

Incident ID	NRM2028241966
District RP	
Facility ID	
Application ID	

Closure

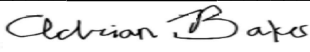
The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled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

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

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

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

Printed Name: Adrian Baker Title: SSHE Coordinator

Signature:  Date: 07/13/2021

email: Adrian.Baker@exxonmobil.com Telephone: 432-236-3808

OCD Only

Received by: Chad Hensley Date: 08/18/2021

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

Closure Approved by:  Date: 08/18/2021

Printed Name: Chad Hensley Title: Environmental Specialist Advanced



WSP USA

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

July 14, 2021

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

**RE: Closure Request
Muy Wayno Frac Pond
Incident Numbers NRM2024756871, NRM2028241966, NAPP2102239584, and
NAPP2102626563
Eddy County, New Mexico**

To Whom It May Concern:

WSP USA Inc. (WSP), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing site assessment, excavation, and soil sampling activities at the Muy Wayno Frac Pond (Site) in Unit C, Section 7, Township 25 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment, excavation, and soil sample activities was to address impacts to soil following four releases of produced water at the Site. Based on excavation activities and soil sample laboratory analytical results, XTO is submitting this Closure Request and requesting no further action (NFA) for Incident Number NRM2024756871, NRM2028241966, NAPP2102239584, and NAPP2102626563.

RELEASE BACKGROUND

On August 18, 2020, a leak developed from the aboveground storage tank, releasing approximately 8.24 barrels (bbls) of produced water into impermeable containment. The containment was breached and a small amount of produced water released onto the surface of the well pad. A vacuum truck was dispatched to the Site to recover free-standing fluids; approximately 8 bbls of produced water were recovered from within the containment. No released fluids escaped the well pad. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 (Form C-141) on September 1, 2020. The release was assigned Incident Number NRM2024756871.

On September 23, 2020, an aluminum cam lock on the discharge pump failed, releasing approximately 121.25 bbls of produced water into impermeable containment. Approximately 1.25 bbls released outside of the containment onto the surface of the well pad. A vacuum truck was dispatched to the Site to recover free-standing fluids; approximately 120 bbls of produced water were recovered. XTO reported the release to the NMOCD via email on September 23, 2020.



A Form C-141 was submitted on October 7, 2020 and the release was assigned Incident Number NRM2028241966.

On January 18, 2021, while loading disposal bins onto a truck, approximately 21.01 bbls of recycled produced water released into the impermeable containment and onto the surface of the well pad. A vacuum truck was dispatched to the Site to recover free-standing fluids; approximately 20 bbls of recycled produced water were recovered from the containment. Approximately 1.01 bbls released onto the caliche well pad. XTO reported the release to the NMOCD on a Form C-141 on January 22, 2021. The release was assigned Incident Number NAPP2102239584.

On January 19, 2021, an isolation valve failed on a disconnected backwash line, resulting in the release of approximately 17.81 bbls of produced water into impermeable containment and onto the surface of the well pad. A vacuum truck was dispatched to the Site to recover free-standing fluids; approximately 15 bbls of produced water were recovered. XTO reported the release to the NMOCD on a Form C-141 on January 26, 2021. The release was assigned Incident Number NAPP2102626563.

As part of initial release response, XTO mapped the extent of each release and provided the information to WSP personnel.

SITE CHARACTERIZATION

WSP characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is United States Geological Survey (USGS) well 320857103553301, located approximately 0.24 miles northwest of the Site. The groundwater well was most recently measured in January 1998 with a reported depth to groundwater of 264 feet bgs and a total depth of 385 feet bgs. Ground surface elevation at the groundwater well location is 3,169 feet above mean sea level (amsl), which is approximately 3 feet lower in elevation than the Site. All wells used for depth to groundwater determination are depicted on Figure 1 and the associated referenced well records are included in Attachment 1.

The closest continuously flowing or significant watercourse to the Site is an intermittent stream, located approximately 330 feet south of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.



CLOSURE CRITERIA

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

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

SITE ASSESSMENT ACTIVITIES AND ANALYTICAL RESULTS

On September 8, 2020, WSP personnel visited the Site to evaluate the August 18, 2020 release extent based on information provided on the Form C-141, visual observations, and information provided by XTO personnel. WSP personnel collected two preliminary assessment soil samples (SS01 and SS02) within the release extent from a depth of approximately 0.25 feet bgs to assess the lateral extent of the impacted soil. Soil was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2.

The preliminary soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Eurofins Laboratories (Eurofins) in 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 preliminary soil samples SS01 and SS02 indicated that benzene, BTEX, TPH-GRO/TPH-DRO, and TPH concentrations were compliant with the Closure Criteria; however, chloride concentrations exceeded the Closure Criteria. Based on visible staining in the release area, elevated field screening results, and laboratory analytical results for the preliminary soil samples, excavation activities were warranted.

EXCAVATION ACTIVITIES AND ANALYTICAL RESULTS

Further assessment and remediation efforts were postponed due to ongoing operations at the well pad near the four release extents, resulting in activity restrictions at the Site due to safety



concerns. The four release extents were inaccessible due to completions equipment and a temporary tank, which was scheduled to be removed. Remediation activities would proceed once the tank and equipment were removed, and the four releases would be addressed simultaneously. The release extents were mapped by XTO personnel and are depicted on Figure 2. Per 19.15.29.12.B.(1) NMAC, three extensions for submission of a remediation work plan or closure report were requested to the NMOCD for Incident Number NRM2024756871 and NRM2028241966. The initial extension was requested on October 22, 2020, the second was requested January 2021, the final extension was requested May 7, 2021, extending the deadline to August 21, 2021. One extension for submission of a remediation work plan or closure report was requested to the NMOCD for Incident Number NAPP2102239584 and NAPP2102626563. The extension was requested on April 9, 2021, extending the deadline to July 17, 2021.

On May 13, 2021, once the equipment and tank were removed, WSP personnel returned to the Site to oversee excavation activities based on observed staining in the release areas, field screening results, and laboratory analytical results for the preliminary soil samples. To direct excavation activities, WSP screened soil for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Based on field screening results, the excavations were completed to depths ranging from 0.5 feet to 1-foot bgs.

Following removal of impacted soil from each release area, WSP collected 5-point composite soil samples every 200 square feet from the floor of the excavations. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the sample by thoroughly mixing. Composite soil samples FS01 through FS41 were collected from the floor of the excavations from depths ranging from 0.5 feet to 1-foot bgs. Due to the shallow depth of the excavations, the floor soil samples represented the floor and sidewalls of the excavations. The excavation soil samples were collected, handled, and analyzed as described above. The excavation extents and excavation soil sample locations are presented on Figure 3. Photographic documentation is included in Attachment 2.

The final combined excavation extents measured approximately 8,109 square feet in area. A total of approximately 150 cubic yards of impacted soil were removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Facility located in Hobbs, New Mexico. After completion of confirmation sampling, the excavations were backfilled immediately.

Laboratory analytical results for floor samples FS01 and FS41 indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included as Attachment 3.

Given the proximity of pasture north of the pad where the release occurred for Incident Numbers NRM2024756871 and NAPP2102626563, WSP collected three surface samples (SS03 through

District II
Page 5

SS05) from a depth of 0.5 feet bgs to confirm the lateral extent of the two release events. Laboratory analytical results for surface samples SS03 through SS05 indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria and compliant with the most stringent Table 1 Closure Criteria. The surface soil sample locations are presented on Figure 3. The surface samples were collected, handled, and analyzed as described above at Eurofins in Carlsbad, New Mexico. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 3.

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address impacted soil resulting from four produced water release events. Laboratory analytical results for the excavation soil samples collected from the final excavation extents, indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Based on the soil sample analytical results, no further remediation was required. XTO backfilled the excavations with material purchased locally and recontoured the Site to match pre-existing site conditions.

Initial response efforts and excavation of impacted soil have mitigated impacts at this Site. Depth to groundwater has been determined to be greater than 100 feet bgs and no other sensitive receptors were identified near the release extents. WSP and XTO believe these remedial actions are protective of human health, the environment, and groundwater. As such, XTO respectfully requests no further action for Incident Numbers NRM2024756871, NRM2028241966, NAPP2102239584, and NAPP2102626563.

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

Sincerely,

WSP USA Inc.

A handwritten signature in black ink that reads 'Kalei Jennings'.

Kalei Jennings
Associate Consultant

A handwritten signature in black ink that reads 'Ashley L. Ager'.

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

cc: Adrian Baker, XTO
Ryan Mann, New Mexico State Land Office

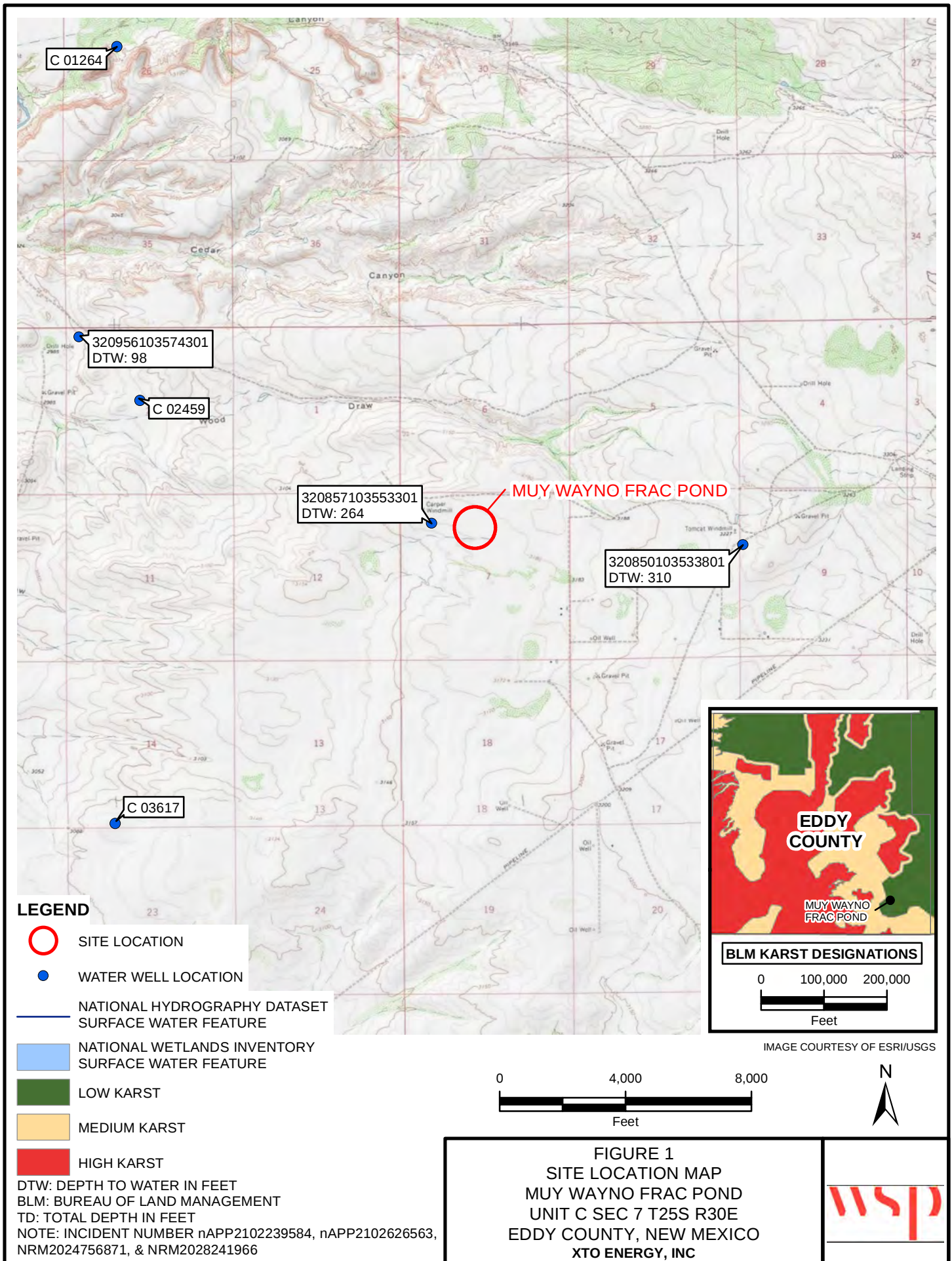


District II
Page 6

Attachments:

- Figure 1 Site Location Map
- Figure 2 Release Extents and Preliminary Soil Sample Locations
- Figure 3 Excavation Soil Sample Locations
- Table 1 Soil Analytical Results
- Attachment 1 Referenced Well Records
- Attachment 2 Photographic Log
- Attachment 3 Laboratory Analytical Reports

FIGURES



P:\XTO Energy\GIS\MXD\31403190.000_MUY WAYNO FRAC POND\31403190.000_FIG01_SL_RECEPTOR_2021.mxd

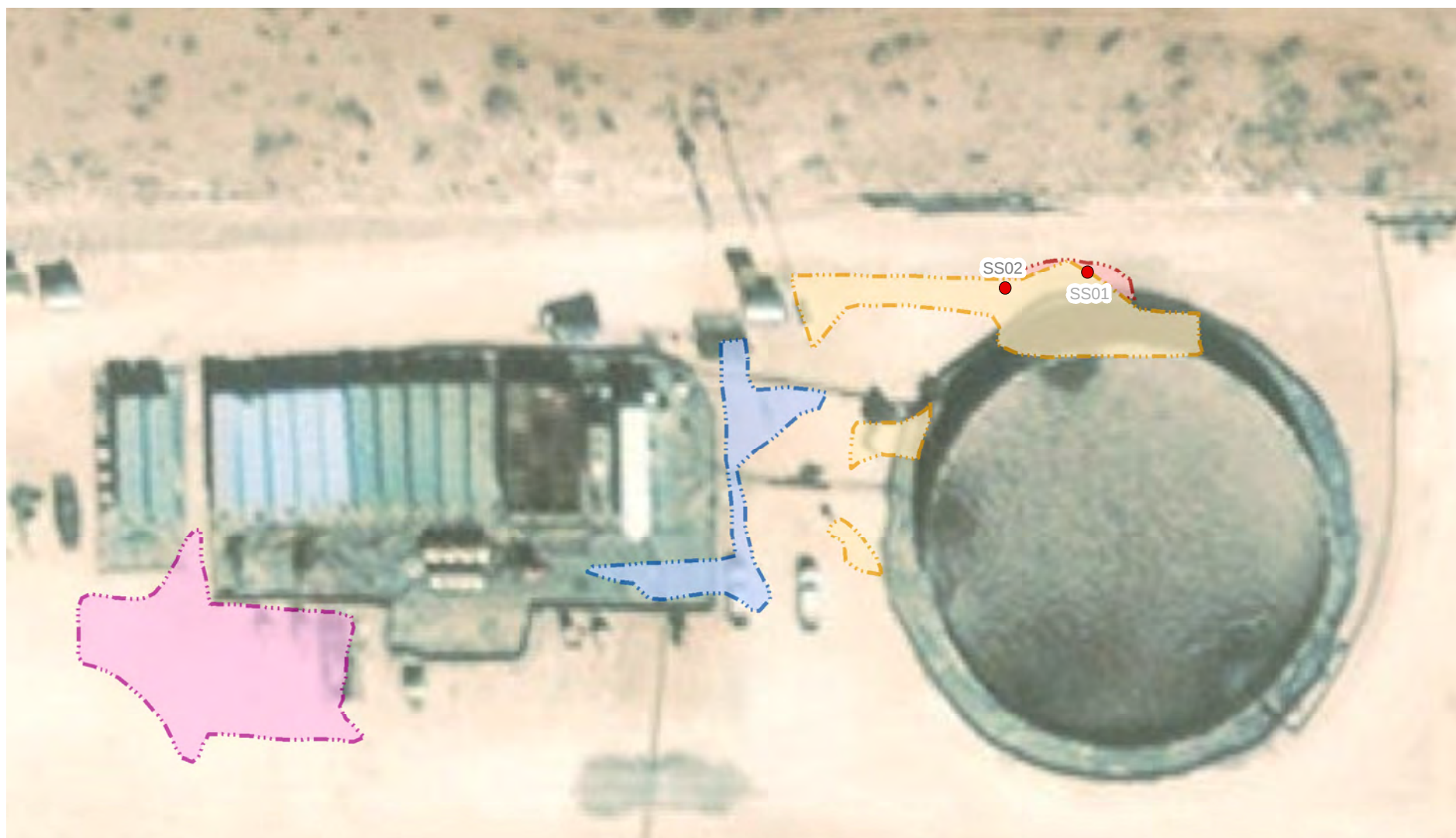


IMAGE COURTESY OF ESRI

LEGEND

- PRELIMINARY SOIL SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE CLOSURE CRITERIA
- RELEASE EXTENT (nAPP2102239584)
- RELEASE EXTENT (nAPP2102626563)
- RELEASE EXTENT (NRM2024756871)
- RELEASE EXTENT (NRM2028241966)

NOTE: INCIDENT NUMBERS nAPP2102239584, nAPP2102626563, NRM2024756871, & NRM2028241966

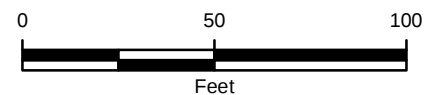
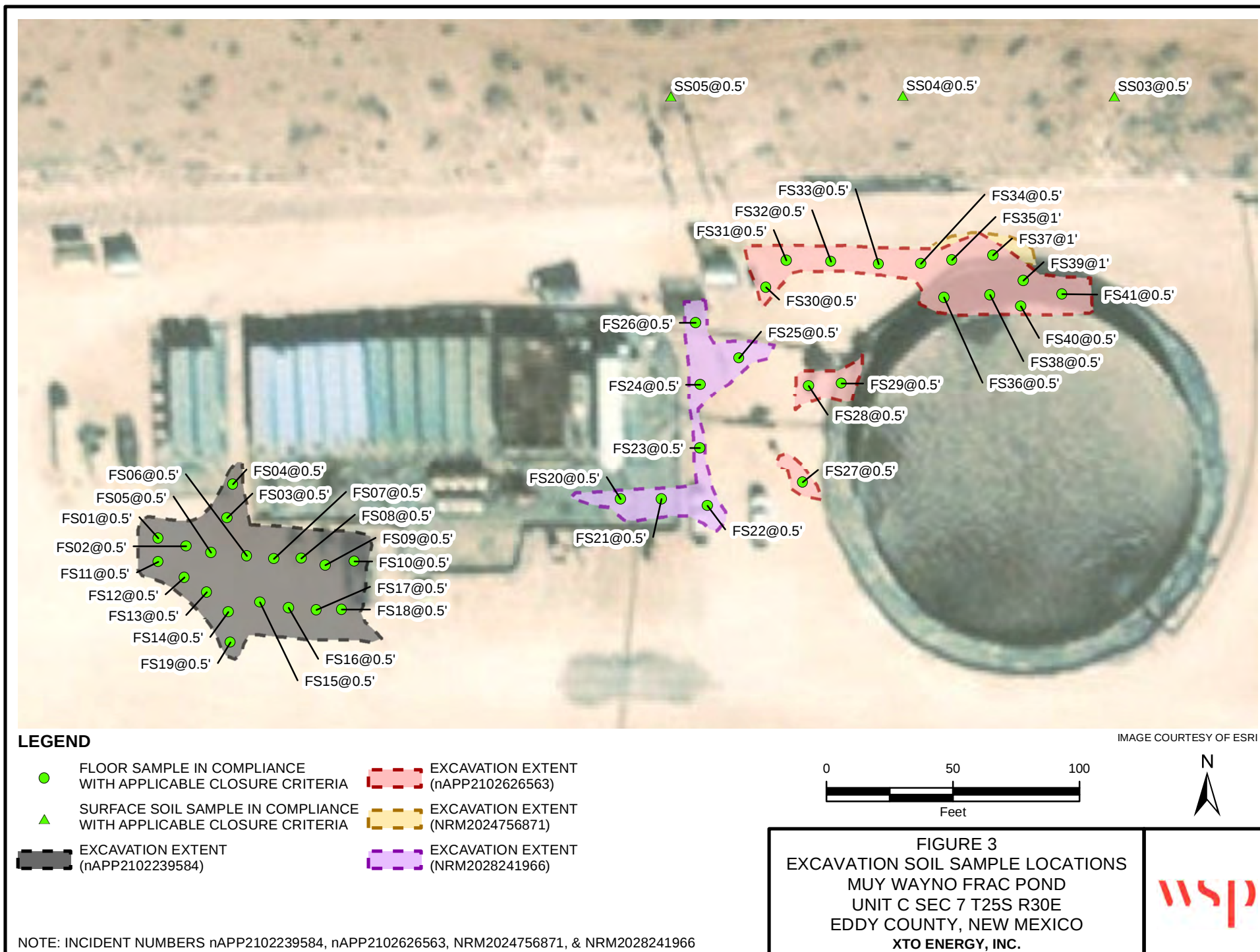


FIGURE 2
 RELEASE EXTENTS AND PRELIMINARY SOIL SAMPLE LOCATIONS
 MUY WAYNO FRAC POND
 UNIT C SEC 7 T25S R30E
 EDDY COUNTY, NEW MEXICO
 XTO ENERGY, INC.



P:\XTO Energy\GIS\IMXD\31403190.000_MUY WAYNO FRAC POND\31403190.000_FIG02_RELEASE_2021.mxd



TABLES

Table 1

Soil Analytical Results
Muy Wayno Frac Pond
Incident Numbers: NRM2024756871, NRM2028241966, NAPP2102239584, and NAPP2102626563
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Preliminary Soil Samples										
SS01	09/08/2020	0.25	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	25,400
SS02	09/08/2020	0.25	<0.00202	<0.00202	<50.1	<50.1	<50.1	<50.1	<50.1	29,500
SS03	05/26/2021	0.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	34.7
SS04	05/26/2021	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	99.7
SS05	05/26/2021	0.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	124
Excavation Floor Samples										
FS01	05/13/2021	0.5	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	393
FS02	05/13/2021	0.5	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	232
FS03	05/13/2021	0.5	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	4,720
FS04	05/13/2021	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	1,680
FS05	05/13/2021	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	1,940
FS06	05/13/2021	0.5	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	1,330
FS07	05/13/2021	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	662
FS08	05/13/2021	0.5	<0.00198	<0.00397	67.4	<49.8	<49.8	<49.8	67.4	2,050
FS09	05/13/2021	0.5	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	1,410
FS10	05/13/2021	0.5	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	1,710
FS11	05/14/2021	0.5	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	398
FS12	05/14/2021	0.5	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	341
FS13	05/14/2021	0.5	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	445
FS14	05/14/2021	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	318

Table 1

Soil Analytical Results
Muy Wayno Frac Pond
Incident Numbers: NRM2024756871, NRM2028241966, NAPP2102239584, and NAPP2102626563
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
FS15	05/14/2021	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	154
FS16	05/14/2021	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	350
FS17	05/14/2021	0.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	383
FS18	05/14/2021	0.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	673
FS19	05/14/2021	0.5	<0.00202	<0.00404	<49.9	<49.9	<49.9	<49.9	<49.9	59.5
FS20	05/14/2021	0.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	8,750
FS21	05/14/2021	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	7,330
FS22	05/14/2021	0.5	<0.00198	<0.00396	<49.8	<49.8	<49.8	<49.8	<49.8	7,840
FS23	05/14/2021	0.5	<0.00202	<0.00404	<49.8	<49.8	<49.8	<49.8	<49.8	7,100
FS24	05/14/2021	0.5	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	10,100
FS25	05/14/2021	0.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	6,230
FS26	05/14/2021	0.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	3,640
FS27	05/14/2021	0.5	<0.00200	<0.00399	137	<50.0	<50.0	<50.0	137	10,200
FS28	05/14/2021	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	12,400
FS29	05/14/2021	0.5	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	9,010
FS30	05/14/2021	0.5	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	12,400
FS31	05/14/2021	0.5	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	10,800
FS32	05/14/2021	0.5	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	10,800
FS33	05/14/2021	0.5	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	11,400
FS34	05/14/2021	0.5	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	9,780
FS35	05/14/2021	1.0	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	9,920

Table 1

Soil Analytical Results
Muy Wayno Frac Pond
Incident Numbers: NRM2024756871, NRM2028241966, NAPP2102239584, and NAPP2102626563
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
FS36	05/14/2021	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	9,980
FS37	05/14/2021	1.0	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	5,480
FS38	05/14/2021	0.5	<0.00198	<0.00397	<50.0	<50.0	<50.0	<50.0	<50.0	7,280
FS39	05/14/2021	1.0	<0.00202	<0.00404	<49.9	<49.9	<49.9	<49.9	<49.9	5,070
FS40	05/14/2021	0.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	10,700
FS41	05/14/2021	0.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	5,850

ft - feet/foot

mg/kg - milligrams per kilograms

BTEX - benzene, toluene, ethylbenzene, and total xylenes

TPH - total petroleum hydrocarbons

DRO - diesel range organics

GRO - gasoline range organics

ORO - motor oil range organics

NMOCD - New Mexico Oil Conservation Division

NMAC - New Mexico Administrative Code

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

NE - Not Established

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

Text

impacted soil was excavated

ATTACHMENT 1: REFERENCED WELL RECORD



New Mexico Office of the State Engineer

Water Right Summary

WR File Number: RA 07162 **Subbasin:** RA **Cross Reference:** -
Primary Purpose: DOM 72-12-1 DOMESTIC ONE HOUSEHOLD
Primary Status: PMT PERMIT
Total Acres: **Subfile:** - **Header:** -
Total Diversion: 0 **Cause/Case:** -
Owner: AMERICAN GROUNDWATER CONSULT.

Documents on File

Trn #	Doc	File/Act	Status		Transaction Desc.	From/ To	Acres	Diversion	Consumptive
			1	2					
243448	EXPL	1983-05-04	PMT	APR	RA 07162	T	0	0	

Current Points of Diversion

POD Number	Well Tag	Source	Q Q Q			(NAD83 UTM in meters)		Other Location Desc
			6416	4	Sec Tws Rng	X	Y	
RA 07162		Shallow	3	1	1 29 10S 25E	552820	3698107*	
RA 07162 EXP		Shallow	4	2	2 30 10S 25E	552615	3698106*	EXPLORATORY
RA 07162 EXP1		Shallow	3	4	1 29 10S 25E	553221	3697707*	EXPLORATORY
RA 07162 EXP2		Shallow	1	3	1 29 10S 25E	552819	3697904*	EXPLORATORY

An () after northing value indicates UTM location was derived from PLSS - see Help



New Mexico Office of the State Engineer

Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
 (quarters are smallest to largest) (NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
RA 07162 EXP2		1	3	1	29	10S	25E	552819	3697904*

Driller License: 784

Driller Company: STEPHENS, RAY WELDING & DRLG.

Driller Name:

Drill Start Date: 05/04/1983

Drill Finish Date: 05/05/1983

Plug Date:

Log File Date: 05/19/1983

PCW Rcv Date:

Source: Shallow

Pump Type:

Pipe Discharge Size:

Estimated Yield:

Casing Size: 4.00

Depth Well: 55 feet

Depth Water: 40 feet

Water Bearing Stratifications:

Top Bottom Description

40 55 Sandstone/Gravel/Conglomerate

Casing Perforations:

Top Bottom

40 55

*UTM location was derived from PLSS - see Help

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

7/20/20 8:39 AM

Page 1 of 1

POD SUMMARY - RA 07162 EXP2



USGS Home
Contact USGS
Search USGS

National Water Information System: Web Interface

USGS Water Resources

Data Category:

Site Information ▼

Geographic Area:

United States ▼

GO

Click to hide News Bulletins

- [Introducing The Next Generation of USGS Water Data for the Nation](#)
- [Full News](#) 

USGS 320857103553301 25S.30E.07.112331

Available data for this site

SUMMARY OF ALL AVAILABLE DATA ▼

GO

Well Site

DESCRIPTION:

Latitude 32°08'57", Longitude 103°55'33" NAD27

Eddy County, New Mexico , Hydrologic Unit 13060011

Well depth: 385 feet

Land surface altitude: 3,169 feet above NAVD88.

