ENSOLUM

August 27, 2025

New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Closure Request
Big Eddy Unit 150
Incident Number NRM2024854885
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared this *Closure Request* to document excavation, and soil sampling activities at the Big Eddy Unit 150 (Site). The purpose of the excavation and sampling activities was to address impacts to soil following an approved *Remediation Work Plan* (*Work Plan)* to address a requested deferral area at the Site. Based on field observations, field screening activities, and soil sample laboratory analytical results, XTO is submitting this *Closure Request*, describing excavation and soil sampling activities that have occurred and requesting no further action for Incident Number NRM2024854885.

SITE DESCRIPTION AND RELEASE BACKGROUND

The Site is located in in Unit K, Section 17, Township 21 South, Range 28 East, in Eddy County, New Mexico (32.47873°, -104.11116°) and is associated with oil and gas exploration and production operations on private land owned by Incident Catering Services LLC DBA Ellipse Global.

On August 19, 2020, the suction line corrosion resulted in the release of approximately 623 barrels (bbls) of produced water. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; 1 bbl of produced water was recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) via an Initial Form C-141 Application (C-141) on September 2, 2020. The release was assigned Incident Number NRM2024854885.

On August 12, 2021, XTO submitted a *Remediation Work Plan and Deferral Request* (*Work Plan*) documenting completed delineation and excavation activities. The *Work Plan* requested approval of a remediation liner installation for impacts remaining in place below 4 feet bgs and the deferral of approximately 1,080 cubic yards directly adjacent to an active production pipeline in the area of sidewall SW05. On February 28, 2022, the NMOCD approved the *Work Plan* with the exception of the requested deferral area. The *Work Plan* is included in Appendix A.

On April 28, 2022, Ensolum returned to the Site to oversee the remediation liner installation on the floor of the excavation in accordance with the approved *Work Plan.* The excavation was backfilled pending approved access to the original requested area of deferral near the active pipeline.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented below.

Depth to groundwater at the Site is estimated to be less than 50 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted well with depth to groundwater data is the New Mexico Office of the State Engineer (NMOSE) permitted well CP-00627, located approximately 139 feet southeast of the Site. The water well has a depth to groundwater of approximately 30 feet bgs with a total depth of 154 feet bgs. The well log and records are provided in Appendix B.

The closest continuously flowing or significant watercourse to the Site is a seasonal dry wash, located approximately 5,817 feet northwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and less than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is less 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 underlain by unstable geology (high potential karst designation area). Potential site receptors are identified on Figure 1.

Based on the results of the Site Characterization, the following NMOCD Table I 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): 100 mg/kg
- Chloride: 600 mg/kg

EXCAVATION AND CONFIRMATION SOIL SAMPLING ACTIVITIES

On February 14, 2025, Ensolum personnel visited the Site to oversee excavation activities. The original requested area of deferral, in the vicinity of SW05, was excavated with heavy equipment. To direct excavation activities, soil was field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. Once field screening results indicated impacted soil was adequately removed, 5-point composite soil samples were collected every 200 square feet from the floor and sidewalls of the excavation extent. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Confirmation soil samples FS01 through FS04 were collected from the floor of the excavation at depths ranging from 4 feet bgs to 8 feet bgs. Confirmation soil samples SW01 through SW03 were collected from the sidewalls of the excavation at depths ranging from the ground surface to 8 feet bgs. The excavation extent and soil sample locations are depicted on Figure 2. Photographic documentation is included in Appendix B.

All soil samples collected 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 under strict chain-of-custody procedures to Cardinal Laboratories (Cardinal) in Hobbs, New Mexico, for analysis of the following contaminants of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following Standard Method SM4500.

The excavation extent measured approximately 780 square feet. 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 Disposal Facility in Hobbs, New Mexico. The total excavation extent, including the previously completed excavation, measured approximately 5,305 square feet with a total of approximately 1,230 cubic yards of impacted soil removed. The final excavation was backfilled with material purchased locally and recontoured to match pre-existing Site conditions. One representative 5-point composite sample (BF01) was collected from the topsoil backfill material. The backfill soil sample was collected and handled as described above and submitted to Cardinal for the same COCs listed above.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for the final confirmation soil samples indicated all COC concentrations were compliant with the Closure Criteria and confirmed the lateral and vertical extent of the release. Laboratory analytical results for backfill soil sample BF01 indicated COC concentrations were in compliance with reclamation requirements. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix C.

RECLAMATION PLAN

The Site will be seeded with BLM seed mix #2 for sandy sites at the rate specified in pounds of pure live seed (PLS) per acre during the next BLM recommended planting season.

Species/Cultivar	**PLS/Acre**
Sand lovegrass (Eragrostis trichodes)	1.0
Sands dropseed (Sporobolus cryptandrus)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

The seed mix will be applied via drill seeding or broadcast seeding. If broadcast seeding is selected, the PLS/acre will be doubled, and the seed will be raked in by chaining or dragging the Site. Reclamation activities will be documented with photographs and included in a *Re-Vegetation Report*.

CLOSURE REQUEST

Excavation activities were conducted at the Site to address the August 19, 2020, suction line failure resulting in the release of 623 bbls of produced water at the Site. Laboratory analytical results for all confirmation soil samples indicated all COC concentrations were compliant with the Closure Criteria. Based on laboratory analytical results, no further remediation was required. XTO backfilled the excavation with material purchased locally and recontoured the Site to match pre-existing site conditions. The release will be reseeded with a BLM approved seed mix during the next BLM recommended planting season and a revegetation report will be completed.

Excavation of impacted soil has mitigated potential impacts at this Site. Depth to groundwater has been estimated to be less than 50 feet bgs and sensitive receptors were identified near the Site. XTO believes these remedial actions are protective of human health, the environment, and groundwater. As such, XTO respectfully requests closure for Incident Number NRM2024854885.

A *Re-vegetation Report* will be submitted to the NMOCD once vegetation growth in the reclaimed pasture area has uniform vegetative cover that reflects a life-form ratio of plus or minus 50 percent (%) of pre-disturbance levels and a total percent plant cover of at least 70% of pre-disturbance levels, excluding noxious weeds, per NMAC 19.15.29.13 D.(3).

If you have any questions or comments, please contact Ms. Tacoma Morrissey at (337) 257-8307 or tmorrissey@ensolum.com.

Sincerely,
Ensolum, LLC

Tracy Hillard
Project Engineer

Tacoma Morrissey
Associate Principal

cc: Kaylan Dirkx, XTO
Ashley McAfee, XTO
Incident Catering Services LLC DBA Ellipse Global

Appendices:

Figure 1	Site Receptor Map
Figure 2	Confirmation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Photographic Log
Appendix C	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix D	August 12, 2021 *Remediation Work Plan*

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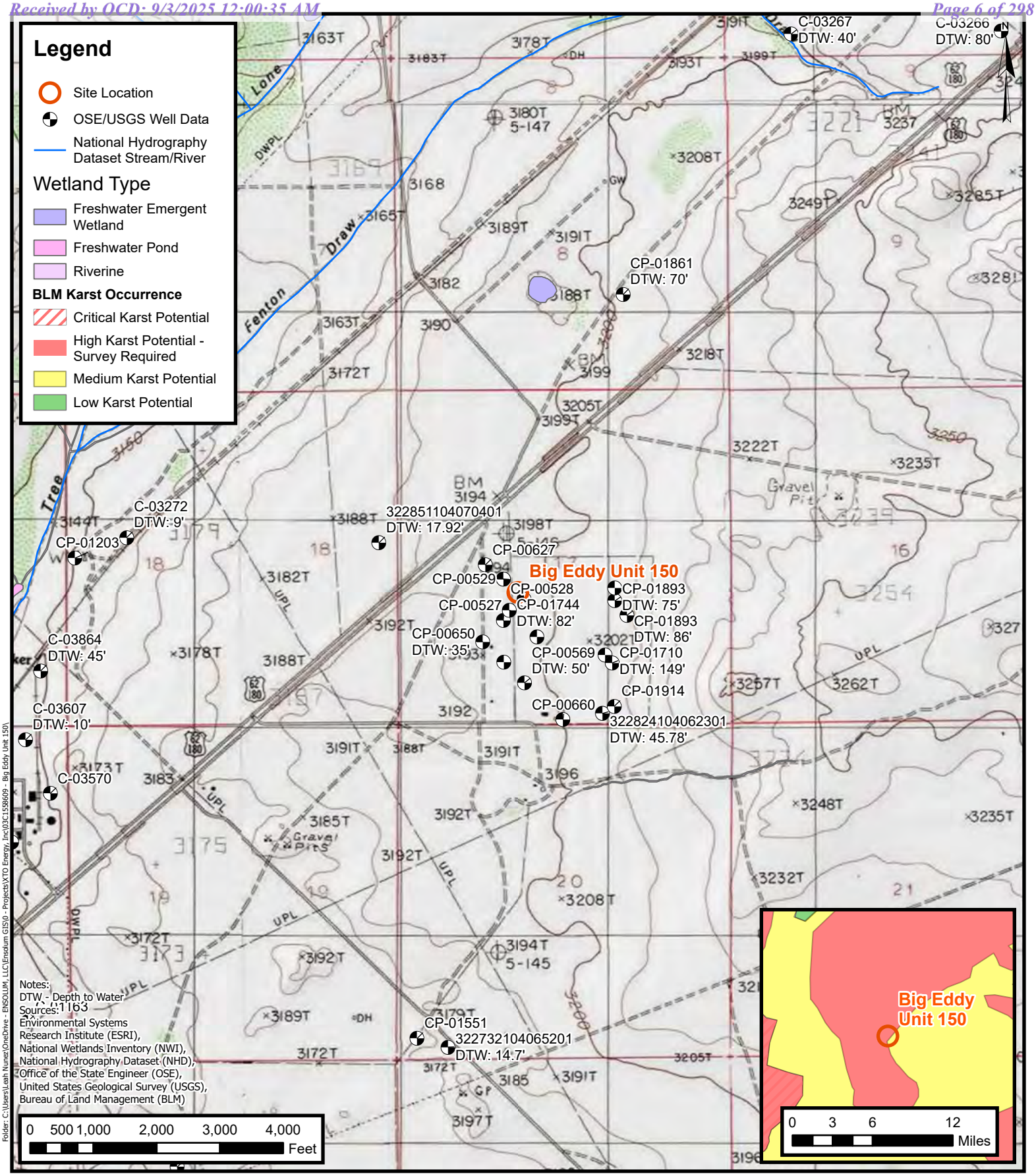
FIGURES



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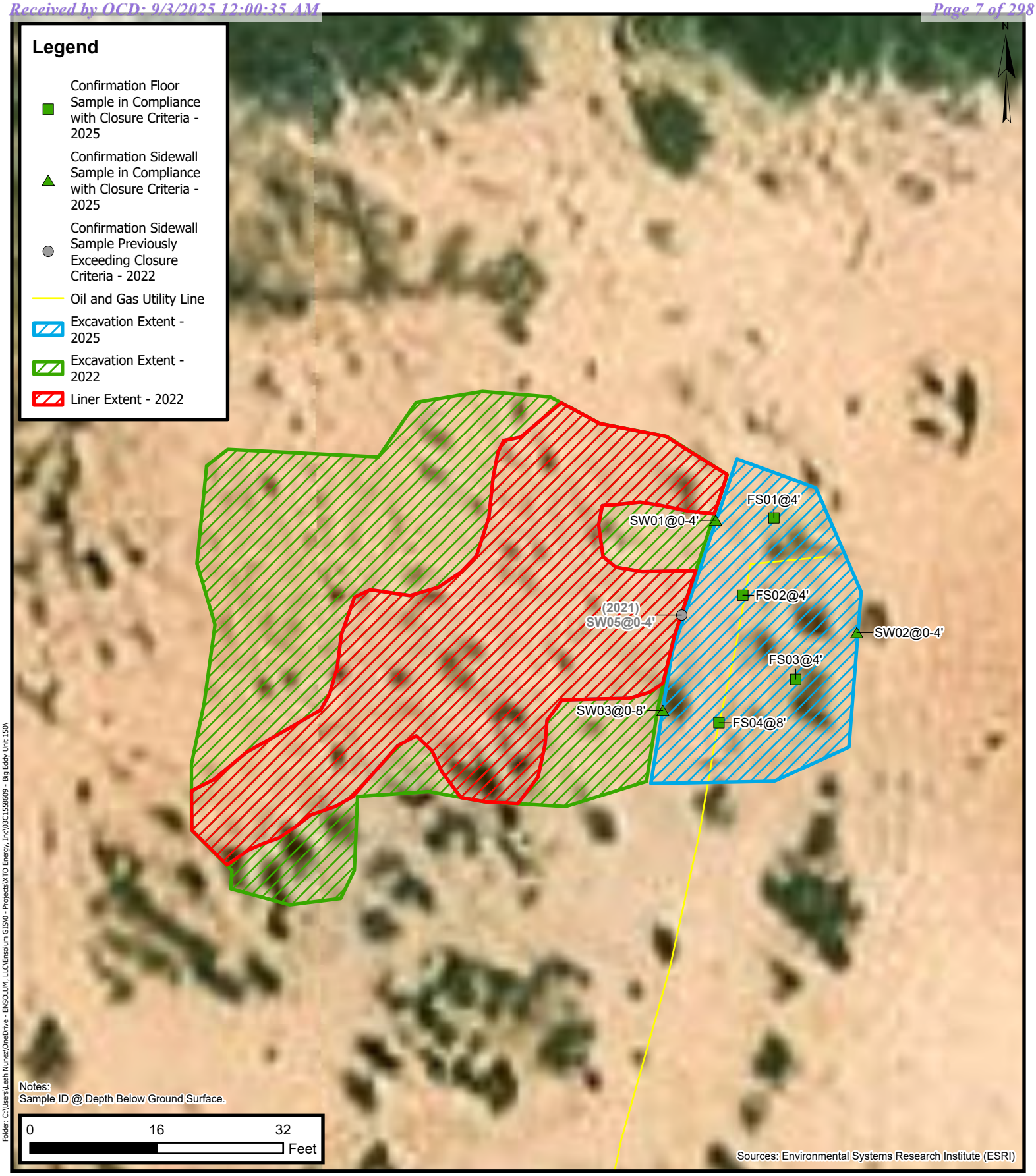
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

