 890-1961-8 SW23 88 89 SW24 890-1961-9 94 94

Eurofins Carlsbad

Job ID: 890-1961-1 SDG: 31403236.001.0129.35.02

Percent Surrogate Recovery (Acceptance Limits)

Prep Type: Total/NA

**Released to Imaging: 9/22/2022 7:39:45 AM** 

SW25

98

98

2/28/2022 (Rev. 1)

Prep Type: Total/NA

Client: WSP USA Inc.

Job ID: 890-1961-1 SDG: 31403236.001.0129.35.02

#### Project/Site: Remuda Basin State #2 Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued) Matrix: Solid

Prep	Type:	Total/NA

hatrix: Solid				Prep Type: Total/NA	
			Percent Surro	gate Recovery (Acceptance Limits)	
		1CO1	OTPH1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
890-1961-11	SW26	98	98		
890-1961-12	SW27	101	103		
890-1961-13	SW10	88	90		
Surrogate Legend					
1CO = 1-Chlorooctane	;				
OTPH = o-Terphenyl					
	M - Diesel Range Org	anics (DR	O) (GC)		
latrix: Solid				Prep Type: Total/NA	
			Porcont Surro		
			Fercent Surroy	gate Recovery (Acceptance Limits)	Ì
Lab Sample ID		1CO2	OTPH2	gate Recovery (Acceptance Limits)	
-	Client Sample ID	1CO2 (70-130)		gate Recovery (Acceptance Limits)	
LCS 880-19786/2-A	Client Sample ID		OTPH2	gate Recovery (Acceptance Limits)	
		(70-130)	OTPH2 (70-130)	gate Recovery (Acceptance Limits)	
LCSD 880-19786/3-A	Lab Control Sample	(70-130) 141 S1+	OTPH2 (70-130) 140 S1+	gate Recovery (Acceptance Limits)	
LCS 880-19786/2-A LCSD 880-19786/3-A MB 880-19786/1-A Surrogate Legend	Lab Control Sample Lab Control Sample Dup	(70-130) 141 S1+ 175 S1+	<b>OTPH2</b> (70-130) 140 S1+ 174 S1+	gate Recovery (Acceptance Limits)	
LCSD 880-19786/3-A MB 880-19786/1-A	Lab Control Sample Lab Control Sample Dup Method Blank	(70-130) 141 S1+ 175 S1+	<b>OTPH2</b> (70-130) 140 S1+ 174 S1+	gate Recovery (Acceptance Limits)	

OTPH = o-Terphenyl

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Client: WSP USA Inc. Project/Site: Remuda Basin State #2

Lab Sample ID: MB 880-19684/5-A

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

Matrix: Solid Analysis Batch: 19796							Prep Type: To Prep Batch:	
	MB	МВ						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/17/22 10:40	02/18/22 17:18	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/17/22 10:40	02/18/22 17:18	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/17/22 10:40	02/18/22 17:18	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/17/22 10:40	02/18/22 17:18	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/17/22 10:40	02/18/22 17:18	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/17/22 10:40	02/18/22 17:18	1
	MB	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130			02/17/22 10:40	02/18/22 17:18	1
1,4-Difluorobenzene (Surr)	78		70 - 130			02/17/22 10:40	02/18/22 17:18	1
Lab Sample ID: MB 880-19 Matrix: Solid Analysis Batch: 19783	696/5-A MB	МВ				Client Samp	ole ID: Method Prep Type: To Prep Batch:	otal/NA

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00200	U	0.00200	mg/Kg		02/18/22 07:00	02/18/22 12:41	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/18/22 07:00	02/18/22 12:41	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/18/22 07:00	02/18/22 12:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/18/22 07:00	02/18/22 12:41	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/18/22 07:00	02/18/22 12:41	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/18/22 07:00	02/18/22 12:41	1
	МВ	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		70 - 130			02/18/22 07:00	02/18/22 12:41	1
1,4-Difluorobenzene (Surr)	89		70 - 130			02/18/22 07:00	02/18/22 12:41	1

#### Lab Sample ID: LCS 880-19696/1-A Matrix: Solid Analysis Batch: 19783

Analysis Batch: 19783							Prep B	atch: 19696
	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09002		mg/Kg		90	70 - 130	
Toluene	0.100	0.09048		mg/Kg		90	70 - 130	
Ethylbenzene	0.100	0.1034		mg/Kg		103	70 - 130	
m-Xylene & p-Xylene	0.200	0.1884		mg/Kg		94	70 - 130	
o-Xylene	0.100	0.09890		mg/Kg		99	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	112		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

Lab Sample ID: LCSD 880-19696/2-A			C	Client Sa	mple	ID: Lat	Control		
Matrix: Solid							Prep Ty	pe: Tot	al/NA
Analysis Batch: 19783							Prep E	Batch: '	19696
	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08948		mg/Kg		89	70 - 130	1	35

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**Client Sample ID: Method Blank** 

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA** 

Job ID: 890-1961-1 SDG: 31403236.001.0129.35.02

**Client Sample ID: Matrix Spike** 

Prep Type: Total/NA

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

Lab Sample ID: LCSD 880-19696/2-A Matrix: Solid Analysis Batch: 19783			C	Client Sa	mple	ID: Lat	Control Prep Ty Prep E		al/NA
-	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene	0.100	0.09333		mg/Kg		93	70 - 130	3	35
Ethylbenzene	0.100	0.1044		mg/Kg		104	70 - 130	1	35
m-Xylene & p-Xylene	0.200	0.1926		mg/Kg		96	70 - 130	2	35
o-Xylene	0.100	0.09354		mg/Kg		94	70 - 130	6	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)			70 - 130
1,4-Difluorobenzene (Surr)	91		70 - 130

#### Lab Sample ID: 880-11436-A-2-C MS Matrix: Solid Analysis Batch: 19783

Analysis Batch: 19783									Prep Batch: 19696
	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	<0.00199	U	0.101	0.07205		mg/Kg		71	70 - 130
Toluene	<0.00199	U F1 F2	0.101	0.07874		mg/Kg		78	70 - 130
Ethylbenzene	<0.00199	U	0.101	0.09275		mg/Kg		92	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1 F2	0.202	0.1741		mg/Kg		86	70 - 130
o-Xylene	<0.00199	U F1 F2	0.101	0.09651		mg/Kg		96	70 - 130

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	132	S1+	70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

#### Lab Sample ID: 880-11436-A-2-D MSD Matrix: Solid Analysis Batch: 19783

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00199	U	0.100	0.08192		mg/Kg		82	70 - 130	13	35
Toluene	<0.00199	U F1 F2	0.100	0.04688	F1 F2	mg/Kg		47	70 - 130	51	35
Ethylbenzene	<0.00199	U	0.100	0.08108		mg/Kg		81	70 - 130	13	35
m-Xylene & p-Xylene	<0.00398	U F1 F2	0.200	0.1063	F1 F2	mg/Kg		53	70 - 130	48	35
o-Xylene	<0.00199	U F1 F2	0.100	0.2186	F1 F2	mg/Kg		219	70 - 130	77	35

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	155	S1+	70 - 130
1,4-Difluorobenzene (Surr)	44	S1-	70 - 130

#### Lab Sample ID: MB 880-19707/5-A Matrix: Solid Analysis Batch: 19783

#### MB MB Analyte **Result Qualifier** RL Unit D Prepared Analyzed Dil Fac 0.00200 02/18/22 08:00 02/19/22 00:17 Benzene <0.00200 U mg/Kg 1 Toluene <0.00200 U 0.00200 mg/Kg 02/18/22 08:00 02/19/22 00:17 1 Ethylbenzene <0.00200 U 0.00200 mg/Kg 02/18/22 08:00 02/19/22 00:17 1 m-Xylene & p-Xylene <0.00400 U 0.00400 mg/Kg 02/18/22 08:00 02/19/22 00:17 1

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#### Client Sample ID: Matrix Spike Duplicate Prep Type: Total/NA Prep Batch: 19696

Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 19707

Client: WSP USA Inc. Project/Site: Remuda Basin State #2 Job ID: 890-1961-1 SDG: 31403236.001.0129.35.02

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

Lab Sample ID: MB 880-19 Matrix: Solid Analysis Batch: 19783	707/5-A							Clie		ole ID: Metho Prep Type: T Prep Batch	otal/NA
-	MB	MB								-	
Analyte	Result	Qualifier	RL		Unit		D	Р	repared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200	)	mg/K	g		02/1	8/22 08:00	02/19/22 00:17	1
Xylenes, Total	<0.00400	U	0.00400	)	mg/K	g		02/1	8/22 08:00	02/19/22 00:17	1
	МВ	МВ									
Surrogate	%Recovery	Qualifier	Limits					Р	repared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130	-				02/1	8/22 08:00	02/19/22 00:17	1
1,4-Difluorobenzene (Surr)	98		70 - 130					02/1	8/22 08:00	02/19/22 00:17	1
Lab Sample ID: LCS 880-19 Matrix: Solid Analysis Batch: 19783	9707/1-A					Clie	ent	t Sai		Lab Control S Prep Type: T Prep Batch	otal/NA
			Spike	LCS	LCS					%Rec.	
Analyte			Added	Result	Qualifier	Unit		D	%Rec	Limits	
Benzene			0.100	0.08860		mg/Kg			89	70 - 130	
Toluene			0.100	0.1018		mg/Kg			102	70 - 130	
Ethylbenzene			0.100	0.09205		mg/Kg			92	70 - 130	
m-Xylene & p-Xylene			0.200	0.1862		mg/Kg			93	70 - 130	
o-Xylene			0.100	0.08996		mg/Kg			90	70 - 130	
	LCS LCS	;									
• · ·											

	LUS	LC3	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

#### Lab Sample ID: LCSD 880-19707/2-A Matrix: Solid Analysis Batch: 19783

#### Client Sample ID: Lab Control Sample Dup Prep Type: Total/NA Prep Batch: 19707

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 19708

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08442		mg/Kg		84	70 - 130	5	35
Toluene	0.100	0.09326		mg/Kg		93	70 - 130	9	35
Ethylbenzene	0.100	0.09408		mg/Kg		94	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.1842		mg/Kg		92	70 - 130	1	35
o-Xylene	0.100	0.08941		mg/Kg		89	70 - 130	1	35

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

#### Lab Sample ID: MB 880-19708/5-A Matrix: Solid Analysis Batch: 19796

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/18/22 08:00	02/19/22 07:56	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/18/22 08:00	02/19/22 07:56	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/18/22 08:00	02/19/22 07:56	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/18/22 08:00	02/19/22 07:56	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/18/22 08:00	02/19/22 07:56	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/18/22 08:00	02/19/22 07:56	1

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Client: WSP USA Inc. Project/Site: Remuda Basin State #2

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

MB MB

Job ID: 890-1961-1 SDG: 31403236.001.0129.35.02

Surrogate		%Recovery	Qualifier	Limits				P	repared	Analyzed	Dil Fac
4-Bromofluorobenzene	(Surr)	102		70 - 13	0			02/1	8/22 08:00	02/19/22 07:56	1
1,4-Difluorobenzene (S	Surr)	77		70 - 13	0			02/1	8/22 08:00	02/19/22 07:56	1
Lab Sample ID: L Matrix: Solid Analysis Batch:		8/1- <b>A</b>		Spike	LCS	LCS	Clien	t Sar		Lab Control S Prep Type: To Prep Batch: %Rec.	otal/NA
Analyte				Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene				0.100	0.08444		mg/Kg		84	70 - 130	
Toluene				0.100	0.07966		mg/Kg		80	70 - 130	

0.07828

0.08548

0.1613

mg/Kg

mg/Kg

mg/Kg

78

81

85

Client Sample ID: Lab Control Sample Dup

70 - 130

70 - 130

70 - 130

**Client Sample ID: Matrix Spike** 

Prep Type: Total/NA

Prep Type: Total/NA

0.100

0.200

0.100

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	122		70 - 130
1,4-Difluorobenzene (Surr)	77		70 - 130