Well completed in "Alluvium, Bolson Deposits and Other Surface Deposits" (110AVMB) local aquifer

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1959-02-05	1998-01-28	5
Revisions	Unavailable (site:0) (timeseries:0)		

OPERATION:

Record for this site is maintained by the USGS New Mexico Water Science Center

Email questions about this site to [New Mexico Water Science Center Water-Data Inquiries](#)

[Questions about sites/data?](#)
[Feedback on this web site](#)

[Automated retrievals](#)

[Help](#)

[Data Tips](#)

[Explanation of terms](#)

[Subscribe for system changes](#)

[News](#)

[Accessibility](#)

[Plug-Ins](#)

[FOIA](#)

[Privacy](#)

[Policies and Notices](#)

[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)



Title: NWIS Site Information for USA: Site Inventory

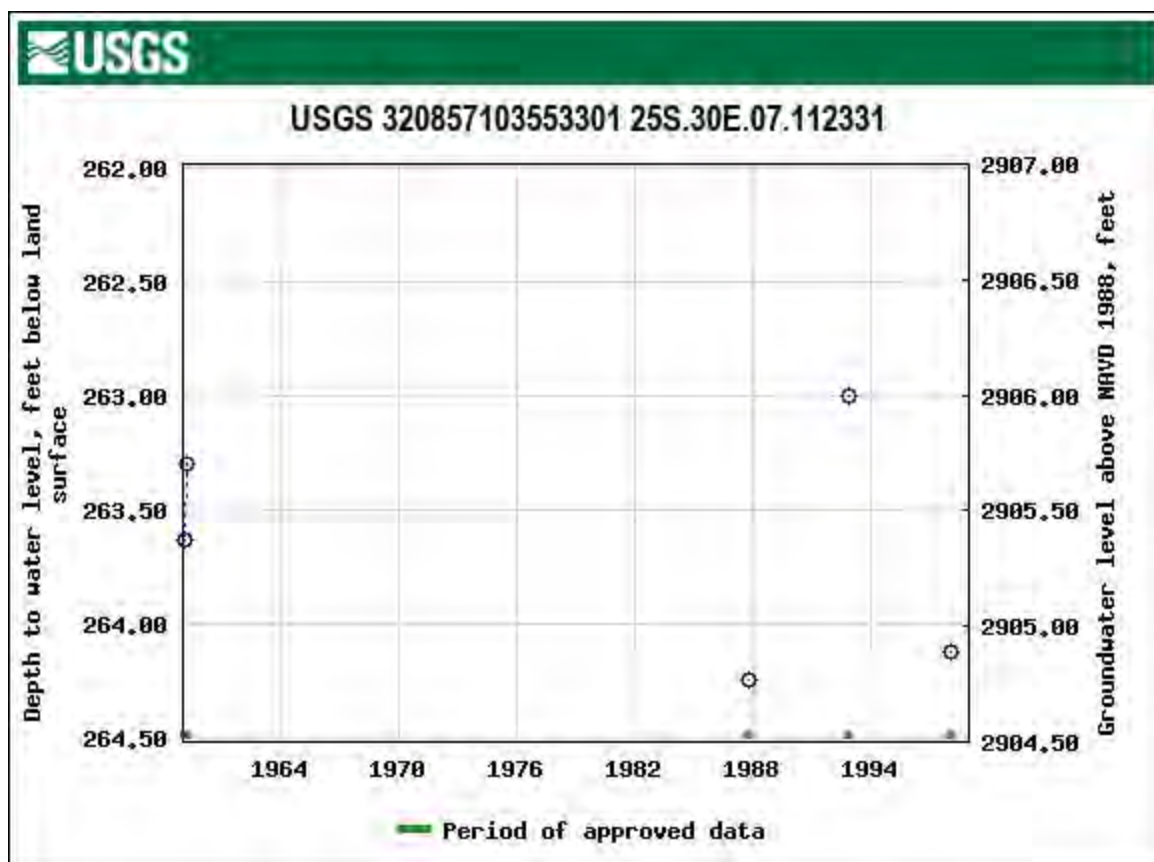
URL: [https://waterdata.usgs.gov/nwis/inventory?](https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=320857103553301)

[agency_code=USGS&site_no=320857103553301](https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=320857103553301)

Page Contact Information: [New Mexico Water Data Support Team](#)

Page Last Modified: 2020-07-20 10:12:31 EDT

0.48 0.42 caww01



ATTACHMENT 2: PHOTOGRAPHIC LOG



PHOTOGRAPHIC LOG		
XTO Energy, Inc.	Muy Wayno Frac Pond Eddy County, New Mexico	NRM2024756871, NRM2028241966, NAPP2102239584, NAPP2102626563

Photo No.	Date	
1	August 10, 2020	
View of initial release area for Incident Number NRM2024756871.		

Photo No.	Date	
2	September 23, 2020	
View of initial release area for Incident Number NRM2028241966 facing southwest.		



PHOTOGRAPHIC LOG		
XTO Energy, Inc.	Muy Wayno Frac Pond Eddy County, New Mexico	NRM2024756871, NRM2028241966, NAPP2102239584, NAPP2102626563

Photo No.	Date	
3	September 23, 2020	
View of initial release area for Incident Number NRM2028241966 facing northwest.		

Photo No.	Date	
4	January 21, 2021	
View of initial release area for Incident Number NAPP2102239584.		



PHOTOGRAPHIC LOG

XTO Energy, Inc.	Muy Wayno Eddy County, New Mexico	NRM2024756871, NRM2028241966, NAPP2102239584, NAPP2102626563
-------------------------	--	---

Photo No.	Date	
5	January 21, 2021	
View of initial release area for Incident Number NAPP2102626563 facing east.		 A photograph showing a dirt road with tire tracks leading towards a dark, rectangular building. A yellow staircase is visible on the side of the building. The sky is overcast and grey.

Photo No.	Date	
6	January 21, 2021	
View of initial release area for Incident Number NAPP2102626563 facing south.		 A photograph showing a dirt road with tire tracks leading towards a dark, rectangular building. A white pickup truck is parked on the right side of the road. The sky is overcast and grey.



PHOTOGRAPHIC LOG

XTO Energy, Inc.	Muy Wayno Eddy County, New Mexico	NRM2024756871, NRM2028241966, NAPP2102239584, NAPP2102626563
-------------------------	--	---

Photo No.	Date	
7	May 12, 2021	
View of excavation activities facing south.		 A wide-angle photograph of a large, flat, sandy excavation site. In the middle ground, a yellow excavator is positioned on the left, and a black bulldozer is on the right. The ground is uneven with some mounds of dirt. In the background, there are utility poles and a clear blue sky with a few clouds.

Photo No.	Date	
8	May 12, 2021	
View of excavation activities facing west.		 A photograph showing a dirt road or path with deep tire tracks leading into the distance. The ground is sandy and uneven. In the background, there are utility poles, a clear blue sky, and some distant structures.

ATTACHMENT 3: LABORATORY ANALYTICAL RESULTS



Certificate of Analysis Summary 671992

LT Environmental, Inc., Arvada, CO

Project Name: Muy Wayno Frac Pond 8-18-20

Project Id: 012920125

Contact: Dan Moir

Project Location: Eddy County

Date Received in Lab: Tue 09.08.2020 12:40

Report Date: 09.09.2020 10:08

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	671992-001	671992-002				
	Field Id:	SS01	SS02				
	Depth:	0.5- ft	0.5- ft				
	Matrix:	SOIL	SOIL				
	Sampled:	09.08.2020 09:44	09.08.2020 09:45				
BTEX by EPA 8021B	Extracted:	09.08.2020 15:56	09.08.2020 15:56				
	Analyzed:	09.08.2020 19:01	09.08.2020 19:23				
	Units/RL:	mg/kg RL	mg/kg RL				
Benzene		<0.00198 0.00198	<0.00202 0.00202				
Toluene		<0.00198 0.00198	<0.00202 0.00202				
Ethylbenzene		<0.00198 0.00198	<0.00202 0.00202				
m,p-Xylenes		<0.00397 0.00397	<0.00404 0.00404				
o-Xylene		<0.00198 0.00198	<0.00202 0.00202				
Total Xylenes		<0.00198 0.00198	<0.00202 0.00202				
Total BTEX		<0.00198 0.00198	<0.00202 0.00202				
Chloride by EPA 300	Extracted:	09.08.2020 15:53	09.08.2020 15:53				
	Analyzed:	09.08.2020 16:19	09.08.2020 16:36				
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride		25400 498	29500 502				
TPH by SW8015 Mod	Extracted:	09.08.2020 16:25	09.08.2020 16:25				
	Analyzed:	09.08.2020 19:04	09.08.2020 19:25				
	Units/RL:	mg/kg RL	mg/kg RL				
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<50.1 50.1				
Diesel Range Organics (DRO)		<50.0 50.0	<50.1 50.1				
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.1 50.1				
Total GRO-DRO		<50.0 50.0	<50.1 50.1				
Total TPH		<50.0 50.0	<50.1 50.1				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Kramer



Analytical Report 671992

for

LT Environmental, Inc.

Project Manager: Dan Moir

Muy Wayno Frac Pond 8-18-20

012920125

09.09.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



09.09.2020

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **671992**

Muy Wayno Frac Pond 8-18-20

Project Address: Eddy County

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 671992. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 671992 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

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

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Sample Cross Reference 671992

LT Environmental, Inc., Arvada, CO

Muy Wayno Frac Pond 8-18-20

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	09.08.2020 09:44	0.25 ft	671992-001
SS02	S	09.08.2020 09:45	0.25 ft	671992-002



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *Muy Wayno Frac Pond 8-18-20*

Project ID: 012920125
Work Order Number(s): 671992

Report Date: 09.09.2020
Date Received: 09.08.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 671992

LT Environmental, Inc., Arvada, CO

Muy Wayno Frac Pond 8-18-20

Sample Id: **SS01** Matrix: Soil Date Received: 09.08.2020 12:40
 Lab Sample Id: 671992-001 Date Collected: 09.08.2020 09:44 Sample Depth: 0.25 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 09.08.2020 15:53 Basis: Wet Weight
 Seq Number: 3136620

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	25400	498	mg/kg	09.08.2020 16:19		50

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 09.08.2020 16:25 Basis: Wet Weight
 Seq Number: 3136626

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.08.2020 19:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.08.2020 19:04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.08.2020 19:04	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	09.08.2020 19:04	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.08.2020 19:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	09.08.2020 19:04	
o-Terphenyl	84-15-1	120	%	70-135	09.08.2020 19:04	



Certificate of Analytical Results 671992

LT Environmental, Inc., Arvada, CO

Muy Wayno Frac Pond 8-18-20

Sample Id: **SS01**
Lab Sample Id: 671992-001

Matrix: Soil
Date Collected: 09.08.2020 09:44

Date Received: 09.08.2020 12:40
Sample Depth: 0.25 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 09.08.2020 15:56

Basis: Wet Weight

Seq Number: 3136619

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.08.2020 19:01	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.08.2020 19:01	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.08.2020 19:01	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	09.08.2020 19:01	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.08.2020 19:01	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.08.2020 19:01	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.08.2020 19:01	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	90	%	70-130	09.08.2020 19:01		
1,4-Difluorobenzene	540-36-3	99	%	70-130	09.08.2020 19:01		



Certificate of Analytical Results 671992

LT Environmental, Inc., Arvada, CO

Muy Wayno Frac Pond 8-18-20

Sample Id: **SS02** Matrix: Soil Date Received: 09.08.2020 12:40
 Lab Sample Id: 671992-002 Date Collected: 09.08.2020 09:45 Sample Depth: 0.25 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 09.08.2020 15:53 Basis: Wet Weight
 Seq Number: 3136620

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	29500	502	mg/kg	09.08.2020 16:36		50

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 09.08.2020 16:25 Basis: Wet Weight
 Seq Number: 3136626

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	09.08.2020 19:25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	09.08.2020 19:25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	09.08.2020 19:25	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	09.08.2020 19:25	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	09.08.2020 19:25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	09.08.2020 19:25	
o-Terphenyl	84-15-1	118	%	70-135	09.08.2020 19:25	



Certificate of Analytical Results 671992

LT Environmental, Inc., Arvada, CO

Muy Wayno Frac Pond 8-18-20

Sample Id: **SS02**
Lab Sample Id: 671992-002

Matrix: Soil
Date Collected: 09.08.2020 09:45

Date Received: 09.08.2020 12:40
Sample Depth: 0.25 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 09.08.2020 15:56

Basis: Wet Weight

Seq Number: 3136619

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	09.08.2020 19:23	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	09.08.2020 19:23	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	09.08.2020 19:23	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	09.08.2020 19:23	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	09.08.2020 19:23	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	09.08.2020 19:23	U	1
Total BTEX		<0.00202	0.00202	mg/kg	09.08.2020 19:23	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	09.08.2020 19:23		
4-Bromofluorobenzene	460-00-4	93	%	70-130	09.08.2020 19:23		



Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



LT Environmental, Inc.
Muy Wayno Frac Pond 8-18-20

Analytical Method: Chloride by EPA 300

Seq Number: 3136620

MB Sample Id: 7710945-1-BLK

Matrix: Solid

LCS Sample Id: 7710945-1-BKS

Prep Method: E300P

Date Prep: 09.08.2020

LCSD Sample Id: 7710945-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	250	100	250	100	90-110	0	20	mg/kg	09.08.2020 16:08	

Analytical Method: Chloride by EPA 300

Seq Number: 3136620

Parent Sample Id: 672026-001

Matrix: Soil

MS Sample Id: 672026-001 S

Prep Method: E300P

Date Prep: 09.08.2020

MSD Sample Id: 672026-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	384	200	574	95	575	96	90-110	0	20	mg/kg	09.08.2020 16:47	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3136626

MB Sample Id: 7710949-1-BLK

Matrix: Solid

LCS Sample Id: 7710949-1-BKS

Prep Method: SW8015P

Date Prep: 09.08.2020

LCSD Sample Id: 7710949-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	858	86	828	83	70-135	4	35	mg/kg	09.08.2020 17:23	
Diesel Range Organics (DRO)	<50.0	1000	980	98	951	95	70-135	3	35	mg/kg	09.08.2020 17:23	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		115		110		70-135	%	09.08.2020 17:23
o-Terphenyl	105		113		110		70-135	%	09.08.2020 17:23

Analytical Method: TPH by SW8015 Mod

Seq Number: 3136626

Matrix: Solid

MB Sample Id: 7710949-1-BLK

Prep Method: SW8015P

Date Prep: 09.08.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	09.08.2020 17:03	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3136626

Matrix: Soil

Parent Sample Id: 672026-001

MS Sample Id: 672026-001 S

Prep Method: SW8015P

Date Prep: 09.08.2020

MSD Sample Id: 672026-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	905	91	884	88	70-135	2	35	mg/kg	09.08.2020 18:23	
Diesel Range Organics (DRO)	<50.2	1000	1040	104	1020	102	70-135	2	35	mg/kg	09.08.2020 18:23	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	127		125		70-135	%	09.08.2020 18:23
o-Terphenyl	126		123		70-135	%	09.08.2020 18:23

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



LT Environmental, Inc.
Muy Wayno Frac Pond 8-18-20

Analytical Method: BTEX by EPA 8021B

Seq Number: 3136619

MB Sample Id: 7710946-1-BLK

Matrix: Solid

LCS Sample Id: 7710946-1-BKS

Prep Method: SW5035A

Date Prep: 09.08.2020

LCSD Sample Id: 7710946-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0971	97	0.104	104	70-130	7	35	mg/kg	09.08.2020 16:58	
Toluene	<0.00200	0.100	0.0953	95	0.102	102	70-130	7	35	mg/kg	09.08.2020 16:58	
Ethylbenzene	<0.00200	0.100	0.0899	90	0.0972	97	71-129	8	35	mg/kg	09.08.2020 16:58	
m,p-Xylenes	<0.00400	0.200	0.181	91	0.195	98	70-135	7	35	mg/kg	09.08.2020 16:58	
o-Xylene	<0.00200	0.100	0.0892	89	0.0960	96	71-133	7	35	mg/kg	09.08.2020 16:58	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		99		98		70-130	%	09.08.2020 16:58
4-Bromofluorobenzene	86		90		87		70-130	%	09.08.2020 16:58

Analytical Method: BTEX by EPA 8021B

Seq Number: 3136619

Parent Sample Id: 671992-001

Matrix: Soil

MS Sample Id: 671992-001 S

Prep Method: SW5035A

Date Prep: 09.08.2020

MSD Sample Id: 671992-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.111	111	0.106	106	70-130	5	35	mg/kg	09.08.2020 17:43	
Toluene	<0.00199	0.0996	0.109	109	0.103	103	70-130	6	35	mg/kg	09.08.2020 17:43	
Ethylbenzene	<0.00199	0.0996	0.101	101	0.0956	96	71-129	5	35	mg/kg	09.08.2020 17:43	
m,p-Xylenes	<0.00398	0.199	0.202	102	0.193	97	70-135	5	35	mg/kg	09.08.2020 17:43	
o-Xylene	<0.00199	0.0996	0.0982	99	0.0954	95	71-133	3	35	mg/kg	09.08.2020 17:43	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		99		70-130	%	09.08.2020 17:43
4-Bromofluorobenzene	89		89		70-130	%	09.08.2020 17:43

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
Midland, TX (432-704-5440) EL Paso, TX (915)585-3443 Lubbock, TX (806)794-1296
Phoenix, AZ (480-355-0900) Atlanta GA (770-449-8800) Tampa, FL (813) 251-1111
Hobbs, NM (575-332-7550)

Chain of Custody

Work Order No: 107/992

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, Tx 79705	City, State ZIP:	
Phone:	(432) 236-3849	Email:	wmaitner@llenrv.com , dmoir@llenrv.com

Work Order Comments									
Program:	UST/PST	☐ RP	☐ Growfields	☐ RC	☐ \$perfund	☐			
State of Project:									
Reporting:	Level II	☐	Level III	☐	ST/UST	☐	RP	☐	Level IV
Deliverables:	EDD	☐	ADAPT	☐	Other:				

[illegible]

SAMPLE RECEIPT		Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):	3.0/2.8	Thermometer ID					
Received Intact:	Yes	No	FMM007				
Cooler Custody Seals:	Yes	No	N/A	Correction Factor:		-0.2	
Sample Custody Seals:	Yes	No	N/A	Total Containers:		2	

Number of Containers

PA 8015)

EPA 0=8021)

de (EPA 300.0)

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

[illegible]

Total	200.7 / 6010	200.8 / 6020:
8RCRA	13PPM	Texas 11
	Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO ₂ Na Sr Ti Sn U V Zn	

[illegible]

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		9/8/20 12:40			

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 09.08.2020 12.40.00 PM

Work Order #: 671992

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T_NM_007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

Samples received in bulk containers.

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

Checklist completed by:



Cloe Clifton

Date: 09.08.2020

Checklist reviewed by:



Jessica Kramer

Date: 09.09.2020



Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-678-1

Laboratory Sample Delivery Group: 314031190

Client Project/Site: Muy Wayno Frac Pond-Big D

For:

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

Attn: Kalei Jennings

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

Authorized for release by:
5/21/2021 3:18:47 PM

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

LINKS

Review your project
results through

TotalAccess

Have a Question?



Visit us at:

www.eurofinsus.com/Env

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

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

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Laboratory Job ID: 890-678-1
SDG: 314031190

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Client Sample Results	6
Surrogate Summary	34
QC Sample Results	37
QC Association Summary	52
Lab Chronicle	61
Certification Summary	72
Method Summary	73
Sample Summary	74
Chain of Custody	75
Receipt Checklists	86

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

Definitions/Glossary

Client: WSP USA Inc.

Job ID: 890-678-1

Project/Site: Muy Wayno Frac Pond-Big D

SDG: 314031190

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
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 VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Eurofins Xenco, Carlsbad

Case Narrative

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Job ID: 890-678-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

**Job Narrative
890-678-1**

Comments

No additional comments.

Receipt

The samples were received on 5/17/2021 10:09 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.4° C.

GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: FS07 (890-678-7). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: FS13 (890-678-13). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Internal standard responses were outside of acceptance limits for the following samples: FS33 (890-678-33), FS34 (890-678-34), FS35 (890-678-35) and FS38 (890-678-38). The sample(s) shows evidence of matrix interference.

Method 8021B: Surrogate recovery for the following sample was outside control limits: FS38 (890-678-38). 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 880-3194 and analytical batch 880-3197 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA

Method 8015B NM: The laboratory control sample (LCS) associated with preparation batch 880-3200 and analytical batch 880-3166 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 8015B NM: The continuing calibration verification (CCV) associated with batch 880-3166 recovered above the upper control limit for Diesel Range Organics (Over C10-C28) and Gasoline Range Organics (GRO)-C6-C10 The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8015B NM: The continuing calibration verification (CCV) associated with batch 880-3220 recovered above the upper control limit for Diesel Range Organics (Over C10-C28) and Gasoline Range Organics (GRO)-C6-C10 The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8015B NM: The sample have bracketing continuing calibration verifications that were biased high for the diesel range. This is however, the second analysis of this sample and does confirm the first analysis; therefore, data was reported.

FS08 (890-678-8)

Method 8015B NM: All quality control biased high indicating possible high bias in samples. All sample is non-detect under the implied high bias therefore the data has been qualified and reported.

(CCV 880-3220/30)

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

Case Narrative

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Job ID: 890-678-1 (Continued)

Laboratory: Eurofins Xenco, Carlsbad (Continued)

General Chemistry

Method 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for 880-3258 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits. The associated samples are: FS01 (890-678-1), FS02 (890-678-2), FS03 (890-678-3), FS04 (890-678-4), FS05 (890-678-5), FS06 (890-678-6), (890-676-A-4-D) and (890-693-A-9-E).

Method 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for 880-3253 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits. The associated samples are: FS08 (890-678-8), FS09 (890-678-9), FS10 (890-678-10), FS11 (890-678-11), FS12 (890-678-12), FS13 (890-678-13), FS14 (890-678-14), FS15 (890-678-15) and FS16 (890-678-16).

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

Organic Prep

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

VOA Prep

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

Client Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS01

Lab Sample ID: 890-678-1

Date Collected: 05/13/21 14:50

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/18/21 14:00	05/18/21 16:25	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/18/21 14:00	05/18/21 16:25	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/18/21 14:00	05/18/21 16:25	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		05/18/21 14:00	05/18/21 16:25	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/18/21 14:00	05/18/21 16:25	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		05/18/21 14:00	05/18/21 16:25	1
Total BTEX	<0.00401	U	0.00401	mg/Kg		05/18/21 14:00	05/18/21 16:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130	05/18/21 14:00	05/18/21 16:25	1
1,4-Difluorobenzene (Surr)	99		70 - 130	05/18/21 14:00	05/18/21 16:25	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/18/21 09:58	05/18/21 13:08	1
Diesel Range Organics (Over C10-C28)	<49.9	U **	49.9	mg/Kg		05/18/21 09:58	05/18/21 13:08	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/18/21 09:58	05/18/21 13:08	1
Total TPH	<49.9	U	49.9	mg/Kg		05/18/21 09:58	05/18/21 13:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	120		70 - 130	05/18/21 09:58	05/18/21 13:08	1
o-Terphenyl	139	S1+	70 - 130	05/18/21 09:58	05/18/21 13:08	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	393		5.00	mg/Kg			05/19/21 19:46	1

Client Sample ID: FS02

Lab Sample ID: 890-678-2

Date Collected: 05/13/21 14:52

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/18/21 14:00	05/18/21 16:46	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/18/21 14:00	05/18/21 16:46	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/18/21 14:00	05/18/21 16:46	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/18/21 14:00	05/18/21 16:46	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/18/21 14:00	05/18/21 16:46	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/18/21 14:00	05/18/21 16:46	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		05/18/21 14:00	05/18/21 16:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130	05/18/21 14:00	05/18/21 16:46	1
1,4-Difluorobenzene (Surr)	98		70 - 130	05/18/21 14:00	05/18/21 16:46	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS02

Lab Sample ID: 890-678-2

Date Collected: 05/13/21 14:52

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		05/18/21 09:58	05/18/21 14:11	1
Diesel Range Organics (Over C10-C28)	<49.8	U *	49.8	mg/Kg		05/18/21 09:58	05/18/21 14:11	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		05/18/21 09:58	05/18/21 14:11	1
Total TPH	<49.8	U	49.8	mg/Kg		05/18/21 09:58	05/18/21 14:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	124		70 - 130	05/18/21 09:58	05/18/21 14:11	1
o-Terphenyl	145	S1+	70 - 130	05/18/21 09:58	05/18/21 14:11	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	232		5.00	mg/Kg			05/19/21 19:51	1

Client Sample ID: FS03

Lab Sample ID: 890-678-3

Date Collected: 05/13/21 14:54

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U F1	0.00199	mg/Kg		05/18/21 08:38	05/18/21 14:31	1
Toluene	<0.00199	U F1	0.00199	mg/Kg		05/18/21 08:38	05/18/21 14:31	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/18/21 08:38	05/18/21 14:31	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/18/21 08:38	05/18/21 14:31	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/18/21 08:38	05/18/21 14:31	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/18/21 08:38	05/18/21 14:31	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		05/18/21 08:38	05/18/21 14:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130	05/18/21 08:38	05/18/21 14:31	1
1,4-Difluorobenzene (Surr)	100		70 - 130	05/18/21 08:38	05/18/21 14:31	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		05/18/21 09:58	05/18/21 14:32	1
Diesel Range Organics (Over C10-C28)	<49.8	U *	49.8	mg/Kg		05/18/21 09:58	05/18/21 14:32	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		05/18/21 09:58	05/18/21 14:32	1
Total TPH	<49.8	U	49.8	mg/Kg		05/18/21 09:58	05/18/21 14:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	119		70 - 130	05/18/21 09:58	05/18/21 14:32	1
o-Terphenyl	138	S1+	70 - 130	05/18/21 09:58	05/18/21 14:32	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4720		49.7	mg/Kg			05/19/21 19:56	10

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS04

Lab Sample ID: 890-678-4

Date Collected: 05/13/21 14:56

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:38	05/18/21 14:51	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:38	05/18/21 14:51	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:38	05/18/21 14:51	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/18/21 08:38	05/18/21 14:51	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:38	05/18/21 14:51	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/18/21 08:38	05/18/21 14:51	1
Total BTEX	<0.00399	U	0.00399	mg/Kg		05/18/21 08:38	05/18/21 14:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		70 - 130	05/18/21 08:38	05/18/21 14:51	1
1,4-Difluorobenzene (Surr)	102		70 - 130	05/18/21 08:38	05/18/21 14:51	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/18/21 09:58	05/18/21 14:53	1
Diesel Range Organics (Over C10-C28)	<49.9	U **	49.9	mg/Kg		05/18/21 09:58	05/18/21 14:53	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/18/21 09:58	05/18/21 14:53	1
Total TPH	<49.9	U	49.9	mg/Kg		05/18/21 09:58	05/18/21 14:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	121		70 - 130	05/18/21 09:58	05/18/21 14:53	1
o-Terphenyl	136	S1+	70 - 130	05/18/21 09:58	05/18/21 14:53	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1680		25.0	mg/Kg			05/19/21 20:01	5