XTO Energy, Inc
Big Eddy Unit 150
Incident Number: NRM2024854885
Unit K, Section 17, T 21S, R 28E
Eddy County, New Mexico

FIGURE 1



Folder: C:\Users\Leah Nunez\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\XTO Energy, Inc\03C1598609 - Big Eddy Unit 150\

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Environmental, Engineering and Hydrogeologic Consultants

Confirmation Soil Sample Locations

XTO Energy, Inc
Big Eddy Unit 150
Incident Number: NRM2024854885
Unit K, Section 17, T 21S, R 28E
Eddy County, New Mexico

FIGURE 2

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Big Eddy Unit 150
XTO Energy, Inc
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**NE**	**100**	**600**
Confirmation Soil Samples										
FS01	02/14/2025	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	384
FS02	02/14/2025	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	368
FS03	02/14/2025	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
FS04	02/15/2025	8	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	240
SW01	02/15/2025	0 - 4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	240
SW02	02/14/2025	0 - 4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	368
SW03	02/15/2025	0 - 8	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
Backfill Soil Sample										
BF01	02/14/2025	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation requirement where applicable.

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMAC: New Mexico Administrative Code

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APPENDIX A

Referenced Well Records

Revised June 1972

SANTA FE

475174

STATE ENGINEER OFFICE

WELL RECORD

Section 1. GENERAL INFORMATION

(A) Owner of well Clinton C. West Owner's Well No. 1

Street or Post Office Address PO Box 532

City and State Carlsbad, New Mexico 88220

Well was drilled under Permit No. CP-627 and is located in the:

a. ____ ¼ NE ¼ SW ¼ ____ ¼ of Section 17 Township 21-S Range 28-E N.M.P.M.

b. Tract No. ____ of Map No. ____ of the ____

c. Lot No. 1 of Block No. 1 of the Quahada Acres Subdivision, recorded in EDDY County.

d. X= ____ feet, Y= ____ feet, N.M. Coordinate System ____ Zone in the ____ Grant.

(B) Drilling Contractor Billy George West License No. WD-817

Address Rt. 1 Box 5-E , Carlsbad, New Mexico, 88220

Drilling Began 5-12-82 Completed 5-15-82 Type tools Rotary Size of hole 6 3/4 in.

Elevation of land surface or ____ at well is ____ ft. Total depth of well 154 ft.

Completed well is ☒ shallow ☐ artesian. Depth to water upon completion of well 30 ft.

Section 2. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	Depth in Feet To	Thickness in Feet	Description of Water-Bearing Formation	Estimated Yield (gallons per minute)
112	118	6	Gypsum & Red Clay Conglomerate	15+

Section 3. RECORD OF CASING

Diameter (inches)	Pounds per foot	Threads per in.	Depth in Feet Top	Depth in Feet Bottom	Length (feet)	Type of Shoe	Perforations From	Perforations To
4	PVC	-	Surface	154	154	-	94	154

Section 4. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	Depth in Feet To	Hole Diameter	Sacks of Mud	Cubic Feet of Cement	Method of Placement

STATE ENGINEER
SANTA FE, N.M.
'82 JUN 3 AM 10 26

Section 5. PLUGGING RECORD

Plugging Contractor ____

Address ____

Plugging Method ____

Date Well Plugged ____

Plugging approved by:

____ State Engineer Representative

No.	Depth in Feet Top	Depth in Feet Bottom	Cubic Feet of Cement
1			
2			
3			
4			

FOR USE OF STATE ENGINEER ONLY

Date Received May 24, 1982

Quad ____ FWL ____ FSL ____

File No. CP-627 Use DOM & STK Location No. 21.28.17.32

Section 6. LOG OF HOLE

Depth in Feet From	Depth in Feet To	Thickness in Feet	Color and Type of Material Encountered
0	18	18	Caliche
10	37	27	Red Clay
37	39	2	Gypsum
39	112	73	Red Clay
112	118	6	Gypsum & Red Clay Conglomerate
118	142	24	Red Clay
142	144	2	Gypsum
144	154	10	Red Clay

Section 7. REMARKS AND ADDITIONAL INFORMATION

MAY 24 8 35 AM '82
STATE ENGINEER
ROSWELL, NM

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

B G West
Driller

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the appropriate district office of the State Engineer. All sections of this form, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1(a) and Section 5 need be completed.

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APPENDIX B

Photographic Log

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Photographic Log
XTO Energy, Inc
Big Eddy Unit 150
NRM2024854885

Photograph: 1 Date: 7/26/2021
Description: Original excavation
View: West

Photograph: 2 Date: 4/28/2022
Description: Liner installation
View: North

Photograph: 3 Date: 4/28/2022
Description: Liner installation
View: West

Photograph: 4 Date: 4/29/2022
Description: Backfilled original excavation
View: Southwest

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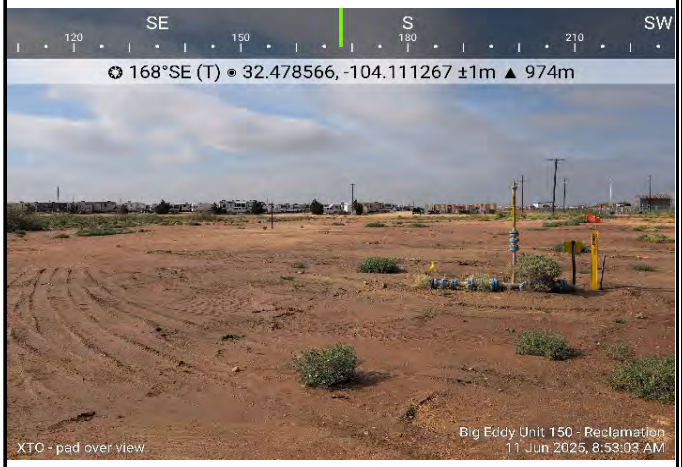
Photographic Log
XTO Energy, Inc
Big Eddy Unit 150
NRM2024854885

Photograph: 5 Date: 2/14/2025
Description: Excavation activities
View: Northwest

Photograph: 6 Date: 2/15/2025
Description: Excavation activities; near FS04
View: East

Photograph: 7 Date: 2/15/2025
Description: Excavation activities; near FS04
View: East



Photograph: 8 Date: 6/11/2025
Description: Backfilled excavation
View: South

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APPENDIX C

Laboratory Analytical Reports & Chain of Custody Documentation

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

February 19, 2025

TRACY HILLARD

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: BIG EDDY UNIT 150

Enclosed are the results of analyses for samples received by the laboratory on 02/17/25 12:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	02/17/2025	Sampling Date:	02/15/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BIG EDDY UNIT 150	Sampling Condition:	Cool & Intact
Project Number:	03C1558609	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.478732-104.111167		

Sample ID: SW 01 0-4' (H250933-01)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2025	ND	1.91	95.4	2.00	3.79	
Toluene*	<0.050	0.050	02/17/2025	ND	2.00	100	2.00	5.08	
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.02	101	2.00	5.30	
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.17	103	6.00	4.79	
Total BTEX	<0.300	0.300	02/17/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *109 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**240**	16.0	02/18/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2025	ND	193	96.3	200	1.56	
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	193	96.5	200	1.77	
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND					

Surrogate: 1-Chlorooctane *88.0 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *90.9 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	02/17/2025	Sampling Date:	02/15/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BIG EDDY UNIT 150	Sampling Condition:	Cool & Intact
Project Number:	03C1558609	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.478732-104.111167		

Sample ID: SW 03 0-8' (H250933-02)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2025	ND	1.91	95.4	2.00	3.79	
Toluene*	<0.050	0.050	02/17/2025	ND	2.00	100	2.00	5.08	
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.02	101	2.00	5.30	
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.17	103	6.00	4.79	
Total BTEX	<0.300	0.300	02/17/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *113 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	02/18/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2025	ND	193	96.3	200	1.56	
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	193	96.5	200	1.77	
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND					

Surrogate: 1-Chlorooctane *103 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *106 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	02/17/2025	Sampling Date:	02/15/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BIG EDDY UNIT 150	Sampling Condition:	Cool & Intact
Project Number:	03C1558609	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.478732-104.111167		

Sample ID: FS 04 8' (H250933-03)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2025	ND	1.91	95.4	2.00	3.79	
Toluene*	<0.050	0.050	02/17/2025	ND	2.00	100	2.00	5.08	
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.02	101	2.00	5.30	
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.17	103	6.00	4.79	
Total BTEX	<0.300	0.300	02/17/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *108 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**240**	16.0	02/18/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2025	ND	193	96.3	200	1.56	
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	193	96.5	200	1.77	
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND					

Surrogate: 1-Chlorooctane *102 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *104 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	02/17/2025	Sampling Date:	02/14/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BIG EDDY UNIT 150	Sampling Condition:	Cool & Intact
Project Number:	03C1558609	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.478732-104.111167		

Sample ID: FS 01 4' (H250933-04)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2025	ND	1.91	95.4	2.00	3.79	
Toluene*	<0.050	0.050	02/17/2025	ND	2.00	100	2.00	5.08	
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.02	101	2.00	5.30	
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.17	103	6.00	4.79	
Total BTEX	<0.300	0.300	02/17/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *109 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**384**	16.0	02/18/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2025	ND	193	96.3	200	1.56	
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	193	96.5	200	1.77	
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND					

Surrogate: 1-Chlorooctane *84.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *86.9 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	02/17/2025	Sampling Date:	02/14/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BIG EDDY UNIT 150	Sampling Condition:	Cool & Intact
Project Number:	03C1558609	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.478732-104.111167		

Sample ID: FS 02 4' (H250933-05)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2025	ND	1.91	95.4	2.00	3.79	
Toluene*	<0.050	0.050	02/17/2025	ND	2.00	100	2.00	5.08	
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.02	101	2.00	5.30	
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.17	103	6.00	4.79	
Total BTEX	<0.300	0.300	02/17/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *110 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**368**	16.0	02/18/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2025	ND	193	96.3	200	1.56	
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	193	96.5	200	1.77	
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND					

Surrogate: 1-Chlorooctane *112 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *115 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	02/17/2025	Sampling Date:	02/14/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BIG EDDY UNIT 150	Sampling Condition:	Cool & Intact
Project Number:	03C1558609	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.478732-104.111167		

Sample ID: FS 03 4' (H250933-06)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2025	ND	1.91	95.4	2.00	3.79	
Toluene*	<0.050	0.050	02/17/2025	ND	2.00	100	2.00	5.08	
Ethylbenzene*	<0.050	0.050	02/17/2025	ND	2.02	101	2.00	5.30	
Total Xylenes*	<0.150	0.150	02/17/2025	ND	6.17	103	6.00	4.79	
Total BTEX	<0.300	0.300	02/17/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *108 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**192**	16.0	02/18/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2025	ND	193	96.3	200	1.56	
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	193	96.5	200	1.77	
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND					

Surrogate: 1-Chlorooctane *75.6 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *77.8 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	02/17/2025	Sampling Date:	02/14/2025
Reported:	02/19/2025	Sampling Type:	Soil
Project Name:	BIG EDDY UNIT 150	Sampling Condition:	Cool & Intact
Project Number:	03C1558609	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.478732-104.111167		

Sample ID: SW 02 0-4' (H250933-07)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/18/2025	ND	1.91	95.4	2.00	3.79	
Toluene*	<0.050	0.050	02/18/2025	ND	2.00	100	2.00	5.08	
Ethylbenzene*	<0.050	0.050	02/18/2025	ND	2.02	101	2.00	5.30	
Total Xylenes*	<0.150	0.150	02/18/2025	ND	6.17	103	6.00	4.79	
Total BTEX	<0.300	0.300	02/18/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *108 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**368**	16.0	02/18/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2025	ND	193	96.3	200	1.56	
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	193	96.5	200	1.77	
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND					