#### Lab Sample ID: LCSD 880-19708/2-A Matrix: Solid Analysis Batch: 19796

Ethylbenzene

o-Xylene

m-Xylene & p-Xylene

Analysis Batch: 19796							Prep E		19708
-	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09801		mg/Kg		98	70 - 130	15	35
Toluene	0.100	0.09551		mg/Kg		96	70 - 130	18	35
Ethylbenzene	0.100	0.09617		mg/Kg		96	70 - 130	21	35
m-Xylene & p-Xylene	0.200	0.1974		mg/Kg		99	70 - 130	20	35
o-Xylene	0.100	0.1056		mg/Kg		106	70 - 130	21	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	130		70 - 130
1,4-Difluorobenzene (Surr)	83		70 - 130

#### Lab Sample ID: 880-11270-A-1-F MS Matrix: Solid Analysis Batch: 19796

Analysis Batch: 19796	Sample	Sample	Spike	MS	MS				Prep Batch: 19 %Rec.	9708
Analyte	•	Qualifier	Added	-	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U F1 F2	0.100	0.009265	F1	mg/Kg		9	70 - 130	
Toluene	<0.00200	U F1 F2	0.100	0.007606	F1	mg/Kg		8	70 - 130	
Ethylbenzene	<0.00200	U F1	0.100	<0.00200	U F1	mg/Kg		0	70 - 130	
m-Xylene & p-Xylene	<0.00399	U F1 F2	0.200	0.01782	F1	mg/Kg		9	70 - 130	
o-Xylene	<0.00200	U F1 F2	0.100	0.01109	F1	mg/Kg		11	70 - 130	
	MS	MS								
Surrogate	%Recovery	Qualifier	Limits							

4-Bromofluorobenzene (Surr)	146	S1+	70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

Client: WSP USA Inc. Project/Site: Remuda Basin State #2 Job ID: 890-1961-1 SDG: 31403236.001.0129.35.02

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

Lab Sample ID: 880-11270-/	A-1-G MSD	)						Client	Sa	mp	le ID: Ma	atrix Spik		
Matrix: Solid												Prep Typ	be: Tot	al/N/
Analysis Batch: 19796												Prep B	atch:	1970
	Sample	Sam	nple	Spike	MSD	MSE	)					%Rec.		RP
Analyte	Result	Qua	lifier	Added	Result	Qua	lifier	Unit		D	%Rec	Limits	RPD	Lim
Benzene	<0.00200	U F	1 F2	0.0990	<0.00198	U F1	1 F2	mg/Kg		_	2	70 - 130	142	3
Toluene	<0.00200	U F	1 F2	0.0990	0.01462	F1 F	2	mg/Kg			15	70 - 130	63	3
Ethylbenzene	<0.00200	U F	1	0.0990	<0.00198	U F1	1	mg/Kg			0.7	70 - 130	NC	З
m-Xylene & p-Xylene	<0.00399	UF	1 F2	0.198	0.02845	F1 F	2	mg/Kg			14	70 - 130	46	3
o-Xylene	<0.00200	U F	1 F2	0.0990	0.01605	F1 F	2	mg/Kg			16	70 - 130	37	3
	MSD	MSI	h											
Surrogate	%Recovery			Limits										
4-Bromofluorobenzene (Surr)		S1+		70 - 130										
1,4-Difluorobenzene (Surr)	88	0,,		70 - 130										
	00			10-100										
lethod: 8015B NM - Die	esel Rang	ge (	Drganic	s (DRO)	(GC)									
Lab Sample ID: MB 880-197	786/1-A									Clie	ent Samp	ole ID: Me	ethod	Blan
Matrix: Solid												Prep Typ		
Analysis Batch: 19782												Prep B	atch:	1 <mark>9</mark> 78
		MB	MB											
Analyte			Qualifier	F	<u>۲</u>		Unit		D	P	repared	Analyz	ed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<	50.0	U	50	0.0		mg/K	g		02/1	8/22 08:34	02/18/22 (	09:43	
Diesel Range Organics (Over C10-C28)	<	50.0	U	50	0.0		mg/K	g		02/1	8/22 08:34	02/18/22 (	09:43	
Oll Range Organics (Over C28-C36)	) <	50.0	U	50	0.0		mg/K	g		02/1	8/22 08:34	02/18/22 (	09:43	
		MВ	ΜΒ											
Surrogate	%Reco	very	Qualifier	Limits						P	repared	Analyz	ed	Dil Fa
1-Chlorooctane		83		70 - 13	0					02/1	8/22 08:34	02/18/22 (	09:43	
o-Terphenyl		87		70 - 13	0					02/1	8/22 08:34	02/18/22 (	09:43	
Lab Sample ID: LCS 880-19	786/2-A							Clie	ent	Sar	mple ID:	Lab Con		
Matrix: Solid												Prep Typ		
Analysis Batch: 19782												Prep B	atch:	1978
				Spike	LCS	LCS	;					%Rec.		
Analyte				Added	Result		lifier	Unit		D	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10				1000	1056			mg/Kg			106	70 - 130		
Diesel Range Organics (Over C10-C28)				1000	1360	*+		mg/Kg			136	70 - 130		
	LCS	LCS	;											
Surrogate	%Recovery			Limits										
	-													
1-Chlorooctane	141	S1+		70 - 130										

Lab Sample ID: LCSD 880-19786/3-A			C	Client Sar	nple	ID: Lat	<b>Control</b>	Sample	e Dup
Matrix: Solid							Prep Ty	pe: Tot	al/NA
Analysis Batch: 19782							Prep E	Batch: 1	19786
	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	1327	*+ *1	mg/Kg		133	70 - 130	23	20
(GRO)-C6-C10									

70 - 130

140 S1+

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o-Terphenyl

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

Lab Sample ID: LCSD 880-19786/3-A

Job ID: 890-1961-1 SDG: 31403236.001.0129.35.02

Client Sample ID: Lab Control Sample Dup

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

Matrix: Solid									Drop	Datah	
Analysis Batch: 19782			Spika		LCSD				%Rec.	Batch:	RPE
Analyte			Spike Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Diesel Range Organics (Over			1000		*+ *1	mg/Kg		171	70 - 130	23	2
C10-C28)			1000	1700		ing/itg		17.1	10-100	20	2
		LCSD									
Surrogate	%Recovery			_							
1-Chlorooctane	175	S1+	70 - 130								
o-Terphenyl	174	S1+	70 - 130								
Lab Sample ID: 890-1957	-A-1-C MS						CI	ient Sa	mple ID:		
Matrix: Solid									Prep Ty	-	
Analysis Batch: 19782	Comula	Comm	e Cuike	ме	MS				%Rec.	Batch:	19/8
Amelia	Sample					11	_	0/ <b>D</b> = =			
Analyte		Qualifi			Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10				1006		mg/Kg		98	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U *+ *1	1000	1197		mg/Kg		120	70 - 130		
		MS									
Surrogate	%Recovery	Qualifi		_							
1-Chlorooctane	71		70 - 130								
		S1-	70 - 130								
Lab Sample ID: 890-1957		07-				Client S	Samp	le ID: N	latrix Spi		
Lab Sample ID: 890-1957 Matrix: Solid	-A-1-D MSD			MSD	MSD	Client S	Samp	le ID: N	Prep Ty Prep		tal/N 1978
Lab Sample ID: 890-1957 Matrix: Solid Analysis Batch: 19782	-A-1-D MSD Sample	Sample	e Spike		MSD Qualifier				Prep Ty Prep   %Rec.	/pe: To Batch:	tal/N 1978 RP
Lab Sample ID: 890-1957 Matrix: Solid Analysis Batch: 19782 Analyte	-A-1-D MSD Sample Result	Sample Qualifi	e Spike er Added	Result	MSD Qualifier	Unit	Samp	%Rec	Prep Ty Prep I %Rec. Limits	pe: To Batch: 	tal/N 1978 RP Lim
Lab Sample ID: 890-1957 Matrix: Solid Analysis Batch: 19782 Analyte Gasoline Range Organics (GRO)-C6-C10	Sample Result <50.0	Sample Qualifi U *+ *1	e Spike er Added 998	<b>Result</b> 948.8		Unit mg/Kg		<b>%Rec</b> 93	Prep Ty Prep 0 %Rec. Limits 70 - 130	vpe: To Batch: RPD 6	tal/N 1978 RP Lim
Lab Sample ID: 890-1957 Matrix: Solid Analysis Batch: 19782 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Sample Result <50.0	Sample Qualifi	e Spike er Added 998	Result		Unit		%Rec	Prep Ty Prep I %Rec. Limits	pe: To Batch: 	tal/N 1978 RP Lim
Lab Sample ID: 890-1957 Matrix: Solid Analysis Batch: 19782 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	-A-1-D MSD Sample Result <50.0	Sample Qualifi U *+ *1	e Spike er Added 998	<b>Result</b> 948.8		Unit mg/Kg		<b>%Rec</b> 93	Prep Ty Prep 0 %Rec. Limits 70 - 130	vpe: To Batch: RPD 6	tal/N 1978 RP Lim