Client Sample ID: FS05

Lab Sample ID: 890-678-5

Date Collected: 05/13/21 15:00

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:38	05/18/21 15:11	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:38	05/18/21 15:11	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:38	05/18/21 15:11	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/18/21 08:38	05/18/21 15:11	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:38	05/18/21 15:11	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/18/21 08:38	05/18/21 15:11	1
Total BTEX	<0.00399	U	0.00399	mg/Kg		05/18/21 08:38	05/18/21 15:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130	05/18/21 08:38	05/18/21 15:11	1
1,4-Difluorobenzene (Surr)	94		70 - 130	05/18/21 08:38	05/18/21 15:11	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS05

Lab Sample ID: 890-678-5

Date Collected: 05/13/21 15:00

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/18/21 09:58	05/18/21 15:14	1
Diesel Range Organics (Over C10-C28)	<49.9	U *	49.9	mg/Kg		05/18/21 09:58	05/18/21 15:14	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/18/21 09:58	05/18/21 15:14	1
Total TPH	<49.9	U	49.9	mg/Kg		05/18/21 09:58	05/18/21 15:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	125		70 - 130	05/18/21 09:58	05/18/21 15:14	1
o-Terphenyl	141	S1+	70 - 130	05/18/21 09:58	05/18/21 15:14	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1940		24.8	mg/Kg			05/19/21 20:07	5

Client Sample ID: FS06

Lab Sample ID: 890-678-6

Date Collected: 05/13/21 15:02

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		05/18/21 08:38	05/18/21 15:32	1
Toluene	<0.00198	U	0.00198	mg/Kg		05/18/21 08:38	05/18/21 15:32	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		05/18/21 08:38	05/18/21 15:32	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		05/18/21 08:38	05/18/21 15:32	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		05/18/21 08:38	05/18/21 15:32	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		05/18/21 08:38	05/18/21 15:32	1
Total BTEX	<0.00396	U	0.00396	mg/Kg		05/18/21 08:38	05/18/21 15:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130	05/18/21 08:38	05/18/21 15:32	1
1,4-Difluorobenzene (Surr)	98		70 - 130	05/18/21 08:38	05/18/21 15:32	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/18/21 09:58	05/18/21 15:35	1
Diesel Range Organics (Over C10-C28)	<49.9	U *	49.9	mg/Kg		05/18/21 09:58	05/18/21 15:35	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/18/21 09:58	05/18/21 15:35	1
Total TPH	<49.9	U	49.9	mg/Kg		05/18/21 09:58	05/18/21 15:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	119		70 - 130	05/18/21 09:58	05/18/21 15:35	1
o-Terphenyl	143	S1+	70 - 130	05/18/21 09:58	05/18/21 15:35	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1330		25.0	mg/Kg			05/19/21 20:12	5

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS07

Lab Sample ID: 890-678-7

Date Collected: 05/13/21 15:04

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/18/21 08:38	05/18/21 15:52	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/18/21 08:38	05/18/21 15:52	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/18/21 08:38	05/18/21 15:52	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/18/21 08:38	05/18/21 15:52	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/18/21 08:38	05/18/21 15:52	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/18/21 08:38	05/18/21 15:52	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		05/18/21 08:38	05/18/21 15:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130	05/18/21 08:38	05/18/21 15:52	1
1,4-Difluorobenzene (Surr)	98		70 - 130	05/18/21 08:38	05/18/21 15:52	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/18/21 09:58	05/18/21 15:56	1
Diesel Range Organics (Over C10-C28)	<50.0	U **	50.0	mg/Kg		05/18/21 09:58	05/18/21 15:56	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/18/21 09:58	05/18/21 15:56	1
Total TPH	<50.0	U	50.0	mg/Kg		05/18/21 09:58	05/18/21 15:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	115		70 - 130	05/18/21 09:58	05/18/21 15:56	1
o-Terphenyl	130		70 - 130	05/18/21 09:58	05/18/21 15:56	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	662	F1	4.99	mg/Kg			05/19/21 16:51	1

Client Sample ID: FS08

Lab Sample ID: 890-678-8

Date Collected: 05/13/21 15:06

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		05/18/21 08:38	05/18/21 16:13	1
Toluene	<0.00198	U	0.00198	mg/Kg		05/18/21 08:38	05/18/21 16:13	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		05/18/21 08:38	05/18/21 16:13	1
m-Xylene & p-Xylene	<0.00397	U	0.00397	mg/Kg		05/18/21 08:38	05/18/21 16:13	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		05/18/21 08:38	05/18/21 16:13	1
Xylenes, Total	<0.00397	U	0.00397	mg/Kg		05/18/21 08:38	05/18/21 16:13	1
Total BTEX	<0.00397	U	0.00397	mg/Kg		05/18/21 08:38	05/18/21 16:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130	05/18/21 08:38	05/18/21 16:13	1
1,4-Difluorobenzene (Surr)	98		70 - 130	05/18/21 08:38	05/18/21 16:13	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS08

Lab Sample ID: 890-678-8

Date Collected: 05/13/21 15:06

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		05/19/21 08:36	05/19/21 19:04	1
Diesel Range Organics (Over C10-C28)	67.4		49.8	mg/Kg		05/19/21 08:36	05/19/21 19:04	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		05/19/21 08:36	05/19/21 19:04	1
Total TPH	67.4		49.8	mg/Kg		05/19/21 08:36	05/19/21 19:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	122		70 - 130	05/19/21 08:36	05/19/21 19:04	1
o-Terphenyl	144	S1+	70 - 130	05/19/21 08:36	05/19/21 19:04	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2050		25.3	mg/Kg			05/19/21 19:13	5

Client Sample ID: FS09

Lab Sample ID: 890-678-9

Date Collected: 05/13/21 15:13

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		05/18/21 08:38	05/18/21 16:33	1
Toluene	<0.00198	U	0.00198	mg/Kg		05/18/21 08:38	05/18/21 16:33	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		05/18/21 08:38	05/18/21 16:33	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		05/18/21 08:38	05/18/21 16:33	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		05/18/21 08:38	05/18/21 16:33	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		05/18/21 08:38	05/18/21 16:33	1
Total BTEX	<0.00396	U	0.00396	mg/Kg		05/18/21 08:38	05/18/21 16:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130	05/18/21 08:38	05/18/21 16:33	1
1,4-Difluorobenzene (Surr)	97		70 - 130	05/18/21 08:38	05/18/21 16:33	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/18/21 09:58	05/18/21 16:38	1
Diesel Range Organics (Over C10-C28)	<49.9	U *	49.9	mg/Kg		05/18/21 09:58	05/18/21 16:38	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/18/21 09:58	05/18/21 16:38	1
Total TPH	<49.9	U	49.9	mg/Kg		05/18/21 09:58	05/18/21 16:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	122		70 - 130	05/18/21 09:58	05/18/21 16:38	1
o-Terphenyl	146	S1+	70 - 130	05/18/21 09:58	05/18/21 16:38	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1410		25.1	mg/Kg			05/19/21 17:11	5

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS10

Lab Sample ID: 890-678-10

Date Collected: 05/13/21 15:15

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:38	05/18/21 16:53	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:38	05/18/21 16:53	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:38	05/18/21 16:53	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/18/21 08:38	05/18/21 16:53	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:38	05/18/21 16:53	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/18/21 08:38	05/18/21 16:53	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/18/21 08:38	05/18/21 16:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	05/18/21 08:38	05/18/21 16:53	1
1,4-Difluorobenzene (Surr)	95		70 - 130	05/18/21 08:38	05/18/21 16:53	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/18/21 09:58	05/18/21 16:59	1
Diesel Range Organics (Over C10-C28)	<50.0	U **	50.0	mg/Kg		05/18/21 09:58	05/18/21 16:59	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/18/21 09:58	05/18/21 16:59	1
Total TPH	<50.0	U	50.0	mg/Kg		05/18/21 09:58	05/18/21 16:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	124		70 - 130	05/18/21 09:58	05/18/21 16:59	1
o-Terphenyl	144	S1+	70 - 130	05/18/21 09:58	05/18/21 16:59	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1710		24.9	mg/Kg			05/19/21 17:16	5

Client Sample ID: FS11

Lab Sample ID: 890-678-11

Date Collected: 05/14/21 09:10

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		05/18/21 08:38	05/18/21 17:14	1
Toluene	<0.00198	U	0.00198	mg/Kg		05/18/21 08:38	05/18/21 17:14	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		05/18/21 08:38	05/18/21 17:14	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		05/18/21 08:38	05/18/21 17:14	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		05/18/21 08:38	05/18/21 17:14	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		05/18/21 08:38	05/18/21 17:14	1
Total BTEX	<0.00396	U	0.00396	mg/Kg		05/18/21 08:38	05/18/21 17:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130	05/18/21 08:38	05/18/21 17:14	1
1,4-Difluorobenzene (Surr)	95		70 - 130	05/18/21 08:38	05/18/21 17:14	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS11

Lab Sample ID: 890-678-11

Date Collected: 05/14/21 09:10

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/19/21 08:36	05/19/21 11:37	1
Diesel Range Organics (Over C10-C28)	<49.9	U F1	49.9	mg/Kg		05/19/21 08:36	05/19/21 11:37	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/19/21 08:36	05/19/21 11:37	1
Total TPH	<49.9	U F1	49.9	mg/Kg		05/19/21 08:36	05/19/21 11:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	128		70 - 130	05/19/21 08:36	05/19/21 11:37	1
o-Terphenyl	150	S1+	70 - 130	05/19/21 08:36	05/19/21 11:37	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	398		24.9	mg/Kg			05/19/21 17:21	5

Client Sample ID: FS12

Lab Sample ID: 890-678-12

Date Collected: 05/14/21 09:12

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/18/21 08:38	05/18/21 18:56	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/18/21 08:38	05/18/21 18:56	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/18/21 08:38	05/18/21 18:56	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/18/21 08:38	05/18/21 18:56	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/18/21 08:38	05/18/21 18:56	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/18/21 08:38	05/18/21 18:56	1
Total BTEX	<0.00402	U	0.00402	mg/Kg		05/18/21 08:38	05/18/21 18:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130	05/18/21 08:38	05/18/21 18:56	1
1,4-Difluorobenzene (Surr)	100		70 - 130	05/18/21 08:38	05/18/21 18:56	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		05/19/21 08:36	05/19/21 12:39	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		05/19/21 08:36	05/19/21 12:39	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		05/19/21 08:36	05/19/21 12:39	1
Total TPH	<49.8	U	49.8	mg/Kg		05/19/21 08:36	05/19/21 12:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	136	S1+	70 - 130	05/19/21 08:36	05/19/21 12:39	1
o-Terphenyl	155	S1+	70 - 130	05/19/21 08:36	05/19/21 12:39	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	341		4.95	mg/Kg			05/19/21 17:38	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS13

Lab Sample ID: 890-678-13

Date Collected: 05/14/21 09:14

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/18/21 08:38	05/18/21 19:17	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/18/21 08:38	05/18/21 19:17	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/18/21 08:38	05/18/21 19:17	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/18/21 08:38	05/18/21 19:17	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/18/21 08:38	05/18/21 19:17	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/18/21 08:38	05/18/21 19:17	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		05/18/21 08:38	05/18/21 19:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		70 - 130	05/18/21 08:38	05/18/21 19:17	1
1,4-Difluorobenzene (Surr)	98		70 - 130	05/18/21 08:38	05/18/21 19:17	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		05/19/21 08:36	05/19/21 13:00	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		05/19/21 08:36	05/19/21 13:00	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		05/19/21 08:36	05/19/21 13:00	1
Total TPH	<49.8	U	49.8	mg/Kg		05/19/21 08:36	05/19/21 13:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	117		70 - 130	05/19/21 08:36	05/19/21 13:00	1
o-Terphenyl	137	S1+	70 - 130	05/19/21 08:36	05/19/21 13:00	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	445		4.95	mg/Kg			05/19/21 17:43	1

Client Sample ID: FS14

Lab Sample ID: 890-678-14

Date Collected: 05/14/21 09:16

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/18/21 08:38	05/18/21 19:37	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/18/21 08:38	05/18/21 19:37	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/18/21 08:38	05/18/21 19:37	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/18/21 08:38	05/18/21 19:37	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/18/21 08:38	05/18/21 19:37	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/18/21 08:38	05/18/21 19:37	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		05/18/21 08:38	05/18/21 19:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		70 - 130	05/18/21 08:38	05/18/21 19:37	1
1,4-Difluorobenzene (Surr)	98		70 - 130	05/18/21 08:38	05/18/21 19:37	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS14

Lab Sample ID: 890-678-14

Date Collected: 05/14/21 09:16

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/19/21 08:36	05/19/21 13:22	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/19/21 08:36	05/19/21 13:22	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/19/21 08:36	05/19/21 13:22	1
Total TPH	<49.9	U	49.9	mg/Kg		05/19/21 08:36	05/19/21 13:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	118		70 - 130	05/19/21 08:36	05/19/21 13:22	1
o-Terphenyl	134	S1+	70 - 130	05/19/21 08:36	05/19/21 13:22	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	318		5.00	mg/Kg			05/19/21 17:48	1

Client Sample ID: FS15

Lab Sample ID: 890-678-15

Date Collected: 05/14/21 09:18

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:38	05/18/21 19:57	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:38	05/18/21 19:57	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:38	05/18/21 19:57	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/18/21 08:38	05/18/21 19:57	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:38	05/18/21 19:57	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/18/21 08:38	05/18/21 19:57	1
Total BTEX	<0.00399	U	0.00399	mg/Kg		05/18/21 08:38	05/18/21 19:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		70 - 130	05/18/21 08:38	05/18/21 19:57	1
1,4-Difluorobenzene (Surr)	98		70 - 130	05/18/21 08:38	05/18/21 19:57	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/19/21 08:36	05/19/21 13:42	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/19/21 08:36	05/19/21 13:42	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/19/21 08:36	05/19/21 13:42	1
Total TPH	<49.9	U	49.9	mg/Kg		05/19/21 08:36	05/19/21 13:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	122		70 - 130	05/19/21 08:36	05/19/21 13:42	1
o-Terphenyl	137	S1+	70 - 130	05/19/21 08:36	05/19/21 13:42	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	154		5.04	mg/Kg			05/19/21 17:53	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS16

Lab Sample ID: 890-678-16

Date Collected: 05/14/21 09:20

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:38	05/18/21 20:18	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:38	05/18/21 20:18	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:38	05/18/21 20:18	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/18/21 08:38	05/18/21 20:18	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:38	05/18/21 20:18	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/18/21 08:38	05/18/21 20:18	1
Total BTEX	<0.00399	U	0.00399	mg/Kg		05/18/21 08:38	05/18/21 20:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 130	05/18/21 08:38	05/18/21 20:18	1
1,4-Difluorobenzene (Surr)	98		70 - 130	05/18/21 08:38	05/18/21 20:18	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/19/21 08:36	05/19/21 14:03	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/19/21 08:36	05/19/21 14:03	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/19/21 08:36	05/19/21 14:03	1
Total TPH	<49.9	U	49.9	mg/Kg		05/19/21 08:36	05/19/21 14:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	115		70 - 130	05/19/21 08:36	05/19/21 14:03	1
o-Terphenyl	140	S1+	70 - 130	05/19/21 08:36	05/19/21 14:03	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	350		5.05	mg/Kg			05/19/21 17:58	1

Client Sample ID: FS17

Lab Sample ID: 890-678-17

Date Collected: 05/14/21 09:22

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:38	05/18/21 20:38	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:38	05/18/21 20:38	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:38	05/18/21 20:38	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/18/21 08:38	05/18/21 20:38	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:38	05/18/21 20:38	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/18/21 08:38	05/18/21 20:38	1
Total BTEX	<0.00399	U	0.00399	mg/Kg		05/18/21 08:38	05/18/21 20:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130	05/18/21 08:38	05/18/21 20:38	1
1,4-Difluorobenzene (Surr)	97		70 - 130	05/18/21 08:38	05/18/21 20:38	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS17

Lab Sample ID: 890-678-17

Date Collected: 05/14/21 09:22

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/19/21 08:36	05/19/21 14:24	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/19/21 08:36	05/19/21 14:24	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/19/21 08:36	05/19/21 14:24	1
Total TPH	<50.0	U	50.0	mg/Kg		05/19/21 08:36	05/19/21 14:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	119		70 - 130	05/19/21 08:36	05/19/21 14:24	1
o-Terphenyl	134	S1+	70 - 130	05/19/21 08:36	05/19/21 14:24	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	383		4.98	mg/Kg			05/19/21 18:03	1

Client Sample ID: FS18

Lab Sample ID: 890-678-18

Date Collected: 05/14/21 09:24

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/18/21 08:38	05/18/21 20:59	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/18/21 08:38	05/18/21 20:59	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/18/21 08:38	05/18/21 20:59	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/18/21 08:38	05/18/21 20:59	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/18/21 08:38	05/18/21 20:59	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/18/21 08:38	05/18/21 20:59	1
Total BTEX	<0.00402	U	0.00402	mg/Kg		05/18/21 08:38	05/18/21 20:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130	05/18/21 08:38	05/18/21 20:59	1
1,4-Difluorobenzene (Surr)	97		70 - 130	05/18/21 08:38	05/18/21 20:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/19/21 08:36	05/19/21 15:20	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/19/21 08:36	05/19/21 15:20	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/19/21 08:36	05/19/21 15:20	1
Total TPH	<50.0	U	50.0	mg/Kg		05/19/21 08:36	05/19/21 15:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	121		70 - 130	05/19/21 08:36	05/19/21 15:20	1
o-Terphenyl	142	S1+	70 - 130	05/19/21 08:36	05/19/21 15:20	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	673		5.04	mg/Kg			05/19/21 18:18	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS19

Lab Sample ID: 890-678-19

Date Collected: 05/14/21 09:26

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		05/18/21 08:38	05/18/21 21:19	1
Toluene	<0.00202	U	0.00202	mg/Kg		05/18/21 08:38	05/18/21 21:19	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		05/18/21 08:38	05/18/21 21:19	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		05/18/21 08:38	05/18/21 21:19	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		05/18/21 08:38	05/18/21 21:19	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		05/18/21 08:38	05/18/21 21:19	1
Total BTEX	<0.00404	U	0.00404	mg/Kg		05/18/21 08:38	05/18/21 21:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130	05/18/21 08:38	05/18/21 21:19	1
1,4-Difluorobenzene (Surr)	99		70 - 130	05/18/21 08:38	05/18/21 21:19	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/19/21 08:36	05/19/21 18:22	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/19/21 08:36	05/19/21 18:22	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/19/21 08:36	05/19/21 18:22	1
Total TPH	<49.9	U	49.9	mg/Kg		05/19/21 08:36	05/19/21 18:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	123		70 - 130	05/19/21 08:36	05/19/21 18:22	1
o-Terphenyl	143	S1+	70 - 130	05/19/21 08:36	05/19/21 18:22	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	59.5		4.97	mg/Kg			05/19/21 18:23	1

Client Sample ID: FS20

Lab Sample ID: 890-678-20

Date Collected: 05/14/21 09:37

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/18/21 12:00	05/18/21 14:40	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/18/21 12:00	05/18/21 14:40	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/18/21 12:00	05/18/21 14:40	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/18/21 12:00	05/18/21 14:40	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/18/21 12:00	05/18/21 14:40	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/18/21 12:00	05/18/21 14:40	1
Total BTEX	<0.00399	U	0.00399	mg/Kg		05/18/21 12:00	05/18/21 14:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	123		70 - 130	05/18/21 12:00	05/18/21 14:40	1
1,4-Difluorobenzene (Surr)	92		70 - 130	05/18/21 12:00	05/18/21 14:40	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS20

Lab Sample ID: 890-678-20

Date Collected: 05/14/21 09:37

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/19/21 08:36	05/19/21 18:43	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/19/21 08:36	05/19/21 18:43	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/19/21 08:36	05/19/21 18:43	1
Total TPH	<50.0	U	50.0	mg/Kg		05/19/21 08:36	05/19/21 18:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	120		70 - 130	05/19/21 08:36	05/19/21 18:43	1
o-Terphenyl	139	S1+	70 - 130	05/19/21 08:36	05/19/21 18:43	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8750		49.5	mg/Kg			05/19/21 18:38	10

Client Sample ID: FS21

Lab Sample ID: 890-678-21

Date Collected: 05/14/21 09:39

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/18/21 12:00	05/18/21 15:05	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/18/21 12:00	05/18/21 15:05	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/18/21 12:00	05/18/21 15:05	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/18/21 12:00	05/18/21 15:05	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/18/21 12:00	05/18/21 15:05	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/18/21 12:00	05/18/21 15:05	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		05/18/21 12:00	05/18/21 15:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	117		70 - 130	05/18/21 12:00	05/18/21 15:05	1
1,4-Difluorobenzene (Surr)	99		70 - 130	05/18/21 12:00	05/18/21 15:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/18/21 09:59	05/18/21 13:08	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/18/21 09:59	05/18/21 13:08	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/18/21 09:59	05/18/21 13:08	1
Total TPH	<49.9	U	49.9	mg/Kg		05/18/21 09:59	05/18/21 13:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130	05/18/21 09:59	05/18/21 13:08	1
o-Terphenyl	113		70 - 130	05/18/21 09:59	05/18/21 13:08	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7330		50.5	mg/Kg			05/19/21 18:43	10

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS22

Lab Sample ID: 890-678-22

Date Collected: 05/14/21 09:41

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		05/18/21 12:00	05/18/21 15:30	1
Toluene	<0.00198	U	0.00198	mg/Kg		05/18/21 12:00	05/18/21 15:30	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		05/18/21 12:00	05/18/21 15:30	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		05/18/21 12:00	05/18/21 15:30	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		05/18/21 12:00	05/18/21 15:30	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		05/18/21 12:00	05/18/21 15:30	1
Total BTEX	<0.00396	U	0.00396	mg/Kg		05/18/21 12:00	05/18/21 15:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130	05/18/21 12:00	05/18/21 15:30	1
1,4-Difluorobenzene (Surr)	100		70 - 130	05/18/21 12:00	05/18/21 15:30	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		05/18/21 09:59	05/18/21 14:11	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		05/18/21 09:59	05/18/21 14:11	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		05/18/21 09:59	05/18/21 14:11	1
Total TPH	<49.8	U	49.8	mg/Kg		05/18/21 09:59	05/18/21 14:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130	05/18/21 09:59	05/18/21 14:11	1
o-Terphenyl	110		70 - 130	05/18/21 09:59	05/18/21 14:11	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7840		50.5	mg/Kg			05/19/21 18:48	10

Client Sample ID: FS23

Lab Sample ID: 890-678-23

Date Collected: 05/14/21 09:43

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		05/18/21 12:00	05/18/21 15:56	1
Toluene	<0.00202	U	0.00202	mg/Kg		05/18/21 12:00	05/18/21 15:56	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		05/18/21 12:00	05/18/21 15:56	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		05/18/21 12:00	05/18/21 15:56	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		05/18/21 12:00	05/18/21 15:56	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		05/18/21 12:00	05/18/21 15:56	1
Total BTEX	<0.00404	U	0.00404	mg/Kg		05/18/21 12:00	05/18/21 15:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130	05/18/21 12:00	05/18/21 15:56	1
1,4-Difluorobenzene (Surr)	102		70 - 130	05/18/21 12:00	05/18/21 15:56	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS23

Lab Sample ID: 890-678-23

Date Collected: 05/14/21 09:43

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		05/18/21 09:59	05/18/21 14:32	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		05/18/21 09:59	05/18/21 14:32	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		05/18/21 09:59	05/18/21 14:32	1
Total TPH	<49.8	U	49.8	mg/Kg		05/18/21 09:59	05/18/21 14:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	83		70 - 130	05/18/21 09:59	05/18/21 14:32	1
o-Terphenyl	96		70 - 130	05/18/21 09:59	05/18/21 14:32	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7100		49.8	mg/Kg			05/19/21 18:53	10

Client Sample ID: FS24

Lab Sample ID: 890-678-24

Date Collected: 05/14/21 09:45

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/18/21 12:00	05/18/21 16:21	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/18/21 12:00	05/18/21 16:21	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/18/21 12:00	05/18/21 16:21	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		05/18/21 12:00	05/18/21 16:21	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/18/21 12:00	05/18/21 16:21	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		05/18/21 12:00	05/18/21 16:21	1
Total BTEX	<0.00401	U	0.00401	mg/Kg		05/18/21 12:00	05/18/21 16:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130	05/18/21 12:00	05/18/21 16:21	1
1,4-Difluorobenzene (Surr)	94		70 - 130	05/18/21 12:00	05/18/21 16:21	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/18/21 09:59	05/18/21 14:53	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/18/21 09:59	05/18/21 14:53	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/18/21 09:59	05/18/21 14:53	1
Total TPH	<49.9	U	49.9	mg/Kg		05/18/21 09:59	05/18/21 14:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	98		70 - 130	05/18/21 09:59	05/18/21 14:53	1
o-Terphenyl	115		70 - 130	05/18/21 09:59	05/18/21 14:53	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10100		50.0	mg/Kg			05/19/21 18:58	10

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS25

Lab Sample ID: 890-678-25

Date Collected: 05/14/21 09:47

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/18/21 12:00	05/18/21 16:46	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/18/21 12:00	05/18/21 16:46	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/18/21 12:00	05/18/21 16:46	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/18/21 12:00	05/18/21 16:46	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/18/21 12:00	05/18/21 16:46	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/18/21 12:00	05/18/21 16:46	1
Total BTEX	<0.00402	U	0.00402	mg/Kg		05/18/21 12:00	05/18/21 16:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	05/18/21 12:00	05/18/21 16:46	1
1,4-Difluorobenzene (Surr)	93		70 - 130	05/18/21 12:00	05/18/21 16:46	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/18/21 09:59	05/18/21 15:14	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/18/21 09:59	05/18/21 15:14	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/18/21 09:59	05/18/21 15:14	1
Total TPH	<49.9	U	49.9	mg/Kg		05/18/21 09:59	05/18/21 15:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130	05/18/21 09:59	05/18/21 15:14	1
o-Terphenyl	113		70 - 130	05/18/21 09:59	05/18/21 15:14	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6230		50.0	mg/Kg			05/19/21 19:03	10

Client Sample ID: FS26

Lab Sample ID: 890-678-26

Date Collected: 05/14/21 09:49

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/18/21 12:00	05/18/21 17:11	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/18/21 12:00	05/18/21 17:11	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/18/21 12:00	05/18/21 17:11	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/18/21 12:00	05/18/21 17:11	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/18/21 12:00	05/18/21 17:11	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/18/21 12:00	05/18/21 17:11	1
Total BTEX	<0.00402	U	0.00402	mg/Kg		05/18/21 12:00	05/18/21 17:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	120		70 - 130	05/18/21 12:00	05/18/21 17:11	1
1,4-Difluorobenzene (Surr)	101		70 - 130	05/18/21 12:00	05/18/21 17:11	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS26