Surrogate: 1-Chlorooctane *93.6 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *95.5 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name: Ensolum, LLC	**BILL TO**
Project Manager: Tracy Hillard	**P.O. #:**
Address: 601 N Marienfeld Street, suite 400	**Company:** XTO Energy
City: Midland **State:** TX **Zip:** 79701	**Attn:** Colton Brown
Phone #: 575-937-3906 **Fax #:**	**Address:**
Project #: 03C1558609 **Project Owner:**	**City:**
Project Name: Big Eddy Unit 150	**State:** NM **Zip:**
Project Location: 32.478732, -104.111167	**Phone #:**
Sampler Name: Uriel Santillana	**Fax #:**

FOR LAB USE ONLY Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	ANALYSIS REQUEST: Chlorides	BTEX	TPH
H250933																		
1	SW01	0-4	C	1			✓					✓		2/15/25	0853	✓	✓	✓
2	SW03	0-8	C	1			✓					✓			0903	✓	✓	✓
3	FS04	8	C	1			✓					✓			1023	✓	✓	✓
4	FS01	4'	C	1			✓					✓		2/14/25	1346	✓	✓	✓
5	FS02	4'	C	1			✓					✓			1519	✓	✓	✓
6	FS03	4'	C	1			✓					✓			1508	✓	✓	✓
	~~SW01~~																	
7	SW02	0-4'	C	1			✓					✓			1510	✓	✓	✓

Relinquished By: U Santillana	**Date:** 2-17-25 **Time:** 1230	**Received By:** Tamara Oldaker	**Verbal Result:** ☐ Yes ☐ No **Add'l Phone #:**
Relinquished By:	**Date:** **Time:**	**Received By:**	**All Results are emailed. Please provide Email address:** thillard@ensolum.com kthomason@ensolum.com usantillana@ensolum.com
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	**Observed Temp. °C** 2.1 **Corrected Temp. °C** 2.4	**Sample Condition** Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	**CHECKED BY: (Initials)**

REMARKS: NRM2024854885

Turnaround Time: 48 hr Standard ☐ Rush ☒ **Thermometer ID** ~~#113~~ #140 **Correction Factor** -0.5°C +0.3°

Bacteria (only) Sample Condition Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No **Observed Temp. °C** **Corrected Temp. °C**

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

FORM-006 R 3.2 10/07/21

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

February 18, 2025

TRACY HILLARD

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: BIG EDDY UNIT 150

Enclosed are the results of analyses for samples received by the laboratory on 02/17/25 12:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	02/17/2025	Sampling Date:	02/14/2025
Reported:	02/18/2025	Sampling Type:	Soil
Project Name:	BIG EDDY UNIT 150	Sampling Condition:	Cool & Intact
Project Number:	03C1558609	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.478732-104.111167		

Sample ID: BF 01 (H250934-01)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/18/2025	ND	1.91	95.4	2.00	3.79	
Toluene*	<0.050	0.050	02/18/2025	ND	2.00	100	2.00	5.08	
Ethylbenzene*	<0.050	0.050	02/18/2025	ND	2.02	101	2.00	5.30	
Total Xylenes*	<0.150	0.150	02/18/2025	ND	6.17	103	6.00	4.79	
Total BTEX	<0.300	0.300	02/18/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *108 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	02/18/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/17/2025	ND	174	87.1	200	16.0	
DRO >C10-C28*	<10.0	10.0	02/17/2025	ND	155	77.4	200	22.8	
EXT DRO >C28-C36	<10.0	10.0	02/17/2025	ND					

Surrogate: 1-Chlorooctane *111 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *115 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

QR-04	The RPD for the BS/BSD was outside of historical limits.
BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC	**BILL TO**
Project Manager: Tracy Hillard	**P.O. #:**
Address: 601 N Marienfeld Street, suite 400	**Company:** XTO Energy
City: Midland **State:** TX **Zip:** 79701	**Attn:** Colton Brown
Phone #: 575-937-3906 **Fax #:**	**Address:**
Project #: 03C1558609 **Project Owner:**	**City:**
Project Name: Big Eddy Unit 150	**State:** NM **Zip:**
Project Location: 32.478732, -104.111167	**Phone #:**
Sampler Name: Uriel Santillana	**Fax #:**

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	Chlorides	BTEX	TPH
H250934-1	BF01	—	C	1			X					X		2/14/25	1025	X	X	X

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	**Date:** 2-17-25 **Time:** 1230	**Received By:**	**Verbal Result:** ☐ Yes ☐ No **Add'l Phone #:**
Relinquished By:	**Date:** **Time:**	**Received By:**	**All Results are emailed. Please provide Email address:** thillard@ensolum.com kthomason@ensolum.com usantillana@ensolum.com
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 2.1 Corrected Temp. °C 2.4	**Sample Condition** Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	**CHECKED BY: (Initials)**

REMARKS: NRM2024854885

Turnaround Time: Standard ☐ Rush ☒ 48hr

Thermometer ID #113 #140 Correction Factor -0.5°C +0.3°C

Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

FORM-006 R 3.2 10/07/21

ENSOLUM

APPENDIX D

August 12, 2021 *Remediation Work Plan*

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

August 12, 2021

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

RE: Remediation Work Plan and Deferral Request
Big Eddy Unit 150
XTO Energy, Inc.
Incident Number NRM2024854885
Eddy County, New Mexico

To Whom it May Concern:

WSP USA Inc. (WSP) on behalf of XTO Energy, Inc. (XTO), presents the following Remediation Work Plan detailing remediation activities completed to date and a proposed work plan to address residual impacted soil at the Big Eddy Unit 150 (Site) in Unit K, Section 17, Township 21 South, Range 28 East, in Eddy County, New Mexico (Figure 1). The purpose of the remediation activities completed to date was to address impacts to soil resulting from the release of produced water at the Site, by safely excavating impacted soil to the extent possible based on Site conditions and allowed by safety policy (Attachment 1). The proposed work plan is designed to address remaining impacts to soil by installing a 20-mil impermeable liner in the subsurface and requesting deferral of final remediation around a third-party active gas line until it is decommissioned and removed by the third party operator.

RELEASE BACKGROUND

On August 19, 2020, a hole was discovered on the suction line between the produced water tanks and the transfer pump. Approximately 6.23 barrels (bbls) of produced water were released within the earthen tank battery containment berm. Hydrovac trucks were immediately dispatched to the Site and recovered approximately 1 bbl of produced water. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form (Form C-141) on September 2, 2020. The release was assigned Incident Number NRM2024854885.

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 51 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater

well with depth to groundwater data is the New Mexico Office of the State Engineer (NMOSE) well CP-01744, located approximately 275 feet southwest of the Site. The water well has a depth to groundwater of approximately 82 feet bgs. NMOSE well CP-01744 is owned by Ellipse Global and is currently permitted for multiple domestic household use.

NMOSE well CP-00627 appeared to be closest to the Site, however, based on additional review and communication with the NMOSE, well CP-00627 is located 734 feet from the Site and 100 feet northwest of CP-00627-POD2. A latitude and longitude was not provided for CP-00627 in the drilling log so the location was subsequently placed in the center of Unit K, Section 17, Township 21 South, Range 28 East. Under *Additional Statements or Explanations* in the application, it states that well CP-00627 would be moved approximately 100 feet southeast due to a damaged 4-inch PVC casing. The application for CP-00627-POD2 was submitted to replace CP-00627 but that well was never drilled. The transaction number (475176) for the application is found under both Water Right Summaries for well CP-00627 and well CP-00627-POD 2. Figure 1 displays the locations of the water wells researched during the desktop review. Referenced well records are provided in Attachment 2.

The closest continuously flowing water or significant watercourse to the Site is an intermittent stream approximately 5,810 feet northwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and less than 300 feet from an occupied residence. The Site is less 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 located within a high-potential karst 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): 100 mg/kg
- Chloride: 600 mg/kg

SITE ASSESSMENT ACTIVITIES AND ANALYTICAL RESULTS

On September 1, 2020, WSP personnel conducted site assessment activities to evaluate the release extent. Additionally, WSP reviewed and verified the Form C-141 incident descriptions (release source and release location) with visual soil impacts present onsite; it was confirmed that the subject release was contained to the earthen berm.

WSP personnel collected one representative surface sample from within the release extent. The soil sample was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photo-ionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Based on elevated field screening results, the soil sample was not submitted for laboratory analysis. Additional remediation efforts were warranted and were scheduled to be completed following the upcoming plugging and abandonment (P&A) activities. The release extent was mapped utilizing a handheld Global Positioning System (GPS) unit and is depicted on Figure 2.

EXCAVATION SOIL SAMPLING ACTIVITIES AND ANALYTICAL RESULTS

Following P&A activities and the removal of inactive subsurface XTO utilities, WSP personnel returned to the Site to oversee excavation activities between July 20, 2021 and July 23, 2021. To direct excavation activities, WSP screened soil for volatile aromatic hydrocarbons and chloride utilizing a calibrated PID and Hach® chloride QuanTab® test strips, respectively. Following removal of impacted soil to the extent possible, WSP collected 5-point composite soil samples at a frequency of at least every 200 square feet from the sidewalls and floor of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite floor samples FS01 through FS25 were collected from the floor of the excavation from depths ranging from 4 feet to 8 feet bgs. Composite sidewall samples SW01 through SW09 were collected from the sidewalls of the excavation from depths ranging from the ground surface to 4 feet bgs. Additional soil could not be removed in the area around sidewall sample SW05 due to the proximity of an active third-party gas line. The excavation soil sample locations and excavation extent were mapped utilizing a handheld Global GPS unit and are depicted on Figure 2.

The excavation soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Eurofins Laboratories (Eurofins) in Midland, Texas, for analysis of BTEX following EPA Method 8021B; TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

The final excavation extent measured approximately 4,525 square feet. A total of approximately 1,080 cubic yards of impacted soil were removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Facility under XTO approved manifests. After completion of confirmation sampling, the excavation was secured with fencing.

Laboratory analytical results for the excavation soil samples indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria in all sidewall samples except SW05, which was collected along the sidewall adjacent to the third-party

active gas line. Additional soil could not be removed in the area beneath and around sidewall sample SW05 due to safety policies in place for the third-party active gas line. Laboratory analytical results indicated that benzene, BTEX, and TPH concentrations were compliant with the Closure Criteria in all floor samples collected from the final excavation extent. Laboratory analytical results indicated that chloride concentrations exceeded the Closure Criteria in floor samples FS03 through FS05, FS07 through FS09, FS11 through FS13, FS15 through FS18, and FS25. Photographic documentation was conducted during the Site visits. A photographic log is provided in Attachment 3.

Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are provided in Attachment 4.

DELINEATION SOIL SAMPLING ACTIVITIES AND ANALYTICAL RESULTS

On July 26, 2021, WSP personnel returned to the Site to complete delineation activities via Core Drill. Boreholes BH01 and BH02 were advanced to a depth of 18 feet bgs within the open excavation to the define the vertical extent of impacted soil left in place. One delineation soil sample was submitted for laboratory analysis from boreholes BH01 and BH02 from a depth of 18 feet bgs, where field screening results indicated a clean vertical depth. Borehole BH03 was advanced to a depth of 18 feet bgs east of the active third-party gas line to define the lateral extent of impacted soil left in place around the gas line. Delineation soil samples were collected from borehole BH03 from depths ranging from 1-foot to 18 feet bgs. Field screening results and observations for the boreholes were logged on lithologic/soil sampling logs, which are included in Attachment 5. The delineation soil samples were collected and analyzed as described above. The borehole locations were mapped utilizing a handheld Global GPS unit and are depicted on Figure 3.

Laboratory analytical results for the delineation soil samples collected from boreholes BH01 through BH03 indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria. Based on the laboratory analytical results, the lateral and vertical extent of chloride impacted soil left in place was successfully defined.

The laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are provided in Attachment 4.

PROPOSED REMEDIATION WORK PLAN

To address the remaining impacts, which are characterized by chloride concentrations ranging from 640 mg/kg to 4,410 mg/kg and extending to a depth of up to 18 feet bgs, WSP proposes installation of a liner to mitigate further impacts into the subsurface. WSP does not believe additional excavation is warranted, as impacts in the top 4 feet have been removed and groundwater is documented to be greater than 51 feet bgs at the Site. Delineation and excavation

soil sampling provided full lateral and vertical delineation of the remaining impacted soil beneath the excavation.

XTO proposes to install a 20-mil impermeable liner over the impacted soil within excavation. Once complete, XTO will backfill the area with non-waste containing soil. The proposed liner extent is shown on Figure 4. Following approval of this work plan by NMOCD, XTO will coordinate the liner installation and backfilling activities.

DEFERRAL REQUEST

A total of approximately 1,080 cubic yards of impacted soil were excavated from the Site; however, due to safety policy, residual impacted soil was left in place immediately adjacent to a third-party active gas line. Laboratory analytical results for excavation sidewall sample SW05 indicated that soil with a chloride concentration of 3,420 mg/kg was left in place.