Lab Sample ID: 890-1957 Matrix: Solid Analysis Batch: 19782 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	-A-1-D MSD Sample Result <50.0	Sample Qualifi U *+ *1 U *+ *1 <i>MSD</i>	e Spike ier Added 998 998 ier Limits			Unit mg/Kg		<b>%Rec</b> 93	Prep Ty Prep 0 %Rec. Limits 70 - 130	vpe: To Batch: RPD 6	tal/N/ 1978 RP Lim 2
Lab Sample ID: 890-1957 Matrix: Solid Analysis Batch: 19782 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate	-A-1-D MSD Sample Result <50.0 <50.0 <i>MSD</i> %Recovery	Sample Qualifi U *+ *1 U *+ *1 <i>MSD</i>	e Spike ier Added 998 998			Unit mg/Kg		<b>%Rec</b> 93	Prep Ty Prep 0 %Rec. Limits 70 - 130	vpe: To Batch: RPD 6	tal/N 1978 RP Lim
Lab Sample ID: 890-1957 Matrix: Solid Analysis Batch: 19782 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane	-A-1-D MSD Sample Result <50.0 <50.0 MSD %Recovery 68	Sample Qualifi U *+ *1 U *+ *1 MSD Qualifi	e Spike ier Added 998 998 ier Limits			Unit mg/Kg		<b>%Rec</b> 93	Prep Ty Prep 0 %Rec. Limits 70 - 130	vpe: To Batch: RPD 6	tal/N/ 1978 RP Lim 2
Lab Sample ID: 890-1957 Matrix: Solid Analysis Batch: 19782 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl	-A-1-D MSD Sample Result <pre>&lt;50.0</pre> <pre>&lt;50.0</pre> <pre>MSD</pre> <pre>%Recovery</pre> <pre>68</pre> <pre>62</pre>	Sample Qualifi U *+ *1 U *+ *1 MSD Qualifi S1- S1- S1-	e Spike er Added 998 998 ier Limits 70 - 130 70 - 130			Unit mg/Kg		<b>%Rec</b> 93	Prep Ty Prep 0 %Rec. Limits 70 - 130	vpe: To Batch: RPD 6	tal/N/ 1978 RP Lim 2
Lab Sample ID: 890-1957 Matrix: Solid Analysis Batch: 19782 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Method: 300.0 - Anion	-A-1-D MSD Sample Result <50.0 <50.0 MSD %Recovery 68 62 is, Ion Chro	Sample Qualifi U *+ *1 U *+ *1 MSD Qualifi S1- S1- S1-	e Spike er Added 998 998 ier Limits 70 - 130 70 - 130			Unit mg/Kg	<u>D</u>	%Rec 93 115	Prep Ty Prep 0 %Rec. Limits 70 - 130	rpe: To Batch: <u>RPD</u> 6 4	tal/N 1978 RP Lim 2
Lab Sample ID: 890-1957 Matrix: Solid Analysis Batch: 19782 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Method: 300.0 - Anion Lab Sample ID: MB 880-1	-A-1-D MSD Sample Result <50.0 <50.0 MSD %Recovery 68 62 is, Ion Chro	Sample Qualifi U *+ *1 U *+ *1 MSD Qualifi S1- S1- S1-	e Spike er Added 998 998 ier Limits 70 - 130 70 - 130			Unit mg/Kg	<u>D</u>	%Rec 93 115	Prep Ty Prep WRec. Limits 70 - 130 70 - 130	rpe: To Batch: <u>RPD</u> 6 4	tal/N. 1978 RP Lim 2 2 2 Blan
Lab Sample ID: 890-1957 Matrix: Solid Analysis Batch: 19782 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Method: 300.0 - Anion Lab Sample ID: MB 880-1 Matrix: Solid	-A-1-D MSD Sample Result <50.0 <50.0 MSD %Recovery 68 62 is, Ion Chro	Sample Qualifi U *+ *1 U *+ *1 MSD Qualifi S1- S1- S1-	e Spike er Added 998 998 ier Limits 70 - 130 70 - 130 ography			Unit mg/Kg	<u>D</u>	%Rec 93 115	Prep Ty Prep WRec. Limits 70 - 130 70 - 130	rpe: To Batch: <u>RPD</u> 6 4	tal/N. 1978 RP Lim 2 2 2 Blan
o-Terphenyl Lab Sample ID: 890-1957 Matrix: Solid Analysis Batch: 19782 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Method: 300.0 - Anion Lab Sample ID: MB 880-1 Matrix: Solid Analysis Batch: 19837 Analyte	-A-1-D MSD Sample Result <pre><pre><pre><pre><pre><pre><pre><pre></pre></pre></pre></pre></pre></pre></pre></pre>	Sample Qualifi U *+ *1 U *+ *1 MSD Qualifi S1- S1- S1-	e Spike ier Added 998 998 ier Limits 70 - 130 70 - 130 Ography B			Unit mg/Kg	D Clie	%Rec 93 115	Prep Ty Prep I %Rec. Limits 70 - 130 70 - 130 70 - 130	rpe: To Batch: <u>RPD</u> 6 4 4	tal/N/ 1978 RPI 2 2 Blan
Lab Sample ID: 890-1957 Matrix: Solid Analysis Batch: 19782 Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Method: 300.0 - Anion Lab Sample ID: MB 880-1 Matrix: Solid Analysis Batch: 19837 Analyte	-A-1-D MSD Sample Result <50.0 <50.0 <i>MSD %Recovery</i> 68 62 <b>is, Ion Chro</b> 19766/1-A Re	Sample Qualifi U *+ *1 U *+ *1 MSD Qualifi S1- S1- S1- Omate	e Spike er Added 998 998 998 <u>998</u> 998 <u>998</u> 998 000 70 - 130 70 - 130 70 - 130 000 000 000 000 000 000 000	 948.8 1145 	Qualifier	Unit mg/Kg mg/Kg	D Clie	%Rec 93 115	Prep Ty Prep WRec. Limits 70 - 130 70 - 130	rpe: To Batch: <u>RPD</u> 6 4 4 Iethod ype: S	tal/NJ 1978 RP Lim 2 2 2 Blan olubl
Lab Sample ID: 890-1957 Matrix: Solid Analysis Batch: 19782 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Method: 300.0 - Anion Lab Sample ID: MB 880-1 Matrix: Solid Analysis Batch: 19837 Analyte Chloride Lab Sample ID: LCS 880-	-A-1-D MSD Sample Result <pre>&lt;50.0</pre> <pre>&lt;50.0</pre> <pre>MSD</pre> <pre>%Recovery</pre> <pre>68</pre> <pre>62</pre> <pre>19766/1-A</pre> <pre>I9766/1-A</pre> <pre>Re</pre> <pre></pre>	Sample Qualifi U *+ *1 U *+ *1 MSD Qualifi S1- S1- S1- Omate MB M esult Q	e Spike er Added 998 998 998 <u>998</u> 998 <u>998</u> 998 000 70 - 130 70 - 130 70 - 130 000 000 000 000 000 000 000		Qualifier	Unit mg/Kg mg/Kg	D Clie	%Rec 93 115 ent Sam	Prep Ty Prep I %Rec. Limits 70 - 130 70 - 140 70	rpe: To Batch: <u>RPD</u> 6 4 4 lethod ype: S zed 217:26 ntrol S	tal/N. 1978 RP Lim 2 2 2 Blan olubl Dil Fa
Lab Sample ID: 890-1957 Matrix: Solid Analysis Batch: 19782 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Method: 300.0 - Anion Lab Sample ID: MB 880-1 Matrix: Solid Analysis Batch: 19837 Analyte Chloride Lab Sample ID: LCS 880- Matrix: Solid	-A-1-D MSD Sample Result <pre>&lt;50.0</pre> <pre>&lt;50.0</pre> <pre>MSD</pre> <pre>%Recovery</pre> <pre>68</pre> <pre>62</pre> <pre>19766/1-A</pre> <pre>I9766/1-A</pre> <pre>Re</pre> <pre></pre>	Sample Qualifi U *+ *1 U *+ *1 MSD Qualifi S1- S1- S1- Omate MB M esult Q	e Spike er Added 998 998 ier Limits 70 - 130 70 - 130 ography B ualifier	<u>Result</u> 948.8 1145  - - 5.00	Qualifier	Unit mg/Kg mg/Kg	D Clie	%Rec 93 115 ent Sam	Prep Ty Prep I %Rec. Limits 70 - 130 70 - 100 70 - 100 - 100 70 - 100 70 - 100 70 - 100 70 -	rpe: To Batch: <u>RPD</u> 6 4 4 <b>lethod</b> ype: S 2 zed 17:26	tal/N. 1978 RP Lim 2 2 2 Blan olubl Dil Fa
Lab Sample ID: 890-1957 Matrix: Solid Analysis Batch: 19782 Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Surrogate 1-Chlorooctane o-Terphenyl Method: 300.0 - Anion Lab Sample ID: MB 880-1 Matrix: Solid	-A-1-D MSD Sample Result <pre>&lt;50.0</pre> <pre>&lt;50.0</pre> <pre>MSD</pre> <pre>%Recovery</pre> <pre>68</pre> <pre>62</pre> <pre>19766/1-A</pre> <pre>I9766/1-A</pre> <pre>Re</pre> <pre></pre>	Sample Qualifi U *+ *1 U *+ *1 MSD Qualifi S1- S1- S1- Omate MB M esult Q	e Spike er Added 998 998 998 <u>998</u> 998 <u>998</u> 998 000 70 - 130 70 - 130 70 - 130 000 000 000 000 000 000 000	Result 948.8 1145 	Qualifier	Unit mg/Kg mg/Kg	D Clie	%Rec 93 115 ent Sam	Prep Ty Prep I %Rec. Limits 70 - 130 70 - 140 70	rpe: To Batch: <u>RPD</u> 6 4 4 lethod ype: S zed 217:26 ntrol S	tal/NJ 1978 RP Lim 2 2 2 Blan olubl Dil Fa