Lab Sample ID: 890-678-26

Date Collected: 05/14/21 09:49

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/18/21 09:59	05/18/21 15:35	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/18/21 09:59	05/18/21 15:35	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/18/21 09:59	05/18/21 15:35	1
Total TPH	<49.9	U	49.9	mg/Kg		05/18/21 09:59	05/18/21 15:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130	05/18/21 09:59	05/18/21 15:35	1
o-Terphenyl	115		70 - 130	05/18/21 09:59	05/18/21 15:35	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3640		24.8	mg/Kg			05/19/21 19:08	5

Client Sample ID: FS27

Lab Sample ID: 890-678-27

Date Collected: 05/14/21 10:19

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/18/21 12:00	05/18/21 17:36	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/18/21 12:00	05/18/21 17:36	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/18/21 12:00	05/18/21 17:36	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/18/21 12:00	05/18/21 17:36	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/18/21 12:00	05/18/21 17:36	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/18/21 12:00	05/18/21 17:36	1
Total BTEX	<0.00399	U	0.00399	mg/Kg		05/18/21 12:00	05/18/21 17:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	05/18/21 12:00	05/18/21 17:36	1
1,4-Difluorobenzene (Surr)	102		70 - 130	05/18/21 12:00	05/18/21 17:36	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/18/21 09:59	05/18/21 15:56	1
Diesel Range Organics (Over C10-C28)	137		50.0	mg/Kg		05/18/21 09:59	05/18/21 15:56	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/18/21 09:59	05/18/21 15:56	1
Total TPH	137		50.0	mg/Kg		05/18/21 09:59	05/18/21 15:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	98		70 - 130	05/18/21 09:59	05/18/21 15:56	1
o-Terphenyl	115		70 - 130	05/18/21 09:59	05/18/21 15:56	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10200		99.4	mg/Kg			05/20/21 12:48	20

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS28

Lab Sample ID: 890-678-28

Date Collected: 05/14/21 10:21

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/18/21 12:00	05/18/21 18:01	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/18/21 12:00	05/18/21 18:01	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/18/21 12:00	05/18/21 18:01	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/18/21 12:00	05/18/21 18:01	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/18/21 12:00	05/18/21 18:01	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/18/21 12:00	05/18/21 18:01	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		05/18/21 12:00	05/18/21 18:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130	05/18/21 12:00	05/18/21 18:01	1
1,4-Difluorobenzene (Surr)	98		70 - 130	05/18/21 12:00	05/18/21 18:01	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/18/21 09:59	05/18/21 16:17	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/18/21 09:59	05/18/21 16:17	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/18/21 09:59	05/18/21 16:17	1
Total TPH	<50.0	U	50.0	mg/Kg		05/18/21 09:59	05/18/21 16:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	94		70 - 130	05/18/21 09:59	05/18/21 16:17	1
o-Terphenyl	111		70 - 130	05/18/21 09:59	05/18/21 16:17	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12400		101	mg/Kg			05/20/21 13:04	20

Client Sample ID: FS29

Lab Sample ID: 890-678-29

Date Collected: 05/14/21 10:23

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		05/18/21 12:00	05/18/21 18:27	1
Toluene	<0.00198	U	0.00198	mg/Kg		05/18/21 12:00	05/18/21 18:27	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		05/18/21 12:00	05/18/21 18:27	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		05/18/21 12:00	05/18/21 18:27	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		05/18/21 12:00	05/18/21 18:27	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		05/18/21 12:00	05/18/21 18:27	1
Total BTEX	<0.00396	U	0.00396	mg/Kg		05/18/21 12:00	05/18/21 18:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130	05/18/21 12:00	05/18/21 18:27	1
1,4-Difluorobenzene (Surr)	102		70 - 130	05/18/21 12:00	05/18/21 18:27	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS29

Lab Sample ID: 890-678-29

Date Collected: 05/14/21 10:23

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/18/21 09:59	05/18/21 16:38	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/18/21 09:59	05/18/21 16:38	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/18/21 09:59	05/18/21 16:38	1
Total TPH	<49.9	U	49.9	mg/Kg		05/18/21 09:59	05/18/21 16:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	108		70 - 130	05/18/21 09:59	05/18/21 16:38	1
o-Terphenyl	126		70 - 130	05/18/21 09:59	05/18/21 16:38	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9010		50.2	mg/Kg			05/20/21 13:09	10

Client Sample ID: FS30

Lab Sample ID: 890-678-30

Date Collected: 05/14/21 10:32

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/18/21 12:00	05/18/21 20:10	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/18/21 12:00	05/18/21 20:10	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/18/21 12:00	05/18/21 20:10	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		05/18/21 12:00	05/18/21 20:10	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/18/21 12:00	05/18/21 20:10	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		05/18/21 12:00	05/18/21 20:10	1
Total BTEX	<0.00401	U	0.00401	mg/Kg		05/18/21 12:00	05/18/21 20:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130	05/18/21 12:00	05/18/21 20:10	1
1,4-Difluorobenzene (Surr)	89		70 - 130	05/18/21 12:00	05/18/21 20:10	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/18/21 09:59	05/18/21 16:59	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/18/21 09:59	05/18/21 16:59	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/18/21 09:59	05/18/21 16:59	1
Total TPH	<50.0	U	50.0	mg/Kg		05/18/21 09:59	05/18/21 16:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	92		70 - 130	05/18/21 09:59	05/18/21 16:59	1
o-Terphenyl	107		70 - 130	05/18/21 09:59	05/18/21 16:59	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12400		101	mg/Kg			05/20/21 13:14	20

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS31

Lab Sample ID: 890-678-31

Date Collected: 05/14/21 10:34

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		05/18/21 12:00	05/18/21 20:37	1
Toluene	<0.00202	U	0.00202	mg/Kg		05/18/21 12:00	05/18/21 20:37	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		05/18/21 12:00	05/18/21 20:37	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		05/18/21 12:00	05/18/21 20:37	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		05/18/21 12:00	05/18/21 20:37	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		05/18/21 12:00	05/18/21 20:37	1
Total BTEX	<0.00403	U	0.00403	mg/Kg		05/18/21 12:00	05/18/21 20:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130	05/18/21 12:00	05/18/21 20:37	1
1,4-Difluorobenzene (Surr)	102		70 - 130	05/18/21 12:00	05/18/21 20:37	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/19/21 08:44	05/19/21 11:37	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/19/21 08:44	05/19/21 11:37	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/19/21 08:44	05/19/21 11:37	1
Total TPH	<49.9	U	49.9	mg/Kg		05/19/21 08:44	05/19/21 11:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	90		70 - 130	05/19/21 08:44	05/19/21 11:37	1
o-Terphenyl	101		70 - 130	05/19/21 08:44	05/19/21 11:37	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10800		99.8	mg/Kg			05/20/21 13:19	20

Client Sample ID: FS32

Lab Sample ID: 890-678-32

Date Collected: 05/14/21 10:36

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/18/21 12:00	05/18/21 21:04	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/18/21 12:00	05/18/21 21:04	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/18/21 12:00	05/18/21 21:04	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/18/21 12:00	05/18/21 21:04	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/18/21 12:00	05/18/21 21:04	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/18/21 12:00	05/18/21 21:04	1
Total BTEX	<0.00402	U	0.00402	mg/Kg		05/18/21 12:00	05/18/21 21:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		70 - 130	05/18/21 12:00	05/18/21 21:04	1
1,4-Difluorobenzene (Surr)	77		70 - 130	05/18/21 12:00	05/18/21 21:04	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS32

Lab Sample ID: 890-678-32

Date Collected: 05/14/21 10:36

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		05/19/21 08:44	05/19/21 12:39	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		05/19/21 08:44	05/19/21 12:39	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		05/19/21 08:44	05/19/21 12:39	1
Total TPH	<49.8	U	49.8	mg/Kg		05/19/21 08:44	05/19/21 12:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	101		70 - 130	05/19/21 08:44	05/19/21 12:39	1
o-Terphenyl	118		70 - 130	05/19/21 08:44	05/19/21 12:39	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10800		99.8	mg/Kg			05/20/21 13:35	20

Client Sample ID: FS33

Lab Sample ID: 890-678-33

Date Collected: 05/14/21 10:38

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/18/21 12:00	05/18/21 21:30	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/18/21 12:00	05/18/21 21:30	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/18/21 12:00	05/18/21 21:30	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/18/21 12:00	05/18/21 21:30	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/18/21 12:00	05/18/21 21:30	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/18/21 12:00	05/18/21 21:30	1
Total BTEX	<0.00402	U	0.00402	mg/Kg		05/18/21 12:00	05/18/21 21:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		70 - 130	05/18/21 12:00	05/18/21 21:30	1
1,4-Difluorobenzene (Surr)	111		70 - 130	05/18/21 12:00	05/18/21 21:30	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		05/19/21 08:44	05/19/21 13:00	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		05/19/21 08:44	05/19/21 13:00	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		05/19/21 08:44	05/19/21 13:00	1
Total TPH	<49.8	U	49.8	mg/Kg		05/19/21 08:44	05/19/21 13:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	83		70 - 130	05/19/21 08:44	05/19/21 13:00	1
o-Terphenyl	96		70 - 130	05/19/21 08:44	05/19/21 13:00	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11400		99.8	mg/Kg			05/20/21 13:40	20

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS34

Lab Sample ID: 890-678-34

Date Collected: 05/14/21 10:40

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/18/21 12:00	05/18/21 21:56	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/18/21 12:00	05/18/21 21:56	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/18/21 12:00	05/18/21 21:56	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		05/18/21 12:00	05/18/21 21:56	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/18/21 12:00	05/18/21 21:56	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		05/18/21 12:00	05/18/21 21:56	1
Total BTEX	<0.00401	U	0.00401	mg/Kg		05/18/21 12:00	05/18/21 21:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	80		70 - 130	05/18/21 12:00	05/18/21 21:56	1
1,4-Difluorobenzene (Surr)	73		70 - 130	05/18/21 12:00	05/18/21 21:56	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/19/21 08:44	05/19/21 13:22	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/19/21 08:44	05/19/21 13:22	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/19/21 08:44	05/19/21 13:22	1
Total TPH	<49.9	U	49.9	mg/Kg		05/19/21 08:44	05/19/21 13:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	99		70 - 130	05/19/21 08:44	05/19/21 13:22	1
o-Terphenyl	115		70 - 130	05/19/21 08:44	05/19/21 13:22	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9780		49.6	mg/Kg			05/20/21 13:45	10

Client Sample ID: FS35

Lab Sample ID: 890-678-35

Date Collected: 05/14/21 10:42

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/18/21 12:00	05/18/21 22:23	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/18/21 12:00	05/18/21 22:23	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/18/21 12:00	05/18/21 22:23	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/18/21 12:00	05/18/21 22:23	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/18/21 12:00	05/18/21 22:23	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/18/21 12:00	05/18/21 22:23	1
Total BTEX	<0.00399	U	0.00399	mg/Kg		05/18/21 12:00	05/18/21 22:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	81		70 - 130	05/18/21 12:00	05/18/21 22:23	1
1,4-Difluorobenzene (Surr)	83		70 - 130	05/18/21 12:00	05/18/21 22:23	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS35

Lab Sample ID: 890-678-35

Date Collected: 05/14/21 10:42

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/19/21 08:44	05/19/21 13:42	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/19/21 08:44	05/19/21 13:42	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/19/21 08:44	05/19/21 13:42	1
Total TPH	<49.9	U	49.9	mg/Kg		05/19/21 08:44	05/19/21 13:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	84		70 - 130	05/19/21 08:44	05/19/21 13:42	1
o-Terphenyl	95		70 - 130	05/19/21 08:44	05/19/21 13:42	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9920		50.1	mg/Kg			05/20/21 13:50	10

Client Sample ID: FS36

Lab Sample ID: 890-678-36

Date Collected: 05/14/21 10:44

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/18/21 12:00	05/18/21 22:50	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/18/21 12:00	05/18/21 22:50	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/18/21 12:00	05/18/21 22:50	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/18/21 12:00	05/18/21 22:50	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/18/21 12:00	05/18/21 22:50	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/18/21 12:00	05/18/21 22:50	1
Total BTEX	<0.00399	U	0.00399	mg/Kg		05/18/21 12:00	05/18/21 22:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		70 - 130	05/18/21 12:00	05/18/21 22:50	1
1,4-Difluorobenzene (Surr)	100		70 - 130	05/18/21 12:00	05/18/21 22:50	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/19/21 08:44	05/19/21 14:03	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/19/21 08:44	05/19/21 14:03	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/19/21 08:44	05/19/21 14:03	1
Total TPH	<49.9	U	49.9	mg/Kg		05/19/21 08:44	05/19/21 14:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130	05/19/21 08:44	05/19/21 14:03	1
o-Terphenyl	102		70 - 130	05/19/21 08:44	05/19/21 14:03	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9980		50.2	mg/Kg			05/20/21 13:55	10

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS37

Lab Sample ID: 890-678-37

Date Collected: 05/14/21 10:46

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/18/21 12:00	05/18/21 23:17	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/18/21 12:00	05/18/21 23:17	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/18/21 12:00	05/18/21 23:17	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/18/21 12:00	05/18/21 23:17	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/18/21 12:00	05/18/21 23:17	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/18/21 12:00	05/18/21 23:17	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		05/18/21 12:00	05/18/21 23:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 130	05/18/21 12:00	05/18/21 23:17	1
1,4-Difluorobenzene (Surr)	101		70 - 130	05/18/21 12:00	05/18/21 23:17	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 14:24	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 14:24	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 14:24	1
Total TPH	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 14:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130	05/19/21 08:44	05/19/21 14:24	1
o-Terphenyl	108		70 - 130	05/19/21 08:44	05/19/21 14:24	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5480		49.8	mg/Kg			05/20/21 14:00	10

Client Sample ID: FS38

Lab Sample ID: 890-678-38

Date Collected: 05/14/21 10:48

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		05/18/21 12:00	05/18/21 23:43	1
Toluene	<0.00198	U	0.00198	mg/Kg		05/18/21 12:00	05/18/21 23:43	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		05/18/21 12:00	05/18/21 23:43	1
m-Xylene & p-Xylene	<0.00397	U	0.00397	mg/Kg		05/18/21 12:00	05/18/21 23:43	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		05/18/21 12:00	05/18/21 23:43	1
Xylenes, Total	<0.00397	U	0.00397	mg/Kg		05/18/21 12:00	05/18/21 23:43	1
Total BTEX	<0.00397	U	0.00397	mg/Kg		05/18/21 12:00	05/18/21 23:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	167	S1+	70 - 130	05/18/21 12:00	05/18/21 23:43	1
1,4-Difluorobenzene (Surr)	91		70 - 130	05/18/21 12:00	05/18/21 23:43	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS38

Lab Sample ID: 890-678-38

Date Collected: 05/14/21 10:48

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 15:20	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 15:20	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 15:20	1
Total TPH	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 15:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 130	05/19/21 08:44	05/19/21 15:20	1
o-Terphenyl	124		70 - 130	05/19/21 08:44	05/19/21 15:20	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7280		50.2	mg/Kg			05/20/21 14:16	10

Client Sample ID: FS39

Lab Sample ID: 890-678-39

Date Collected: 05/14/21 10:50

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		05/18/21 12:00	05/19/21 00:10	1
Toluene	<0.00202	U	0.00202	mg/Kg		05/18/21 12:00	05/19/21 00:10	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		05/18/21 12:00	05/19/21 00:10	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		05/18/21 12:00	05/19/21 00:10	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		05/18/21 12:00	05/19/21 00:10	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		05/18/21 12:00	05/19/21 00:10	1
Total BTEX	<0.00404	U	0.00404	mg/Kg		05/18/21 12:00	05/19/21 00:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 130	05/18/21 12:00	05/19/21 00:10	1
1,4-Difluorobenzene (Surr)	97		70 - 130	05/18/21 12:00	05/19/21 00:10	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/19/21 08:44	05/19/21 18:22	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/19/21 08:44	05/19/21 18:22	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/19/21 08:44	05/19/21 18:22	1
Total TPH	<49.9	U	49.9	mg/Kg		05/19/21 08:44	05/19/21 18:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	114		70 - 130	05/19/21 08:44	05/19/21 18:22	1
o-Terphenyl	129		70 - 130	05/19/21 08:44	05/19/21 18:22	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5070		50.5	mg/Kg			05/20/21 14:21	10

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS40

Lab Sample ID: 890-678-40

Date Collected: 05/14/21 10:52

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/19/21 14:30	05/19/21 19:16	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/19/21 14:30	05/19/21 19:16	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/19/21 14:30	05/19/21 19:16	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/19/21 14:30	05/19/21 19:16	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/19/21 14:30	05/19/21 19:16	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/19/21 14:30	05/19/21 19:16	1
Total BTEX	<0.00402	U	0.00402	mg/Kg		05/19/21 14:30	05/19/21 19:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130	05/19/21 14:30	05/19/21 19:16	1
1,4-Difluorobenzene (Surr)	0.7	S1-	70 - 130	05/19/21 14:30	05/19/21 19:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 18:43	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 18:43	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 18:43	1
Total TPH	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 18:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 130	05/19/21 08:44	05/19/21 18:43	1
o-Terphenyl	120		70 - 130	05/19/21 08:44	05/19/21 18:43	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10700		101	mg/Kg			05/20/21 14:37	20

Client Sample ID: FS41

Lab Sample ID: 890-678-41

Date Collected: 05/14/21 10:54

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/19/21 14:30	05/19/21 19:36	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/19/21 14:30	05/19/21 19:36	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/19/21 14:30	05/19/21 19:36	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/19/21 14:30	05/19/21 19:36	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/19/21 14:30	05/19/21 19:36	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/19/21 14:30	05/19/21 19:36	1
Total BTEX	<0.00402	U	0.00402	mg/Kg		05/19/21 14:30	05/19/21 19:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130	05/19/21 14:30	05/19/21 19:36	1
1,4-Difluorobenzene (Surr)	99		70 - 130	05/19/21 14:30	05/19/21 19:36	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS41

Lab Sample ID: 890-678-41

Date Collected: 05/14/21 10:54

Matrix: Solid

Date Received: 05/17/21 10:09

Sample Depth: - 0.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/18/21 11:59	05/18/21 14:03	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/18/21 11:59	05/18/21 14:03	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/18/21 11:59	05/18/21 14:03	1
Total TPH	<49.9	U	49.9	mg/Kg		05/18/21 11:59	05/18/21 14:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 130	05/18/21 11:59	05/18/21 14:03	1
o-Terphenyl	105		70 - 130	05/18/21 11:59	05/18/21 14:03	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5850		50.3	mg/Kg			05/20/21 14:42	10

Surrogate Summary

Client: WSP USA Inc.

Job ID: 890-678-1

Project/Site: Muy Wayno Frac Pond-Big D

SDG: 314031190

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BFB1 (70-130)	DFBZ1 (70-130)
890-678-1	FS01	106	99
890-678-2	FS02	114	98
890-678-3	FS03	96	100
890-678-3 MS	FS03	105	100
890-678-4	FS04	93	102
890-678-5	FS05	102	94
890-678-6	FS06	95	98
890-678-7	FS07	92	98
890-678-8	FS08	96	98
890-678-9	FS09	97	97
890-678-10	FS10	99	95
890-678-11	FS11	104	95
890-678-12	FS12	95	100
890-678-13	FS13	85	98
890-678-14	FS14	87	98
890-678-15	FS15	90	98
890-678-16	FS16	94	98
890-678-17	FS17	92	97
890-678-18	FS18	96	97
890-678-19	FS19	95	99
890-678-20	FS20	123	92
890-678-20 MS	FS20	82	89
890-678-20 MSD	FS20	93	108
890-678-21	FS21	117	99
890-678-22	FS22	114	100
890-678-23	FS23	113	102
890-678-24	FS24	110	94
890-678-25	FS25	109	93
890-678-26	FS26	120	101
890-678-27	FS27	109	102
890-678-28	FS28	108	98
890-678-29	FS29	112	102
890-678-30	FS30	111	89
890-678-31	FS31	105	102
890-678-32	FS32	83	77
890-678-33	FS33	83	111
890-678-34	FS34	80	73
890-678-35	FS35	81	83
890-678-36	FS36	93	100
890-678-37	FS37	94	101
890-678-38	FS38	167 S1+	91
890-678-39	FS39	94	97
890-678-40	FS40	111	0.7 S1-
890-678-41	FS41	112	99
LCS 880-3194/1-A	Lab Control Sample	102	96
LCS 880-3195/1-A	Lab Control Sample	107	103
LCS 880-3196/1-A	Lab Control Sample	105	103
LCS 880-3223/1-A	Lab Control Sample	100	93
LCSD 880-3194/2-A	Lab Control Sample Dup	102	97

Eurofins Xenco, Carlsbad

Surrogate Summary

Client: WSP USA Inc.

Job ID: 890-678-1

Project/Site: Muy Wayno Frac Pond-Big D

SDG: 314031190

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
LCSD 880-3195/2-A	Lab Control Sample Dup	105	104
LCSD 880-3196/2-A	Lab Control Sample Dup	99	102
LCSD 880-3223/2-A	Lab Control Sample Dup	99	94
MB 880-3194/5-A	Method Blank	107	91
MB 880-3195/5-A	Method Blank	84	94
MB 880-3196/5-A	Method Blank	72	85
MB 880-3223/5-A	Method Blank	106	91
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1	DFBZ1
890-678-3 MSD	FS03		
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-678-1	FS01	120	139 S1+
890-678-1 MS	FS01	109	111
890-678-1 MSD	FS01	108	110
890-678-2	FS02	124	145 S1+
890-678-3	FS03	119	138 S1+
890-678-4	FS04	121	136 S1+
890-678-5	FS05	125	141 S1+
890-678-6	FS06	119	143 S1+
890-678-7	FS07	115	130
890-678-8	FS08	122	144 S1+
890-678-9	FS09	122	146 S1+
890-678-10	FS10	124	144 S1+
890-678-11	FS11	128	150 S1+
890-678-11 MS	FS11	113	118
890-678-11 MSD	FS11	121	125
890-678-12	FS12	136 S1+	155 S1+
890-678-13	FS13	117	137 S1+
890-678-14	FS14	118	134 S1+
890-678-15	FS15	122	137 S1+
890-678-16	FS16	115	140 S1+
890-678-17	FS17	119	134 S1+
890-678-18	FS18	121	142 S1+

Eurofins Xenco, Carlsbad

Surrogate Summary

Client: WSP USA Inc.

Job ID: 890-678-1

Project/Site: Muy Wayno Frac Pond-Big D

SDG: 314031190

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-678-19	FS19	123	143 S1+
890-678-20	FS20	120	139 S1+
890-678-21	FS21	97	113
890-678-21 MS	FS21	91	99
890-678-21 MSD	FS21	90	94
890-678-22	FS22	95	110
890-678-23	FS23	83	96
890-678-24	FS24	98	115
890-678-25	FS25	100	113
890-678-26	FS26	97	115
890-678-27	FS27	98	115
890-678-28	FS28	94	111
890-678-29	FS29	108	126
890-678-30	FS30	92	107
890-678-31	FS31	90	101
890-678-31 MS	FS31	83	85
890-678-31 MSD	FS31	82	85
890-678-32	FS32	101	118
890-678-33	FS33	83	96
890-678-34	FS34	99	115
890-678-35	FS35	84	95
890-678-36	FS36	89	102
890-678-37	FS37	93	108
890-678-38	FS38	107	124
890-678-39	FS39	114	129
890-678-40	FS40	107	120
890-678-41	FS41	102	105
890-678-41 MS	FS41	101	90
890-678-41 MSD	FS41	97	88
LCS 880-3200/2-A	Lab Control Sample	122	136 S1+
LCS 880-3201/2-A	Lab Control Sample	97	109
LCS 880-3210/2-A	Lab Control Sample	102	98
LCS 880-3219/2-A	Lab Control Sample	105	103
LCS 880-3222/2-A	Lab Control Sample	87	96
LCSD 880-3200/3-A	Lab Control Sample Dup	121	128
LCSD 880-3201/3-A	Lab Control Sample Dup	107	119
LCSD 880-3210/3-A	Lab Control Sample Dup	105	97
LCSD 880-3219/3-A	Lab Control Sample Dup	106	113
LCSD 880-3222/3-A	Lab Control Sample Dup	91	101
MB 880-3200/1-A	Method Blank	111	130
MB 880-3201/1-A	Method Blank	95	110
MB 880-3210/1-A	Method Blank	112	105
MB 880-3219/1-A	Method Blank	110	129
MB 880-3222/1-A	Method Blank	91	106

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-3194/5-A

Matrix: Solid

Analysis Batch: 3197

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 3194

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:35	05/18/21 13:13	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:35	05/18/21 13:13	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:35	05/18/21 13:13	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/18/21 08:35	05/18/21 13:13	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:35	05/18/21 13:13	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/18/21 08:35	05/18/21 13:13	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/18/21 08:35	05/18/21 13:13	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130	05/18/21 08:35	05/18/21 13:13	1
1,4-Difluorobenzene (Surr)	91		70 - 130	05/18/21 08:35	05/18/21 13:13	1

Lab Sample ID: LCS 880-3194/1-A

Matrix: Solid

Analysis Batch: 3197

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 3194

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.07243		mg/Kg		72	70 - 130
Toluene	0.100	0.08903		mg/Kg		89	70 - 130
Ethylbenzene	0.100	0.09700		mg/Kg		97	70 - 130
m-Xylene & p-Xylene	0.200	0.1973		mg/Kg		99	70 - 130
o-Xylene	0.100	0.09996		mg/Kg		100	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

Lab Sample ID: LCSD 880-3194/2-A

Matrix: Solid

Analysis Batch: 3197

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 3194

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.07261		mg/Kg		73	70 - 130	0	35
Toluene	0.100	0.08635		mg/Kg		86	70 - 130	3	35
Ethylbenzene	0.100	0.09331		mg/Kg		93	70 - 130	4	35
m-Xylene & p-Xylene	0.200	0.1892		mg/Kg		95	70 - 130	4	35
o-Xylene	0.100	0.09680		mg/Kg		97	70 - 130	3	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: MB 880-3195/5-A

Matrix: Solid

Analysis Batch: 3199

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 3195

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:38	05/18/21 14:09	1

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

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

Lab Sample ID: MB 880-3195/5-A

Matrix: Solid

Analysis Batch: 3199

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 3195

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:38	05/18/21 14:09	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:38	05/18/21 14:09	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/18/21 08:38	05/18/21 14:09	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:38	05/18/21 14:09	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/18/21 08:38	05/18/21 14:09	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/18/21 08:38	05/18/21 14:09	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		70 - 130	05/18/21 08:38	05/18/21 14:09	1
1,4-Difluorobenzene (Surr)	94		70 - 130	05/18/21 08:38	05/18/21 14:09	1

Lab Sample ID: LCS 880-3195/1-A

Matrix: Solid

Analysis Batch: 3199

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 3195

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.08072		mg/Kg		81	70 - 130
Toluene	0.100	0.08281		mg/Kg		83	70 - 130
Ethylbenzene	0.100	0.09180		mg/Kg		92	70 - 130
m-Xylene & p-Xylene	0.200	0.1920		mg/Kg		96	70 - 130
o-Xylene	0.100	0.09894		mg/Kg		99	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

Lab Sample ID: LCSD 880-3195/2-A

Matrix: Solid

Analysis Batch: 3199

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 3195

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.07828		mg/Kg		78	70 - 130	3	35
Toluene	0.100	0.07992		mg/Kg		80	70 - 130	4	35
Ethylbenzene	0.100	0.08818		mg/Kg		88	70 - 130	4	35
m-Xylene & p-Xylene	0.200	0.1832		mg/Kg		92	70 - 130	5	35
o-Xylene	0.100	0.09405		mg/Kg		94	70 - 130	5	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