The impacted soil remaining in place is delineated vertically and laterally by excavation soil samples SW04, SW06, FS06, and FS10, collected from the sidewalls and floor of the final excavation extent, and delineation soil samples collected from borehole BH03. An estimated 109 cubic yards of impacted soil remains in place, assuming a maximum 4-foot depth based on the excavation and delineation soil samples listed above, that were compliant with the Closure Criteria and the installation of the proposed liner.

XTO requests to complete final remediation after decommissioning of the third-party active gas line. If additional chloride impacted soil is encountered after decommissioning of the line, remediation activities will include achieving a clean eastern sidewall boundary via excavation of the top four feet and extending the liner. WSP and XTO do not believe deferment will result in imminent risk to human health, the environment, or groundwater. The majority of the released fluids were recovered during initial response activities, the impacted soil remaining in place is limited to the area immediately around the third-party active gas line, and no saturated soil remains in-place. XTO requests deferral of final remediation for the area immediately surrounding the third-party active gas line. The deferral request area is depicted on Figure 4.

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

Sincerely,

WSP USA Inc.

Joseph S. Hernandez
Associate Consultant, Geologist

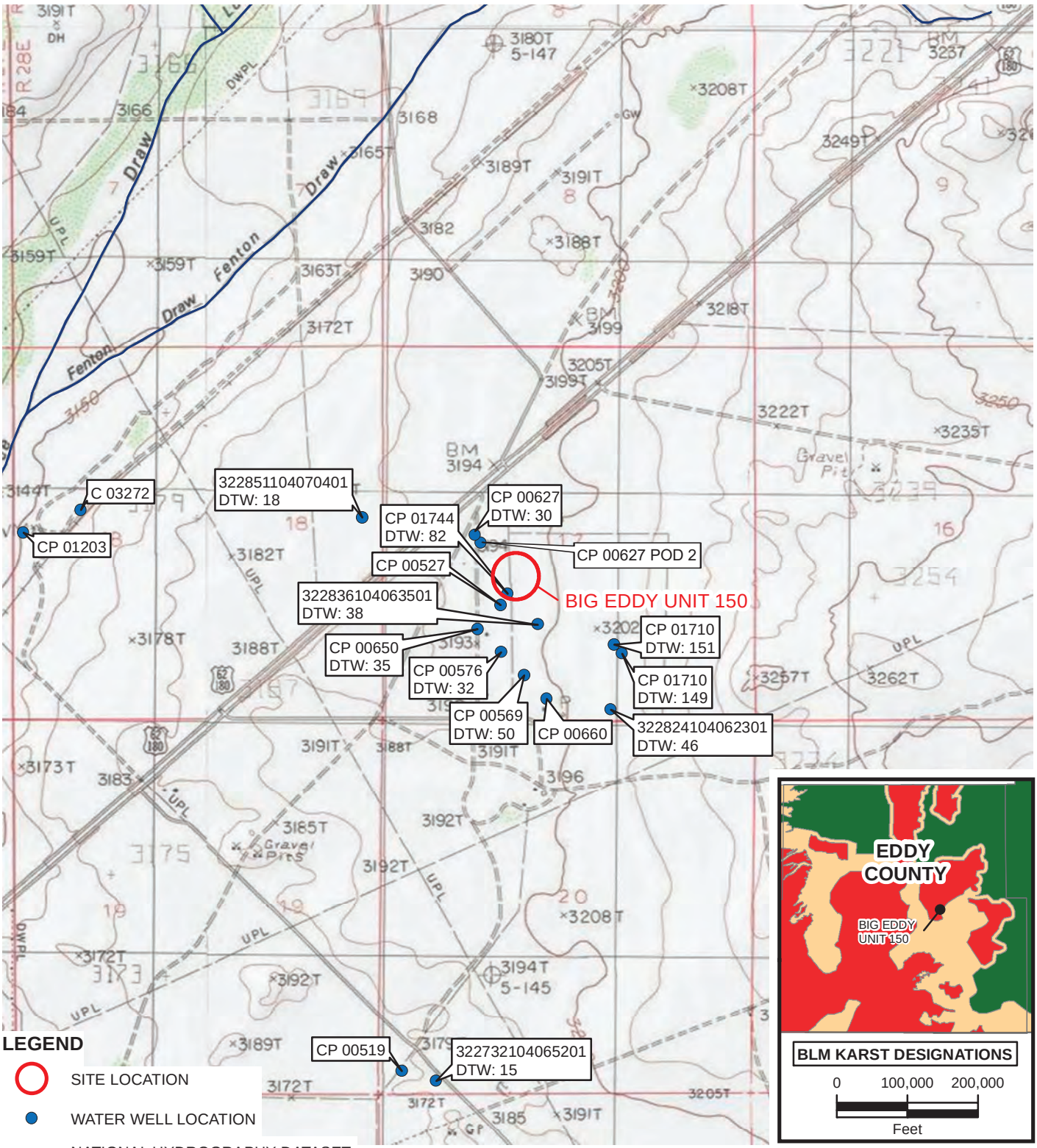
Ashley L. Ager, M.S., P.G.
Assistant Vice President, Geologist

cc: Adrian Baker, XTO
Incident Catering Services LLC DBA Ellipse Global

Attachments:

Figure 1	Site Location Map
Figure 2	Excavation Soil Sample Locations
Figure 3	Delineation Soil Sample Locations
Figure 4	Proposed Liner and Deferral Area
Table 1	Soil Analytical Results
Attachment 1	Energy Transfer I.28 Right of Way Encroachment
Attachment 2	Referenced Well Records
Attachment 3	Photographic Log
Attachment 4	Laboratory Analytical Reports
Attachment 5	Lithologic / Soil Sampling Log

FIGURES



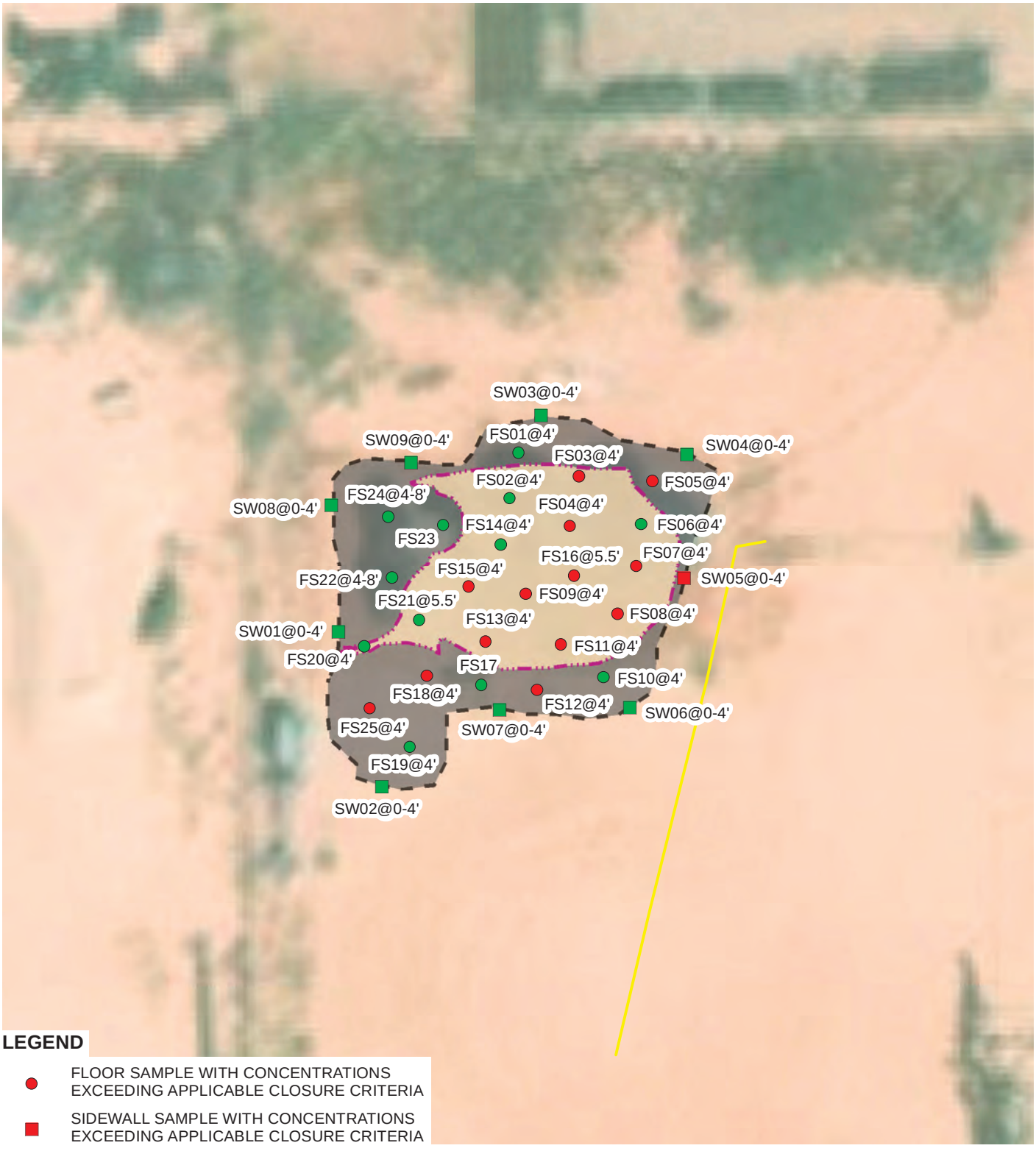
LEGEND

- SITE LOCATION
- WATER WELL LOCATION
- NATIONAL HYDROGRAPHY DATASET SURFACE WATER FEATURE
- NATIONAL WETLANDS INVENTORY SURFACE WATER FEATURE
- LOW KARST
- MEDIUM KARST
- HIGH KARST

NOTE: INCIDENT NUMBER NRM2024854885
DTW: DEPTH TO WATER IN FEET
BLM: BUREAU OF LAND MANAGEMENT

FIGURE 1
SITE LOCATION MAP
BIG EDDY UNIT 150
UNIT K SEC 17 T21S R28E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012920126_BIG EDDY UNIT 150\012920126_FIG01_SL_RECEPTOR_2020.mxd



LEGEND

- FLOOR SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE CLOSURE CRITERIA
- SIDEWALL SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE CLOSURE CRITERIA
- FLOOR SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- SIDEWALL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- ENERGY TRANSFER GAS LINE
- RELEASE EXTENT
- EXCAVATION EXTENT

NOTE: INCIDENT NUMBER NRM2024854885
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

IMAGE COURTESY OF ESRI

0 30 60
Feet

N

FIGURE 2
EXCAVATION SOIL SAMPLE LOCATIONS
BIG EDDY UNIT 150
UNIT K SEC 17 T21S R28E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012920126_BIG EDDY UNIT 150\012920126_FIG02_EXCAVATION_2021.mxd

LEGEND

DELINEATION SOIL SAMPLE WITH CONCENTRATIONS PREVIOUSLY EXCEEDING APPLICABLE CLOSURE CRITERIA

DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA

ENERGY TRANSFER GAS LINE

RELEASE EXTENT

IMAGE COURTESY OF ESRI

0 50 100

Feet

N

NOTE: INCIDENT NUMBER NRM2024854885
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

FIGURE 3
DELINEATION SOIL SAMPLE LOCATIONS
BIG EDDY UNIT 150
UNIT K SEC 17 T21S R28E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012920126_BIG EDDY UNIT 150\012920126_FIG03_DELINEATION_2021.mxd

LEGEND

- ENERGY TRANSFER GAS LINE
- DEFERRAL AREA (734 SQUARE FEET)
- EXCAVATION EXTENT
- PROPOSED LINER EXTENT

NOTE: INCIDENT NUMBER NRM2024854885

IMAGE COURTESY OF ESRI

0 30 60

Feet

N

FIGURE 4
PROPOSED LINER AND DEFERRAL AREA
BIG EDDY UNIT 150
UNIT K SEC 17 T21S R28E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012920126_BIG EDDY UNIT 150\012920126_FIG04_DEFERRAL_2021.mxd

TABLES

Table 1

Soil Analytical Results
Big Eddy Unit 150
Incident Number NRM2024854885
XTO Energy, Inc.
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
Sidewall Samples										
SW01	07/21/2021	0-4	<0.00200	<0.00401	<49.9	86.3	<49.9	86.3	86.3	317
SW02	07/22/2021	0-4	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	449
SW03	07/21/2021	0-4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	411
SW04	07/21/2021	0-4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	521
SW05	07/20/2021	0-4	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	**3,420**
SW06	07/21/2021	0-4	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	<50.0	407
SW07	07/21/2021	0-4	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	375
SW08	07/21/2021	0-4	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	37.3
SW09	07/21/2021	0-4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	438
Floor Samples										
FS01	07/22/2021	4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	246
FS02	07/22/2021	4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	149
FS03	07/22/2021	4	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	**640**
FS04	07/22/2021	4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	**709**
FS05	07/22/2021	4	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	**1,610**
FS06	07/20/2021	4	<0.00202	<0.00404	<49.9	<49.9	<49.9	<49.9	<49.9	167
FS07	07/20/2021	4	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	**4,410**