Project/Site: Remuda Basin State #2

Client: WSP USA Inc.

Job ID: 890-1961-1 SDG: 31403236.001.0129.35.02

Method: 300.0 - Anions, Ion Chromatography

	-19766/3-A				c	lient San	nple	ID: Lab	<b>Control</b>	Sample	e Dup
Matrix: Solid									Prep T	ype: So	oluble
Analysis Batch: 19837											
			Spike		LCSD		_	~~ <b>-</b>	%Rec.		RPD
Analyte			Added		Qualifier	Unit	_ <u>D</u>	%Rec	Limits	RPD	Limit
Chloride			250	266.7		mg/Kg		107	90 - 110	2	20
Lab Sample ID: 890-1961- Matrix: Solid	1 <b>MS</b>							Cli	ient Samp Prep Ty		
Analysis Batch: 19837											
-	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits		
Chloride	66.9		249	314.2		mg/Kg		99	90 - 110		
_ Lab Sample ID: 890-1961- Matrix: Solid	1 MSD							Cli	ient Samp Prep Ty		
Analysis Batch: 19837									i icp i	ype. oc	Jubic
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte		Qualifier	Added	_	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	66.9		249	318.0		mg/Kg		101	90 - 110	1	20
Lab Sample ID: MB 880-19 Matrix: Solid Analysis Batch: 19872	9774/1-A						Clie	ent Sam	nple ID: M Prep Ty		
		MB MB									
Analyte	Re	sult Qualifier		RL	Unit	D	Р	repared	Analyz	zed	Dil Fac
Chloride	<	5.00 U		5.00	mg/K	g			02/18/22	23:07	1
Lab Sample ID: LCS 880-1	0774/2 4										
Matrix: Solid Analysis Batch: 19872	19774/2-A		Spiko	1.05		Clien	t Sai	mple ID	: Lab Cor Prep Ty		
Matrix: Solid Analysis Batch: 19872	13774/2-A		Spike	-	LCS Qualifier				Prep Ty %Rec.		
Matrix: Solid Analysis Batch: 19872 Analyte			Added	Result	LCS Qualifier	Unit	t Sai	%Rec	Prep Ty %Rec. Limits		
Matrix: Solid Analysis Batch: 19872			•	-					Prep Ty %Rec.		
Matrix: Solid Analysis Batch: 19872 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid			Added	Result	Qualifier	Unit mg/Kg	_ <u>D</u>	<b>%Rec</b> 98	Prep Ty %Rec. Limits	ype: So  Sample	e Dup
Matrix: Solid Analysis Batch: 19872 Analyte Chloride Lab Sample ID: LCSD 880			Added 250	Result 244.4	Qualifier	Unit mg/Kg	_ <u>D</u>	<b>%Rec</b> 98	Prep Ty %Rec. Limits 90 - 110 Control Prep Ty	ype: So  Sample	e Dup bluble
Matrix: Solid Analysis Batch: 19872 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 19872			Added 250 Spike	Result 244.4 LCSD	Qualifier C	Unit mg/Kg Client San	_ D	%Rec 98 ID: Lab	Prep Ty %Rec. Limits 90 - 110 O Control Prep Ty %Rec.	ype: So  Sample ype: So	e Dup bluble RPD
Matrix: Solid Analysis Batch: 19872 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 19872 Analyte			Added 250 Spike Added	Result 244.4 LCSD Result	Qualifier	Unit mg/Kg Client San	_ <u>D</u>	%Rec 98 ID: Lab	Prep Ty %Rec. Limits 90 - 110 Control Prep Ty %Rec. Limits	ype: So Sample ype: So 	e Dup bluble RPD Limit
Matrix: Solid Analysis Batch: 19872 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 19872			Added 250 Spike	Result 244.4 LCSD	Qualifier C	Unit mg/Kg Client San	_ D	%Rec 98 ID: Lab	Prep Ty %Rec. Limits 90 - 110 O Control Prep Ty %Rec.	ype: So  Sample ype: So	e Dup bluble RPD
Matrix: Solid Analysis Batch: 19872 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 19872 Analyte	9-19774/3-A		Added 250 Spike Added	Result 244.4 LCSD Result	Qualifier C	Unit mg/Kg Client San	_ D nple	%Rec           98           ID: Lab           %Rec           98	Prep Ty %Rec. Limits 90 - 110 Control Prep Ty %Rec. Limits	ype: So Sample ype: So <u>RPD</u> 0	e Dup bluble RPD Limit 20
Matrix: Solid Analysis Batch: 19872 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 19872 Analyte Chloride	9-19774/3-A		Added 250 Spike Added	Result 244.4 LCSD Result	Qualifier C	Unit mg/Kg Client San	_ D nple	%Rec           98           ID: Lab           %Rec           98	Prep Ty %Rec. Limits 90 - 110 Control Prep Ty %Rec. Limits 90 - 110	ype: So Sample ype: So <u>RPD</u> 0 Matrix 3	e Dup bluble RPD Limit 20 Spike
Matrix: Solid Analysis Batch: 19872 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 19872 Analyte Chloride Lab Sample ID: 880-11428	9-19774/3-A		Added 250 Spike Added	Result 244.4 LCSD Result	Qualifier C	Unit mg/Kg Client San	_ D nple	%Rec           98           ID: Lab           %Rec           98	Prep Ty %Rec. Limits 90 - 110 Control Prep Ty %Rec. Limits 90 - 110 mple ID: 1	ype: So Sample ype: So <u>RPD</u> 0 Matrix 3	e Dup bluble RPD Limit 20 Spike
Matrix: Solid Analysis Batch: 19872 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 19872 Analyte Chloride Lab Sample ID: 880-11428 Matrix: Solid Analysis Batch: 19872	9-19774/3-A 8-A-3-H MS Sample		Added 250 Spike Added 250 Spike	Result 244.4 LCSD Result 244.2 MS	Qualifier LCSD Qualifier MS	Unit mg/Kg Client San Unit mg/Kg	_ D nple	%Rec 98 ID: Lak <u>%Rec</u> 98	Prep Ty %Rec. Limits 90 - 110 O Control Prep Ty %Rec. Limits 90 - 110 mple ID: I Prep Ty %Rec.	ype: So Sample ype: So <u>RPD</u> 0 Matrix 3	e Dup bluble RPD Limit 20 Spike
Matrix: Solid Analysis Batch: 19872 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 19872 Analyte Chloride Lab Sample ID: 880-11428 Matrix: Solid Analysis Batch: 19872 Analyte	9-19774/3-A B-A-3-H MS Sample Result	Sample Qualifier	Added 250 Spike Added 250 Spike Added	Result 244.4 LCSD Result 244.2 MS Result	Qualifier C LCSD Qualifier	Unit mg/Kg Client San Unit mg/Kg	_ D nple	%Rec 98 ID: Lab %Rec 98 lient Sa	Prep Ty %Rec. Limits 90 - 110 O Control Prep Ty %Rec. Limits 90 - 110 mple ID: I Prep Ty %Rec. Limits	ype: So Sample ype: So <u>RPD</u> 0 Matrix 3	e Dup bluble RPD Limit 20 Spike
Matrix: Solid Analysis Batch: 19872 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 19872 Analyte Chloride Lab Sample ID: 880-11428 Matrix: Solid Analysis Batch: 19872	9-19774/3-A 8-A-3-H MS Sample		Added 250 Spike Added 250 Spike	Result 244.4 LCSD Result 244.2 MS	Qualifier LCSD Qualifier MS	Unit mg/Kg Client San Unit mg/Kg	_ D nple _ D Cl	%Rec 98 ID: Lak <u>%Rec</u> 98	Prep Ty %Rec. Limits 90 - 110 O Control Prep Ty %Rec. Limits 90 - 110 mple ID: I Prep Ty %Rec.	ype: So Sample ype: So <u>RPD</u> 0 Matrix 3	e Dup bluble RPD Limit 20 Spike
Matrix: Solid Analysis Batch: 19872 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 19872 Analyte Chloride Lab Sample ID: 880-11428 Matrix: Solid Analysis Batch: 19872 Analyte Chloride Lab Sample ID: 880-11428 Matrix: Solid	9-19774/3-A 8-A-3-H MS Sample Result 7.65		Added 250 Spike Added 250 Spike Added	Result 244.4 LCSD Result 244.2 MS Result	Qualifier LCSD Qualifier MS	Unit mg/Kg Client San Unit mg/Kg	_ D nple _ D Cl	%Rec         98           ID: Lak	Prep Ty %Rec. Limits 90 - 110 O Control Prep Ty %Rec. Limits 90 - 110 mple ID: I Prep Ty %Rec. Limits	ype: So Sample ype: So <u>RPD</u> 0 Matrix S ype: So ke Dup	e Dup bluble RPD Limit 20 Spike bluble
Matrix: Solid Analysis Batch: 19872 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 19872 Analyte Chloride Lab Sample ID: 880-11428 Matrix: Solid Analysis Batch: 19872 Analyte Chloride Lab Sample ID: 880-11428	9-19774/3-A 8-A-3-H MS Sample Result 7.65 8-A-3-I MSD	Qualifier	Added 250 Spike Added 250 Spike Added 252	Result 244.4 LCSD Result 244.2 MS Result 248.1	Qualifier LCSD Qualifier MS Qualifier	Unit mg/Kg Client San Unit mg/Kg	_ D nple _ D Cl	%Rec         98           ID: Lak	Prep Ty %Rec. Limits 90 - 110 O Control Prep Ty %Rec. Limits 90 - 110 Matrix Spil Prep Ty	ype: So Sample ype: So <u>RPD</u> 0 Matrix S ype: So ke Dup	e Dup bluble RPD Limit 20 Spike bluble
Matrix: Solid Analysis Batch: 19872 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 19872 Analyte Chloride Lab Sample ID: 880-11428 Matrix: Solid Analysis Batch: 19872 Analyte Chloride Lab Sample ID: 880-11428 Matrix: Solid Analysis Batch: 19872	9-19774/3-A 8-A-3-H MS Sample Result 7.65 8-A-3-I MSD Sample	Qualifier	Added 250 Spike Added 250 Spike Added 252	Result 244.4 LCSD Result 244.2 MS Result 248.1	Qualifier LCSD Qualifier MS Qualifier	Unit mg/Kg Client San Unit mg/Kg Unit mg/Kg Client S	_ D nple _ D Cl	%Rec         98         ID: Lak         %Rec         98         lient Sa         %Rec         95         ble ID: N	Prep Ty %Rec. Limits 90 - 110 O Control Prep Ty %Rec. Limits 90 - 110 Matrix Spil Prep Ty %Rec.	ype: So Sample ype: So <u>RPD</u> 0 Matrix S ype: So ke Dup ype: So	e Dup bluble RPD Limit 20 Spike bluble licate bluble RPD
Matrix: Solid Analysis Batch: 19872 Analyte Chloride Lab Sample ID: LCSD 880 Matrix: Solid Analysis Batch: 19872 Analyte Chloride Lab Sample ID: 880-11428 Matrix: Solid Analysis Batch: 19872 Analyte Chloride Lab Sample ID: 880-11428 Matrix: Solid	9-19774/3-A 8-A-3-H MS Sample Result 7.65 8-A-3-I MSD Sample	Qualifier	Added 250 Spike Added 250 Spike Added 252	Result 244.4 LCSD Result 244.2 MS Result 248.1	Qualifier LCSD Qualifier MS Qualifier	Unit mg/Kg Client San Unit mg/Kg	_ D nple _ D Cl	%Rec         98           ID: Lak	Prep Ty %Rec. Limits 90 - 110 O Control Prep Ty %Rec. Limits 90 - 110 Matrix Spil Prep Ty	ype: So Sample ype: So <u>RPD</u> 0 Matrix S ype: So ke Dup	e Dup bluble RPE Limi 20 Spike bluble

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Job ID: 890-1961-1 SDG: 31403236.001.0129.35.02

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

Lab Sample ID: MB 880-20129 Matrix: Solid	)/1 <b>-A</b>								Cli	ent S	ample ID: M Prep 1	lethod Type: So	
Analysis Batch: 20336		мв	MD										
Analyta	Ba		Qualifier		RL		Unit		D	Prepare	ed Analy	(70d	Dil Fac
Analyte Chloride	-	5.00			5.00		mg/K		<u> </u>	repart	02/25/2		
Chionde		5.00	0		5.00		iiig/it	9			02/23/2	2 13.10	
Lab Sample ID: LCS 880-2012	9/2-A							Clie	ent Sa	mple	ID: Lab Co	ntrol Sa	ample
Matrix: Solid										- C.		Type: So	
Analysis Batch: 20336													
				Spike		LCS	LCS				%Rec.		
Analyte				Added		Result	Qualifier	Unit	D	%Re	c Limits		
Chloride				250		258.8		mg/Kg		10	4 90 - 110		
Lab Sample ID: LCSD 880-201	29/3-A						c	lient S	ample	Ə ID: L	ab Control	Sampl	e Dur
Matrix: Solid												Type: S	
Analysis Batch: 20336											•		
				Spike		LCSD	LCSD				%Rec.		RPD
Analyte				Added		Result	Qualifier	Unit	D	%Re	c Limits	RPD	Limi
Chloride				250		265.2		mg/Kg		10	6 90 - 110	2	20
Lab Sample ID: 880-11518-A-6	6-F MS								c	lient	Sample ID:	Matrix	Spike
Matrix: Solid												Type: So	
Analysis Batch: 20336													
-	Sample	Sam	ple	Spike		MS	MS				%Rec.		
Analyte	Result	Qual	lifier	Added		Result	Qualifier	Unit	D	%Re	c Limits		
Chloride	25.3			250		295.2		mg/Kg		10	8 90 - 110	. <u> </u>	
Lab Sample ID: 880-11518-A-6	6-G MSD	)						Client	Sam	ole ID	: Matrix Sp	ike Dup	olicate
Matrix: Solid												Type: So	
Analysis Batch: 20336													
-	Sample	Sam	ple	Spike		MSD	MSD				%Rec.		RPD
Analyte	Result	Qual	lifier	Added		Result	Qualifier	Unit	D	%Re	c Limits	RPD	Limit
Analyte	nooun												

Prep Type

Total/NA

Matrix

Solid

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

**Client Sample ID** 

Method Blank

Job ID: 890-1961-1 SDG: 31403236.001.0129.35.02

Method

5035

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Prep Batch

5 8

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-19696/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-19696/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-19696/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-11436-A-2-C MS	Matrix Spike	Total/NA	Solid	5035	
880-11436-A-2-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
Prep Batch: 19707					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1961-1	SW16	Total/NA	Solid	5035	
890-1961-2	SW17	Total/NA	Solid	5035	
890-1961-3	SW18	Total/NA	Solid	5035	
890-1961-4	SW19	Total/NA	Solid	5035	
MB 880-19707/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-19707/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-19707/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
Prep Batch: 19708					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1961-5	SW20	Total/NA	Solid	5035	
890-1961-6	SW21	Total/NA	Solid	5035	
890-1961-7	SW22	Total/NA	Solid	5035	
890-1961-8	SW23	Total/NA	Solid	5035	
890-1961-9	SW24	Total/NA	Solid	5035	
890-1961-10	SW25	Total/NA	Solid	5035	
890-1961-11	SW26	Total/NA	Solid	5035	
890-1961-12	SW27	Total/NA	Solid	5035	
890-1961-13	SW10	Total/NA	Solid	5035	
MB 880-19708/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-19708/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-19708/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-11270-A-1-F MS	Matrix Spike	Total/NA	Solid	5035	
880-11270-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
Analysis Batch: 1978	3				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1961-1	SW16	Total/NA	Solid	8021B	19707
890-1961-2	SW17	Total/NA	Solid	8021B	19707
890-1961-3	SW18	Total/NA	Solid	8021B	19707
890-1961-4	SW19	Total/NA	Solid	8021B	19707
MB 880-19696/5-A	Method Blank	Total/NA	Solid	8021B	19696
MB 880-19707/5-A	Method Blank	Total/NA	Solid	8021B	19707
LCS 880-19696/1-A	Lab Control Sample	Total/NA	Solid	8021B	19696
LCS 880-19707/1-A	Lab Control Sample	Total/NA	Solid	8021B	19707
LCSD 880-19696/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	19696
LCSD 880-19707/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	19707
880-11436-A-2-C MS	Matrix Spike	Total/NA	Solid	8021B	19696