Lab Sample ID: 890-678-3 MS

Matrix: Solid

Analysis Batch: 3199

Client Sample ID: FS03

Prep Type: Total/NA

Prep Batch: 3195

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00199	U F1	0.0996	0.06313	F1	mg/Kg		63	70 - 130
Toluene	<0.00199	U F1	0.0996	0.06608	F1	mg/Kg		66	70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

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

Lab Sample ID: 890-678-3 MS

Matrix: Solid

Analysis Batch: 3199

Client Sample ID: FS03

Prep Type: Total/NA

Prep Batch: 3195

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00199	U	0.0996	0.07234		mg/Kg		73	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.199	0.1502		mg/Kg		75	70 - 130
o-Xylene	<0.00199	U	0.0996	0.07723		mg/Kg		78	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: 890-678-3 MSD

Matrix: Solid

Analysis Batch: 3199

Client Sample ID: FS03

Prep Type: Total/NA

Prep Batch: 3195

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00199	U F1	0.0996	0.05696		mg/Kg					
Toluene	<0.00199	U F1	0.0996	0.06281		mg/Kg					
Ethylbenzene	<0.00199	U	0.0996	0.06784		mg/Kg					
m-Xylene & p-Xylene	<0.00398	U	0.199	0.1377		mg/Kg					
o-Xylene	<0.00199	U	0.0996	0.07073		mg/Kg					

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)			
1,4-Difluorobenzene (Surr)			

Lab Sample ID: MB 880-3196/5-A

Matrix: Solid

Analysis Batch: 3198

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 3196

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:42	05/18/21 14:14	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:42	05/18/21 14:14	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:42	05/18/21 14:14	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/18/21 08:42	05/18/21 14:14	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/18/21 08:42	05/18/21 14:14	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/18/21 08:42	05/18/21 14:14	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/18/21 08:42	05/18/21 14:14	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	72		70 - 130	05/18/21 08:42	05/18/21 14:14	1
1,4-Difluorobenzene (Surr)	85		70 - 130	05/18/21 08:42	05/18/21 14:14	1

Lab Sample ID: LCS 880-3196/1-A

Matrix: Solid

Analysis Batch: 3198

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 3196

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.09520		mg/Kg		95	70 - 130
Toluene	0.100	0.09415		mg/Kg		94	70 - 130
Ethylbenzene	0.100	0.1007		mg/Kg		101	70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

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

Lab Sample ID: LCS 880-3196/1-A

Matrix: Solid

Analysis Batch: 3198

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 3196

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
m-Xylene & p-Xylene	0.200	0.1963		mg/Kg		98	70 - 130
o-Xylene	0.100	0.09500		mg/Kg		95	70 - 130

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

Lab Sample ID: LCSD 880-3196/2-A

Matrix: Solid

Analysis Batch: 3198

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 3196

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Benzene	0.100	0.1127		mg/Kg		113	70 - 130	17	35
Toluene	0.100	0.1108		mg/Kg		111	70 - 130	16	35
Ethylbenzene	0.100	0.1103		mg/Kg		110	70 - 130	9	35
m-Xylene & p-Xylene	0.200	0.2144		mg/Kg		107	70 - 130	9	35
o-Xylene	0.100	0.1014		mg/Kg		101	70 - 130	7	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

Lab Sample ID: 890-678-20 MS

Matrix: Solid

Analysis Batch: 3198

Client Sample ID: FS20

Prep Type: Total/NA

Prep Batch: 3196

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00200	U	0.100	0.08897		mg/Kg		89	70 - 130
Toluene	<0.00200	U	0.100	0.09204		mg/Kg		92	70 - 130
Ethylbenzene	<0.00200	U	0.100	0.09667		mg/Kg		96	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1836		mg/Kg		92	70 - 130
o-Xylene	<0.00200	U	0.100	0.08452		mg/Kg		84	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	82		70 - 130
1,4-Difluorobenzene (Surr)	89		70 - 130

Lab Sample ID: 890-678-20 MSD

Matrix: Solid

Analysis Batch: 3198

Client Sample ID: FS20

Prep Type: Total/NA

Prep Batch: 3196

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Benzene	<0.00200	U	0.101	0.09900		mg/Kg		98	70 - 130	11	35
Toluene	<0.00200	U	0.101	0.09870		mg/Kg		98	70 - 130	7	35
Ethylbenzene	<0.00200	U	0.101	0.1031		mg/Kg		102	70 - 130	6	35
m-Xylene & p-Xylene	<0.00399	U	0.202	0.1992		mg/Kg		99	70 - 130	8	35
o-Xylene	<0.00200	U	0.101	0.09347		mg/Kg		93	70 - 130	10	35

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

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

Lab Sample ID: 890-678-20 MSD

Matrix: Solid

Analysis Batch: 3198

Client Sample ID: FS20

Prep Type: Total/NA

Prep Batch: 3196

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	93		70 - 130
1,4-Difluorobenzene (Surr)	108		70 - 130

Lab Sample ID: MB 880-3223/5-A

Matrix: Solid

Analysis Batch: 3232

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 3223

	MB	MB							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil	Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/19/21 08:58	05/19/21 12:42	1	
Toluene	<0.00200	U	0.00200	mg/Kg		05/19/21 08:58	05/19/21 12:42	1	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/19/21 08:58	05/19/21 12:42	1	
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/19/21 08:58	05/19/21 12:42	1	
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/19/21 08:58	05/19/21 12:42	1	
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/19/21 08:58	05/19/21 12:42	1	
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/19/21 08:58	05/19/21 12:42	1	

	MB	MB							
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil	Fac
4-Bromofluorobenzene (Surr)	106		70 - 130			05/19/21 08:58	05/19/21 12:42	1	
1,4-Difluorobenzene (Surr)	91		70 - 130			05/19/21 08:58	05/19/21 12:42	1	

Lab Sample ID: LCS 880-3223/1-A

Matrix: Solid

Analysis Batch: 3232

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 3223

	Spike	LCS	LCS					%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Benzene	0.100	0.09271		mg/Kg		93	70 - 130		
Toluene	0.100	0.1156		mg/Kg		116	70 - 130		
Ethylbenzene	0.100	0.1164		mg/Kg		116	70 - 130		
m-Xylene & p-Xylene	0.200	0.2404		mg/Kg		120	70 - 130		
o-Xylene	0.100	0.1163		mg/Kg		116	70 - 130		

	LCS	LCS							
Surrogate	%Recovery	Qualifier	Limits						
4-Bromofluorobenzene (Surr)	100		70 - 130						
1,4-Difluorobenzene (Surr)	93		70 - 130						

Lab Sample ID: LCSD 880-3223/2-A

Matrix: Solid

Analysis Batch: 3232

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 3223

	Spike	LCSD	LCSD					%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.09617		mg/Kg		96	70 - 130	4	35	
Toluene	0.100	0.1154		mg/Kg		115	70 - 130	0	35	
Ethylbenzene	0.100	0.1159		mg/Kg		116	70 - 130	0	35	
m-Xylene & p-Xylene	0.200	0.2367		mg/Kg		118	70 - 130	2	35	
o-Xylene	0.100	0.1149		mg/Kg		115	70 - 130	1	35	

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

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

Lab Sample ID: LCSD 880-3223/2-A

Matrix: Solid

Analysis Batch: 3232

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 3223

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

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

Lab Sample ID: MB 880-3200/1-A

Matrix: Solid

Analysis Batch: 3166

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 3200

	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		05/18/21 09:58	05/18/21 11:25	1	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/18/21 09:58	05/18/21 11:25	1	
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/18/21 09:58	05/18/21 11:25	1	
Total TPH	<50.0	U	50.0	mg/Kg		05/18/21 09:58	05/18/21 11:25	1	

	MB	MB							
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil	Fac
1-Chlorooctane	111		70 - 130			05/18/21 09:58	05/18/21 11:25	1	
o-Terphenyl	130		70 - 130			05/18/21 09:58	05/18/21 11:25	1	

Lab Sample ID: LCS 880-3200/2-A

Matrix: Solid

Analysis Batch: 3166

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 3200

		Spike	LCS	LCS				%Rec.	
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10		1000	1067		mg/Kg		107	70 - 130	
Diesel Range Organics (Over C10-C28)		1000	1314	*+	mg/Kg		131	70 - 130	

	LCS	LCS							
Surrogate	%Recovery	Qualifier	Limits						
1-Chlorooctane	122		70 - 130						
o-Terphenyl	136	S1+	70 - 130						

Lab Sample ID: LCSD 880-3200/3-A

Matrix: Solid

Analysis Batch: 3166

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 3200

		Spike	LCSD	LCSD				%Rec.		RPD	
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics (GRO)-C6-C10		1000	1028		mg/Kg		103	70 - 130	4	20	
Diesel Range Organics (Over C10-C28)		1000	1282		mg/Kg		128	70 - 130	2	20	

	LCSD	LCSD								
Surrogate	%Recovery	Qualifier	Limits							
1-Chlorooctane	121		70 - 130							
o-Terphenyl	128		70 - 130							

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

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

Lab Sample ID: 890-678-1 MS

Matrix: Solid

Analysis Batch: 3166

Client Sample ID: FS01

Prep Type: Total/NA

Prep Batch: 3200

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	996	993.2		mg/Kg		100	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U *	996	1244		mg/Kg		125	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
1-Chlorooctane	109		70 - 130						
o-Terphenyl	111		70 - 130						

Lab Sample ID: 890-678-1 MSD

Matrix: Solid

Analysis Batch: 3166

Client Sample ID: FS01

Prep Type: Total/NA

Prep Batch: 3200

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	996	981.7		mg/Kg		99	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<49.9	U *	996	1257		mg/Kg		126	70 - 130	1	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	108		70 - 130								
o-Terphenyl	110		70 - 130								

Lab Sample ID: MB 880-3201/1-A

Matrix: Solid

Analysis Batch: 3168

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 3201

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/18/21 09:59	05/18/21 11:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/18/21 09:59	05/18/21 11:25	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/18/21 09:59	05/18/21 11:25	1
Total TPH	<50.0	U	50.0	mg/Kg		05/18/21 09:59	05/18/21 11:25	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130			05/18/21 09:59	05/18/21 11:25	1
o-Terphenyl	110		70 - 130			05/18/21 09:59	05/18/21 11:25	1

Lab Sample ID: LCS 880-3201/2-A

Matrix: Solid

Analysis Batch: 3168

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 3201

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	863.9		mg/Kg		86	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1059		mg/Kg		106	70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

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

Lab Sample ID: LCS 880-3201/2-A

Matrix: Solid

Analysis Batch: 3168

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 3201

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	97		70 - 130
o-Terphenyl	109		70 - 130

Lab Sample ID: LCSD 880-3201/3-A

Matrix: Solid

Analysis Batch: 3168

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 3201

			Spike	LCSD	LCSD				%Rec.		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10			1000	952.0		mg/Kg		95	70 - 130	10	20
Diesel Range Organics (Over C10-C28)			1000	1158		mg/Kg		116	70 - 130	9	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	107		70 - 130
o-Terphenyl	119		70 - 130

Lab Sample ID: 890-678-21 MS

Matrix: Solid

Analysis Batch: 3168

Client Sample ID: FS21

Prep Type: Total/NA

Prep Batch: 3201

	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	996	935.7		mg/Kg		94	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	996	1110		mg/Kg		111	70 - 130		

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	99		70 - 130

Lab Sample ID: 890-678-21 MSD

Matrix: Solid

Analysis Batch: 3168

Client Sample ID: FS21

Prep Type: Total/NA

Prep Batch: 3201

	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	996	928.3		mg/Kg		93	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<49.9	U	996	1073		mg/Kg		108	70 - 130	3	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	90		70 - 130
o-Terphenyl	94		70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

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

Lab Sample ID: MB 880-3210/1-A

Matrix: Solid

Analysis Batch: 3205

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 3210

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/18/21 11:59	05/18/21 12:58	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/18/21 11:59	05/18/21 12:58	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/18/21 11:59	05/18/21 12:58	1
Total TPH	<50.0	U	50.0	mg/Kg		05/18/21 11:59	05/18/21 12:58	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	112		70 - 130	05/18/21 11:59	05/18/21 12:58	1
o-Terphenyl	105		70 - 130	05/18/21 11:59	05/18/21 12:58	1

Lab Sample ID: LCS 880-3210/2-A

Matrix: Solid

Analysis Batch: 3205

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 3210

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	873.5		mg/Kg		87	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1084		mg/Kg		108	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	102		70 - 130
o-Terphenyl	98		70 - 130

Lab Sample ID: LCSD 880-3210/3-A

Matrix: Solid

Analysis Batch: 3205

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 3210

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	900.4		mg/Kg		90	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	1000	1097		mg/Kg		110	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	97		70 - 130

Lab Sample ID: 890-678-41 MS

Matrix: Solid

Analysis Batch: 3205

Client Sample ID: FS41

Prep Type: Total/NA

Prep Batch: 3210

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	996	965.1		mg/Kg		95	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	996	1148		mg/Kg		114	70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

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

Lab Sample ID: 890-678-41 MS

Matrix: Solid

Analysis Batch: 3205

Client Sample ID: FS41

Prep Type: Total/NA

Prep Batch: 3210

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	101		70 - 130
o-Terphenyl	90		70 - 130

Lab Sample ID: 890-678-41 MSD

Matrix: Solid

Analysis Batch: 3205

Client Sample ID: FS41

Prep Type: Total/NA

Prep Batch: 3210

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	996	942.1		mg/Kg		92	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<49.9	U	996	1149		mg/Kg		114	70 - 130	0	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	97		70 - 130
o-Terphenyl	88		70 - 130

Lab Sample ID: MB 880-3219/1-A

Matrix: Solid

Analysis Batch: 3220

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 3219

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/19/21 08:36	05/19/21 10:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/19/21 08:36	05/19/21 10:13	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/19/21 08:36	05/19/21 10:13	1
Total TPH	<50.0	U	50.0	mg/Kg		05/19/21 08:36	05/19/21 10:13	1

	MB	MB						
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac		
1-Chlorooctane	110		70 - 130	05/19/21 08:36	05/19/21 10:13	1		
o-Terphenyl	129		70 - 130	05/19/21 08:36	05/19/21 10:13	1		

Lab Sample ID: LCS 880-3219/2-A

Matrix: Solid

Analysis Batch: 3220

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 3219

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	970.2		mg/Kg		97	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1191		mg/Kg		119	70 - 130

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	103		70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.

Job ID: 890-678-1

Project/Site: Muy Wayno Frac Pond-Big D

SDG: 314031190

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

Lab Sample ID: LCSD 880-3219/3-A

Matrix: Solid

Analysis Batch: 3220

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 3219

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	995.0		mg/Kg		99	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	1000	1250		mg/Kg		125	70 - 130	5	20
	LCSD	LCSD							
Surrogate	%Recovery	Qualifier	Limits						
1-Chlorooctane	106		70 - 130						
o-Terphenyl	113		70 - 130						

Lab Sample ID: 890-678-11 MS

Matrix: Solid

Analysis Batch: 3220

Client Sample ID: FS11

Prep Type: Total/NA

Prep Batch: 3219

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	996	1161		mg/Kg		117	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U F1	996	1481	F1	mg/Kg		149	70 - 130		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	113		70 - 130								
o-Terphenyl	118		70 - 130								

Lab Sample ID: 890-678-11 MSD

Matrix: Solid

Analysis Batch: 3220

Client Sample ID: FS11

Prep Type: Total/NA

Prep Batch: 3219

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	996	1240		mg/Kg		124	70 - 130	7	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1	996	1582	F1	mg/Kg		159	70 - 130	7	20
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	121		70 - 130								
o-Terphenyl	125		70 - 130								

Lab Sample ID: MB 880-3222/1-A

Matrix: Solid

Analysis Batch: 3224

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 3222

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 10:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 10:13	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 10:13	1
Total TPH	<50.0	U	50.0	mg/Kg		05/19/21 08:44	05/19/21 10:13	1

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

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

Lab Sample ID: MB 880-3222/1-A

Matrix: Solid

Analysis Batch: 3224

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 3222

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	91		70 - 130	05/19/21 08:44	05/19/21 10:13	1
o-Terphenyl	106		70 - 130	05/19/21 08:44	05/19/21 10:13	1

Lab Sample ID: LCS 880-3222/2-A

Matrix: Solid

Analysis Batch: 3224

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 3222

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	904.4		mg/Kg		90	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1051		mg/Kg		105	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	87		70 - 130
o-Terphenyl	96		70 - 130

Lab Sample ID: LCSD 880-3222/3-A

Matrix: Solid

Analysis Batch: 3224

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 3222

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	888.8		mg/Kg		89	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	1000	1109		mg/Kg		111	70 - 130	5	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	101		70 - 130

Lab Sample ID: 890-678-31 MS

Matrix: Solid

Analysis Batch: 3224

Client Sample ID: FS31

Prep Type: Total/NA

Prep Batch: 3222

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	996	883.6		mg/Kg		89	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	996	1058		mg/Kg		106	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	83		70 - 130
o-Terphenyl	85		70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

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

Lab Sample ID: 890-678-31 MSD

Matrix: Solid

Analysis Batch: 3224

Client Sample ID: FS31

Prep Type: Total/NA

Prep Batch: 3222

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	996	866.6		mg/Kg		87	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<49.9	U	996	1057		mg/Kg		106	70 - 130	0	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	82		70 - 130								
o-Terphenyl	85		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-3233/1-A

Matrix: Solid

Analysis Batch: 3253

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			05/19/21 16:36	1

Lab Sample ID: LCS 880-3233/2-A

Matrix: Solid

Analysis Batch: 3253

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	245.4		mg/Kg		98	90 - 110

Lab Sample ID: LCSD 880-3233/3-A

Matrix: Solid

Analysis Batch: 3253

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	245.3		mg/Kg		98	90 - 110	0	20

Lab Sample ID: 890-678-7 MS

Matrix: Solid

Analysis Batch: 3253

Client Sample ID: FS07

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	662	F1	250	869.7	F1	mg/Kg		83	90 - 110

Lab Sample ID: 890-678-7 MSD

Matrix: Solid

Analysis Batch: 3253

Client Sample ID: FS07

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	662	F1	250	870.2	F1	mg/Kg		83	90 - 110	0	20

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-678-17 MS

Matrix: Solid

Analysis Batch: 3253

Client Sample ID: FS17

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	383		249	606.1		mg/Kg		90	90 - 110

Lab Sample ID: 890-678-17 MSD

Matrix: Solid

Analysis Batch: 3253

Client Sample ID: FS17

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	383		249	606.1		mg/Kg		90	90 - 110	0	20

Lab Sample ID: MB 880-3234/1-A

Matrix: Solid

Analysis Batch: 3256

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			05/20/21 12:32	1

Lab Sample ID: LCS 880-3234/2-A

Matrix: Solid

Analysis Batch: 3256

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	252.9		mg/Kg		101	90 - 110

Lab Sample ID: LCSD 880-3234/3-A

Matrix: Solid

Analysis Batch: 3256

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	249.0		mg/Kg		100	90 - 110	2	20

Lab Sample ID: 890-678-27 MS

Matrix: Solid

Analysis Batch: 3256

Client Sample ID: FS27

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10200		249	14980	4	mg/Kg		1908	90 - 110

Lab Sample ID: 890-678-27 MSD

Matrix: Solid

Analysis Batch: 3256

Client Sample ID: FS27

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10200		249	15160	4	mg/Kg		1981	90 - 110	1	20

Lab Sample ID: 890-678-37 MS

Matrix: Solid

Analysis Batch: 3256

Client Sample ID: FS37

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5480		249	8199	4	mg/Kg		1092	90 - 110

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 890-678-37 MSD

Matrix: Solid

Analysis Batch: 3256

Client Sample ID: FS37

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	5480		249	7972	4	mg/Kg		1001	90 - 110	3	20

Lab Sample ID: MB 880-3231/1-A

Matrix: Solid

Analysis Batch: 3258

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			05/19/21 17:36	1

Lab Sample ID: LCS 880-3231/2-A

Matrix: Solid

Analysis Batch: 3258

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	255.0		mg/Kg		102	90 - 110

Lab Sample ID: LCSD 880-3231/3-A

Matrix: Solid

Analysis Batch: 3258

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	254.5		mg/Kg		102	90 - 110	0	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

GC VOA

Prep Batch: 3194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-678-1	FS01	Total/NA	Solid	5035	
890-678-2	FS02	Total/NA	Solid	5035	
MB 880-3194/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3194/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3194/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Prep Batch: 3195

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-678-3	FS03	Total/NA	Solid	5035	
890-678-4	FS04	Total/NA	Solid	5035	
890-678-5	FS05	Total/NA	Solid	5035	
890-678-6	FS06	Total/NA	Solid	5035	
890-678-7	FS07	Total/NA	Solid	5035	
890-678-8	FS08	Total/NA	Solid	5035	
890-678-9	FS09	Total/NA	Solid	5035	
890-678-10	FS10	Total/NA	Solid	5035	
890-678-11	FS11	Total/NA	Solid	5035	
890-678-12	FS12	Total/NA	Solid	5035	
890-678-13	FS13	Total/NA	Solid	5035	
890-678-14	FS14	Total/NA	Solid	5035	
890-678-15	FS15	Total/NA	Solid	5035	
890-678-16	FS16	Total/NA	Solid	5035	
890-678-17	FS17	Total/NA	Solid	5035	
890-678-18	FS18	Total/NA	Solid	5035	
890-678-19	FS19	Total/NA	Solid	5035	
MB 880-3195/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3195/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3195/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-678-3 MS	FS03	Total/NA	Solid	5035	
890-678-3 MSD	FS03	Total/NA	Solid	5035	

Prep Batch: 3196

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-678-20	FS20	Total/NA	Solid	5035	
890-678-21	FS21	Total/NA	Solid	5035	
890-678-22	FS22	Total/NA	Solid	5035	
890-678-23	FS23	Total/NA	Solid	5035	
890-678-24	FS24	Total/NA	Solid	5035	
890-678-25	FS25	Total/NA	Solid	5035	
890-678-26	FS26	Total/NA	Solid	5035	
890-678-27	FS27	Total/NA	Solid	5035	
890-678-28	FS28	Total/NA	Solid	5035	
890-678-29	FS29	Total/NA	Solid	5035	
890-678-30	FS30	Total/NA	Solid	5035	
890-678-31	FS31	Total/NA	Solid	5035	
890-678-32	FS32	Total/NA	Solid	5035	
890-678-33	FS33	Total/NA	Solid	5035	
890-678-34	FS34	Total/NA	Solid	5035	
890-678-35	FS35	Total/NA	Solid	5035	
890-678-36	FS36	Total/NA	Solid	5035	
890-678-37	FS37	Total/NA	Solid	5035	

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.

Job ID: 890-678-1

Project/Site: Muy Wayno Frac Pond-Big D

SDG: 314031190

GC VOA (Continued)

Prep Batch: 3196 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-678-38	FS38	Total/NA	Solid	5035	
890-678-39	FS39	Total/NA	Solid	5035	
MB 880-3196/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3196/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3196/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-678-20 MS	FS20	Total/NA	Solid	5035	
890-678-20 MSD	FS20	Total/NA	Solid	5035	

Analysis Batch: 3197

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-678-1	FS01	Total/NA	Solid	8021B	3194
890-678-2	FS02	Total/NA	Solid	8021B	3194
MB 880-3194/5-A	Method Blank	Total/NA	Solid	8021B	3194
LCS 880-3194/1-A	Lab Control Sample	Total/NA	Solid	8021B	3194
LCSD 880-3194/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3194

Analysis Batch: 3198

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-678-20	FS20	Total/NA	Solid	8021B	3196
890-678-21	FS21	Total/NA	Solid	8021B	3196
890-678-22	FS22	Total/NA	Solid	8021B	3196
890-678-23	FS23	Total/NA	Solid	8021B	3196
890-678-24	FS24	Total/NA	Solid	8021B	3196
890-678-25	FS25	Total/NA	Solid	8021B	3196
890-678-26	FS26	Total/NA	Solid	8021B	3196
890-678-27	FS27	Total/NA	Solid	8021B	3196
890-678-28	FS28	Total/NA	Solid	8021B	3196
890-678-29	FS29	Total/NA	Solid	8021B	3196
890-678-30	FS30	Total/NA	Solid	8021B	3196
890-678-31	FS31	Total/NA	Solid	8021B	3196
890-678-32	FS32	Total/NA	Solid	8021B	3196
890-678-33	FS33	Total/NA	Solid	8021B	3196
890-678-34	FS34	Total/NA	Solid	8021B	3196
890-678-35	FS35	Total/NA	Solid	8021B	3196
890-678-36	FS36	Total/NA	Solid	8021B	3196
890-678-37	FS37	Total/NA	Solid	8021B	3196
890-678-38	FS38	Total/NA	Solid	8021B	3196
890-678-39	FS39	Total/NA	Solid	8021B	3196
MB 880-3196/5-A	Method Blank	Total/NA	Solid	8021B	3196
LCS 880-3196/1-A	Lab Control Sample	Total/NA	Solid	8021B	3196
LCSD 880-3196/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3196
890-678-20 MS	FS20	Total/NA	Solid	8021B	3196
890-678-20 MSD	FS20	Total/NA	Solid	8021B	3196

Analysis Batch: 3199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-678-3	FS03	Total/NA	Solid	8021B	3195
890-678-4	FS04	Total/NA	Solid	8021B	3195
890-678-5	FS05	Total/NA	Solid	8021B	3195
890-678-6	FS06	Total/NA	Solid	8021B	3195
890-678-7	FS07	Total/NA	Solid	8021B	3195

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

GC VOA (Continued)

Analysis Batch: 3199 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-678-8	FS08	Total/NA	Solid	8021B	3195
890-678-9	FS09	Total/NA	Solid	8021B	3195
890-678-10	FS10	Total/NA	Solid	8021B	3195
890-678-11	FS11	Total/NA	Solid	8021B	3195
890-678-12	FS12	Total/NA	Solid	8021B	3195
890-678-13	FS13	Total/NA	Solid	8021B	3195
890-678-14	FS14	Total/NA	Solid	8021B	3195
890-678-15	FS15	Total/NA	Solid	8021B	3195
890-678-16	FS16	Total/NA	Solid	8021B	3195
890-678-17	FS17	Total/NA	Solid	8021B	3195
890-678-18	FS18	Total/NA	Solid	8021B	3195
890-678-19	FS19	Total/NA	Solid	8021B	3195
MB 880-3195/5-A	Method Blank	Total/NA	Solid	8021B	3195
LCS 880-3195/1-A	Lab Control Sample	Total/NA	Solid	8021B	3195
LCSD 880-3195/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3195
890-678-3 MS	FS03	Total/NA	Solid	8021B	3195
890-678-3 MSD	FS03	Total/NA	Solid	8021B	3195

Prep Batch: 3223

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-678-40	FS40	Total/NA	Solid	5035	
890-678-41	FS41	Total/NA	Solid	5035	
MB 880-3223/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3223/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3223/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 3232

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-678-40	FS40	Total/NA	Solid	8021B	3223
890-678-41	FS41	Total/NA	Solid	8021B	3223
MB 880-3223/5-A	Method Blank	Total/NA	Solid	8021B	3223
LCS 880-3223/1-A	Lab Control Sample	Total/NA	Solid	8021B	3223
LCSD 880-3223/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3223

GC Semi VOA

Analysis Batch: 3166

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-678-1	FS01	Total/NA	Solid	8015B NM	3200
890-678-2	FS02	Total/NA	Solid	8015B NM	3200
890-678-3	FS03	Total/NA	Solid	8015B NM	3200
890-678-4	FS04	Total/NA	Solid	8015B NM	3200
890-678-5	FS05	Total/NA	Solid	8015B NM	3200
890-678-6	FS06	Total/NA	Solid	8015B NM	3200
890-678-7	FS07	Total/NA	Solid	8015B NM	3200
890-678-9	FS09	Total/NA	Solid	8015B NM	3200
890-678-10	FS10	Total/NA	Solid	8015B NM	3200
MB 880-3200/1-A	Method Blank	Total/NA	Solid	8015B NM	3200
LCS 880-3200/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3200
LCSD 880-3200/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3200
890-678-1 MS	FS01	Total/NA	Solid	8015B NM	3200

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.