Table 1

Soil Analytical Results
Big Eddy Unit 150
Incident Number NRM2024854885
XTO Energy, Inc.
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
FS08	07/20/2021	4	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	<50.0	**2,040**
FS09	07/21/2021	4	<0.00200	<0.00400	<50.0	83.9	<50.0	83.9	83.9	**2,470**
FS10	07/22/2021	4	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	596
FS11	07/22/2021	4	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	**1,470**
FS12	07/22/2021	4	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	**654**
FS13	07/22/2021	4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	**1,350**
FS14	07/22/2021	4	<0.00201	<0.00402	<49.7	<49.7	<49.7	<49.7	<49.7	265
FS15	07/22/2021	4	<0.00200	<0.00400	<49.8	<49.8	<49.8	<49.8	<49.8	**988**
FS16	07/23/2021	5.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	**1,130**
FS17	07/22/2021	4	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	**737**
FS18	07/22/2021	4	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	**1,180**
FS19	07/22/2021	4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	248
FS20	07/22/2021	4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	286
FS21	07/23/2021	5.5	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	438
FS22	07/23/2021	4-8	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	24.2
FS23	07/22/2021	4	<0.00200	<0.00400	<50.0	75.3	<50.0	75.3	75.3	489
FS24	07/23/2021	4-8	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	149
FS25	07/22/2021	4	0.00543	0.0302	<50.0	<50.0	<50.0	<50.0	<50.0	**3,670**

Table 1

Soil Analytical Results
Big Eddy Unit 150
Incident Number NRM2024854885
XTO Energy, Inc.
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
Delineation Samples										
BH01	07/26/2021	18	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	342
BH02	07/26/2021	18	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	113
BH03	07/26/2021	1	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	94.8
BH03	07/26/2021	5	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	112
BH03	07/26/2021	10	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	200
BH03	07/26/2021	15	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	36.6
BH03	07/26/2021	18	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	<50.0	26.5

Notes:

ft - feet/foot
mg/kg - milligrams per kilograms
BTEX - benzene, toluene, ethylbenzene, and total xylenes
TPH - total petroleum hydrocarbons
DRO - diesel range organics
GRO - gasoline range organics
ORO - oil range organics
ORO - oil range organics
NMOCD - New Mexico Oil Conservation Division
NMAC - New Mexico Administrative Code
< - indicates result is less than the stated laboratory method practical quantitation limit
NE - Not Established
BOLD - indicates results exceed the higher of the background sample result or applicable regulatory standard
Greyed data represents samples that were excavated

ATTACHMENT 1: ENERGY TRANSFER I.28 RIGHT OF WAY ENCROACHMENT

ENERGY TRANSFER

Standard Operating Procedures

Applicable to Natural Gas Pipelines and Related Facilities

Right-of-Way Encroachments/Activities

Code Reference:	**Procedure No.: I.28**	
49 CFR 192.935 (b) (iv)	***Effective Date: 11/01/18***	**Page 1 of 40**

1.0 Procedure Description

This Standard Operating Procedure (SOP) describes how to manage company right-of-way encroachments/activities including foreign line crossings.

2.0 Scope

Use the guidelines in this SOP to control, monitor, and limit encroachments/activities with the potential to damage company pipeline facilities or violate the rights of the company.

3.0 Applicability

This SOP applies to encroachments/activities on regulated company pipeline facilities.

4.0 Frequency

As required: for all encroachments/activities on or near company right-of-way.

5.0 Governance

The following table describes the responsibility, accountability, and authority of the operations described in this SOP.

Function	Responsibility	Accountability	Authority
Encroachments of Company Pipeline Facilities	Operations Personnel	Operations Manager	Director of Operations

Code Reference:	**Procedure No.: I.28**	
49 CFR 192.935 (b) (iv)	***Effective Date:*** ***11/01/18***	**Page 2 of 40**

Function	Responsibility	Accountability	Authority
Undefined Easement Required Offsets	Operations Personnel	Right-of-Way Representative/ Encroachments Group	Right-of-Way Representative/ Encroachments Group
Restrictions on Encroachments	Operations Personnel	Operations Manager/Right-of-Way Representative	Director of Operations/Right-of-Way Representative
Proposed Site Encroachment Investigation	Operations Personnel/ Encroachments Group	Operations Manager/ Encroachments Group	Director of Operations/ Encroachments Group
Foreign Line Crossing Methods	Operations Personnel/ Encroachments Group	Operations Manager/ Encroachments Group	Director of Operations/ Encroachments Group
Investigation of Unknown Encroachments in Progress	Operations Personnel	Right-of-Way Representative/ Encroachments Group	Right-of-Way Representative/ Encroachments Group
Legal Action	Right-of-Way Representative/ Encroachments Group	Right-of-Way Representative/ Encroachments Group	Right-of-Way Representative/ Encroachments Group

6.0 Terms and Definitions

Terms associated with this SOP are provided in SOP *A.01 Glossary and Acronyms*.

Code Reference:	Procedure No.: I.28	
49 CFR 192.935 (b) (iv)	***Effective Date:*** ***11/01/18***	**Page 3 of 40**

Terms	Definitions
Easement	Legal document recorded and/or on file controlling company right-of-way.
Encroachment	Any use and/or activity on or near company right-of-way which could create safety concerns for company pipeline facilities or interferes with company property or easment rights.
Right-of-Way (ROW)	Physical route through real estate belonging to another defined by the easement.
Undefined Easement	Easement which does not limit the right-of-way to a detailed dimensional specification and route through the real estate covered by the easement.

7.0 Right-of-Way Encroachments/ Activities

This SOP contains the following sections:

- Encroachment of company pipeline facilities
- Undefined easement required offsets
- Restrictions on encroachments
- Proposed site encroachment investigation
- Foreign line crossing methods
- Investigation of unknown encroachments in progress
- Legal action

7.1 Encroachments of Company Pipeline

Operations Personnel follow the procedure below when notification of work is encroaching on or near company right-of-way.

Code Reference:	Procedure No.: I.28	
49 CFR 192.935 (b) (iv)	***Effective Date:*** ***11/01/18***	**Page 4 of 40**

Facilities

NOTE: Operations Personnel follow *section 7.3.2* of SOP *I.31 One-Call System and Field Response*.

Step	Activity
1	**ADVISE** encroaching party of the nature of the product in the company pipeline facilities and the potential hazards.
2	**CONSULT** Right-of-Way Representative or Encroachments Group to **REVIEW** the terms of the easement for the tract of land involved.
3	**REVIEW** the total scope of the project and maintain contact with the contractors, developers, landowners and others until the work is complete.
4	**PROVIDE** a company representative to field locate and stake company pipeline facilities per SOP *B.04 Pipe Location and Marking.*
5	**CONFIRM** excavation methods will be completed per SOP *I.10 Excavation and Backfill* if company pipeline facilities will be excavated by a third party excavator and/or landowner.

NOTE: Prevent foreign easements from encroaching into company right-of-way when proposed foreign construction is parallel to and outside of company right-of-way.

Step	Activity
6	**REFER** to SOP *D.35 Buried Pipe Inspections* when buried company pipeline facilities may be exposed.

Code Reference:	Procedure No.: I.28	
49 CFR 192.935 (b) (iv)	***Effective Date:*** ***11/01/18***	**Page 5 of 40**

NOTE: An encroachment of company right-of-way may require, as determined by Operations, a letter of no objection, crossing agreement or similar type document executed by a Right-of-Way Representative and filed in the applicable tract file.

7	**PROVIDE** a copy of Appendix B: *Engineering and Construction Guidelines* or a modified version of the guidelines as approved by the Right-of-Way Group or Encroachments Group to the contractors, developers, landowners and others.
8	**VERIFY** a company representative will be on-site any time work is performed within the company right-of-way.

WARNING: Stop any work if it could cause damage, affect the safety and/or integrity of company pipeline facilities, is prohibited by the easement or is a violation of company rights. The on-site company representative has authority to contact local law enforcement to protect company pipeline facilities when necessary. **CONSIDER** delivery of cease and desist letter to third party excavator or landowner. Refer to section *7.7 Legal Action* below.

9	**COMPLETE** the applicable form(s) for *Encroachment Foreign Line Crossing Report*.
10	**DOCUMENT** in the applicable electronic database, as required.

7.2 Undefined Easement Required Offsets

In the case where the company has an undefined easement, Operations Personnel maintains the following offset distances for proposed foreign encroachments/activities.

Step	Activity
1	**CONSULT** Right-of-Way Representative or Encroachments Group to

Code Reference:	Procedure No.: I.28	
49 CFR 192.935 (b) (iv)	***Effective Date:*** ***11/01/18***	**Page 6 of 40**

	EXAMINE the terms of the easements prior to establishing offset distances for contractors, developers, landowners and others.
2	**LIMIT** any encroachments/activities to a minimum distance of 50 feet from either side of a company pipeline when the company has an undefined easement.
3	**VERIFY** the offset distance is measured from the outside of the outermost pipeline (whether existing or proposed) when multiple company pipelines exist within the same corridor.

NOTE: Additional widths may be required for new encroachments/activities (e.g., buildings, trees, structures, or obstructions) within undefined easements when multiple line rights exist.

Step	Activity
4	**OBTAIN** prior written approval from the Director of Operations/Right-of-Way Representative/Encroachments Group for any variance from the footage requirements pertaining to company undefined easement encroachments.
5	The Right-of-Way Representative/Encroachments Group will **DOCUMENT** authorization in the applicable tract file**.**

7.3 Restrictions on Encroachments

Operations Personnel follow the procedure below regarding any encroachments/ activities within company right-of-way.

CAUTION: Additional precautions pertaining to specific encroachments to avoid possible conflicts and/or hazards are listed in the following subsections. It is not the intent of this SOP to list all possible prohibited encroachments/activities affecting company right-of-way/pipeline facilities which include but are not limited to the

Code Reference:	Procedure No.: I.28	
49 CFR 192.935 (b) (iv)	***Effective Date:*** ***11/01/18***	**Page 7 of 40**

following: air strip, athletic field, berm/terrace, building, campground, cemetary, chattel, dam/dike, drain, earthwork, garage, georthermal system, house/mobile home, lake/pond/reservoir, landfill, logging operation, material storage, mine/quarry, pole/signage, septic system, soil boring, swimming pool, tower, vehicle/equipment parking, wells, wetland or other improvments including any facility causing the permanent or temporary retention of water and any associated appurtenances, anchors/guys, foundations, junction boxes or supports. Consult the company Right-of-Way Representative/Encroachments Group and Operations Manager regarding any encroachments/activities not included in this SOP.

Step	Activity
1	**CONSULT** the Right-of-Way Representative/Encroachments Group to **EXAMINE** the terms of the easements prior to establishing offset distances and restrictions for contractors, developers, landowners and others.

WARNING: Company pipelines with couplings and acetylene welds may be affected by encroachment activities. Safeguards per SOP *I.15 Coupled Pipeline and Acetylene Weld Reinforcement* need to be taken in areas where an adverse pipeline or site condition (insufficient cover, soil movement, vertical or side bend, etc.) exists possibly causing a coupling slip during activities or over stressing an acetylene weld.

2	**RESTRICT** any encroachments/activities within the company right-of-way not permissible under the terms of the easement.
3	**CONSULT** the Pipeline Specialist/Engineer or Encroachments Group to **DETERMINE** per SOP *I.27 Determination of Abnormal Loading* if external loading from construction equipment and/or traffic traveling on finished surfaces crossing company pipeline facilities is within acceptable limits.
4	**VERIFY** the excavator and/or landowner uses bridging or matting, when required, to cross company pipeline facilities with construction equipment.
5	**PROVIDE** protection for company pipeline facilities when damage could occur from the proximity of an approved foreign structure and adequate clearance cannot be attained**.**

Code Reference:	Procedure No.: I.28	
49 CFR 192.935 (b) (iv)	***Effective Date:*** ***11/01/18***	**Page 8 of 40**

6	**REFER** to SOP *I.10 Excavation and Backfill* when an encroachment requires any excavation and/or backfill within company right-of-way**.**
7	**REFER** to SOP *D.35 Buried Pipe Inspections* when buried company pipeline facilities may be exposed.
8	**OBTAIN** prior approval from the Operations Manager/Right-of-Way Representative/Encroachments Group for any variance of the encroachment guidelines in the following subsections.
9	The Right-of-Way Representative/Encroachments Group will **DOCUMENT** authorization in the applicable tract file.

NOTE: Additional offset distances from company pipeline facilities may be required for activities outside of company right-of-way limits (e.g., blasting, mining, wind turbines, cell/radio towers).

7.3.1 Agricultural Drain Tile

For agricultural drain tile follow the procedure below. See *Section 7.3.7 Foreign Lines (Onshore)* for non-agricultural drain tile.

CAUTION: Reference section *7.3.7 Foreign Lines (Onshore)* below. Extra precautions are necessary when agricultural drain tiles cross company pipeline facilities due to the nature, frequency and potential impact.

Step	Task
1	**REPORT** any proposals to place agricultural drain tile across or parallel to company right-of-way to the Right-of-Way Representative and Operations Manager.