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# **GC VOA**

Lab Sample ID

MB 880-19684/5-A

Prep Batch: 19696

#### Prep Batch: 19684

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batc
MB 880-19696/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-19696/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-19696/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-11436-A-2-C MS	Matrix Spike	Total/NA	Solid	5035	
880-11436-A-2-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
rep Batch: 19707					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
890-1961-1	SW16	Total/NA	Solid	5035	
890-1961-2	SW17	Total/NA	Solid	5035	
890-1961-3	SW18	Total/NA	Solid	5035	
890-1961-4	SW19	Total/NA	Solid	5035	
MB 880-19707/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-19707/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-19707/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
rep Batch: 19708					
rep Batch: 19708 Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
rep Batch: 19708 Lab Sample ID 890-1961-5	Client Sample ID SW20	Prep Type Total/NA	<u>Matrix</u> Solid	5035	Prep Batc
rep Batch: 19708 Lab Sample ID 890-1961-5 890-1961-6	Client Sample ID SW20 SW21	Prep Type Total/NA Total/NA	Matrix Solid Solid	5035 5035	Prep Batc
rep Batch: 19708 Lab Sample ID 890-1961-5 890-1961-6 890-1961-7	Client Sample ID SW20 SW21 SW22	<b>Prep Type</b> Total/NA Total/NA Total/NA	Matrix Solid Solid Solid	5035 5035 5035	Prep Batc
rep Batch: 19708 Lab Sample ID 890-1961-5 890-1961-6 890-1961-7 890-1961-8	Client Sample ID SW20 SW21 SW22 SW22 SW23	Prep Type Total/NA Total/NA Total/NA Total/NA	Matrix Solid Solid Solid Solid Solid	5035 5035 5035 5035 5035	Prep Batc
rep Batch: 19708 Lab Sample ID 890-1961-5 890-1961-6 890-1961-7 890-1961-8 890-1961-9	Client Sample ID SW20 SW21 SW22 SW22 SW23 SW24	Prep Type Total/NA Total/NA Total/NA Total/NA Total/NA	Matrix Solid Solid Solid Solid Solid Solid	5035 5035 5035 5035 5035 5035	Prep Batc
rep Batch: 19708 Lab Sample ID 890-1961-5 890-1961-6 890-1961-7 890-1961-8 890-1961-9 890-1961-10	Client Sample ID SW20 SW21 SW22 SW23 SW23 SW24 SW25	Prep Type Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA	Matrix Solid Solid Solid Solid Solid Solid Solid	5035 5035 5035 5035 5035 5035 5035	Prep Batc
rep Batch: 19708 Lab Sample ID 890-1961-5 890-1961-6 890-1961-7 890-1961-8 890-1961-9 890-1961-10 890-1961-11	Client Sample ID SW20 SW21 SW22 SW23 SW23 SW24 SW25 SW26	Prep Type Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA	Matrix Solid Solid Solid Solid Solid Solid Solid Solid	5035 5035 5035 5035 5035 5035 5035 5035	Prep Batc
rep Batch: 19708 Lab Sample ID 890-1961-5 890-1961-6 890-1961-7 890-1961-8 890-1961-9 890-1961-10 890-1961-11	Client Sample ID SW20 SW21 SW22 SW23 SW23 SW24 SW25	Prep Type Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA	Matrix Solid Solid Solid Solid Solid Solid Solid	5035 5035 5035 5035 5035 5035 5035	Prep Batc
rep Batch: 19708 890-1961-5 890-1961-6 890-1961-7 890-1961-7 890-1961-8 890-1961-9 890-1961-10 890-1961-11 890-1961-12	Client Sample ID SW20 SW21 SW22 SW23 SW23 SW24 SW25 SW26	Prep Type Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA	Matrix Solid Solid Solid Solid Solid Solid Solid Solid	5035 5035 5035 5035 5035 5035 5035 5035	Prep Batc
rep Batch: 19708 Lab Sample ID 890-1961-5 890-1961-6 890-1961-7 890-1961-8 890-1961-9 890-1961-10 890-1961-11 890-1961-12 890-1961-13	Client Sample ID SW20 SW21 SW22 SW23 SW24 SW25 SW26 SW27	Prep Type Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA	Matrix Solid Solid Solid Solid Solid Solid Solid Solid Solid	5035 5035 5035 5035 5035 5035 5035 5035	Prep Batc
rep Batch: 19708 Lab Sample ID 890-1961-5 890-1961-6 890-1961-7 890-1961-7 890-1961-8 890-1961-9 890-1961-10 890-1961-11 890-1961-12 890-1961-13 MB 880-19708/5-A	Client Sample ID SW20 SW21 SW22 SW23 SW24 SW25 SW26 SW27 SW10	Prep Type Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA	Matrix Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid	5035 5035 5035 5035 5035 5035 5035 5035	Prep Batc
rep Batch: 19708 Lab Sample ID 890-1961-5 890-1961-6 890-1961-7 890-1961-8 890-1961-9 890-1961-10 890-1961-11 890-1961-12 890-1961-12 890-1961-13 MB 880-19708/5-A LCS 880-19708/1-A	Client Sample ID SW20 SW21 SW22 SW22 SW23 SW24 SW25 SW26 SW27 SW10 Method Blank	Prep Type Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA	Matrix Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid	5035 5035 5035 5035 5035 5035 5035 5035	Prep Batc
	Client Sample ID SW20 SW21 SW22 SW23 SW24 SW25 SW26 SW27 SW10 Method Blank Lab Control Sample	Prep Type Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA	Matrix Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid	5035           5035           5035           5035           5035           5035           5035           5035           5035           5035           5035           5035           5035           5035           5035           5035           5035           5035	Prep Batc

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

Job ID: 890-1961-1 SDG: 31403236.001.0129.35.02

# GC VOA

# Analysis Batch: 19796

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-1961-5	SW20	Total/NA	Solid	8021B	19708	
890-1961-6	SW21	Total/NA	Solid	8021B	19708	5
890-1961-7	SW22	Total/NA	Solid	8021B	19708	
890-1961-8	SW23	Total/NA	Solid	8021B	19708	
890-1961-9	SW24	Total/NA	Solid	8021B	19708	
890-1961-10	SW25	Total/NA	Solid	8021B	19708	
890-1961-11	SW26	Total/NA	Solid	8021B	19708	
890-1961-12	SW27	Total/NA	Solid	8021B	19708	8
890-1961-13	SW10	Total/NA	Solid	8021B	19708	
MB 880-19684/5-A	Method Blank	Total/NA	Solid	8021B	19684	9
MB 880-19708/5-A	Method Blank	Total/NA	Solid	8021B	19708	
LCS 880-19708/1-A	Lab Control Sample	Total/NA	Solid	8021B	19708	
LCSD 880-19708/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	19708	
880-11270-A-1-F MS	Matrix Spike	Total/NA	Solid	8021B	19708	
880-11270-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	19708	

#### Analysis Batch: 19998

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1961-1	SW16	Total/NA	Solid	Total BTEX	
890-1961-2	SW17	Total/NA	Solid	Total BTEX	
890-1961-3	SW18	Total/NA	Solid	Total BTEX	
890-1961-4	SW19	Total/NA	Solid	Total BTEX	
890-1961-5	SW20	Total/NA	Solid	Total BTEX	
890-1961-6	SW21	Total/NA	Solid	Total BTEX	
890-1961-7	SW22	Total/NA	Solid	Total BTEX	
890-1961-8	SW23	Total/NA	Solid	Total BTEX	
890-1961-9	SW24	Total/NA	Solid	Total BTEX	
890-1961-10	SW25	Total/NA	Solid	Total BTEX	
890-1961-11	SW26	Total/NA	Solid	Total BTEX	
890-1961-12	SW27	Total/NA	Solid	Total BTEX	
890-1961-13	SW10	Total/NA	Solid	Total BTEX	

# GC Semi VOA

# Analysis Batch: 19782

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1961-1	SW16	Total/NA	Solid	8015B NM	19786
890-1961-2	SW17	Total/NA	Solid	8015B NM	19786
890-1961-3	SW18	Total/NA	Solid	8015B NM	19786
890-1961-4	SW19	Total/NA	Solid	8015B NM	19786
890-1961-5	SW20	Total/NA	Solid	8015B NM	19786
890-1961-6	SW21	Total/NA	Solid	8015B NM	19786
890-1961-7	SW22	Total/NA	Solid	8015B NM	19786
890-1961-8	SW23	Total/NA	Solid	8015B NM	19786
890-1961-9	SW24	Total/NA	Solid	8015B NM	19786
890-1961-10	SW25	Total/NA	Solid	8015B NM	19786
890-1961-11	SW26	Total/NA	Solid	8015B NM	19786
890-1961-12	SW27	Total/NA	Solid	8015B NM	19786
890-1961-13	SW10	Total/NA	Solid	8015B NM	19786
MB 880-19786/1-A	Method Blank	Total/NA	Solid	8015B NM	19786
LCS 880-19786/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	19786

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Client: WSP USA Inc. Project/Site: Remuda Basin State #2

# GC Semi VOA (Continued)

# Analysis Batch: 19782 (Continued)

Lab Sample ID LCSD 880-19786/3-A	Client Sample ID Lab Control Sample Dup	Prep Type Total/NA	Matrix Solid	Method 8015B NM	Prep Batch 19786
890-1957-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	19786
890-1957-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	19786

#### Prep Batch: 19786

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-1961-1	SW16	Total/NA	Solid	8015NM Prep		
890-1961-2	SW17	Total/NA	Solid	8015NM Prep		8
890-1961-3	SW18	Total/NA	Solid	8015NM Prep		
890-1961-4	SW19	Total/NA	Solid	8015NM Prep		9
890-1961-5	SW20	Total/NA	Solid	8015NM Prep		
890-1961-6	SW21	Total/NA	Solid	8015NM Prep		
890-1961-7	SW22	Total/NA	Solid	8015NM Prep		
890-1961-8	SW23	Total/NA	Solid	8015NM Prep		
890-1961-9	SW24	Total/NA	Solid	8015NM Prep		
890-1961-10	SW25	Total/NA	Solid	8015NM Prep		
890-1961-11	SW26	Total/NA	Solid	8015NM Prep		
890-1961-12	SW27	Total/NA	Solid	8015NM Prep		
890-1961-13	SW10	Total/NA	Solid	8015NM Prep		15
MB 880-19786/1-A	Method Blank	Total/NA	Solid	8015NM Prep		
LCS 880-19786/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep		
LCSD 880-19786/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep		
890-1957-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep		
890-1957-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep		

#### Analysis Batch: 19843

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1961-1	SW16	Total/NA	Solid	8015 NM	
890-1961-2	SW17	Total/NA	Solid	8015 NM	
890-1961-3	SW18	Total/NA	Solid	8015 NM	
890-1961-4	SW19	Total/NA	Solid	8015 NM	
890-1961-5	SW20	Total/NA	Solid	8015 NM	
890-1961-6	SW21	Total/NA	Solid	8015 NM	
890-1961-7	SW22	Total/NA	Solid	8015 NM	
890-1961-8	SW23	Total/NA	Solid	8015 NM	
890-1961-9	SW24	Total/NA	Solid	8015 NM	
890-1961-10	SW25	Total/NA	Solid	8015 NM	
890-1961-11	SW26	Total/NA	Solid	8015 NM	
890-1961-12	SW27	Total/NA	Solid	8015 NM	
890-1961-13	SW10	Total/NA	Solid	8015 NM	

# HPLC/IC

#### Leach Batch: 19766

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-1961-1	SW16	Soluble	Solid	DI Leach	
890-1961-2	SW17	Soluble	Solid	DI Leach	
890-1961-3	SW18	Soluble	Solid	DI Leach	
890-1961-4	SW19	Soluble	Solid	DI Leach	
890-1961-5	SW20	Soluble	Solid	DI Leach	
890-1961-6	SW21	Soluble	Solid	DI Leach	

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Job ID: 890-1961-1

SDG: 31403236.001.0129.35.02

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

# HPLC/IC (Continued)

# Leach Batch: 19766 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1961-8	SW23	Soluble	Solid	DI Leach	
890-1961-9	SW24	Soluble	Solid	DI Leach	
890-1961-10	SW25	Soluble	Solid	DI Leach	
MB 880-19766/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-19766/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-19766/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1961-1 MS	SW16	Soluble	Solid	DI Leach	
890-1961-1 MSD	SW16	Soluble	Solid	DI Leach	

# Leach Batch: 19774

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1961-11	SW26	Soluble	Solid	DI Leach	
890-1961-12	SW27	Soluble	Solid	DI Leach	
890-1961-13	SW10	Soluble	Solid	DI Leach	
MB 880-19774/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-19774/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-19774/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-11428-A-3-H MS	Matrix Spike	Soluble	Solid	DI Leach	
880-11428-A-3-I MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Analysis Batch: 19837

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1961-1	SW16	Soluble	Solid	300.0	19766
890-1961-2	SW17	Soluble	Solid	300.0	19766
890-1961-3	SW18	Soluble	Solid	300.0	19766
890-1961-4	SW19	Soluble	Solid	300.0	19766
890-1961-5	SW20	Soluble	Solid	300.0	19766
890-1961-6	SW21	Soluble	Solid	300.0	19766
890-1961-8	SW23	Soluble	Solid	300.0	19766
890-1961-9	SW24	Soluble	Solid	300.0	19766
890-1961-10	SW25	Soluble	Solid	300.0	19766
MB 880-19766/1-A	Method Blank	Soluble	Solid	300.0	19766
LCS 880-19766/2-A	Lab Control Sample	Soluble	Solid	300.0	19766
LCSD 880-19766/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	19766
890-1961-1 MS	SW16	Soluble	Solid	300.0	19766
890-1961-1 MSD	SW16	Soluble	Solid	300.0	19766

#### Analysis Batch: 19872

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1961-11	SW26	Soluble	Solid	300.0	19774
890-1961-12	SW27	Soluble	Solid	300.0	19774
890-1961-13	SW10	Soluble	Solid	300.0	19774
MB 880-19774/1-A	Method Blank	Soluble	Solid	300.0	19774
LCS 880-19774/2-A	Lab Control Sample	Soluble	Solid	300.0	19774
LCSD 880-19774/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	19774
880-11428-A-3-H MS	Matrix Spike	Soluble	Solid	300.0	19774
880-11428-A-3-I MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	19774
Leach Batch: 20129					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1961-7	SW22	Soluble	Solid	DI Leach	

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Job ID: 890-1961-1 SDG: 31403236.001.0129.35.02

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

# HPLC/IC (Continued)

# Leach Batch: 20129 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-20129/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-20129/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-20129/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-11518-A-6-F MS	Matrix Spike	Soluble	Solid	DI Leach	
880-11518-A-6-G MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Analysis Batch: 20336

Lab Sample ID 890-1961-7	Client Sample ID	Prep Type Soluble	Matrix	Method 300.0	Prep Batch 20129	8
MB 880-20129/1-A	Method Blank	Soluble	Solid	300.0	20129	9
LCS 880-20129/2-A	Lab Control Sample	Soluble	Solid	300.0	20129	
LCSD 880-20129/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	20129	
880-11518-A-6-F MS	Matrix Spike	Soluble	Solid	300.0	20129	
880-11518-A-6-G MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	20129	
						13

Job ID: 890-1961-1 SDG: 31403236.001.0129.35.02

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Job ID: 890-1961-1 SDG: 31403236.001.0129.35.02

# Lab Sample ID: 890-1961-1 Matrix: Solid

Client Sample ID: SW16 Date Collected: 02/16/22 13:45 Date Received: 02/16/22 16:22

Client: WSP USA Inc.