Job ID: 890-678-1

Project/Site: Muy Wayno Frac Pond-Big D

SDG: 314031190

GC Semi VOA (Continued)

Analysis Batch: 3166 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-678-1 MSD	FS01	Total/NA	Solid	8015B NM	3200

Analysis Batch: 3168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-678-21	FS21	Total/NA	Solid	8015B NM	3201
890-678-22	FS22	Total/NA	Solid	8015B NM	3201
890-678-23	FS23	Total/NA	Solid	8015B NM	3201
890-678-24	FS24	Total/NA	Solid	8015B NM	3201
890-678-25	FS25	Total/NA	Solid	8015B NM	3201
890-678-26	FS26	Total/NA	Solid	8015B NM	3201
890-678-27	FS27	Total/NA	Solid	8015B NM	3201
890-678-28	FS28	Total/NA	Solid	8015B NM	3201
890-678-29	FS29	Total/NA	Solid	8015B NM	3201
890-678-30	FS30	Total/NA	Solid	8015B NM	3201
MB 880-3201/1-A	Method Blank	Total/NA	Solid	8015B NM	3201
LCS 880-3201/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3201
LCSD 880-3201/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3201
890-678-21 MS	FS21	Total/NA	Solid	8015B NM	3201
890-678-21 MSD	FS21	Total/NA	Solid	8015B NM	3201

Prep Batch: 3200

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-678-1	FS01	Total/NA	Solid	8015NM Prep	
890-678-2	FS02	Total/NA	Solid	8015NM Prep	
890-678-3	FS03	Total/NA	Solid	8015NM Prep	
890-678-4	FS04	Total/NA	Solid	8015NM Prep	
890-678-5	FS05	Total/NA	Solid	8015NM Prep	
890-678-6	FS06	Total/NA	Solid	8015NM Prep	
890-678-7	FS07	Total/NA	Solid	8015NM Prep	
890-678-9	FS09	Total/NA	Solid	8015NM Prep	
890-678-10	FS10	Total/NA	Solid	8015NM Prep	
MB 880-3200/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3200/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3200/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-678-1 MS	FS01	Total/NA	Solid	8015NM Prep	
890-678-1 MSD	FS01	Total/NA	Solid	8015NM Prep	

Prep Batch: 3201

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-678-21	FS21	Total/NA	Solid	8015NM Prep	
890-678-22	FS22	Total/NA	Solid	8015NM Prep	
890-678-23	FS23	Total/NA	Solid	8015NM Prep	
890-678-24	FS24	Total/NA	Solid	8015NM Prep	
890-678-25	FS25	Total/NA	Solid	8015NM Prep	
890-678-26	FS26	Total/NA	Solid	8015NM Prep	
890-678-27	FS27	Total/NA	Solid	8015NM Prep	
890-678-28	FS28	Total/NA	Solid	8015NM Prep	
890-678-29	FS29	Total/NA	Solid	8015NM Prep	
890-678-30	FS30	Total/NA	Solid	8015NM Prep	
MB 880-3201/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3201/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

GC Semi VOA (Continued)

Prep Batch: 3201 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-3201/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-678-21 MS	FS21	Total/NA	Solid	8015NM Prep	
890-678-21 MSD	FS21	Total/NA	Solid	8015NM Prep	

Analysis Batch: 3205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-678-41	FS41	Total/NA	Solid	8015B NM	3210
MB 880-3210/1-A	Method Blank	Total/NA	Solid	8015B NM	3210
LCS 880-3210/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3210
LCSD 880-3210/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3210
890-678-41 MS	FS41	Total/NA	Solid	8015B NM	3210
890-678-41 MSD	FS41	Total/NA	Solid	8015B NM	3210

Prep Batch: 3210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-678-41	FS41	Total/NA	Solid	8015NM Prep	
MB 880-3210/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3210/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3210/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-678-41 MS	FS41	Total/NA	Solid	8015NM Prep	
890-678-41 MSD	FS41	Total/NA	Solid	8015NM Prep	

Prep Batch: 3219

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-678-8	FS08	Total/NA	Solid	8015NM Prep	
890-678-11	FS11	Total/NA	Solid	8015NM Prep	
890-678-12	FS12	Total/NA	Solid	8015NM Prep	
890-678-13	FS13	Total/NA	Solid	8015NM Prep	
890-678-14	FS14	Total/NA	Solid	8015NM Prep	
890-678-15	FS15	Total/NA	Solid	8015NM Prep	
890-678-16	FS16	Total/NA	Solid	8015NM Prep	
890-678-17	FS17	Total/NA	Solid	8015NM Prep	
890-678-18	FS18	Total/NA	Solid	8015NM Prep	
890-678-19	FS19	Total/NA	Solid	8015NM Prep	
890-678-20	FS20	Total/NA	Solid	8015NM Prep	
MB 880-3219/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3219/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3219/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-678-11 MS	FS11	Total/NA	Solid	8015NM Prep	
890-678-11 MSD	FS11	Total/NA	Solid	8015NM Prep	

Analysis Batch: 3220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-678-8	FS08	Total/NA	Solid	8015B NM	3219
890-678-11	FS11	Total/NA	Solid	8015B NM	3219
890-678-12	FS12	Total/NA	Solid	8015B NM	3219
890-678-13	FS13	Total/NA	Solid	8015B NM	3219
890-678-14	FS14	Total/NA	Solid	8015B NM	3219
890-678-15	FS15	Total/NA	Solid	8015B NM	3219
890-678-16	FS16	Total/NA	Solid	8015B NM	3219
890-678-17	FS17	Total/NA	Solid	8015B NM	3219

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.

Job ID: 890-678-1

Project/Site: Muy Wayno Frac Pond-Big D

SDG: 314031190

GC Semi VOA (Continued)

Analysis Batch: 3220 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-678-18	FS18	Total/NA	Solid	8015B NM	3219
890-678-19	FS19	Total/NA	Solid	8015B NM	3219
890-678-20	FS20	Total/NA	Solid	8015B NM	3219
MB 880-3219/1-A	Method Blank	Total/NA	Solid	8015B NM	3219
LCS 880-3219/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3219
LCSD 880-3219/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3219
890-678-11 MS	FS11	Total/NA	Solid	8015B NM	3219
890-678-11 MSD	FS11	Total/NA	Solid	8015B NM	3219

Prep Batch: 3222

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-678-31	FS31	Total/NA	Solid	8015NM Prep	
890-678-32	FS32	Total/NA	Solid	8015NM Prep	
890-678-33	FS33	Total/NA	Solid	8015NM Prep	
890-678-34	FS34	Total/NA	Solid	8015NM Prep	
890-678-35	FS35	Total/NA	Solid	8015NM Prep	
890-678-36	FS36	Total/NA	Solid	8015NM Prep	
890-678-37	FS37	Total/NA	Solid	8015NM Prep	
890-678-38	FS38	Total/NA	Solid	8015NM Prep	
890-678-39	FS39	Total/NA	Solid	8015NM Prep	
890-678-40	FS40	Total/NA	Solid	8015NM Prep	
MB 880-3222/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3222/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3222/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-678-31 MS	FS31	Total/NA	Solid	8015NM Prep	
890-678-31 MSD	FS31	Total/NA	Solid	8015NM Prep	

Analysis Batch: 3224

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-678-31	FS31	Total/NA	Solid	8015B NM	3222
890-678-32	FS32	Total/NA	Solid	8015B NM	3222
890-678-33	FS33	Total/NA	Solid	8015B NM	3222
890-678-34	FS34	Total/NA	Solid	8015B NM	3222
890-678-35	FS35	Total/NA	Solid	8015B NM	3222
890-678-36	FS36	Total/NA	Solid	8015B NM	3222
890-678-37	FS37	Total/NA	Solid	8015B NM	3222
890-678-38	FS38	Total/NA	Solid	8015B NM	3222
890-678-39	FS39	Total/NA	Solid	8015B NM	3222
890-678-40	FS40	Total/NA	Solid	8015B NM	3222
MB 880-3222/1-A	Method Blank	Total/NA	Solid	8015B NM	3222
LCS 880-3222/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3222
LCSD 880-3222/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3222
890-678-31 MS	FS31	Total/NA	Solid	8015B NM	3222
890-678-31 MSD	FS31	Total/NA	Solid	8015B NM	3222

HPLC/IC

Leach Batch: 3231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-678-1	FS01	Soluble	Solid	DI Leach	
890-678-2	FS02	Soluble	Solid	DI Leach	

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

HPLC/IC (Continued)

Leach Batch: 3231 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-678-3	FS03	Soluble	Solid	DI Leach	
890-678-4	FS04	Soluble	Solid	DI Leach	
890-678-5	FS05	Soluble	Solid	DI Leach	
890-678-6	FS06	Soluble	Solid	DI Leach	
MB 880-3231/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3231/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3231/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Leach Batch: 3233

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-678-7	FS07	Soluble	Solid	DI Leach	
890-678-8	FS08	Soluble	Solid	DI Leach	
890-678-9	FS09	Soluble	Solid	DI Leach	
890-678-10	FS10	Soluble	Solid	DI Leach	
890-678-11	FS11	Soluble	Solid	DI Leach	
890-678-12	FS12	Soluble	Solid	DI Leach	
890-678-13	FS13	Soluble	Solid	DI Leach	
890-678-14	FS14	Soluble	Solid	DI Leach	
890-678-15	FS15	Soluble	Solid	DI Leach	
890-678-16	FS16	Soluble	Solid	DI Leach	
890-678-17	FS17	Soluble	Solid	DI Leach	
890-678-18	FS18	Soluble	Solid	DI Leach	
890-678-19	FS19	Soluble	Solid	DI Leach	
890-678-20	FS20	Soluble	Solid	DI Leach	
890-678-21	FS21	Soluble	Solid	DI Leach	
890-678-22	FS22	Soluble	Solid	DI Leach	
890-678-23	FS23	Soluble	Solid	DI Leach	
890-678-24	FS24	Soluble	Solid	DI Leach	
890-678-25	FS25	Soluble	Solid	DI Leach	
890-678-26	FS26	Soluble	Solid	DI Leach	
MB 880-3233/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3233/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3233/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-678-7 MS	FS07	Soluble	Solid	DI Leach	
890-678-7 MSD	FS07	Soluble	Solid	DI Leach	
890-678-17 MS	FS17	Soluble	Solid	DI Leach	
890-678-17 MSD	FS17	Soluble	Solid	DI Leach	

Leach Batch: 3234

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-678-27	FS27	Soluble	Solid	DI Leach	
890-678-28	FS28	Soluble	Solid	DI Leach	
890-678-29	FS29	Soluble	Solid	DI Leach	
890-678-30	FS30	Soluble	Solid	DI Leach	
890-678-31	FS31	Soluble	Solid	DI Leach	
890-678-32	FS32	Soluble	Solid	DI Leach	
890-678-33	FS33	Soluble	Solid	DI Leach	
890-678-34	FS34	Soluble	Solid	DI Leach	
890-678-35	FS35	Soluble	Solid	DI Leach	
890-678-36	FS36	Soluble	Solid	DI Leach	
890-678-37	FS37	Soluble	Solid	DI Leach	

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

HPLC/IC (Continued)

Leach Batch: 3234 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-678-38	FS38	Soluble	Solid	DI Leach	
890-678-39	FS39	Soluble	Solid	DI Leach	
890-678-40	FS40	Soluble	Solid	DI Leach	
890-678-41	FS41	Soluble	Solid	DI Leach	
MB 880-3234/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3234/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3234/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-678-27 MS	FS27	Soluble	Solid	DI Leach	
890-678-27 MSD	FS27	Soluble	Solid	DI Leach	
890-678-37 MS	FS37	Soluble	Solid	DI Leach	
890-678-37 MSD	FS37	Soluble	Solid	DI Leach	

Analysis Batch: 3253

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-678-7	FS07	Soluble	Solid	300.0	3233
890-678-8	FS08	Soluble	Solid	300.0	3233
890-678-9	FS09	Soluble	Solid	300.0	3233
890-678-10	FS10	Soluble	Solid	300.0	3233
890-678-11	FS11	Soluble	Solid	300.0	3233
890-678-12	FS12	Soluble	Solid	300.0	3233
890-678-13	FS13	Soluble	Solid	300.0	3233
890-678-14	FS14	Soluble	Solid	300.0	3233
890-678-15	FS15	Soluble	Solid	300.0	3233
890-678-16	FS16	Soluble	Solid	300.0	3233
890-678-17	FS17	Soluble	Solid	300.0	3233
890-678-18	FS18	Soluble	Solid	300.0	3233
890-678-19	FS19	Soluble	Solid	300.0	3233
890-678-20	FS20	Soluble	Solid	300.0	3233
890-678-21	FS21	Soluble	Solid	300.0	3233
890-678-22	FS22	Soluble	Solid	300.0	3233
890-678-23	FS23	Soluble	Solid	300.0	3233
890-678-24	FS24	Soluble	Solid	300.0	3233
890-678-25	FS25	Soluble	Solid	300.0	3233
890-678-26	FS26	Soluble	Solid	300.0	3233
MB 880-3233/1-A	Method Blank	Soluble	Solid	300.0	3233
LCS 880-3233/2-A	Lab Control Sample	Soluble	Solid	300.0	3233
LCSD 880-3233/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3233
890-678-7 MS	FS07	Soluble	Solid	300.0	3233
890-678-7 MSD	FS07	Soluble	Solid	300.0	3233
890-678-17 MS	FS17	Soluble	Solid	300.0	3233
890-678-17 MSD	FS17	Soluble	Solid	300.0	3233

Analysis Batch: 3256

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-678-27	FS27	Soluble	Solid	300.0	3234
890-678-28	FS28	Soluble	Solid	300.0	3234
890-678-29	FS29	Soluble	Solid	300.0	3234
890-678-30	FS30	Soluble	Solid	300.0	3234
890-678-31	FS31	Soluble	Solid	300.0	3234
890-678-32	FS32	Soluble	Solid	300.0	3234
890-678-33	FS33	Soluble	Solid	300.0	3234

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

HPLC/IC (Continued)

Analysis Batch: 3256 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-678-34	FS34	Soluble	Solid	300.0	3234
890-678-35	FS35	Soluble	Solid	300.0	3234
890-678-36	FS36	Soluble	Solid	300.0	3234
890-678-37	FS37	Soluble	Solid	300.0	3234
890-678-38	FS38	Soluble	Solid	300.0	3234
890-678-39	FS39	Soluble	Solid	300.0	3234
890-678-40	FS40	Soluble	Solid	300.0	3234
890-678-41	FS41	Soluble	Solid	300.0	3234
MB 880-3234/1-A	Method Blank	Soluble	Solid	300.0	3234
LCS 880-3234/2-A	Lab Control Sample	Soluble	Solid	300.0	3234
LCSD 880-3234/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3234
890-678-27 MS	FS27	Soluble	Solid	300.0	3234
890-678-27 MSD	FS27	Soluble	Solid	300.0	3234
890-678-37 MS	FS37	Soluble	Solid	300.0	3234
890-678-37 MSD	FS37	Soluble	Solid	300.0	3234

Analysis Batch: 3258

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-678-1	FS01	Soluble	Solid	300.0	3231
890-678-2	FS02	Soluble	Solid	300.0	3231
890-678-3	FS03	Soluble	Solid	300.0	3231
890-678-4	FS04	Soluble	Solid	300.0	3231
890-678-5	FS05	Soluble	Solid	300.0	3231
890-678-6	FS06	Soluble	Solid	300.0	3231
MB 880-3231/1-A	Method Blank	Soluble	Solid	300.0	3231
LCS 880-3231/2-A	Lab Control Sample	Soluble	Solid	300.0	3231
LCSD 880-3231/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3231

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS01

Lab Sample ID: 890-678-1

Date Collected: 05/13/21 14:50

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	3194	05/18/21 14:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3197	05/18/21 16:25	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3200	05/18/21 09:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3166	05/18/21 13:08	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	3231	05/19/21 09:31	CH	XEN MID
Soluble	Analysis	300.0		1			3258	05/19/21 19:46	SC	XEN MID

Client Sample ID: FS02

Lab Sample ID: 890-678-2

Date Collected: 05/13/21 14:52

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	3194	05/18/21 14:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3197	05/18/21 16:46	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	3200	05/18/21 09:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3166	05/18/21 14:11	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	3231	05/19/21 09:31	CH	XEN MID
Soluble	Analysis	300.0		1			3258	05/19/21 19:51	SC	XEN MID

Client Sample ID: FS03

Lab Sample ID: 890-678-3

Date Collected: 05/13/21 14:54

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	3195	05/18/21 08:38	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3199	05/18/21 14:31	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	3200	05/18/21 09:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3166	05/18/21 14:32	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	3231	05/19/21 09:31	CH	XEN MID
Soluble	Analysis	300.0		10			3258	05/19/21 19:56	SC	XEN MID

Client Sample ID: FS04

Lab Sample ID: 890-678-4

Date Collected: 05/13/21 14:56

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	3195	05/18/21 08:38	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3199	05/18/21 14:51	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3200	05/18/21 09:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3166	05/18/21 14:53	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	3231	05/19/21 09:31	CH	XEN MID
Soluble	Analysis	300.0		5			3258	05/19/21 20:01	SC	XEN MID

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS05

Lab Sample ID: 890-678-5

Date Collected: 05/13/21 15:00

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	3195	05/18/21 08:38	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3199	05/18/21 15:11	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3200	05/18/21 09:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3166	05/18/21 15:14	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	3231	05/19/21 09:31	CH	XEN MID
Soluble	Analysis	300.0		5			3258	05/19/21 20:07	SC	XEN MID

Client Sample ID: FS06

Lab Sample ID: 890-678-6

Date Collected: 05/13/21 15:02

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	3195	05/18/21 08:38	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3199	05/18/21 15:32	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	3200	05/18/21 09:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3166	05/18/21 15:35	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	3231	05/19/21 09:31	CH	XEN MID
Soluble	Analysis	300.0		5			3258	05/19/21 20:12	SC	XEN MID

Client Sample ID: FS07

Lab Sample ID: 890-678-7

Date Collected: 05/13/21 15:04

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	3195	05/18/21 08:38	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3199	05/18/21 15:52	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	3200	05/18/21 09:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3166	05/18/21 15:56	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	3233	05/19/21 09:35	SC	XEN MID
Soluble	Analysis	300.0		1			3253	05/19/21 16:51	SC	XEN MID

Client Sample ID: FS08

Lab Sample ID: 890-678-8

Date Collected: 05/13/21 15:06

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	3195	05/18/21 08:38	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3199	05/18/21 16:13	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	3219	05/19/21 08:36	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3220	05/19/21 19:04	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	3233	05/19/21 09:35	SC	XEN MID
Soluble	Analysis	300.0		5			3253	05/19/21 19:13	SC	XEN MID

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.

Job ID: 890-678-1

Project/Site: Muy Wayno Frac Pond-Big D

SDG: 314031190

Client Sample ID: FS09

Lab Sample ID: 890-678-9

Date Collected: 05/13/21 15:13

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	3195	05/18/21 08:38	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3199	05/18/21 16:33	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3200	05/18/21 09:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3166	05/18/21 16:38	AJ	XEN MID
Soluble	Leach	DI Leach			4.98 g	50 mL	3233	05/19/21 09:35	SC	XEN MID
Soluble	Analysis	300.0		5			3253	05/19/21 17:11	SC	XEN MID

Client Sample ID: FS10

Lab Sample ID: 890-678-10

Date Collected: 05/13/21 15:15

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	3195	05/18/21 08:38	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3199	05/18/21 16:53	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	3200	05/18/21 09:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3166	05/18/21 16:59	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	3233	05/19/21 09:35	SC	XEN MID
Soluble	Analysis	300.0		5			3253	05/19/21 17:16	SC	XEN MID

Client Sample ID: FS11

Lab Sample ID: 890-678-11

Date Collected: 05/14/21 09:10

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	3195	05/18/21 08:38	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3199	05/18/21 17:14	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3219	05/19/21 08:36	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3220	05/19/21 11:37	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	3233	05/19/21 09:35	SC	XEN MID
Soluble	Analysis	300.0		5			3253	05/19/21 17:21	SC	XEN MID

Client Sample ID: FS12

Lab Sample ID: 890-678-12

Date Collected: 05/14/21 09:12

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	3195	05/18/21 08:38	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3199	05/18/21 18:56	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	3219	05/19/21 08:36	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3220	05/19/21 12:39	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	3233	05/19/21 09:35	SC	XEN MID
Soluble	Analysis	300.0		1			3253	05/19/21 17:38	SC	XEN MID

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS13

Lab Sample ID: 890-678-13

Date Collected: 05/14/21 09:14

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	3195	05/18/21 08:38	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3199	05/18/21 19:17	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	3219	05/19/21 08:36	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3220	05/19/21 13:00	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	3233	05/19/21 09:35	SC	XEN MID
Soluble	Analysis	300.0		1			3253	05/19/21 17:43	SC	XEN MID

Client Sample ID: FS14

Lab Sample ID: 890-678-14

Date Collected: 05/14/21 09:16

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	3195	05/18/21 08:38	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3199	05/18/21 19:37	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3219	05/19/21 08:36	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3220	05/19/21 13:22	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	3233	05/19/21 09:35	SC	XEN MID
Soluble	Analysis	300.0		1			3253	05/19/21 17:48	SC	XEN MID

Client Sample ID: FS15

Lab Sample ID: 890-678-15

Date Collected: 05/14/21 09:18

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	3195	05/18/21 08:38	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3199	05/18/21 19:57	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3219	05/19/21 08:36	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3220	05/19/21 13:42	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	3233	05/19/21 09:35	SC	XEN MID
Soluble	Analysis	300.0		1			3253	05/19/21 17:53	SC	XEN MID

Client Sample ID: FS16

Lab Sample ID: 890-678-16

Date Collected: 05/14/21 09:20

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	3195	05/18/21 08:38	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3199	05/18/21 20:18	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	3219	05/19/21 08:36	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3220	05/19/21 14:03	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	3233	05/19/21 09:35	SC	XEN MID
Soluble	Analysis	300.0		1			3253	05/19/21 17:58	SC	XEN MID

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.

Job ID: 890-678-1

Project/Site: Muy Wayno Frac Pond-Big D

SDG: 314031190

Client Sample ID: FS17

Lab Sample ID: 890-678-17

Date Collected: 05/14/21 09:22

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	3195	05/18/21 08:38	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3199	05/18/21 20:38	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	3219	05/19/21 08:36	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3220	05/19/21 14:24	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	3233	05/19/21 09:35	SC	XEN MID
Soluble	Analysis	300.0		1			3253	05/19/21 18:03	SC	XEN MID

Client Sample ID: FS18

Lab Sample ID: 890-678-18

Date Collected: 05/14/21 09:24

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	3195	05/18/21 08:38	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3199	05/18/21 20:59	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	3219	05/19/21 08:36	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3220	05/19/21 15:20	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	3233	05/19/21 09:35	SC	XEN MID
Soluble	Analysis	300.0		1			3253	05/19/21 18:18	SC	XEN MID

Client Sample ID: FS19

Lab Sample ID: 890-678-19

Date Collected: 05/14/21 09:26

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	3195	05/18/21 08:38	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3199	05/18/21 21:19	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3219	05/19/21 08:36	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3220	05/19/21 18:22	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	3233	05/19/21 09:35	SC	XEN MID
Soluble	Analysis	300.0		1			3253	05/19/21 18:23	SC	XEN MID

Client Sample ID: FS20

Lab Sample ID: 890-678-20

Date Collected: 05/14/21 09:37

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	3196	05/18/21 12:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3198	05/18/21 14:40	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	3219	05/19/21 08:36	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3220	05/19/21 18:43	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	3233	05/19/21 09:35	SC	XEN MID
Soluble	Analysis	300.0		10			3253	05/19/21 18:38	SC	XEN MID

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.