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2	**ALLOW** agricultural drain tiles to cross company pipeline facilities at or near right angles to company right-of-way with adequate clearance.
3	**OBTAIN** prior approval from the Operations Manager if adequate clearance cannot be attained. **VERIFY** there is enough clearance not to interfere with future company maintenance or construction.

CAUTION: Where a minimum clearance of 12 inches cannot be attained and if approved by Operations Manager ensure company pipeline facilities are protected from possible damage due to the proximity of an agricultural drain tile.

4	**RESTRICT** parallel agricultural drain headers from within the company right-of-way.

NOTE: Where applicable parallel agricultural drain tile headers may be approved by Operations Management to be installed no closer than 25 feet from company pipeline facilities.

7.3.2 Blasting

Follow the procedure below to monitor blasting outside of company right-of-way and within 300 feet of company pipeline facilities in accordance with SOP *I.23 Protection of Pipeline Facilities From Blasting Operations* to verify it is not detrimental to company pipeline facilities.

WARNING:

- Immediately stop any blasting endangering company pipeline facilities.
- Do not allow blasting within company right-of-way without the permission of the Director of Operations.

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7.3.3 Communication Cables (e.g. Fiber Optic, Telephone, TV)

For communication cables installed by open cut construction methods follow the procedure below. Communication cables include but are not limited to underground fiber optic, telephone and television cables.

CAUTION: Reference section *7.3.7 Foreign Lines (Onshore)* below. Extra precautions are necessary when communication cables cross company pipeline facilities due to the nature, frequency and potential impact.

Step	Task
1	**VERIFY** communication cables are placed in a rigid non-metallic conduit with bags of concrete-mix placed directly above and below the conduit across company right-of-way or similar company approved method.
2	**VERIFY** warning burial tape is placed the width of company right-of-way at least 18 inches directly above communication cables.
3	**RECOMMEND** the communication cable owner mark the crossing route clearly and permanently on each side of company right-of-way.

7.3.4 Ditches and Waterways

For ditches and waterways follow the procedure below.

CAUTION: Discourage ditches/waterways from crossing company right-of-way. Do not allow parallel ditches and waterways within company right-of-way.

1	**REPORT** any proposals to place a ditch/waterway across or parallel to company right-of-way to the Right-of-Way Representative/Encroachments

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	Group and Operations Manager.
2	**ALLOW** a ditch/waterway to cross a company right-of-way at or near right angles with a minimum 48 inches of cover remaining to the top of company pipeline facilities at the lowest point of the ditch/waterway.
3	**OBTAIN** prior approval from the Operations Manager/Encroachments Group when minimum of 36 inches of cover cannot be maintained. **REQUIRE** mechanical protection and/or erosion control (e.g., concrete lined bottom, articulating grout mat, buried culvert, rip rap) with a minimum clearance of 12 inches from company pipeline facilities the entire width of company right-of-way.
4	**CONSULT** the Pipeline Specialist/Engineer or Encroachments Group to **EVALUATE** company pipeline facilities for buoyancy and the need for river weights.

NOTE: Culvert material shall be constructed of non-metallic material and installed to consider protection to company pipeline facilities when damage could occur from the proximity of an approved culvert.

7.3.5 Dredging

For dredging in existing waterways follow the procedure below.

WARNING: Stop any unapproved dredging operations near company pipeline facilities immediately.

Step	Activity
1	**NOTIFY** the Right-Of-Way Representative/Encroachments Group and Operations Manager of dredging operations.
2	**PROFILE** waterways crossing company pipeline facilities where dredging is

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Step	Activity
	proposed.
3	**RESTRICT** any dredging closer than 6 feet above company pipeline facilities the width of the entire company right-of-way.

7.3.6 Fences

For fences follow the procedure below.

Step	Activity
1	**PERMIT** wire type fences for agricultural purposes to cross company right-of-way.
2	**VERIFY** all fence crossings are at or near right angles to company right-of-way and access gates or walkovers are installed where required.

WARNING: Fence posts must be spaced and installed so they are not directly over company pipeline facilities with a company representative on site. Verify there is enough clearance not to interfere with future company maintenance or construction.

CAUTION:

- Prohibit any fencing parallel to and within company right-of-way.
- Do not permit any chain link, hurricane wire, stone, brick, concrete, privacy, decorative,
- Prohibit any fencing obstructing access or line of sight for patrol/inspection or identification markers

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7.3.7 Foreign Lines (Onshore)

For foreign lines (onshore) crossings follow the procedure below.

Step	Activity
1	**DETERMINE** the construction method to complete the foreign line crossing: • Open Cut • Dry Bore • Direction Drill Reference section *7.5 Foreign Line Crossing Methods* below.
2	**REQUEST** any foreign line crossing to cross under company pipeline facilities with clearance as specified in *Appendix B ROW Engineering and Construction Guidelines*. **VERIFY** there is enough clearance not to interfere with future company maintenance or construction.
3	**OBTAIN** prior approval from the Operations Manager and/or Encroachments Group when company pipeline facilities are unreasonably deep to allow a foreign line crossing to be installed over the top or reduce the amount of clearance between a foreign line and company pipeline facilities.
4	**COMPLETE** an investigation dig(s) on company pipeline facilities, if necessary, before construction of a foreign line crossing.

CAUTION: Do not allow any foreign line(s) to be constructed parallel to and/or allow foreign structures, appurtenances or related fittings within company right-of-way.

Step	Activity
5	**PERFORM** corrosion related tasks before and during foreign line crossings as

	required.

NOTE: Operations Personnel must consult the Company Corrosion Specialist when a foreign cathodically protected line is installed across company pipeline facilities to determine the need for installation of bond/test lead stations on the foreign and company pipeline facilities.

Step	Activity
6	**REFER** to SOP *D.35 Buried Pipe Inspections* when buried company pipeline facilities may be exposed.
7	**VERIFY** construction of the foreign line will limit the length of time company pipeline facilities are exposed.
8	**REINFORCE** couplings and acetylene welds where required prior to construction of foreign lines. Reference SOP *I.15 Coupled Pipeline and Acetylene Weld Reinforcement.*
9	**PLACE** warning tape a minimum of 18 inches above any foreign line crossing company right-of-way.
10	**RECOMMEND** foreign line owners mark the crossing route clearly and permanently on each side of company right-of-way.

7.3.8 Parking Areas

Do not allow permanent parking areas within company right-of-way; for temporary parking areas follow the procedure below.

Step	Activity
1	**REVIEW** the affected company pipeline facilities attributes including but not limited to: • Diameter, wall thickness, grade

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Step	Activity
	• Vintage, seam and weld type • Established maximum allowable operatring pressure • Class and/or HCA • Existing anomalies

NOTE: To determine the possible need for alterations to company pipeline facilities and to comply with Federal and State regulations parking area plans must be reviewed and approved by the Right-of-Way Representative, Encroachments Group, Pipeline Specialist/Engineer and Director of Operations before construction begins.

Step	Activity
2	**DETERMINE** per SOP *I.27 Determination of Abnormal Loading* whether external loading from traffic traveling on parking surfaces crossing company pipeline facilities is within acceptable limits.
3	**VERIFY** the remaining cover under the parking area at the shallowest point will be at least 36 inches.
4	**INSTALL** gas leak stations at a minimum of every 25 feet directly over the centerline of company pipeline facilities.

7.3.9 Power / Communication Lines (Overhead)

For power/communication lines (overhead) follow the procedure below.

Step	Activity

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1	**REPORT** to Operations Manager, Encroachments Group and Corrosion Specialist if a proposed above ground power line will be constructed parallel to and outside of company right-of-way within 300 feet of company pipeline facilities.
2	**ALLOW** overhead power/communication lines to cross company pipeline facilities with a minimum vertical overhead clearance to grade of 25 feet.
3	**VERIFY** all overhead power/communication line crossings are at or near right angles to company right-of-way.

WARNING: Do not allow new power lines over existing blow-offs or relief valves. Do not allow power line towers to straddle the company right-of-way or power line tower footings to encroach within company right-of-way.

7.3.10 Power Lines (Underground)

For power lines (underground) installed by open cut construction methods follow the procedure below.

CAUTION: Reference section *7.3.7 Foreign Lines (Onshore)* above. Extra precautions are necessary when power lines (underground) cross company pipeline facilities due to the nature, safety and potential impact.

Step	Activity
1	**REFER** requests for the installation of buried power cable crossings to the Operations Manager, Right-of-Way Representative/Encroachments Group, and Corrosion Specialist to establish the requirements for each crossing.
2	**ESTABLISH** the requirements for underground power cables/lines with consideration given to the number of cables/lines, voltage, cable/line loading, grounding system, spacing of cables/lines, phase, proximity of transmission cable/line facilities to company facilities, location of cathodic

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Step	Activity
	protection facilities, soil type, coating and depth of cover.
3	**VERIFY** the following requirements are provided: • Minimum 36 inches of clearance below the bottom of company pipeline facilities the entire width of company right-of-way for power cables over 600 volts. • Neutrals are externally spirally wound and grounded on each side of company right-of-way. • Placed in a rigid non-metallic conduit with bags of concrete-mix placed directly above and below the conduit across the entire width of company right-of-way or similar company approved methods. • Red warning burial tape is placed the width of company right-of-way at least 18 inches directly above the cable.
4	**RECOMMEND** the power line cable owner mark the crossing route clearly and permanently on each side of company right-of-way.

7.3.11 New or Modified Roads, Railroads or Driveways

For new or modified roads, railroads or driveways follow the procedure below.

CAUTION: Prohibit any road, railroad or driveway from being constructed parallel to and within company right-of-way; or allow related foreign structures, appurtenances or signage within company right-of-way.

Step	Activity
1	**DETERMINE** the physical status of and review available data of affected company pipeline facilities.

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NOTE: When determined necessary reference *BP I.36 Pipeline Road and Rail Crossings* to determine the possible need for company pipeline facility alterations and to comply with Federal and State regulations. Road, railroad or driveway construction/modification plans must be reviewed and approved by the Right-of-Way Representative/Encroachments Group, Pipeline Specialist and Director of Operations before construction begins.

2	**ALLOW** a new road, railroad or driveway to cross company right-of-way at or near right angles.
3	**VERIFY** the remaining cover at the shallowest point will be at least 36 inches to the top of company pipeline facilities. Additional cover may be required as prescribed in individual state regulations i.e. Texas requires 48 inches of cover.
4	**DETERMINE** per SOP *I.27 Determination of Abnormal Loading* whether external loading from traffic traveling on a road, railroad or driveway crossing company pipeline facilities is within acceptable limits.

NOTE: Depth of cover should not exceed 7 feet from the top of the pipe to final grade. Engineering stress calculations must be performed and approved prior to allowing any cover exceeding 7 feet.

7.3.12 Seismography

For seismography activity follow the procedure below.

CAUTION: Do not allow any seismographic activity within 300 feet of company pipeline facilities without the approval of the Pipeline Specialist/Engineer or Encroachments Group.

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Step	Activity
1	**RECOMMEND** the third party seismic company call the respective state One-Call or 811 center prior to the start of their project.

7.3.13 Sidewalks, Paths and Trails

For sidewalks, paths and trails follow the procedure below.

Step	Activity
1	**VERIFY** the sidewalks, paths and trails do not exceed 48 inches in width without prior approval of a Right of Way Representative/Encroachments Group and Operations Manager.
2	**ALLOW** sidewalks, paths and trails to cross at or near right angles to company right-of-way.

7.3.14 Subdivisions

Verify the contractors, developers, landowners and others submit subdivision plats to a company Right-of Way Representative/Encroachments Group and Operations Manager for review and approval.

7.3.15 Vegetation

For vegetation follow the procedure below.

Step	Activity
1	**CONSULT** the Right-of-Way Representative/Encroachments Group to **EXAMINE** the terms of the easements prior to restricting planting of any vegetation within company right-of-way.

Step	Activity
2	**PROHIBIT** any planting of trees, bushes, shrubs, vines, and/or any other landscape planting within company right-of-way.
3	**VERIFY** vegetation does not obstruct company patrol/inspection or identification markers.

7.3.16 Water Impoundments

For water impoundments follow the procedure below.

CAUTION:

- Do not allow water impoundments on company right-of-way. This excludes water impoundments for such things as rice, cranberry bogs and crawfish farming.
- Do not allow any portion of any dike, berm or dam to be constructed on company right-of-way.
- Do not remove cover or overburden from company right-of-way to assist in the construction of a dike, berm or dam.

7.3.17 Wells

For wells follow the procedure below.

Step	Activity
1	**REPORT** wells drilled within 100 feet of company pipeline facilities to a company Right-of-Way Representative/Encroachments Group and Corrosion Specialist.

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CAUTION: Do not allow any foreign wells (water, oil, gas, storage, disposal or other) to be drilled on company right-of-way.

2	**NOTIFY** well owners of company cathodic protection systems and the possibility of interference.

7.3.18 Wind Turbine, Communication Towers (e.g. Cell, Radio, Microwave)

For foreign towers follow the procedure below.