	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			19707	02/18/22 08:00	KL	XEN MID
Total/NA	Analysis	8021B		1	19783	02/19/22 01:48	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	19998	02/21/22 19:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	19843	02/18/22 17:26	AJ	XEN MID
Total/NA	Prep	8015NM Prep			19786	02/18/22 08:34	DM	XEN MID
Total/NA	Analysis	8015B NM		1	19782	02/18/22 11:52	AJ	XEN MID
Soluble	Leach	DI Leach			19766	02/17/22 21:39	СН	XEN MID
Soluble	Analysis	300.0		1	19837	02/18/22 19:50	СН	XEN MID

#### Client Sample ID: SW17 Date Collected: 02/16/22 09:55 Date Received: 02/16/22 16:22

Batch Batch Dilution Batch Prepared Method Number or Analyzed Prep Type Туре Run Factor Analyst Lab Total/NA Prep 5035 19707 02/18/22 08:00 KL XEN MID Total/NA 8021B XEN MID 19783 02/19/22 02:08 MR Analysis 1 Total/NA Total BTEX XEN MID Analysis 1 19998 02/21/22 19:46 AJ Total/NA 8015 NM 19843 02/18/22 17:26 AJ XEN MID Analysis 1 Total/NA Prep 8015NM Prep 19786 02/18/22 08:34 DM XEN MID Total/NA 8015B NM 19782 02/18/22 12:13 AJ XEN MID Analysis 1 Soluble 19766 02/17/22 21:39 CH XEN MID Leach **DI Leach** Soluble 300.0 19837 02/18/22 20:09 CH XEN MID Analysis 1

# Client Sample ID: SW18 Date Collected: 02/16/22 14:20 Date Received: 02/16/22 16:22

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			19707	02/18/22 08:00	KL	XEN MID
Total/NA	Analysis	8021B		1	19783	02/19/22 02:29	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	19998	02/21/22 19:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	19843	02/18/22 17:26	AJ	XEN MID
Total/NA	Prep	8015NM Prep			19786	02/18/22 08:34	DM	XEN MID
Total/NA	Analysis	8015B NM		1	19782	02/18/22 12:34	AJ	XEN MID
Soluble	Leach	DI Leach			19766	02/17/22 21:39	СН	XEN MID
Soluble	Analysis	300.0		1	19837	02/18/22 20:15	СН	XEN MID

## Client Sample ID: SW19 Date Collected: 02/16/22 14:25 Date Received: 02/16/22 16:22

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			19707	02/18/22 08:00	KL	XEN MID
Total/NA	Analysis	8021B		1	19783	02/19/22 02:49	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	19998	02/21/22 19:46	AJ	XEN MID

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#### Lab Sample ID: 890-1961-2 Matrix: Solid

Lab Sample ID: 890-1961-3

Lab Sample ID: 890-1961-4

Matrix: Solid

: Solid

12 13

9

5

Matrix: Solid

Project/Site: Remuda Basin State #2

Matrix: Solid

Matrix: Solid

Matrix: Solid

Job ID: 890-1961-1 SDG: 31403236.001.0129.35.02

# Lab Sample ID: 890-1961-4 Matrix: Solid

Lab Sample ID: 890-1961-6

Lab Sample ID: 890-1961-7

Client Sample ID: SW19 Date Collected: 02/16/22 14:25 Date Received: 02/16/22 16:22

Client: WSP USA Inc.

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1	19843	02/18/22 17:26	AJ	XEN MID
Total/NA	Prep	8015NM Prep			19786	02/18/22 08:34	DM	XEN MID
Total/NA	Analysis	8015B NM		1	19782	02/18/22 12:55	AJ	XEN MID
Soluble	Leach	DI Leach			19766	02/17/22 21:39	СН	XEN MID
Soluble	Analysis	300.0		1	19837	02/18/22 20:34	СН	XEN MID
lient Sam	ple ID: SW	20					Lab	Sample

#### Client Sample ID: SW20 Date Collected: 02/16/22 11:00 Date Received: 02/16/22 16:22

	Batch	Batch		Dilution	Batch	Prepared		
Prep Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			19708	02/18/22 08:00	KL	XEN MID
Total/NA	Analysis	8021B		1	19796	02/19/22 08:52	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	19998	02/21/22 19:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	19843	02/18/22 17:26	AJ	XEN MID
Total/NA	Prep	8015NM Prep			19786	02/18/22 08:34	DM	XEN MID
Total/NA	Analysis	8015B NM		1	19782	02/18/22 13:15	AJ	XEN MID
Soluble	Leach	DI Leach			19766	02/17/22 21:39	СН	XEN MID
Soluble	Analysis	300.0		1	19837	02/20/22 12:22	СН	XEN MID

# Client Sample ID: SW21

Date Collected: 02/16/22 14:00 Date Received: 02/16/22 16:22

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			19708	02/18/22 08:00	KL	XEN MID
Total/NA	Analysis	8021B		1	19796	02/19/22 09:20	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	19998	02/21/22 19:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	19843	02/18/22 17:26	AJ	XEN MID
Total/NA	Prep	8015NM Prep			19786	02/18/22 08:34	DM	XEN MID
Total/NA	Analysis	8015B NM		1	19782	02/18/22 13:36	AJ	XEN MID
Soluble	Leach	DI Leach			19766	02/17/22 21:39	СН	XEN MID
Soluble	Analysis	300.0		5	19837	02/18/22 20:47	СН	XEN MID

#### Client Sample ID: SW22 Date Collected: 02/16/22 14:05 Date Received: 02/16/22 16:22

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			19708	02/18/22 08:00	KL	XEN MID
Total/NA	Analysis	8021B		1	19796	02/19/22 09:49	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	19998	02/21/22 19:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	19843	02/18/22 17:26	AJ	XEN MID
Total/NA	Prep	8015NM Prep			19786	02/18/22 08:34	DM	XEN MID
Total/NA	Analysis	8015B NM		1	19782	02/18/22 13:57	AJ	XEN MID

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# Lab Chronicle

Client: WSP USA Inc. Project/Site: Remuda Basin State #2

# **Client Sample ID: SW22** Date Collected: 02/16/22 14:05 Date Received: 02/16/22 16:22

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			20129	02/23/22 09:37	СН	XEN MID
Soluble	Analysis	300.0		5	20336	02/25/22 16:50	СН	XEN MID

# **Client Sample ID: SW23** Date Collected: 02/16/22 11:05 Date Received: 02/16/22 16:22

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			19708	02/18/22 08:00	KL	XEN MID
Total/NA	Analysis	8021B		1	19796	02/19/22 10:17	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	19998	02/21/22 19:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	19843	02/18/22 17:26	AJ	XEN MID
Total/NA	Prep	8015NM Prep			19786	02/18/22 08:34	DM	XEN MID
Total/NA	Analysis	8015B NM		1	19782	02/18/22 14:18	AJ	XEN MID
Soluble	Leach	DI Leach			19766	02/17/22 21:39	СН	XEN MID
Soluble	Analysis	300.0		1	19837	02/20/22 12:29	СН	XEN MID

## **Client Sample ID: SW24** Date Collected: 02/16/22 12:05 Date Received: 02/16/22 16:22

	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			19708	02/18/22 08:00	KL	XEN MID
Total/NA	Analysis	8021B		1	19796	02/19/22 10:45	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	19998	02/21/22 19:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	19843	02/18/22 17:26	AJ	XEN MID
Total/NA	Prep	8015NM Prep			19786	02/18/22 08:34	DM	XEN MID
Total/NA	Analysis	8015B NM		1	19782	02/18/22 14:38	AJ	XEN MID
Soluble	Leach	DI Leach			19766	02/17/22 21:39	СН	XEN MID
Soluble	Analysis	300.0		5	19837	02/18/22 21:06	СН	XEN MID

# **Client Sample ID: SW25** Date Collected: 02/16/22 12:00 Date Received: 02/16/22 16:22

La	b	Sample	ID:	890-1961-10
				Matrix: Solid

Batch Batch Dilution Batch Prepared Method Prep Type Туре Run Factor Number or Analyzed Analyst Lab Total/NA 5035 19708 02/18/22 08:00 KL XEN MID Prep Total/NA 8021B Analysis 1 19796 02/19/22 11:13 MR XEN MID Total BTEX Total/NA Analysis 19998 02/21/22 19:46 AJ XEN MID 1 Total/NA 8015 NM XEN MID Analysis 1 19843 02/18/22 17:26 AJ Total/NA Prep 8015NM Prep 19786 02/18/22 08:34 DM XEN MID Total/NA Analysis 8015B NM 1 19782 02/18/22 15:19 AJ XEN MID Soluble Leach DI Leach 19766 02/17/22 21:39 CH XEN MID Soluble Analysis 300.0 1 19837 02/20/22 12:35 CH XEN MID

#### **Eurofins Carlsbad**

Matrix: Solid

Matrix: Solid

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Job ID: 890-1961-1 SDG: 31403236.001.0129.35.02

# Lab Sample ID: 890-1961-7 Matrix: Solid

Lab Sample ID: 890-1961-8

**Released to Imaging: 9/22/2022 7:39:45 AM** 

Project/Site: Remuda Basin State #2

Job ID: 890-1961-1 SDG: 31403236.001.0129.35.02

# Lab Sample ID: 890-1961-11 Matrix: Solid

Lab Sample ID: 890-1961-12

Matrix: Solid

Client Sample ID: SW26 Date Collected: 02/16/22 11:40 Date Received: 02/16/22 16:22

Client: WSP USA Inc.