Job ID: 890-678-1

Project/Site: Muy Wayno Frac Pond-Big D

SDG: 314031190

Client Sample ID: FS21

Lab Sample ID: 890-678-21

Date Collected: 05/14/21 09:39

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	3196	05/18/21 12:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3198	05/18/21 15:05	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3201	05/18/21 09:59	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3168	05/18/21 13:08	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	3233	05/19/21 09:35	SC	XEN MID
Soluble	Analysis	300.0		10			3253	05/19/21 18:43	SC	XEN MID

Client Sample ID: FS22

Lab Sample ID: 890-678-22

Date Collected: 05/14/21 09:41

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	3196	05/18/21 12:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3198	05/18/21 15:30	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	3201	05/18/21 09:59	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3168	05/18/21 14:11	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	3233	05/19/21 09:35	SC	XEN MID
Soluble	Analysis	300.0		10			3253	05/19/21 18:48	SC	XEN MID

Client Sample ID: FS23

Lab Sample ID: 890-678-23

Date Collected: 05/14/21 09:43

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	3196	05/18/21 12:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3198	05/18/21 15:56	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	3201	05/18/21 09:59	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3168	05/18/21 14:32	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	3233	05/19/21 09:35	SC	XEN MID
Soluble	Analysis	300.0		10			3253	05/19/21 18:53	SC	XEN MID

Client Sample ID: FS24

Lab Sample ID: 890-678-24

Date Collected: 05/14/21 09:45

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	3196	05/18/21 12:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3198	05/18/21 16:21	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3201	05/18/21 09:59	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3168	05/18/21 14:53	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	3233	05/19/21 09:35	SC	XEN MID
Soluble	Analysis	300.0		10			3253	05/19/21 18:58	SC	XEN MID

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS25

Lab Sample ID: 890-678-25

Date Collected: 05/14/21 09:47

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	3196	05/18/21 12:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3198	05/18/21 16:46	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3201	05/18/21 09:59	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3168	05/18/21 15:14	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	3233	05/19/21 09:35	SC	XEN MID
Soluble	Analysis	300.0		10			3253	05/19/21 19:03	SC	XEN MID

Client Sample ID: FS26

Lab Sample ID: 890-678-26

Date Collected: 05/14/21 09:49

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	3196	05/18/21 12:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3198	05/18/21 17:11	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	3201	05/18/21 09:59	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3168	05/18/21 15:35	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	3233	05/19/21 09:35	SC	XEN MID
Soluble	Analysis	300.0		5			3253	05/19/21 19:08	SC	XEN MID

Client Sample ID: FS27

Lab Sample ID: 890-678-27

Date Collected: 05/14/21 10:19

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	3196	05/18/21 12:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3198	05/18/21 17:36	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	3201	05/18/21 09:59	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3168	05/18/21 15:56	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	3234	05/19/21 09:37	CH	XEN MID
Soluble	Analysis	300.0		20			3256	05/20/21 12:48	CH	XEN MID

Client Sample ID: FS28

Lab Sample ID: 890-678-28

Date Collected: 05/14/21 10:21

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	3196	05/18/21 12:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3198	05/18/21 18:01	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	3201	05/18/21 09:59	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3168	05/18/21 16:17	AJ	XEN MID
Soluble	Leach	DI Leach			4.97 g	50 mL	3234	05/19/21 09:37	CH	XEN MID
Soluble	Analysis	300.0		20			3256	05/20/21 13:04	CH	XEN MID

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS29

Lab Sample ID: 890-678-29

Date Collected: 05/14/21 10:23

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	3196	05/18/21 12:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3198	05/18/21 18:27	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3201	05/18/21 09:59	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3168	05/18/21 16:38	AJ	XEN MID
Soluble	Leach	DI Leach			4.98 g	50 mL	3234	05/19/21 09:37	CH	XEN MID
Soluble	Analysis	300.0		10			3256	05/20/21 13:09	CH	XEN MID

Client Sample ID: FS30

Lab Sample ID: 890-678-30

Date Collected: 05/14/21 10:32

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	3196	05/18/21 12:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3198	05/18/21 20:10	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	3201	05/18/21 09:59	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3168	05/18/21 16:59	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	3234	05/19/21 09:37	CH	XEN MID
Soluble	Analysis	300.0		20			3256	05/20/21 13:14	CH	XEN MID

Client Sample ID: FS31

Lab Sample ID: 890-678-31

Date Collected: 05/14/21 10:34

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	3196	05/18/21 12:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3198	05/18/21 20:37	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3222	05/19/21 08:44	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3224	05/19/21 11:37	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	3234	05/19/21 09:37	CH	XEN MID
Soluble	Analysis	300.0		20			3256	05/20/21 13:19	CH	XEN MID

Client Sample ID: FS32

Lab Sample ID: 890-678-32

Date Collected: 05/14/21 10:36

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	3196	05/18/21 12:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3198	05/18/21 21:04	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	3222	05/19/21 08:44	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3224	05/19/21 12:39	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	3234	05/19/21 09:37	CH	XEN MID
Soluble	Analysis	300.0		20			3256	05/20/21 13:35	CH	XEN MID

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS33

Lab Sample ID: 890-678-33

Date Collected: 05/14/21 10:38

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	3196	05/18/21 12:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3198	05/18/21 21:30	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	3222	05/19/21 08:44	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3224	05/19/21 13:00	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	3234	05/19/21 09:37	CH	XEN MID
Soluble	Analysis	300.0		20			3256	05/20/21 13:40	CH	XEN MID

Client Sample ID: FS34

Lab Sample ID: 890-678-34

Date Collected: 05/14/21 10:40

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	3196	05/18/21 12:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3198	05/18/21 21:56	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3222	05/19/21 08:44	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3224	05/19/21 13:22	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	3234	05/19/21 09:37	CH	XEN MID
Soluble	Analysis	300.0		10			3256	05/20/21 13:45	CH	XEN MID

Client Sample ID: FS35

Lab Sample ID: 890-678-35

Date Collected: 05/14/21 10:42

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	3196	05/18/21 12:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3198	05/18/21 22:23	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3222	05/19/21 08:44	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3224	05/19/21 13:42	AJ	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	3234	05/19/21 09:37	CH	XEN MID
Soluble	Analysis	300.0		10			3256	05/20/21 13:50	CH	XEN MID

Client Sample ID: FS36

Lab Sample ID: 890-678-36

Date Collected: 05/14/21 10:44

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	3196	05/18/21 12:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3198	05/18/21 22:50	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	3222	05/19/21 08:44	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3224	05/19/21 14:03	AJ	XEN MID
Soluble	Leach	DI Leach			4.98 g	50 mL	3234	05/19/21 09:37	CH	XEN MID
Soluble	Analysis	300.0		10			3256	05/20/21 13:55	CH	XEN MID

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.

Job ID: 890-678-1

Project/Site: Muy Wayno Frac Pond-Big D

SDG: 314031190

Client Sample ID: FS37

Lab Sample ID: 890-678-37

Date Collected: 05/14/21 10:46

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	3196	05/18/21 12:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3198	05/18/21 23:17	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	3222	05/19/21 08:44	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3224	05/19/21 14:24	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	3234	05/19/21 09:37	CH	XEN MID
Soluble	Analysis	300.0		10			3256	05/20/21 14:00	CH	XEN MID

Client Sample ID: FS38

Lab Sample ID: 890-678-38

Date Collected: 05/14/21 10:48

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	3196	05/18/21 12:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3198	05/18/21 23:43	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	3222	05/19/21 08:44	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3224	05/19/21 15:20	AJ	XEN MID
Soluble	Leach	DI Leach			4.98 g	50 mL	3234	05/19/21 09:37	CH	XEN MID
Soluble	Analysis	300.0		10			3256	05/20/21 14:16	CH	XEN MID

Client Sample ID: FS39

Lab Sample ID: 890-678-39

Date Collected: 05/14/21 10:50

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	3196	05/18/21 12:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3198	05/19/21 00:10	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3222	05/19/21 08:44	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3224	05/19/21 18:22	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	3234	05/19/21 09:37	CH	XEN MID
Soluble	Analysis	300.0		10			3256	05/20/21 14:21	CH	XEN MID

Client Sample ID: FS40

Lab Sample ID: 890-678-40

Date Collected: 05/14/21 10:52

Matrix: Solid

Date Received: 05/17/21 10:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	3223	05/19/21 14:30	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3232	05/19/21 19:16	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	3222	05/19/21 08:44	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3224	05/19/21 18:43	AJ	XEN MID
Soluble	Leach	DI Leach			4.97 g	50 mL	3234	05/19/21 09:37	CH	XEN MID
Soluble	Analysis	300.0		20			3256	05/20/21 14:37	CH	XEN MID

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Client Sample ID: FS41

Date Collected: 05/14/21 10:54

Date Received: 05/17/21 10:09

Lab Sample ID: 890-678-41

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	3223	05/19/21 14:30	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3232	05/19/21 19:36	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3210	05/18/21 11:59	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3205	05/18/21 14:03	AJ	XEN MID
Soluble	Leach	DI Leach			4.97 g	50 mL	3234	05/19/21 09:37	CH	XEN MID
Soluble	Analysis	300.0		10			3256	05/20/21 14:42	CH	XEN MID

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

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

Laboratory: Eurofins Xenco, Midland

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

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

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

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

Method Summary

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond-Big D

Job ID: 890-678-1
SDG: 314031190

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

Protocol References:

ASTM = ASTM International

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

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

Laboratory References:

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

Sample Summary

Client: WSP USA Inc.

Job ID: 890-678-1

Project/Site: Muy Wayno Frac Pond-Big D

SDG: 314031190

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-678-1	FS01	Solid	05/13/21 14:50	05/17/21 10:09	- 0.5
890-678-2	FS02	Solid	05/13/21 14:52	05/17/21 10:09	- 0.5
890-678-3	FS03	Solid	05/13/21 14:54	05/17/21 10:09	- 0.5
890-678-4	FS04	Solid	05/13/21 14:56	05/17/21 10:09	- 0.5
890-678-5	FS05	Solid	05/13/21 15:00	05/17/21 10:09	- 0.5
890-678-6	FS06	Solid	05/13/21 15:02	05/17/21 10:09	- 0.5
890-678-7	FS07	Solid	05/13/21 15:04	05/17/21 10:09	- 0.5
890-678-8	FS08	Solid	05/13/21 15:06	05/17/21 10:09	- 0.5
890-678-9	FS09	Solid	05/13/21 15:13	05/17/21 10:09	- 0.5
890-678-10	FS10	Solid	05/13/21 15:15	05/17/21 10:09	- 0.5
890-678-11	FS11	Solid	05/14/21 09:10	05/17/21 10:09	- 0.5
890-678-12	FS12	Solid	05/14/21 09:12	05/17/21 10:09	- 0.5
890-678-13	FS13	Solid	05/14/21 09:14	05/17/21 10:09	- 0.5
890-678-14	FS14	Solid	05/14/21 09:16	05/17/21 10:09	- 0.5
890-678-15	FS15	Solid	05/14/21 09:18	05/17/21 10:09	- 0.5
890-678-16	FS16	Solid	05/14/21 09:20	05/17/21 10:09	- 0.5
890-678-17	FS17	Solid	05/14/21 09:22	05/17/21 10:09	- 0.5
890-678-18	FS18	Solid	05/14/21 09:24	05/17/21 10:09	- 0.5
890-678-19	FS19	Solid	05/14/21 09:26	05/17/21 10:09	- 0.5
890-678-20	FS20	Solid	05/14/21 09:37	05/17/21 10:09	- 0.5
890-678-21	FS21	Solid	05/14/21 09:39	05/17/21 10:09	- 0.5
890-678-22	FS22	Solid	05/14/21 09:41	05/17/21 10:09	- 0.5
890-678-23	FS23	Solid	05/14/21 09:43	05/17/21 10:09	- 0.5
890-678-24	FS24	Solid	05/14/21 09:45	05/17/21 10:09	- 0.5
890-678-25	FS25	Solid	05/14/21 09:47	05/17/21 10:09	- 0.5
890-678-26	FS26	Solid	05/14/21 09:49	05/17/21 10:09	- 0.5
890-678-27	FS27	Solid	05/14/21 10:19	05/17/21 10:09	- 0.5
890-678-28	FS28	Solid	05/14/21 10:21	05/17/21 10:09	- 0.5
890-678-29	FS29	Solid	05/14/21 10:23	05/17/21 10:09	- 0.5
890-678-30	FS30	Solid	05/14/21 10:32	05/17/21 10:09	- 0.5
890-678-31	FS31	Solid	05/14/21 10:34	05/17/21 10:09	- 0.5
890-678-32	FS32	Solid	05/14/21 10:36	05/17/21 10:09	- 0.5
890-678-33	FS33	Solid	05/14/21 10:38	05/17/21 10:09	- 0.5
890-678-34	FS34	Solid	05/14/21 10:40	05/17/21 10:09	- 0.5
890-678-35	FS35	Solid	05/14/21 10:42	05/17/21 10:09	- 1
890-678-36	FS36	Solid	05/14/21 10:44	05/17/21 10:09	- 0.5
890-678-37	FS37	Solid	05/14/21 10:46	05/17/21 10:09	- 1
890-678-38	FS38	Solid	05/14/21 10:48	05/17/21 10:09	- 0.5
890-678-39	FS39	Solid	05/14/21 10:50	05/17/21 10:09	- 1
890-678-40	FS40	Solid	05/14/21 10:52	05/17/21 10:09	- 0.5
890-678-41	FS41	Solid	05/14/21 10:54	05/17/21 10:09	- 0.5

Eurofins Xenco, Carlsbad



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

Chain of Custody

Work Order No: _____

Page 2 of 5

Project Manager:	Kalei Jennings	Bill to: (if different)	Todd Moore
Company Name:	WSP USA Inc.	Company Name:	Big D Companies
Address:	3300 North A Street	Address:	4501 E Highway 80
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Midland, Texas 79706
Phone:	432.236.3849	Email:	luis.delval@wsp.com, kalei.jennings@wsp.com

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

Project Name:	Muy Wayno Frac Pond-Big D	Turn Around	☒
Project Number:	31403190	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Luis Del Val	Due Date:	
SAMPLE RECEIPT			
Temperature (°C):	26/2.4	Temp Blank:	☒ Yes ☐ No
Received Intact:	☒ Yes ☐ No	Wet Ice:	☒ Yes ☐ No
Cooler Custody Seals:	Yes ☐ No ☒ N/A	Thermometer ID	2111-003
Sample Custody Seals:	Yes ☒ No ☐ N/A	Correction Factor:	-0.2
Total Containers:			



890-678 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number	TPH (E)	BTEX (C)	Chloride													Sample Comments
FS01	S	5/13/2021	1450	0.5'	1	X	X	X	X												PLEASE CC INVOICE TO: KALEI JENNINGS
FS02	S	5/13/2021	1452	0.5'	1	X	X	X	X												
FS03	S	5/13/2021	1454	0.5'	1	X	X	X	X												Incident #'s:
FS04	S	5/13/2021	1456	0.5'	1	X	X	X	X												NRM2024756871
FS05	S	5/13/2021	1500	0.5'	1	X	X	X	X												NRM2028241966
FS06	S	5/13/2021	1502	0.5'	1	X	X	X	X												NAPP2102239584
FS07	S	5/13/2021	1504	0.5'	1	X	X	X	X												NAPP2102626563
FS08	S	5/13/2021	1506	0.5'	1	X	X	X	X												
FS09	S	5/13/2021	1513	0.5'	1	X	X	X	X												
FS10	S	5/13/2021	1515	0.5'	1	X	X	X	X												

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		5-17-21 1009			



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

Chain of Custody

Work Order No: _____

www.xenco.com

Page 2 of 5

Project Manager:	Kalei Jennings	Bill to: (if different)	Todd Moore
Company Name:	WSP USA Inc.	Company Name:	Big D Companies
Address:	3300 North A Street	Address:	4501 E Highway 80
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Midland, Texas 79706
Phone:	432.236.3849	Email:	luis.delval@wsp.com; kalei.jennings@wsp.com

Program: ☐ PST ☐ PRP ☐ Brownfields ☐ RC ☐ Superfund ☐ State of Project: Reporting Level: ☐ I ☐ II ☐ III ☐ ST/UST ☐ RP ☐ IV ☐ Deliverables: ☐ EDD ☐ ADAPT ☐ Other: _____		Work Order Comments
--	--	----------------------------

Project Name:	Muy Wayno Frac Pond-Big D	Turn Around
Project Number:	31403190	Routine ☒ Rush: _____
P.O. Number:		Due Date:
Sampler's Name:	Luis Del Val	

SAMPLE RECEIPT	Temp Blank:	Yes	No	Wettest:	Yes	No
Temperature (°C):		Thermometer ID				
Received intact:	Yes	No				
Cooler Custody Seals:	Yes	No	N/A	Correction Factor:		
Sample Custody Seals:	Yes	No	N/A	Total Containers:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	ANALYSIS REQUEST										Work Order Notes	
					Number of Containers										AEE's:	
					TPH (EPA 8015)										DD, 2017.01917.CMP.01	
					BTX (EPA 0=8021)										DD, 2017.01911.CMP.01	
					Chloride (EPA 300.0)										DD, 2017.01912.CMP.01	
															DD, 2017.01901.CMP.01	
															DD, 2017.01905.CMP.01	
															TAT starts the day received by the lab, if received by 4:30pm	
															Sample Comments	
FS11	S	5/14/2021	910	0.5'	1	X	X	X								PLEASE CC INVOICE TO:
FS12	S	5/14/2021	912	0.5'	1	X	X	X								KALEI JENNINGS
FS13	S	5/14/2021	914	0.5'	1	X	X	X								Incident #s:
FS14	S	5/14/2021	916	0.5'	1	X	X	X								NRM2024756871
FS15	S	5/14/2021	918	0.5'	1	X	X	X								NRM2028241966
FS16	S	5/14/2021	920	0.5'	1	X	X	X								NAPP2102239584
FS17	S	5/14/2021	922	0.5'	1	X	X	X								NAPP2102626563
FS18	S	5/14/2021	924	0.5'	1	X	X	X								
FS19	S	5/14/2021	926	0.5'	1	X	X	X								
FS20	S	5/14/2021	937	0.5'	1	X	X	X								

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		5.17.21 1009			



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

Chain of Custody

Work Order No: _____

Page 3 of 5

Project Manager:	Kalei Jennings	Bill to: (if different)	Todd Moore
Company Name:	WSP USA Inc.	Company Name:	Big D Companies
Address:	3300 North A Street	Address:	4501 E Highway 80
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Midland, Texas 79706
Phone:	432.236.3849	Email:	luis.delval@wsp.com; kalei.jennings@wsp.com

Program: ☐ UST/ST ☐ PRP ☐ Brownfields ☐ RC ☐ Superfund State of Project:	
Reporting Level II ☐	Level III ☐
ST/UST ☐	RP ☐
Deliverables: EDD ☐	ADAPT ☐
Other: _____	

Project Name:	Muy Wayno Frac Pond-Big D	Turn Around	☒
Project Number:	31403190	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Luis Del Val	Due Date:	

SAMPLE RECEIPT	Temp Blank:	Yes	No	Wet log:	Yes	No
	Temperature (°C):	Thermometer ID				
	Received Intact:	Yes	No	Correction Factor:		
	Cooler Custody Seals:	Yes	No	N/A		
	Sample Custody Seals:	Yes	No	N/A		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	ANALYSIS REQUEST													Work Order Notes
FS21	S	5/14/2021	939	0.5'	1	X	X	X										AEE's: DD.2017.01917.CMP.01 DD.2017.01911.CMP.01 DD.2017.01912.CMP.01 DD.2017.01901.CMP.01 DD.2017.01905.CMP.01
FS22	S	5/14/2021	941	0.5'	1	X	X	X										PLEASE CC INVOICE TO: KALEI JENNINGS
FS23	S	5/14/2021	943	0.5'	1	X	X	X										Incident #'s: NRM2024756871 NRM2028241966
FS24	S	5/14/2021	945	0.5'	1	X	X	X										NAP2102626563
FS25	S	5/14/2021	947	0.5'	1	X	X	X										NAP2102239584
FS26	S	5/14/2021	949	0.5'	1	X	X	X										NAP2102626563
FS27	S	5/14/2021	1019	0.5'	1	X	X	X										
FS28	S	5/14/2021	1021	0.5'	1	X	X	X										
FS29	S	5/14/2021	1023	0.5'	1	X	X	X										
FS30	S	5/14/2021	1032	0.5'	1	X	X	X										

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	5.17.21 1008			



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

Chain of Custody

Work Order No: _____

www.xenco.com

Page 4 of 5

Project Manager:	Kalei Jennings	Bill to: (if different)	Todd Moore
Company Name:	WSP USA Inc.	Company Name:	Big D Companies
Address:	3300 North A Street	Address:	4501 E Highway 80
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Midland, Texas 79706
Phone:	432.236.3849	Email:	luis.delval@wsp.com; kaleijennings@wsp.com

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

Project Name:	Muy Wayno Frac Pond-Big D	Turn Around	☒
Project Number:	31403190	Routine	☒
P.O. Number:		Flush:	
Sampler's Name:	Luis Del Val	Due Date:	

SAMPLE RECEIPT	Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):		Thermometer ID				
Received Intact:	Yes	No	481			
Cooler Custody Seals:	Yes	No	Correction Factor:			
Sample Custody Seals:	Yes	No	Total Containers:			

Sample Identification					Matrix	Date Sampled	Time Sampled	Depth	Number	TPH (E)	BTEX (E)	Chloride														Sample Comments	
FS31					S	5/14/2021	1034	0.5'	1	X	X	X	X	PLEASE CC INVOICE TO:													KALEI JENNINGS
FS32					S	5/14/2021	1036	0.5'	1	X	X	X	X														
FS33					S	5/14/2021	1038	0.5'	1	X	X	X	X	Incident #s:													
FS34					S	5/14/2021	1040	0.5'	1	X	X	X	X	NRM2024756871													NRM2028241966
FS35					S	5/14/2021	1042	1'	1	X	X	X	X														
FS36					S	5/14/2021	1044	0.5'	1	X	X	X	X	NAPP2102239584													NAPP2102626563
FS37					S	5/14/2021	1046	1'	1	X	X	X	X														
FS38					S	5/14/2021	1048	0.5'	1	X	X	X	X														
FS39					S	5/14/2021	1050	1'	1	X	X	X	X														
FS40					S	5/14/2021	1052	0.5'	1	X	X	X	X														

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 <i>[Signature]</i>	<i>[Signature]</i>	5-17-21	4 <i>[Signature]</i>		
3					
5					



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

Chain of Custody

Work Order No: _____

www.xenco.com

Page 5 of 5

Project Manager:	Kalei Jennings	Bill to: (if different)	Todd Moore
Company Name:	WSP USA Inc.	Company Name:	Big D Companies
Address:	3300 North A Street	Address:	4501 E Highway 80
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Midland, Texas 79706
Phone:	432.236.3849	Email:	luis.delval@wsp.com; kalei.jennings@wsp.com

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RC ☐ Superfund ☐ State of Project: Reporting Level II ☐ Level III ☐ ST/UST ☐ RP ☐ Level IV ☐ Deliverables: EDD ☐ ADAPT ☐ Other: _____		Work Order Comments
---	--	----------------------------

Project Name:	Muy Wayno Frac Pond-Big D	Turn Around	☒
Project Number:	31403190	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Luis Del Val	Due Date:	

SAMPLE RECEIPT Temperature (°C): Received intact: Cooler Custody Seals: Sample Custody Seals:	Temp Blank:	Yes	No	Well Ice:	Yes	No
	Thermometer ID					
	Yes	No	Correction Factor:			
	Yes	No	Total Containers:			
	Yes	No				

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	ANALYSIS REQUEST										Work Order Notes					
FS41	S	5/14/2021	1054	0.5'	Number of Containers	1	TPH (EPA 8015)	X	BTEX (EPA 0=8021)	X	Chloride (EPA 300.0)	X								AFE's: DD.2017.01917.CMP.01 DD.2017.01911.CMP.01 DD.2017.01912.CMP.01 DD.2017.01901.CMP.01 DD.2017.01905.CMP.01
					PLEASE CC INVOICE TO:											TAT starts the day received by the lab, if received by 4:30pm Sample Comments KALEI JENNINGS Incident #'s: NFM2024756871 NFM2028241966 NAPP2102239584 NAPP2102626563				

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	5-17-21 1009			

Eurofins Xenco, Carlsbad

1089 N Canal St.

Carlsbad, NM 88220

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

Chain of Custody Record

Environment Testing
America

Client Information (Sub Contract Lab)		Sampler	Lab PM	Carrier Tracking No(s)	COC No					
Client Contact:	Phone:	Kramer, Jessica			890-219-1					
Shipping/Receiving	E-Mail:	Jessica.kramer@eurofins.com	State of Origin:		Page 1 of 5					
Company	Accreditations Required (See note)	NEAP - Texas			Job #					
Eurofins Xenco					890-678-1					
Address	Due Date Requested									
1211 W Florida Ave,	5/21/2021									
City	TAT Requested (days)									
Midland										
State, Zip										
TX 79701										
Phone	PO #									
432-704-5440(Tel)										
Email	WO #									
Project Name:	Project #									
Muy Wayno Frac Pond-Big D	89000055									
Site:	SSOW#									
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (W=Water, S=solid, O=wastewater, BT=trace, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested	Total Number of containers	Special Instructions/Note
FS01 (890-678-1)	5/13/21	14 50	Mountain	Solid		X	X	X	1	
FS02 (890-678-2)	5/13/21	14 52	Mountain	Solid		X	X	X	1	
FS03 (890-678-3)	5/13/21	14 54	Mountain	Solid		X	X	X	1	
FS04 (890-678-4)	5/13/21	14 56	Mountain	Solid		X	X	X	1	
FS05 (890-678-5)	5/13/21	15 00	Mountain	Solid		X	X	X	1	
FS06 (890-678-6)	5/13/21	15 02	Mountain	Solid		X	X	X	1	
FS07 (890-678-7)	5/13/21	15 04	Mountain	Solid		X	X	X	1	
FS08 (890-678-8)	5/13/21	15 06	Mountain	Solid		X	X	X	1	
FS09 (890-678-9)	5/13/21	15 13	Mountain	Solid		X	X	X	1	
Note: Since laboratory accreditations are subject to change, Eurofins Xenco LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/testing, the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Xenco LLC.										
Possible Hazard Identification						☐ Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months				
Unconfirmed										
Deliverable Requested I II III IV Other (specify)						Primary Deliverable Rank 2				
Empty Kit Relinquished by						Date	Time	Method of Shipment		
Relinquished by						Date/Time:	Company	Received by	Date/Time:	Company
Relinquished by						Date/Time:	Company	Received by	Date/Time:	Company
Relinquished by						Date/Time:	Company	Received by	Date/Time:	Company
Custody Seals Intact:						Cooler Temperature(s) °C and Other Remarks				
☐ Yes ☐ No						Custody Seal No				

Eurofins Xenco, Carlsbad

1089 N Canal St.

Carlsbad, NM 88220

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

Chain of Custody Record

Environment Testing
America

Client Information (Sub Contract Lab)		Sampler	Lab PM	Carrier Tracking No(s)	COC No:				
Client Contact:	Phone:		Kramer, Jessica		890-219 3				
Shipping/Receiving	E-Mail:		Jessica.kramer@eurofins.com	State of Origin:	Page 3 of 5				
Company:			Accreditations Required (See note)						
Eurofins Xenco			NEIAP - Texas						
Address:	Due Date Requested								
1211 W Florida Ave,	5/21/2021								
City:	TAT Requested (days):								
Midland									
State Zip:									
TX, 79701									
Phone:	PO #:								
432-704-5440(Tel)									
Email:	WO #:								
Project Name:	Project #:								
Muly Wayno Frac Pond-Big D	89000055								
Site:	SSOW#:								
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab, BT=Tissue, A=Air)	Matrix (Monomer, Soluble, On-wash, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested	Total Number of containers	Special Instructions/Note
FS19 (890-678-19)	5/14/21	09 26	Mountain	Solid	X	X	X	1	
FS20 (890-678-20)	5/14/21	09 37	Mountain	Solid	X	X	X	1	
FS21 (890-678-21)	5/14/21	09 39	Mountain	Solid	X	X	X	1	
FS22 (890-678-22)	5/14/21	09 41	Mountain	Solid	X	X	X	1	
FS23 (890-678-23)	5/14/21	09 43	Mountain	Solid	X	X	X	1	
FS24 (890-678-24)	5/14/21	09 45	Mountain	Solid	X	X	X	1	
FS25 (890-678-25)	5/14/21	09 47	Mountain	Solid	X	X	X	1	
FS26 (890-678-26)	5/14/21	09 49	Mountain	Solid	X	X	X	1	
FS27 (890-678-27)	5/14/21	10 19	Mountain	Solid	X	X	X	1	

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

Possible Hazard Identification

Unconfirmed

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

Empty Kit Relinquished by

Relinquished by: *Che Gaf* 5.17.21

Relinquished by: *[Signature]* 5.17.21

Relinquished by: *[Signature]* 5.17.21

Custody Seals Intact: ☐ Yes ☐ No Custody Seal No

Cooler Temperature(s) °C and Other Remarks

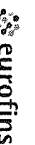
Eurofins Xenco, Carlsbad

1089 N Canal St.

Carlsbad NM 88220

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

Chain of Custody Record

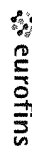
Environment Testing
America

Client Information (Sub Contract Lab)		Sampler	Lab PM	Kramer Jessica	Carrier Tracking No(s)	COC No:				
Client Contact:	Phone:		E-Mail:	jessica.kramer@eurofins.com	State of Origin	890-219.5				
Shipping/Receiving					New Mexico	Page 5 of 5				
Company	Eurofins Xenco			Accreditations Required (See note)	NEIAP - Texas	Job #				
Address:	1211 W. Florida Ave	Due Date Requested	5/21/2021			890-678-1				
City:	Midland	TAT Requested (days)								
State:	TX, 79701									
Phone:	432-704-5440(Tel)	PO #								
Email:		WO #								
Project Name:	Muly Wayno Frac Pond-Big D	Project #:	89000055							
Site:		SSOW#:								
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=solid, O=waste/oil, B=tissue, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested	Total Number of containers	Special Instructions/Note:
FS37 (890-678-37)	5/14/21	10:46	Mountain	Solid		X	X	X		
FS38 (890-678-38)	5/14/21	10:48	Mountain	Solid		X	X	X		
FS39 (890-678-39)	5/14/21	10:50	Mountain	Solid		X	X	X		
FS40 (890-678-40)	5/14/21	10:52	Mountain	Solid		X	X	X		
FS41 (890-678-41)	5/14/21	10:54	Mountain	Solid		X	X	X		
Note: Since laboratory accreditations are subject to change, Eurofins Xenco LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Xenco LLC.										
Possible Hazard Identification Unconfirmed Deliverable Requested I II III IV Other (Specify) Primary Deliverable Rank: 2										
Empty Kit Relinquished by:		Date	Time	Method of Shipment:						
Relinquished by: <i>Cue Cuffs</i>		Date/Time: 5.17.21		Received by: <i>[Signature]</i>		Date/Time: 5-18-21	11:00AM			
Relinquished by:		Date/Time:		Received by:		Date/Time:				
Relinquished by:		Date/Time:		Received by:		Date/Time:				
Custody Seals Intact		Custody Seal No		Cooler Temperature(s) °C and Other Remarks						
A Yes A No										

Eurofins Xenco, Carlsbad

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

Chain of Custody Record



Environment Testing America

Client Information (Sub Contract Lab)						Sampler
Client Contact:						Kramer Jessica
Shipping/Receiving						Jessica kramer@euroflinset.com
Company Euroflins Xenco						E-Mail
Address: 1211 W Florida Ave						Accreditations Required (See note) NELAP - Texas
City: Midland						State of Origin New Mexico
State Zip: TX. 79701						COC No: 890-219 1
Phone: 432-704-5440(Tel)						Page 1 of 5
Email: WQ #:						Job #: 890-678-1
Project Name: Muly Wayne Frac Pond-Big D						Preservation Codes
Site: SSOW#:						A - HCL B NaOH C - Zn Acetate D Nitric Acid E NaHSO4 F MeOH G Amchlor H Ascorbic Acid I Ice J DI Water K EDTA L EDA M Hexane N None O AsNaO2 P Na2CO4S Q Na2SO3 R - Na2S2O3 S H2SO4 T TSP Decahydrate U - Acetone V MCAA W pH 4-5 Z other (specify)
Sample Identification - Client ID (Lab ID)						Total Number of containers
						Special Instructions/Note.
FS01 (890-678-1)	5/13/21	14 50	Mountain	Solid	X	1
FS02 (890-678-2)	5/13/21	14 52	Mountain	Solid	X	1
FS03 (890-678-3)	5/13/21	14 54	Mountain	Solid	X	1
FS04 (890-678-4)	5/13/21	14 56	Mountain	Solid	X	1
FS05 (890-678-5)	5/13/21	15 00	Mountain	Solid	X	1
FS06 (890-678-6)	5/13/21	15 02	Mountain	Solid	X	1
FS07 (890-678-7)	5/13/21	15 04	Mountain	Solid	X	1
FS08 (890-678-8)	5/13/21	15 06	Mountain	Solid	X	1
FS09 (890-678-9)	5/13/21	15 13	Mountain	Solid	X	1
Note: Since laboratory accreditations are subject to change, Euroflins Xenco LLC places the ownership of method, analyte & accreditation compliance upon our subcontracted laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/matrix being analyzed, the samples must be shipped back to the Euroflins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Euroflins Xenco LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Euroflins Xenco LLC.						
Possible Hazard Identification						
Unconfirmed Deliverable Requested I II III IV Other (specify) Primary Deliverable Rank 2						
Empty Kit Relinquished by						
Relinquished by: [Signature]						
Relinquished by: [Signature]						
Relinquished by: [Signature]						
Custody Seals Intact: Δ Yes Δ No						
Cooler Temperature(s) °C and Other Remarks.						