Step	Activity
1	**NOTIFY** a company Right-of-Way Representative/Encroachments Group, Communication Specialist and Corrosion Specialist of any plans to install a foreign tower within one mile of company facilities/towers.
2	**RESTRICT** placement of foreign towers from within 1500 feet of company facilities/towers. **REFER** requests for the installation of a foreign tower within 1500 feet of company facilities/towers to the Operations Manager, Right-of-Way Representative/Encroachments Group, Pipeline Specialist, Communication Specialist, Corrosion Specialist and Manager of Patrol Pilots to establish the minimum offset for each foreign tower with consideration given to tower height, aerial patrol, tower/blade failure, ice throw, etc.

WARNING: Do not allow foreign towers within company right-of-way. **RESTRICT** placement of foreign towers a minimum distance equal to the height of the structure (plus the length of wind turbine blades measured to the tip in the vertical position) from company right-of-way limits; consideration should be given to the distance of ice throw from wind turbine blades to company right-of-way limits and required

elevations/offsets for aerial patrol.

3	**NOTIFY** the Patrol Pilot of the location of any new foreign tower.

7.4 Proposed Site Encroachment Investigation

Operations Personnel/Encroachments Group follow the procedure below to conduct a proposed site encroachment investigation.

Step	Task
1	**REQUEST** technical drawings from the contractors, developers, landowners and others of the proposed work to be completed.
2	**CONSULT** Right-of-Way Representative or Encroachments Group to **REVIEW** technical drawings prior to proposed work.
3	**VERIFY** company pipeline facilities are accurately identified in the technical drawings.
4	**CONDUCT** a site encroachment investigation with the contractors, developers, landowners and others of the proposed site as far in advance as practical.
5	**CONFIRM** excavation methods will be completed per SOP *I.10 Excavation and Backfill* if company pipeline facilities will be excavated by a third party excavator and/or landowner.

WARNING: Stop any excavation work if it could cause damage, affect the safety and/or integrity of company pipeline facilities, is prohibited by the easement or is a violation of company rights. The on-site company representative has authority to contact local law enforcement to protect the company pipeline facilities when necessary.

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NOTE: Prevent foreign easements from encroaching into company right-of-way when proposed foreign construction will be parallel to and outside of company right-of-way.

Step	Activity
6	**PROVIDE** a copy of Appendix B: *Engineering and Construction Guidelines* to the contractors, developers, landowners and others.
7	**REQUEST** any foreign line crossing to cross under company pipeline facilities with adequate clearance. **VERIFY** there is enough clearance not to interfere with future company maintenance or construction.
8	**VERIFY** construction activity does not commence until all information is exchanged between the parties, company pipeline facilities are field located and staked per SOP *B.04 Pipe Location and Marking*, foreign facilities are accurately marked and the company gives proper authorization.
9	**VERIFY** a company representative will be on-site any time work is performed within company right-of-way.

WARNING: Notify the contractors, developers, landowners and others a One-Call or 811 notification must be submitted before any work begins.

Steps	Activity
10	The Right-of-Way Representative/Encroachments Group will **DOCUMENT** all pertinent drawings and agreements in the applicable tract file.

7.5 Foreign Line Crossing

Operations Personnel/Encroachments Group follow the procedure below regarding the types of foreign line crossing methods possible within company right-of-way.

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Methods

CAUTION: Additional precautions pertaining to specific foreign line crossing methods to avoid possible problems and/or hazards are listed in the following subsections. It is not the intent of this SOP to list all possible types of foreign line crossing methods affecting company right-of-way/pipeline facilities. Consult the company Right-of-Way Representative, Pipeline Specialist, Encroachments Group and Operations Manager regarding any construction crossing methods not included in this SOP.

Step	Activity
1	**REVIEW** the affected company pipeline facilities attributes including but not limited to: • Diameter, wall thickness, grade • Vintage, seam and weld type • Established maximum allowable operatring pressure • Class and/or HCA • Existing anomalies
2	**PROVIDE** a company representative to field locate and stake company pipeline facilities per SOP *B.04 Pipe Location and Marking.*
3	**DETERMINE** the depth of each company pipeline facility within the work area at appropriate intervals. **VERIFY** depth by probing.
4	**REINFORCE** couplings and acetylene welds where required prior to construction of foreign lines. Reference SOP *I.15 Coupled Pipeline and Acetylene Weld Reinforcement.*
5	**MEET** with the contractors, developers, landowners and others on site and review each party's responsibilities.
6	**COMPLETE** the applicable form(s) for *B.13.B Foreign Line Crossing.*

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Step	Activity
7	**DOCUMENT** in the applicable electronic database, as required.

7.5.1 Open Cut

Operations Personnel/Encroachments Group follow the procedure below regarding foreign lines crossings conducted by open cut construction

Step	Activity
1	**REQUIRE** a minimum 24 inches of clearance below company pipeline facilities the entire width of company right-of-way. **VERIFY** there is enough clearance not to interfere with future company maintenance or construction.
2	**REQUEST** an excavation plan identifying the width, depth and slope dimensions of the proposed crossing of company pipeline facilities.

NOTE: The excavation plan should include compaction specifications of how fill will be compacted under and around company pipeline facilities to prevent possible settling.

Step	Activity
3	**VERIFY** open cut construction is conducted in a good and workmanlike manner, in conformity with all applicable engineering design standards, safety and other specifications.

CAUTION: Without approval, no more than one company pipeline is to be exposed and/or unsupported at one time and no more than 20 feet of company pipeline shall be unsupported at any given time. Engineering stress calculations must be performed and approved prior to allowing more than 20 feet of unsupported pipe.

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Step	Activity
4	**VERIFY** protective measures requested by the company, in order to avoid any damage to company pipeline facilities during foreign open cut construction, are provided.

7.5.2 Auger Bore (Dry)

Operations Personnel/Encroachments Group follow the procedure below regarding foreign line crossings conducted by auger bore (dry) construction.

Step	Activity
1	**REQUIRE** a minimum 36 inches of clearance below company pipeline facilities the entire width of company right-of-way. **VERIFY** there is enough clearance not to interfere with future company maintenance or construction.
2	**OBTAIN** an auger bore plan identifying offset distances and bore pit locations including extents (e.g., width, depth and slope dimensions) within company right-of-way.
3	**REINFORCE** couplings and acetylene welds where required prior to construction of foreign lines. Reference *SOP I.15 Coupled Pipeline and Acetylene Weld Reinforcement.*
4	**EXCAVATE** company pipeline facilities at the point of the proposed crossing on the approach side to verify the auger head, boring and installation process will not damage company pipeline facilities.

NOTE: These excavations are called potholes and must be deep enough to monitor the bottom of the company pipeline facilities being crossed.

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Step	Activity
5	**VERIFY** auger boring is conducted in a good and workmanlike manner, in conformity with all applicable engineering design standard, safety and other specifications.

CAUTION: Without approval no more than one company pipeline is to be exposed and/or unsupported at one time and no more than 20 feet of company pipeline shall be unsupported at any given time. Engineering stress calculations must be performed and approved prior to allowing more than 20 feet of unsupported pipe.

Step	Activity
6	**VERIFY** protective measures requested by the company, in order to avoid any damage to company pipeline facilities during foreign auger boring construction, are provided.

7.5.3 Directionally Drilled

Operations Personnel/Encroachments Group follows the procedure below regarding foreign lines crossings conducted by directionally drilled construction

Step	Activity
1	**REQUIRE** a minimum 36 inches of clearance below company pipeline facilities the entire width of company right-of-way. For large diameter (12 inches or greater) foreign line crossings, **REQUIRE** a minimum of 60 inches of clearance below company pipeline facilities the entire width of company right-of-way. **VERIFY** there is enough clearance not to interfere with future company maintenance or construction.
2	**OBTAIN** a directional drill plan identifying offset distances, drill profile, equipment staging and bore pit locations including extents (e.g., width,

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Step	Activity
	depth and slope dimensions) within company right-of-way.
3	**VERIFY** the clearances between the drill and company pipeline facilities account for the size of the back reamer and straightening of drill rods.
4	**REQUIRE** drill equipment to incorporate a mechanism for real time positioning and controlling bit to ensure the required clearance is maintained throughout the drill process.
5	**DETERMINE** if the boring contractor maintains returns.

CAUTION: Returns are the bentonite-containing drilling fluids usually brought back to the drilling machine and recycled. If fluids are not returned or recycled it is possible they could be lost into the earth creating a cavity or other unstable foundation underneath company pipeline facilities. This would be evident by a noticeable increase in the amount of drilling fluids being used.

Step	Activity
6	**VERIFY** drill machine anchorage and deadman locations do not interfere with the safe operation of company pipeline facilities.
7	**EXCAVATE** company pipeline facilities at the point of the proposed drill on the approach side to verify the drilling and pulling process will not damage company pipeline facilities.

NOTE: These excavations are called potholes and must be deep enough to monitor the bottom of the company pipeline facilities being crossed.

NOTE: If it is not practical to expose company pipeline facilities **CONTACT** the Operations Manager. **DETERMINE** alternatives to ensuring company pipeline facilities are not damaged by the drilling and pulling process. Alternatives include but are not limited to: Requiring a minimum 15-foot separation between company pipeline facilities across the entire width of company right-of-way or altering the point of

crossing so company pipeline facilities can be exposed.

Step	**Activity**
8	**VERIFY** directional drill boring is conducted in a good and workmanlike manner, in conformity with all applicable engineering design standards, safety and other specifications.
9	**VERIFY** protective measures requested by the company, in order to avoid any damage to company pipeline facilities during foreign directional drilling construction, are provided.
10	**MONITOR** the boring equipment to verify it is calibrated and gives actual depth and pitch readings.

NOTE:

- On some machines this can be accomplished beforehand by placing the drilling head on the ground and moving the locator a known distance away i.e. 10 feet.
- The measurements should be within a few inches.
- Perform a recalibration whenever batteries are replaced.
- If the locator cannot be calibrated within inches then excavate company pipeline facilities at the point of the crossing to verify no damage has occurred.

7.6 Investigation of Unknown Encroachments in Progress

Follow the procedure below when Operations Personnel discover or are notified of an unknown encroachment/activity currently in progress within company right-of-way.

Step	**Activity**

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Step	Activity
1	**IDENTIFY** the type of work and its potential to damage company pipeline facilities or violate company rights.
2	**ADVISE** encroaching party of the nature of the product in the company pipeline facilities and the potential hazards.

WARNING: Stop any work if it could cause damage, affect the safety and/or integrity of company pipeline facilities, is prohibited by the easement or is a violation of company rights. The on-site company representative has authority to contact local law enforcement to protect the company pipeline facilities when necessary.

Step	Activity
3	**REFER** to SOP *I.30 Mechanical Damage* for reporting the unknown encroachment activity to the One Call Group for violation reporting.
4	**CONTACT** the Right-of-Way Representative/Encroachments Group and Director of Operations if the third party excavator or landowner performing the work does not agree to stop immediately and discontinue until a resolution is determined. **CONSIDER** delivery of a cease and desist letter to third party excavator or landowner. Refer to section *7.7 Legal Action* below.

NOTE: If foreign equipment is found unattended on company right-of-way, leave written notice and follow up as soon as possible to identify the excavator and/or landowner.

Step	Activity
5	**VERIFY** company pipeline facilities are accurately located and marked per SOP *B.04 Pipe Location and Marking.*
6	**REMAIN** at the work site while construction is in progress to prevent damage

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	to company pipeline facilities.
7	**EXCAVATE** company pipeline facilities and complete an inspection if facilities are thought to have been damaged.
Step	**Activity**
8	**KEEP** a written record with all pertinent information concerning the sequence of events including but not limited to dates, names, telephone numbers, action taken (locating and staking lines, etc.) and discussions with all parties involved.
9	**PROVIDE** information to the Damage Prevention Department for reporting to appropriate Regulatory Agency(s) of known damages to company pipeline facilities within 5 days per *SOP I.30 Mechanical Damage*.

CAUTION: When an excavator and/or landowner has performed work on company right-of-way without making appropriate notifications prior to commencing work:

- **SEND** a letter to the excavator and/or landowner advising them of company crossing requirements and the dangers of working around buried facilities without notice to the owner.
- **SEND** copies of the letter to the appropriate state One-Call or 811 system operator and Area Operations.
- **REFER** to *I.40 Public Awareness Plan – Communication with API RP1162 – defined Stakeholders.*

7.7 Legal Action

If any foreign encroachments/activities, known or unknown, persist once notified, with the potential to damage company pipeline facilities or violate the rights of the company, follow the procedure below to take legal action, when necessary.

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7.7.1 Contacting a Local Attorney

The company Right-of-Way Representative/Encroachments Group follow the procedure below to contact a local attorney.

Step	Activity
1	**DISCUSS** the situation with company Legal Department to determine if and when it will be necessary to contact a local attorney to represent the company.
2	**INSTRUCT** the local attorney to make contact with the third party excavator and/or landowner and provide any correspondences to the company Right-of-Way Representative/Encroachments Group and Director of Operations.
3	**DOCUMENT** correspondence, written records, field notes (on staking, marking, and flagging company facilities) and photographs (identified with dates, etc.) in the applicable tract file.