	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			19708	02/18/22 08:00	KL	XEN MID
Total/NA	Analysis	8021B		1	19796	02/19/22 11:40	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	19998	02/21/22 19:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	19843	02/18/22 17:26	AJ	XEN MID
Total/NA	Prep	8015NM Prep			19786	02/18/22 08:34	DM	XEN MID
Total/NA	Analysis	8015B NM		1	19782	02/18/22 15:40	AJ	XEN MID
Soluble	Leach	DI Leach			19774	02/17/22 21:49	СН	XEN MID
Soluble	Analysis	300.0		1	19872	02/19/22 06:45	СН	XEN MID

#### Client Sample ID: SW27 Date Collected: 02/16/22 13:25 Date Received: 02/16/22 16:22

Batch Batch Dilution Batch Prepared Method Number Prep Type Туре Run Factor or Analyzed Analyst Lab Total/NA 5035 19708 02/18/22 08:00 KL XEN MID Prep Total/NA 8021B 19796 02/19/22 12:08 MR XEN MID Analysis 1 Total/NA Total BTEX Analysis 1 19998 02/21/22 19:46 AJ XEN MID Total/NA 8015 NM XEN MID Analysis 1 19843 02/18/22 17:26 AJ Total/NA Prep 8015NM Prep 19786 02/18/22 08:34 DM XEN MID Total/NA 8015B NM 19782 02/18/22 16:01 AJ XEN MID Analysis 1 Soluble 19774 02/17/22 21:49 CH XEN MID Leach **DI Leach** Soluble 300.0 19872 02/19/22 07:01 CH XEN MID Analysis 1

# Client Sample ID: SW10 Date Collected: 02/16/22 14:15 Date Received: 02/16/22 16:22

# Lab Sample ID: 890-1961-13 Matrix: Solid

_	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			19708	02/18/22 08:00	KL	XEN MID
Total/NA	Analysis	8021B		1	19796	02/19/22 12:34	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	19998	02/21/22 19:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1	19843	02/18/22 17:26	AJ	XEN MID
Total/NA	Prep	8015NM Prep			19786	02/18/22 08:34	DM	XEN MID
Total/NA	Analysis	8015B NM		1	19782	02/18/22 16:21	AJ	XEN MID
Soluble	Leach	DI Leach			19774	02/17/22 21:49	СН	XEN MID
Soluble	Analysis	300.0		5	19872	02/19/22 07:17	СН	XEN MID

#### Laboratory References:

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

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Client: WSP USA Inc.

**Accreditation/Certification Summary** 

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Job ID: 890-1961-1 SDG: 31403236.001.0129.35.02

# Project/Site: Remuda Basin State #2 Laboratory: Eurofins Midland

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

uthority	Pro	ogram	Identification Number	Expiration Date
exas	NE	LAP	T104704400-21-22	06-30-22
				This list many include an alute a famulai
The following analytes the agency does not o	•	rt, but the laboratory is n	not certified by the governing authority.	This list may include analytes for which
0,	•	rt, but the laboratory is n Matrix	Analyte	This list may include analytes for which
the agency does not o	ffer certification.			This list may include analytes for whic

**Eurofins Carlsbad** 

# **Method Summary**

Project/Site: Remuda Basin State #2

Job ID: 890-1961-1 SDG: 31403236.001.0129.35.02

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

#### **Protocol References:**

ASTM = ASTM International

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

#### Laboratory References:

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

# Sample Summary

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Client: WSP USA Inc. Project/Site: Remuda Basin State #2 Job ID: 890-1961-1 SDG: 31403236.001.0129.35.02

3890-1961-5SW20Solid02/16/22 11:0002/16/22 16:220 - 43890-1961-6SW21Solid02/16/22 14:0002/16/22 16:220 - 43890-1961-7SW22Solid02/16/22 14:0502/16/22 16:220 - 43890-1961-8SW23Solid02/16/22 11:0502/16/22 16:220 - 43890-1961-9SW24Solid02/16/22 12:0502/16/22 16:220 - 43890-1961-10SW25Solid02/16/22 12:0002/16/22 16:220 - 43890-1961-11SW26Solid02/16/22 11:4002/16/22 16:220 - 43890-1961-12SW27Solid02/16/22 13:2502/16/22 16:220 - 43890-1961-13SW10Solid02/16/22 14:1502/16/22 16:220 - 4	ab Sample ID.	Client Sample ID	Matrix	Collected	Received	Depth	
3890-1961-3SW18Solid02/16/22 14:2002/16/22 16:220 - 43890-1961-4SW19Solid02/16/22 14:2502/16/22 16:220 - 43890-1961-5SW20Solid02/16/22 11:0002/16/22 16:220 - 43890-1961-6SW21Solid02/16/22 14:0502/16/22 16:220 - 43890-1961-7SW22Solid02/16/22 14:0502/16/22 16:220 - 43890-1961-8SW23Solid02/16/22 11:0502/16/22 16:220 - 43890-1961-9SW24Solid02/16/22 12:0502/16/22 16:220 - 43890-1961-10SW25Solid02/16/22 12:0002/16/22 16:220 - 43890-1961-11SW26Solid02/16/22 11:0402/16/22 16:220 - 43890-1961-12SW27Solid02/16/22 13:2502/16/22 16:220 - 43890-1961-13SW10Solid02/16/22 14:1502/16/22 16:220 - 4	90-1961-1	SW16	Solid	02/16/22 13:45	02/16/22 16:22	0 - 4	
390-1961-4       SW19       Solid       02/16/22 14:25       02/16/22 16:22       0 - 4         390-1961-5       SW20       Solid       02/16/22 11:00       02/16/22 16:22       0 - 4         390-1961-6       SW21       Solid       02/16/22 14:05       02/16/22 16:22       0 - 4         390-1961-7       SW22       Solid       02/16/22 14:05       02/16/22 16:22       0 - 4         390-1961-8       SW23       Solid       02/16/22 11:05       02/16/22 16:22       0 - 4         390-1961-9       SW24       Solid       02/16/22 12:05       02/16/22 16:22       0 - 4         390-1961-10       SW25       Solid       02/16/22 12:00       02/16/22 16:22       0 - 4         390-1961-11       SW26       Solid       02/16/22 13:25       02/16/22 16:22       0 - 4         390-1961-12       SW27       Solid       02/16/22 13:25       02/16/22 16:22       0 - 4         390-1961-13       SW10       Solid       02/16/22 14:15       02/16/22 16:22       0 - 4	90-1961-2	SW17	Solid	02/16/22 09:55	02/16/22 16:22	0 - 4	
3890-1961-5SW20Solid02/16/22 11:0002/16/22 16:220 - 43890-1961-6SW21Solid02/16/22 14:0002/16/22 16:220 - 43890-1961-7SW22Solid02/16/22 14:0502/16/22 16:220 - 43890-1961-8SW23Solid02/16/22 11:0502/16/22 16:220 - 43890-1961-9SW24Solid02/16/22 12:0502/16/22 16:220 - 43890-1961-10SW25Solid02/16/22 12:0002/16/22 16:220 - 43890-1961-11SW26Solid02/16/22 11:4002/16/22 16:220 - 43890-1961-12SW27Solid02/16/22 13:2502/16/22 16:220 - 43890-1961-13SW10Solid02/16/22 14:1502/16/22 16:220 - 4	90-1961-3	SW18	Solid	02/16/22 14:20	02/16/22 16:22	0 - 4	
390-1961-6       SW21       Solid       02/16/22 14:00       02/16/22 16:22       0 - 4         390-1961-7       SW22       Solid       02/16/22 14:05       02/16/22 16:22       0 - 4         390-1961-8       SW23       Solid       02/16/22 11:05       02/16/22 16:22       0 - 4         390-1961-9       SW24       Solid       02/16/22 12:05       02/16/22 16:22       0 - 4         390-1961-10       SW25       Solid       02/16/22 12:00       02/16/22 16:22       0 - 4         390-1961-11       SW26       Solid       02/16/22 11:40       02/16/22 16:22       0 - 4         390-1961-12       SW27       Solid       02/16/22 13:25       02/16/22 16:22       0 - 4         390-1961-13       SW10       Solid       02/16/22 13:25       02/16/22 16:22       0 - 4	90-1961-4	SW19	Solid	02/16/22 14:25	02/16/22 16:22	0 - 4	Ę
390-1961-7       SW22       Solid       02/16/22 14:05       02/16/22 16:22       0 - 4         390-1961-8       SW23       Solid       02/16/22 11:05       02/16/22 16:22       0 - 4         390-1961-9       SW24       Solid       02/16/22 12:05       02/16/22 16:22       0 - 4         390-1961-10       SW25       Solid       02/16/22 12:00       02/16/22 16:22       0 - 4         390-1961-11       SW26       Solid       02/16/22 11:40       02/16/22 16:22       0 - 4         390-1961-12       SW27       Solid       02/16/22 13:25       02/16/22 16:22       0 - 4         390-1961-13       SW10       Solid       02/16/22 14:15       02/16/22 16:22       0 - 4	90-1961-5	SW20	Solid	02/16/22 11:00	02/16/22 16:22	0 - 4	
390-1961-8       SW23       Solid       02/16/22 11:05       02/16/22 16:22       0 - 4         390-1961-9       SW24       Solid       02/16/22 12:05       02/16/22 16:22       0 - 4         390-1961-10       SW25       Solid       02/16/22 12:00       02/16/22 16:22       0 - 4         390-1961-11       SW26       Solid       02/16/22 11:40       02/16/22 16:22       0 - 4         390-1961-12       SW27       Solid       02/16/22 13:25       02/16/22 16:22       0 - 4         390-1961-13       SW10       Solid       02/16/22 14:15       02/16/22 16:22       0 - 4	90-1961-6	SW21	Solid	02/16/22 14:00	02/16/22 16:22	0 - 4	
390-1961-9       SW24       Solid       02/16/22 12:05       02/16/22 16:22       0 - 4         390-1961-10       SW25       Solid       02/16/22 12:00       02/16/22 16:22       0 - 4         390-1961-11       SW26       Solid       02/16/22 11:40       02/16/22 16:22       0 - 4         390-1961-12       SW27       Solid       02/16/22 13:25       02/16/22 16:22       0 - 4         390-1961-13       SW10       Solid       02/16/22 14:15       02/16/22 16:22       0 - 4	90-1961-7	SW22	Solid	02/16/22 14:05	02/16/22 16:22	0 - 4	
390-1961-10       SW25       Solid       02/16/22 12:00       02/16/22 16:22       0 - 4         390-1961-11       SW26       Solid       02/16/22 11:40       02/16/22 16:22       0 - 4         390-1961-12       SW27       Solid       02/16/22 13:25       02/16/22 16:22       0 - 4         390-1961-13       SW10       Solid       02/16/22 14:15       02/16/22 16:22       0 - 4	90-1961-8	SW23	Solid	02/16/22 11:05	02/16/22 16:22	0 - 4	
390-1961-11       SW26       Solid       02/16/22 11:40       02/16/22 16:22       0 - 4         390-1961-12       SW27       Solid       02/16/22 13:25       02/16/22 16:22       0 - 4         390-1961-13       SW10       Solid       02/16/22 14:15       02/16/22 16:22       0 - 4	90-1961-9	SW24	Solid	02/16/22 12:05	02/16/22 16:22	0 - 4	
390-1961-12       SW27       Solid       02/16/22 13:25       02/16/22 16:22       0 - 4         390-1961-13       SW10       Solid       02/16/22 14:15       02/16/22 16:22       0 - 4	90-1961-10	SW25	Solid	02/16/22 12:00	02/16/22 16:22	0 - 4	8
390-1961-13 SW10 Solid 02/16/22 14:15 02/16/22 16:22 0 - 4	90-1961-11	SW26	Solid	02/16/22 11:40	02/16/22 16:22	0 - 4	
	90-1961-12	SW27	Solid	02/16/22 13:25	02/16/22 16:22	0 - 4	
	90-1961-13	SW10	Solid	02/16/22 14:15	02/16/22 16:22	0 - 4	
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							1