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

Eurofins Xenco, Carlsbad

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

Chain of Custody Record



Environment Testing
America

Client Information (Sub Contract Lab)		Sampler	Lab PM	Carrier Tracking No(s)	COC No:					
Client Contact:	Phone:	Kramer, Jessica			890-219-3					
Shipping/Receiving	E-Mail:	jessica.kramer@eurofinsnet.com	State of Origin:		Page 3 of 5					
Company:	Address:	1211 W. Florida Ave	Accreditations Required (See note)		Job #:					
Eurofins Xenco	City:	Midland	NEIAP - Texas		890-678-1					
	State, Zip:	TX, 79701								
	Phone:	432-704-5440(Tel)								
	Email:	W/O #								
Project Name:	Project #:	89000055								
Maly Wayno Frac Pond-Big D	SSOW#:									
Site:										
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=solid, O=soil, B=issue, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested	Total Number of containers	Special Instructions/Note
FS19 (890-678-19)	5/14/21	09 26	Mountain	Solid		X	X	X	1	
FS20 (890-678-20)	5/14/21	09 37	Mountain	Solid		X	X	X	1	
FS21 (890-678-21)	5/14/21	09 39	Mountain	Solid		X	X	X	1	
FS22 (890-678-22)	5/14/21	09 41	Mountain	Solid		X	X	X	1	
FS23 (890-678-23)	5/14/21	09 43	Mountain	Solid		X	X	X	1	
FS24 (890-678-24)	5/14/21	09 45	Mountain	Solid		X	X	X	1	
FS25 (890-678-25)	5/14/21	09 47	Mountain	Solid		X	X	X	1	
FS26 (890-678-26)	5/14/21	09 49	Mountain	Solid		X	X	X	1	
FS27 (890-678-27)	5/14/21	10 19	Mountain	Solid		X	X	X	1	
Note: Since laboratory accreditations are subject to change, Eurofins Xenco LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/testing/matrix being analyzed the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately. If all requested accreditations are current to date return the signed Chain of Custody attesting to said compliance to Eurofins Xenco LLC.										
Possible Hazard Identification Unconfirmed Deliverable Requested I II III IV Other (specify) Primary Deliverable Rank 2 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☐ Dispose/By Lab ☐ Archive For _____ Months Special Instructions/QC Requirements:										
Empty Kit Relinquished by	Date/Time:	Date	Time	Method of Shipment:	Company					
Relinquished by	Date/Time:	Company		Received by	Date/Time:					
Relinquished by	Date/Time:	Company		Received by	Date/Time:					
Relinquished by	Date/Time:	Company		Received by	Date/Time:					
Custody Seals Intact:	Custody Seal No	Cooler Temperature(s) °C and Other Remarks								
Δ Yes Δ No										

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

Eurofins Xenco, Carlsbad

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

Chain of Custody Record



Environment Testing
America

Client Information (Sub Contract Lab)		Sampler	Lab PM	Carrier Tracking No(s)	COC No:
Client Contact	Phone	Kramer Jessica	890-219 5		
Shipping/Receiving Company	E-Mail	jessica.kramer@eurofinsnet.com	Page 5 of 5		
Eurofins Xenco	Accreditations Required (See note)	NELAP - Texas	Job #:	890-678-1	
Address:	Due Date Requested	5/21/2021	Preservation Codes		
City	TAT Requested (days)		A HCL M Hexane B NaOH N None C - Zn Acetate O AsHAc2 D - Nitric Acid P Na2O4S E NaHSO4 Q Na2SO3 F MeOH R Na2S2O3 G Ascorbic Acid S H2SO4 H Ascorbic Acid T TSP Dodecylhydrate I Ice U Acetone J DI Water V MCAA K - EDTA W pH 4-5 L - EDTA Z other (specify) Other:		
State Zip	PO #		Analysis Requested		
TX 79701	WO #		8021B/6035FP_Calc BTEX 8015MOD_NM/8016NM_S_Prep Full TPH 300_ORGFM_28D/DI_LEACH Chloride		
Phone	Project #		Field Filtered Sample (Yes or No)		
432-704-5440(Tel)	89000055		Perforated MS/MSD (Yes or No)		
Email	SSOV#		8021B/6035FP_Calc BTEX 8015MOD_NM/8016NM_S_Prep Full TPH 300_ORGFM_28D/DI_LEACH Chloride		
Project Name	Project #		Total Number of containers		
My Wayno Frac Pond-Big D	89000055		Special Instructions/Note:		
Site:	SSOV#				
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=washsol, B=triple, A=AA)
FS37 (890-678-37)	5/14/21	10 46		Solid	
FS38 (890-678-38)	5/14/21	10 48		Solid	
FS39 (890-678-39)	5/14/21	10 50		Solid	
FS40 (890-678-40)	5/14/21	10 52		Solid	
FS41 (890-678-41)	5/14/21	10 54		Solid	
Note: Since laboratory accreditations are subject to change, Eurofins Xenco LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis, the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Xenco LLC.					
Possible Hazard Identification					
Unconfirmed					
Deliverable Requested I II III IV Other (specify)		Primary Deliverable Rank 2		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
				☐ Return To Client / ☐ Disposal By Lab ☐ Archive For _____ Months	
Empty Kit Relinquished by		Date	Time	Method of Shipment:	
Relinquished by: <i>Clare Culp</i>		Date/Time: 5.17.21		Date/Time: 5-18-21 11:00AM	
Relinquished by:		Date/Time:		Date/Time:	
Relinquished by:		Date/Time:		Date/Time:	
Custody Seals Intact: ☐ Yes ☐ No		Custody Seal No		Cooler Temperature(s) °C and Other Remarks:	

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-678-1

SDG Number: 314031190

Login Number: 678

List Number: 1

Creator: Ordonez, Gabby

List Source: Eurofins Xenco, Carlsbad

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

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-678-1

SDG Number: 314031190

Login Number: 678

List Number: 2

Creator: Copeland, Tatiana

List Source: Eurofins Xenco, Midland

List Creation: 05/18/21 11:10 AM

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



Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-736-1

Laboratory Sample Delivery Group: Eddy
Client Project/Site: Muy Wayno Frac Pond
Revision: 1

For:

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

Attn: Dan Moir

A handwritten signature in dark ink that reads "Chad A. Bechtold".

Authorized for release by:

7/12/2021 5:38:04 PM

Chad Bechtold, Project Manager
(813)690-3563

chad.bechtold@eurofinset.com

Designee for

Jessica Kramer, Project Manager
(432)704-5440

jessica.kramer@eurofinset.com

LINKS

Review your project
results through

TotalAccess

Have a Question?



Visit us at:

www.eurofinsus.com/Env

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

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

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond

Laboratory Job ID: 890-736-1
SDG: Eddy

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Client Sample Results	5
Surrogate Summary	7
QC Sample Results	8
QC Association Summary	11
Lab Chronicle	13
Certification Summary	14
Method Summary	15
Sample Summary	16
Chain of Custody	17
Receipt Checklists	19

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

Definitions/Glossary

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond

Job ID: 890-736-1
SDG: Eddy

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond

Job ID: 890-736-1
SDG: Eddy

Job ID: 890-736-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-736-1

Receipt

The samples were received on 5/26/2021 2:21 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 8.0°C

Report Revision

Per client request the sample IDs were changed as requested via email on 7/12/2021.

BG01 was changed to SS03
BG02 was changed to SS04
BG03 was changed to SS05

Receipt Exceptions

The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: SS03 (890-736-1), SS04 (890-736-2) and SS05 (890-736-3).

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: Manual integration was performed on the following samples: (MB 880-3585/1-A) and (890-735-A-1-D). Manual integrations were performed in the Over C10-C28 hydrocarbon range and the Over C28-C36 hydrocarbon range due to false detections created by a baseline rise.

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

HPLC/IC

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

Client Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond

Job ID: 890-736-1
SDG: Eddy

Client Sample ID: SS03

Lab Sample ID: 890-736-1

Date Collected: 05/26/21 10:34

Matrix: Solid

Date Received: 05/26/21 14:21

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		05/27/21 12:00	05/27/21 23:59	1
Toluene	<0.00201	U	0.00201	mg/Kg		05/27/21 12:00	05/27/21 23:59	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		05/27/21 12:00	05/27/21 23:59	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		05/27/21 12:00	05/27/21 23:59	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		05/27/21 12:00	05/27/21 23:59	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		05/27/21 12:00	05/27/21 23:59	1
Total BTEX	<0.00402	U	0.00402	mg/Kg		05/27/21 12:00	05/27/21 23:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130	05/27/21 12:00	05/27/21 23:59	1
1,4-Difluorobenzene (Surr)	100		70 - 130	05/27/21 12:00	05/27/21 23:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/27/21 14:14	05/28/21 23:02	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/27/21 14:14	05/28/21 23:02	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/27/21 14:14	05/28/21 23:02	1
Total TPH	<50.0	U	50.0	mg/Kg		05/27/21 14:14	05/28/21 23:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130	05/27/21 14:14	05/28/21 23:02	1
o-Terphenyl	93		70 - 130	05/27/21 14:14	05/28/21 23:02	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	34.7		5.04	mg/Kg			05/28/21 16:37	1

Client Sample ID: SS04

Lab Sample ID: 890-736-2

Date Collected: 05/26/21 10:38

Matrix: Solid

Date Received: 05/26/21 14:21

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/27/21 12:00	05/28/21 00:19	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/27/21 12:00	05/28/21 00:19	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/27/21 12:00	05/28/21 00:19	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/27/21 12:00	05/28/21 00:19	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/27/21 12:00	05/28/21 00:19	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/27/21 12:00	05/28/21 00:19	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		05/27/21 12:00	05/28/21 00:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	117		70 - 130	05/27/21 12:00	05/28/21 00:19	1
1,4-Difluorobenzene (Surr)	101		70 - 130	05/27/21 12:00	05/28/21 00:19	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond

Job ID: 890-736-1
SDG: Eddy

Client Sample ID: SS04

Lab Sample ID: 890-736-2

Date Collected: 05/26/21 10:38

Matrix: Solid

Date Received: 05/26/21 14:21

Sample Depth: - 0.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/27/21 14:14	05/28/21 23:24	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/27/21 14:14	05/28/21 23:24	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/27/21 14:14	05/28/21 23:24	1
Total TPH	<49.9	U	49.9	mg/Kg		05/27/21 14:14	05/28/21 23:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130	05/27/21 14:14	05/28/21 23:24	1
o-Terphenyl	92		70 - 130	05/27/21 14:14	05/28/21 23:24	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	99.7		4.99	mg/Kg			05/28/21 16:42	1

Client Sample ID: SS05

Lab Sample ID: 890-736-3

Date Collected: 05/26/21 10:41

Matrix: Solid

Date Received: 05/26/21 14:21

Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/27/21 12:00	05/28/21 00:40	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/27/21 12:00	05/28/21 00:40	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/27/21 12:00	05/28/21 00:40	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/27/21 12:00	05/28/21 00:40	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/27/21 12:00	05/28/21 00:40	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		05/27/21 12:00	05/28/21 00:40	1
Total BTEX	<0.00399	U	0.00399	mg/Kg		05/27/21 12:00	05/28/21 00:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		70 - 130	05/27/21 12:00	05/28/21 00:40	1
1,4-Difluorobenzene (Surr)	98		70 - 130	05/27/21 12:00	05/28/21 00:40	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/27/21 14:14	05/28/21 23:45	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/27/21 14:14	05/28/21 23:45	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/27/21 14:14	05/28/21 23:45	1
Total TPH	<50.0	U	50.0	mg/Kg		05/27/21 14:14	05/28/21 23:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130	05/27/21 14:14	05/28/21 23:45	1
o-Terphenyl	97		70 - 130	05/27/21 14:14	05/28/21 23:45	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	124		4.97	mg/Kg			05/29/21 04:06	1

Eurofins Xenco, Carlsbad

Surrogate Summary

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond

Job ID: 890-736-1
SDG: Eddy

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-736-1	SS03	113	100
890-736-2	SS04	117	101
890-736-3	SS05	115	98
LCS 880-3566/1-A	Lab Control Sample	108	96
LCSD 880-3566/2-A	Lab Control Sample Dup	108	94
MB 880-3566/5-A	Method Blank	109	93

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-736-1	SS03	97	93
890-736-2	SS04	96	92
890-736-3	SS05	97	97
LCS 880-3585/3-A	Lab Control Sample	96	86
MB 880-3585/1-A	Method Blank	96	91

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond

Job ID: 890-736-1
SDG: Eddy

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-3566/5-A

Matrix: Solid

Analysis Batch: 3568

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 3566

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/27/21 10:16	05/27/21 16:14	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/27/21 10:16	05/27/21 16:14	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/27/21 10:16	05/27/21 16:14	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/27/21 10:16	05/27/21 16:14	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/27/21 10:16	05/27/21 16:14	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/27/21 10:16	05/27/21 16:14	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/27/21 10:16	05/27/21 16:14	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	05/27/21 10:16	05/27/21 16:14	1
1,4-Difluorobenzene (Surr)	93		70 - 130	05/27/21 10:16	05/27/21 16:14	1

Lab Sample ID: LCS 880-3566/1-A

Matrix: Solid

Analysis Batch: 3568

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 3566

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.09632		mg/Kg		96	70 - 130
Toluene	0.100	0.1167		mg/Kg		117	70 - 130
Ethylbenzene	0.100	0.1190		mg/Kg		119	70 - 130
m-Xylene & p-Xylene	0.200	0.2470		mg/Kg		123	70 - 130
o-Xylene	0.100	0.1230		mg/Kg		123	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

Lab Sample ID: LCSD 880-3566/2-A

Matrix: Solid

Analysis Batch: 3568

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 3566

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.09201		mg/Kg		92	70 - 130	5	35
Toluene	0.100	0.1148		mg/Kg		115	70 - 130	2	35
Ethylbenzene	0.100	0.1166		mg/Kg		117	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.2400		mg/Kg		120	70 - 130	3	35
o-Xylene	0.100	0.1191		mg/Kg		119	70 - 130	3	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond

Job ID: 890-736-1
SDG: Eddy

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

Lab Sample ID: MB 880-3585/1-A

Matrix: Solid

Analysis Batch: 3616

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 3585

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/27/21 14:14	05/28/21 14:51	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/27/21 14:14	05/28/21 14:51	1
Oil Range Organics (Over C28-C36)	107.7		50.0	mg/Kg		05/27/21 14:14	05/28/21 14:51	1
Total TPH	107.7		50.0	mg/Kg		05/27/21 14:14	05/28/21 14:51	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130	05/27/21 14:14	05/28/21 14:51	1
o-Terphenyl	91		70 - 130	05/27/21 14:14	05/28/21 14:51	1

Lab Sample ID: LCS 880-3585/3-A

Matrix: Solid

Analysis Batch: 3616

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 3585

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	844.3		mg/Kg		84	70 - 130
Diesel Range Organics (Over C10-C28)	1000	892.1		mg/Kg		89	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	96		70 - 130
o-Terphenyl	86		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-3587/1-A

Matrix: Solid

Analysis Batch: 3608

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			05/28/21 13:46	1

Lab Sample ID: LCS 880-3587/2-A

Matrix: Solid

Analysis Batch: 3608

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	244.0		mg/Kg		98	90 - 110

Lab Sample ID: LCSD 880-3587/3-A

Matrix: Solid

Analysis Batch: 3608

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	244.1		mg/Kg		98	90 - 110	0	20

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond

Job ID: 890-736-1
SDG: Eddy

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 880-3620/1-A

Matrix: Solid

Analysis Batch: 3649

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			05/29/21 01:59	1

Lab Sample ID: LCS 880-3620/2-A

Matrix: Solid

Analysis Batch: 3649

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	245.6		mg/Kg		98	90 - 110

Lab Sample ID: LCSD 880-3620/3-A

Matrix: Solid

Analysis Batch: 3649

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	245.0		mg/Kg		98	90 - 110	0	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond

Job ID: 890-736-1
SDG: Eddy

GC VOA

Prep Batch: 3566

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-736-1	SS03	Total/NA	Solid	5035	
890-736-2	SS04	Total/NA	Solid	5035	
890-736-3	SS05	Total/NA	Solid	5035	
MB 880-3566/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3566/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3566/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 3568

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-736-1	SS03	Total/NA	Solid	8021B	3566
890-736-2	SS04	Total/NA	Solid	8021B	3566
890-736-3	SS05	Total/NA	Solid	8021B	3566
MB 880-3566/5-A	Method Blank	Total/NA	Solid	8021B	3566
LCS 880-3566/1-A	Lab Control Sample	Total/NA	Solid	8021B	3566
LCSD 880-3566/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3566

GC Semi VOA

Prep Batch: 3585

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-736-1	SS03	Total/NA	Solid	8015NM Prep	
890-736-2	SS04	Total/NA	Solid	8015NM Prep	
890-736-3	SS05	Total/NA	Solid	8015NM Prep	
MB 880-3585/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3585/3-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	

Analysis Batch: 3616

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-736-1	SS03	Total/NA	Solid	8015B NM	3585
890-736-2	SS04	Total/NA	Solid	8015B NM	3585
890-736-3	SS05	Total/NA	Solid	8015B NM	3585
MB 880-3585/1-A	Method Blank	Total/NA	Solid	8015B NM	3585
LCS 880-3585/3-A	Lab Control Sample	Total/NA	Solid	8015B NM	3585

HPLC/IC

Leach Batch: 3587

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-736-1	SS03	Soluble	Solid	DI Leach	
890-736-2	SS04	Soluble	Solid	DI Leach	
MB 880-3587/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3587/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3587/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 3608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-736-1	SS03	Soluble	Solid	300.0	3587
890-736-2	SS04	Soluble	Solid	300.0	3587
MB 880-3587/1-A	Method Blank	Soluble	Solid	300.0	3587
LCS 880-3587/2-A	Lab Control Sample	Soluble	Solid	300.0	3587
LCSD 880-3587/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3587

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond

Job ID: 890-736-1
SDG: Eddy

HPLC/IC

Leach Batch: 3620

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-736-3	SS05	Soluble	Solid	DI Leach	
MB 880-3620/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3620/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3620/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 3649

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-736-3	SS05	Soluble	Solid	300.0	3620
MB 880-3620/1-A	Method Blank	Soluble	Solid	300.0	3620
LCS 880-3620/2-A	Lab Control Sample	Soluble	Solid	300.0	3620
LCSD 880-3620/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3620

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond

Job ID: 890-736-1
SDG: Eddy

Client Sample ID: SS03

Lab Sample ID: 890-736-1

Date Collected: 05/26/21 10:34

Matrix: Solid

Date Received: 05/26/21 14:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3566	05/27/21 12:00	MR	XEN MID
Total/NA	Analysis	8021B		1	3568	05/27/21 23:59	KL	XEN MID
Total/NA	Prep	8015NM Prep			3585	05/27/21 14:14	DM	XEN MID
Total/NA	Analysis	8015B NM		1	3616	05/28/21 23:02	AJ	XEN MID
Soluble	Leach	DI Leach			3587	05/27/21 14:55	CH	XEN MID
Soluble	Analysis	300.0		1	3608	05/28/21 16:37	SC	XEN MID

Client Sample ID: SS04

Lab Sample ID: 890-736-2

Date Collected: 05/26/21 10:38

Matrix: Solid

Date Received: 05/26/21 14:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3566	05/27/21 12:00	MR	XEN MID
Total/NA	Analysis	8021B		1	3568	05/28/21 00:19	KL	XEN MID
Total/NA	Prep	8015NM Prep			3585	05/27/21 14:14	DM	XEN MID
Total/NA	Analysis	8015B NM		1	3616	05/28/21 23:24	AJ	XEN MID
Soluble	Leach	DI Leach			3587	05/27/21 14:55	CH	XEN MID
Soluble	Analysis	300.0		1	3608	05/28/21 16:42	SC	XEN MID

Client Sample ID: SS05

Lab Sample ID: 890-736-3

Date Collected: 05/26/21 10:41

Matrix: Solid

Date Received: 05/26/21 14:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3566	05/27/21 12:00	MR	XEN MID
Total/NA	Analysis	8021B		1	3568	05/28/21 00:40	KL	XEN MID
Total/NA	Prep	8015NM Prep			3585	05/27/21 14:14	DM	XEN MID
Total/NA	Analysis	8015B NM		1	3616	05/28/21 23:45	AJ	XEN MID
Soluble	Leach	DI Leach			3620	05/28/21 12:43	SC	XEN MID
Soluble	Analysis	300.0		1	3649	05/29/21 04:06	SC	XEN MID

Laboratory References:

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

Eurofins Xenco, Carlsbad

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond

Job ID: 890-736-1
SDG: Eddy

Laboratory: Eurofins Xenco, Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	06-30-21
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

Method Summary

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond

Job ID: 890-736-1
SDG: Eddy

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

Protocol References:

ASTM = ASTM International

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

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

Laboratory References:

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

Eurofins Xenco, Carlsbad

Sample Summary

Client: WSP USA Inc.
Project/Site: Muy Wayno Frac Pond

Job ID: 890-736-1
SDG: Eddy

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-736-1	SS03	Solid	05/26/21 10:34	05/26/21 14:21	- 0.5
890-736-2	SS04	Solid	05/26/21 10:38	05/26/21 14:21	- 0.5
890-736-3	SS05	Solid	05/26/21 10:41	05/26/21 14:21	- 0.5

1

2

3

4

5

6

7

8

9

10

11

12

13

14



Houston, TX (281) 240-4200 Dallas, TX (214) 902-0550 San Antonio, TX (210) 509-3334
Midland, TX (432-704-5440) El Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296
Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813) 233-3927
Hobbs, NM (575-392-7550)

www.xenco.com

Page ____ of ____

Chain of Custody

Work Order No:

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

Work Order Comments	
Program: UST/ST	☐ RP ☐ Growfields ☐ RC ☐ Superfund ☐
State of Project:	
Reporting Level II	☐ Level III ☐ ST/UST ☐ RP ☐ Level IV ☐
Deliverables: EDD	☐ ADAPT ☐ Other:

[illegible]

SAMPLE RECEIPT		Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):	8.2/8.0	Thermometer ID					
Received Intact:	Yes	No	2NW-007				
Cooler Custody Seals:	Yes	No	Correction Factor: -0.2				
Sample Custody Seals:	Yes	No	Total Containers:				

Number of Containers	
(EPA 8015)	
(EPA 0-8021)	
(EPA 300.0)	



890-736 Chain of Custody

Incident #: NRM2024756871.

NRM2028241966, nAPP21022393584

nAPP2102626563

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

[illegible]

Circle Method(s) and Metal(s) to be analyzed	Total 200.7 / 6010	200.8 / 6020:
8RCRA 13PPM Texas 11	Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn	
TC1P / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U		14341+2464+17470+7471+119

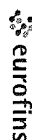
Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xencro, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xencro will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xencro. A minimum charge of \$75.00 will be applied to each project and a charge of \$3 for each sample submitted to Xencro, but not analyzed. These terms will be enforced unless previously negotiated. At Xencro, a minimum charge of \$75.00 will be applied to each project and a charge of \$3 for each sample submitted to Xencro, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 <i>[Signature]</i>	<i>[Signature]</i>	5-28-21 1721 ²			
3		4			
5		6			

Eurofins Xenco, Carlsbad

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

Chain of Custody Record



Environment Testing
| America

[illegible]

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-736-1

SDG Number: Eddy

Login Number: 736**List Number: 1****Creator: Clifton, Cloe****List Source: Eurofins Xenco, Carlsbad**

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

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-736-1

SDG Number: Eddy

Login Number: 736**List Number: 2****Creator: Kramer, Jessica****List Source: Eurofins Xenco, Midland****List Creation: 05/27/21 11:06 AM**

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

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

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

CONDITIONS

Action 36556

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 36556
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
chensley	None	8/18/2021