Characterization         Characterization<				2 CC 01 C	2.16.2		D	W. W			R	
(210) 509-334 (306)/74-1296 Tampa FL (813-620-2000) WWW.Xenco.com Nork Order Co Program: UST/PST Project: Reporting:Level II Project: Deliverables: EDD D D D Byo-1961 Chain of Custody 900-1961 Chain of Custody 900-1961 Chain of Custody Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Pb Mn Mo Ni Se Ag Tl U 163 Iractors. It assigns standard terms and conditions Insess are due to circumstances beyond the control Work Order Co Work Order Co Not A Control Work Order Co Not A Control Work Order Co Not K Se Ag SiO2 Na Iractors. It assigns standard terms and conditions Insess are due to circumstances beyond the control	Date/Time	Received by:	Relinquished by: (Signature	Time	Date/	re)	oy: (Signatu	Received t	ature)	ished by: (Signa	Relinqu	
Manager:		ndard terms and conditions Instances beyond the control s previously negotiated.		to Xenco, its affil nses incurred by co, but not analy:	ient company osses or expe omitted to Xen	chase order from c ponsibility for any for each sample su	utes a valid pur assume any res l a charge of \$5	f samples constit es and shall not each project and	t and relinquishment of y for the cost of sampl 5.00 will be applied to	ure of this document nco will be liable onl iinimum charge of \$7	Notice: Signa of service. Xe of Xenco. A n	
Name:         Restant         Tum Anual         Tum	I Sn U V Zn 15.1 / 7470 / 7471 : Hg	Mo Ni K Se Ag SiO2 Ti U	Cd Ca Cr Co Cu Cr Co Cu Pb Mn			<sup>•</sup> PM Texas 1 <u>-P 6010:</u> 8RC	RCRA 13F		200.8 / 6020: Metal(s) to be an	200.7 / 6010 Method(s) and	Total : Circle	
Control Colspan="2">Control Colspan="2">Control Colspan="2">Control Colspan="2">Control Colspan="2"           Namage: Annee Cole         Control Colspan="2"         Watanci TX (281) 344-200 Old an Annio TX (210) 508-333         Watanci TX (281) 344-200 Old an Annio TX (210) 508-333         Watanci TX (281) 244-200 Old an Annio TX (210) 508-333         Watanci TX (281) 244-200 Old an Annio TX (210) 508-333         Watanci TX (281) 244-200         Watanci TX (281) 254-343         Lubbox (X10) 508-333         Watanci TX (281) 508-331         Watanci TX (281) 508-303         Watanci TX (281) 508-303         Watanci TX (281) 508-331         State of Projet: T </td <td>111</td> <td></td> <td></td> <td></td> <td></td> <td>0-4</td> <td>1200</td> <td>2/16/2022</td> <td>s</td> <td>SW25</td> <td></td>	111					0-4	1200	2/16/2022	s	SW25		
Manage:         Aimee Cole         Monton TX (281) 344-200         Charanton TX (214) 392-200         Summer TX (214) TX	COMPOSITE			+	+	0-4'	1205	2/16/2022	s	SW24		
Winder Criterio Concentry (281) 264-200         Circle Criterio Concentry Criterio Concentry (281) 264-200         Circle Criterio Concentry Critery Concentry Criterio Concentry Criterio Concentry C	COMPOSITE			┽─		0-4'	1105	2/16/2022	S	SW23		
CLICING VICUUM         CLICING VICUUM         CLICING VICUUM         WORK OTHER OF VICUUM           Manage: Almee Cole         Munee TX (42:20:4400 El Pasit X (95)385-344 Lubbeck X (98)394-128         WORK OTHER 00003         WARE VICUUM         MARE VICUUM         MARE VICUUM         MARE VICUUM         ANALYSIS REQUEST           ANAL VICUUM         ANAL VISIS REQUEST         ANAL VICUUM <th col<="" td=""><td>COMPOSITE</td><td></td><td></td><td></td><td>-</td><td>0-4</td><td>1405</td><td>2/16/2022</td><td>S</td><td>SW22</td><td></td></th>	<td>COMPOSITE</td> <td></td> <td></td> <td></td> <td>-</td> <td>0-4</td> <td>1405</td> <td>2/16/2022</td> <td>S</td> <td>SW22</td> <td></td>	COMPOSITE				-	0-4	1405	2/16/2022	S	SW22	
Manager:         Annee Cole         Mouton TX (281) 240-200         Balance         Manager         Annee Cole         Monte Cole         Mo	COMPOSITE				-	0-4'	1400	2/16/2022	s	SW21		
Manager         Aime         Bauton TX (281) 240-200         Bauton TX (281) 240-200         Bauton TX (281) 240-200         Second Statution         Manager         Aime Convertion         Kall (200) Second Statution         Manager         Aime Convertion         Manager	COMPOSITE					0-4'	1100	2/16/2022	s	SW20	-	
Manager         Aimee Cole         Moustan TX (28) 240-200 Datas, TX (91) 592-303 San Annuolin TX (210) 593-334         WORK Order Action TX (91) 593-335         WORK Order Action TX (91) 593-334           Manager         Aimee Cole         Bill to (r dreewo)         Alama Baker         Work Order Action TX (91) 593-334         Work Order Action TX (91) 593-344         Work	COMPOSITE			-		0-4'	1425	2/16/2022	s	SW19		
Manager         Aimee Cole         Houtsm.TX (281) 200-200         Cansus TX (211) 920-300         Ca	COMPOSITE			}−	-	0-4 <sup>-</sup>	1420	2/16/2022	s	SW18		
Manager:         Aimee Cole         Houston TX (21) 24-200 Datas, TX (21) 92-0300 San Anomo, TX (210) 509-334         Work Order Cole         <	COMPOSITE			-		0-4'	955	2/16/2022	s	SW17		
Manager:       Annee Cole       Houston TX (281) 240-200 Dallas TX (214) 92-2000 Sta Autolo DTX (210) 50-334       Work Order Cole       Work Order Co	COMPOSITE					0-4'	1345	2/16/2022	S	SW16		
Manager:         Arrend Cole         Housen, TX (281) 240-200         State TX (214) 920:003         Anono, TX (215) 593-334         Work Order NO           Manager:         Aimee Cole         Imit (37, 432, 724-440)         Ell ass, TX (214) 920:003         State of Project:         Work Order Cole           Invalue         Imit (37, 432, 724-440)         Ell ass, TX (214) 920:003         State of Project:         Work Order Cole           Invalue         Imit (37, 432, 724-440)         Ell ass, TX (214) 920:035-344         Luboeck TX (806)744-129         Work Order Cole           Invalue         Imit (37, 432, 724-440)         Ell ass, TX (214) 920:035-344         Luboeck TX (806)744-129         Work Order Cole           Invalue         Imit (37, 443, 200)         Prosentix, AZ (480, 355-0500)         Aimal, GA (770-449-800)         Times FL (813-520-200)         Work Order Cole           Invalue         Arvada, Colorado 80003         Email: (conner shore@wsp.com)         Aimae Cole@wsp.com         State of Project:         Reporting: Level II         Imit (10, 102)         State of Project:         Reporting: Level II         Imit (10, 102)         Apart           Name:         Conner Shore         Invalue: (Ves) No         Work Order Cole         Apart         Apart         Apart         Apart           Invalue:         Conner Shore         Invalor         Imit (Ves	Sample Comments					Depth	Time Sampled	Date Sampled		nple Identificatio	Sa	
Manager:       Aimee Cole       Houston, TX (281) 204-200       Dallas, TX (241) 202-300 San Annonio, TX (210) 598-334       Work Order NO         Manager:       Aimee Cole       Bill to: (////////////////////////////////////	ab, if received by 4:30pm			+			Containers:	Total	No	Ĥ	Sample Cu	
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Manager:       Aimee Cole       Bill to: (r different)       Adrian Baker       Work Order No:       Work Order No:         s:       4600 West 60th Avenue       Company Name:       XTO Energy       work Order Street       Image: State of Project:       Image: State of Project:       State of Project:       State of Project:       Remuda Basin State #2       Turn Around       Turn Around       Annaction:       Annaction:       Annaction:       Annaction:       Mork Order No:       Mork Order No:         Name:       Remuda Basin State #2       Turn Around       Turn Around       Annaction:       Annaction:       Annaction:       Mork Order No:       Mork Order No:         Name:       Remuda Basin State #2       Turn Around       Annaction:       Annaction:       Annaction:       Mork Order Notes         Name:       Remuda Basin State #2       Turn Around       Annaction:       Annaction:       Mork Order Notes							Routi	)129.35.02	31403236.001.0	nber:	Project Nu	
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KERNER       Houston, TX (281) 240-4200       Dallas, TX (214) 902-0300       San Antonio, TX (210) 509-3334       Work Order No:         Midland, TX (281) 240-4200       Dallas, TX (214) 902-0300       San Antonio, TX (210) 509-3334       Midland, TX (432-704-5440)       EL Pase, TX (915)585-3443       Lubbock, TX (806)794-1296       WWW.Xenco.com       >age       1       of         Annager:       Aimee Cole       Bill to: (if different)       Adrian Baker       Work Order Comments       Work Order Comments         Y Name:       WSP USA Inc.       Company Name:       XTO Energy       Work Order Comments       Work Order Comments         4600 West 60th Avenue       Address:       3104 E Green Street       Program: UST/PST       Preventieds       Flore (perfund)				ad, NM 88220	Carlsb	City, State ZIP:		ω	a, Colorado 8000:		City, State	
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		: (Signature)	gnature 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 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 A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	otal 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed						0	7	9			s: Yes No	Yes			Conner Shore		3140323	Remud	720.384.7365	Arvada, Colorado 80003	4600 West 60th Avenue	WSP USA Inc.	Aimee Cole	
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Job Number: 890-1961-1

SDG Number: 31403236.001.0129.35.02

List Source: Eurofins Carlsbad

# Login Sample Receipt Checklist

Client: WSP USA Inc.

#### Login Number: 1961 List Number: 1 Creator: Clifton, Cloe

<6mm (1/4").

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

# Login Sample Receipt Checklist

Client: WSP USA Inc.

Login Number: 1961 List Number: 2 Creator: Rodriguez, Leticia

Job Number: 890-1961-1 SDG Number: 31403236.001.0129.35.02

# List Source: Eurofins Midland List Creation: 02/18/22 11:34 AM 5 7 8 9 10 11 12 13

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



# APPENDIX D

# **NMOCD** Notifications

Released to Imaging: 9/22/2022 7:39:45 AM

# **Aimee Cole**

From:	Green, Garrett J <garrett.green@exxonmobil.com></garrett.green@exxonmobil.com>
Sent:	Tuesday, June 28, 2022 12:52 PM
То:	Aimee Cole; Tacoma Morrissey; Kalei Jennings
Subject:	FW: XTO Site Activities for the Week of Jan 17

# [ \*\*EXTERNAL EMAIL\*\*]

From: Morrissey, Tacoma [mailto:Tacoma.Morrissey@wsp.com]
Sent: Thursday, January 13, 2022 2:59 PM
To: OCD.Enviro@state.nm.us
Cc: DelawareSpills /SM <DelawareSpills@exxonmobil.com>; WSP-XTO-Project-Team <WSP-XTO-Project-Team@wsp.com>
Subject: XTO Site Activities for the Week of Jan 17

All,

XTO will be completing excavation and sampling activities at the following sites next week. We anticipate collecting final confirmation samples.

Monday:

HOLIDAY

Tuesday:

- PLU 423 / nAPP2132248577
- Remuda Basin State 002 / NAB1802927873

Wednesday:

- PLU 423 / nAPP2132248577
- Remuda Basin State 002 / NAB1802927873

Thursday:

- PLU 423 / nAPP2132248577
- Remuda Basin State 002 / NAB1802927873

Friday:

• Remuda Basin State 002 / NAB1802927873

Thank you,

**Tacoma Morrissey** 

Consultant Geologist Office Manager, Midland

wsp

# **Aimee Cole**

From:	Green, Garrett J <garrett.green@exxonmobil.com></garrett.green@exxonmobil.com>
Sent:	Tuesday, June 28, 2022 12:53 PM
То:	Aimee Cole; Tacoma Morrissey; Kalei Jennings
Subject:	FW: XTO Site Activities for the Week of Feb 14

## [ \*\*EXTERNAL EMAIL\*\*]

From: Morrissey, Tacoma [mailto:Tacoma.Morrissey@wsp.com]
Sent: Friday, February 11, 2022 7:34 AM
To: OCD.Enviro@state.nm.us
Cc: DelawareSpills /SM <DelawareSpills@exxonmobil.com>; WSP-XTO-Project-Team <WSP-XTO-Project-Team@wsp.com>
Subject: XTO Site Activities for the Week of Feb 14

All,

XTO will be completing excavation and sampling activities at the following sites next week. We anticipate collecting final confirmation samples.

Monday:

• Remuda Basin State 002 / NAB1802927873

Tuesday:

- PLU Del B 23 SWD / nAPP2134754672
- Remuda Basin State 002 / NAB1802927873

Wednesday:

• Remuda Basin State 002 / NAB1802927873

Thank you,

**Tacoma Morrissey** 

Consultant Geologist Office Manager, Midland



M+ 1 337-257-8307 WSP USA 3300 North A Street Bldg 1, Unit 222 Midland, Texas 79705

wsp.com

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

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

District III

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

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

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

CONDITIONS

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	123638
	Action Type:
	[C-141] Release Corrective Action (C-141)
CONDITIONS	

#### CONDITIONS

Created By	Condition	Condition Date
amaxwell	None	9/22/2022

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