7.7.2 Verifying Stoppage of Encroachment Activities

The Right of Way Representative/Encroachments performs the following procedure below to verify the stoppage of encroachment activities.

Step	Activity
1	**CONTACT** the company field representative on-site when company legal representation and/or the Right-of-Way Representative/Encroachments Group has requested stoppage of encroachments/activities to determine the work has stopped.
2	**DETERMINE** additional actions if needed.

Code Reference:	Procedure No.: I.28	
49 CFR 192.935 (b) (iv)	***Effective Date:*** ***11/01/18***	**Page 33 of 40**

WARNING: When necessary request the company Legal Department and/or local attorney to file for an injunction to stop encroachment activities in progress.

8.0 Documentation Requirements

Record data in electronic database or utilize the following form(s) as applicable:

- Pipeline Inspection Database
- B.13.A Encroachment
- B.13.B Foreign Line Crossing

9.0 References

A.01 Glossary and Acronyms

A.22 DOT Record Keeping

B.04 Pipe Location and Marking

D.35 Buried Pipe Inspections

I.10 Excavation and Backfill

I.15 Coupled Pipeline and Acetylene Weld Reinforcement

I.23 Protection of Pipeline Facilities from Blasting Operations

I.26 Mining Subsidence and Soil Slippage

I.27 Determination of Abnormal Loading

I.30 Mechanical Damage

I.31 One-Call System and Field Response

I.40 Public Awareness Plan – Communication with API RP1162-defined Stakeholders

BP I.36 Pipeline Road and Rail Crossings

Code Reference:	Procedure No.: I.28	
49 CFR 192.935 (b) (iv)	***Effective Date:*** ***11/01/18***	**Page 34 of 40**

Appendix A: OQ Task Requirements

The table below identifies Operator Qualification (OQ) task requirements.

Task Description	OQ Task
Visual Inspection of Buried Pipe and Components When Exposed	PLOQ401
Backfilling – Pipe and Coating Protection	PLOQ404
Underground Pipeline – Locate and Temporarily Mark	PLOQ605
Damage Prevention During Excavation/Encroachment Activities	PLOQ607

Appendix B: Engineering / Construction Guidelines

The table below identifies Operator Qualification (OQ) task requirements.

NOTE: It is the intent of this appendix to be an editable document to facilitate engineering/construction guidelines regarding specific encroachments/activities within or near company right-of-way. Editing and distribution of this appendix shall be limited to a Pipeline Specialist/Engineer, Right-of-Way Representative and/or Encroachment Project Manager.

1. Contractors, developers, landowners and others, prior to any installation, construction, excavation or demolition activities on or near company right-of-way, shall make notifications to appropriate ONE CALL or 811 centers. A company representative must be on-site during any encroachment/activity within company right-of-way. The company representative on-site will have the authority to stop work by contractors, developers, landowners or others if the encroachment/activity is determined to be unsafe. The company representative will be invited to participate in all construction safety meeting(s).

Code Reference:	**Procedure No.: I.28**	
49 CFR 192.935 (b) (iv)	***Effective Date:*** ***11/01/18***	**Page 35 of 40**

2. A minimum of 36 inches of cover is to be maintained over below ground company pipeline facilities across the entire company right-of-way.

3. No structure, construct or venue of any kind, including but not limited to any air strip, athletic field, berm/terrace, building, campground, cemetary, chattel, dam/dike, drain, earthwork, garage, georthermal system, house/mobile home, lake/pond/reservoir, landfill, logging operation, material storage, mine/quarry, poles/signage, septic system, soil boring, swimming pool, tower, vehicle parking/equipment parking, wells, wetland or other improvments including any facility causing the permanent or temporary retention of water, shall be permitted, placed or erected within, above or below company right-of-way including all associated appurtenances, foundations, guys/anchors, junction boxes or supports.

4. Where consent for fencing has been granted, the owner must install and maintain a vehicle access gate (at least 12 feet in width) or walkovers where required.
   - Shall cross at or near right angles
   - No fence post excavations shall be directly over company pipeline facilities
   - Fence posts shall be placed with adequate spacing from company pipeline facilities.
   - Chain link, hurricane wire, stone, brick, concrete, privacy, decorative, or similar style fences or barriers are prohibited within company right-of-way.
   - If a gate is locked, the owner shall provide the company with a key or allow a company lock to be installed in series, to enable access.

5. Planting of trees, bushes, shrubs, vines and/or any other landscape planting within company right-of-way is prohibited. Vegetation shall not obstruct company patrol/inspection or identification markers.

6. Where consent for sidewalks, paths or trails have been granted, the width shall not exceed 48 inches and shall cross at or near right angles to company right-of-way.

7. Open ditches or waterways where consent has been granted must cross company right-of-way at or near right angles with at least 48 inches of cover remaining at the lowest point of the ditch or waterway.

Code Reference:	**Procedure No.: I.28**	
49 CFR 192.935 (b) (iv)	***Effective Date:*** ***11/01/18***	**Page 36 of 40**

8. Contractors, developers, landowners and others shall provide and install temporary construction fencing along company right-of-way to protect company pipeline facilities. The fencing must be maintained for the duration of the encroachment activities. Barriers adequate to prevent vehicular damage to any excavated and exposed company pipeline facilities shall be installed and maintained at all times.

9. For temporary vehicle and/or construction equipment crossing company pipeline facilities, each crossing location will be reviewed on a site specific basis, which will include a wheel/track load calculation to be completed and approved on every vehicle and/or construction equipment crossing company pipeline facilities.
   - Crossings shall be at or near right angles.
   - A minimum 36 inches cover is required.
   - Air bridging, matting or other suitable material may be required to be installed to achieve the necessary support for each crossing.
   - Crossing supports shall span a minimum of 10 feet either side of company pipeline facilities.

10. Excavation equipment shall be equipped with a barred tooth bucket and side cutters removed when digging or excavating within company right-of-way. All excavation within 18 inches of the top or 36 inches from the side or bottom of any company pipeline facility shall be completed by hand. After the top is exposed excavation up to 24 inches from the side or bottom of the exposed company pipeline facilities may proceed by mechanical means only if approved by a company representative.

11. No foreign line, appurtenance, structure or related fittings are to be constructed parallel to and/or allowed within company right-of-way. Foreign easements are prohibited from encroaching into company right-of-way when proposed foreign construction is parallel to and outside of company right-of-way.

12. For a new or modified road, railroad, or driveway crossing company pipeline facilities, each crossing location will be reviewed and approved on a site specific basis. The review will include, but not limited to, a wheel load calculation for superimposed loading due to traffic (DOT maximum axle load 20,000 lbs. per axle), imposed conditions caused by soil overburden and

determination of the need for alterations to company pipeline facilities to comply with Federal and State regulations.

- Crossings shall be at or near right angles.
- A minimum 36 inches of undisturbed or compacted soil shall be maintained from the bottom of the road or drive to the top of company pipeline facilities. Additional cover may be required as prescribed in individual state regulations i.e. Texas requires 48 inches of cover.
- Permanent air bridging requires drawings signed and approved by a Professional Engineer (P.E.) provided to the company.
- If a concrete pad is to be used as the method to minimize load, the crossing shall be built with load bearing footers spanning a minimum 10 feet either side of company pipeline facilities.

13. Open cut foreign line crossings, if approved, require a minimum 24 inches of separation below company pipeline facilities the entire width of company right-of-way. A compaction plan with a description of how fill will be compacted under company pipeline facilities to prevent settling will need to be reviewed and approved prior to the proposed crossing. Contractors, developers, landowners and others will be responsible for repairing any settling due to encroachment activities occurring on company right-of-way.
    - Open cut crossings shall cross at or near right angles.
    - Communication Cables (Fiber Optic, Telephone, and TV) shall be placed in non-metallic conduit with bags of concrete mix placed directly above and below the conduit with warning burial tape installed 18 inches directly above the conduit across the entire width of company right-of-way.
    - All metallic foreign line crossings shall have insulation methods installed (e.g., Micarta board) where required between company pipeline facilities and the foreign line to prevent interference with cathodic protection.
    - Sand and/or clean fill, free of rocks and debris, shall be installed around company pipeline facilities.
    - Where permissible foreign crossings should be clearly and permanently marked on each side of company right-of-way.

14. Auger bore (dry) foreign line crossings, if approved, require a minimum 36 inches of separation below company pipeline facilities the entire width of company right-of-way. Pothole excavations must be dug to observe the boring and pulling process does not damage company pipeline facilities and spacing is maintained.
    - Auger bore (dry) crossings shall cross at or near right angles.
    - An auger bore plan shall be provided for the proposed crossing showing the relationship of the auger hole to the bottom of company pipeline facilities and include bore pit locations.

Code Reference:	Procedure No.: I.28	
49 CFR 192.935 (b) (iv)	***Effective Date:*** ***11/01/18***	**Page 38 of 40**

- Potholes shall be excavated on the approach side of the bore. The depth of the pothole shall be to a minimum 24 inches below the bottom of company pipeline facilities and in the direct path of the approaching auger to visually confirm it does not impact the pipeline.

15. Directionally drilled foreign line crossings, if approved, require a minimum 36 inches, 60 inches for large diameter foreign line crossings (12 inches diameter or greater), of separation below company pipeline facilities the entire width of company right-of-way. Pothole excavations must be dug to observe the drilling and pulling process does not damage company pipeline facilities. Boring equipment, if required, shall incorporate a mechanism for real time positioning and controlling bore bit/auger to ensure the required clearance is maintained throughout the boring process.
    - Directionally drilled crossings shall cross at or near right angles.
    - A directional drill plan shall be provided for the proposed crossing showing the relationship of the bore hole to the bottom of company pipeline facilities.
    - Potholes shall be excavated on the approach side of the drill. The depth of the pothole shall be to a minimum 24 inches below the bottom of company pipeline facilities and in the direct path of the approaching drill tool to visually confirm it does not impact company pipeline facilities.

16. Temporary storage of spoils, material, equipment, or vehicles within company right-of-way, must be approved by Operations Manegement; at no time will storage be allowed directly over company pipeline facilities.

17. Equipment used in earthwork (e.g., excavation, contouring, precision leveling) must be approved on a site specific basis. This will include wheel/track load calculation to be completed on every vehicle and/or equipment crossing company pipeline facilities.

    - A minimum 36 inches of cover is required.
    - Depth of cover should not exceed 7 feet.

18. Seismographic activity within 300 feet of company pipeline facilities without company approval is prohibited.

19. No roto-mixing or vibrating machinery is allowed within company right-of-way.

20. All pile driving operations 20 feet adjacent to company right-of-way will be required to pre-drill or auger all pilings to 36 inches below the bottom elevation of company pipeline facilities.

Code Reference:	Procedure No.: I.28	
49 CFR 192.935 (b) (iv)	***Effective Date:*** ***11/01/18***	**Page 39 of 40**

21. Foreign crossing excavations exposing company pipeline facilities shall be sloped and/or shored to allow a company representative the ability to inspect and make coating repairs where required.

22. No more than one company pipeline is to be exposed and/or unsupported at one time and no more than 20 feet of company pipeline shall be unsupported at any given time. Engineering stress calculations must be performed and approved prior to allowing more than 20 feet of unsupported pipe.
23. Cathodic protection test stations and line markers shall be protected from damage by encroachment activities.

24. Additional requirements for approved power lines energized to 600 volts or more shall include a minimum 36 inches of separation below company pipeline facilities the entire width of company right-of-way.

    - Shall cross at or near right angles
    - Be installed in rigid non-metallic conduit
    - For an open cut crossing method include
        i. Bags of concrete-mix placed directly above and below the conduit the entire width of company right-of-way.
        ii. Red burial tape placed 18 inches directly above the conduit.
    - Have external, spiral wound, neutrals grounded on each side of company right-of-way.
    - Where permissible the cable crossing should be clearly and permanently marked on each side of company right-of-way.

25. Power/Communication Lines (overhead) shall be constructed above the easement area with a minimum of twenty five feet (25') clearance to grade.

    - Power lines shall not be constructed over existing blow-offs or relief valves.

    - Power lines shall cross at or near right angles
    - Power line towers shall not straddle the company right-of-way

    - Power line tower footings shall not encroach within company right-of-way

26. Placement of wind turbine and communication towers (e.g., cell, radio, and microwave) must be placed a minimum distance of 1500 feet from company pipeline facilities.

27. Should modifications to company pipeline facilities be required, the company will be reimbursed for all costs, including overtime costs, incurred to complete any company pipeline facility

modification (e.g., coupling/weld reinforcement) including but not limited to: engineering, surveying, contract labor, materials, inspections, gas loss, administrative expenses and any other costs reasonably incurred directly or indirectly with respect to the work to be performed. Company lead times for competitively bidding, permitting and material procurement (estimated at 120 days) will commence only after the company receives a fully executed reimbursable agreement. Seasonal demands for natural gas can preclude the company from having outages of company pipeline facilities during any unscheduled timeframe in any given year.

28. Should any encroachment activity by the contractors, developers, landowners and others result in damage to any company pipeline facilities the total cost of the repairs will be the sole responsibility of the damaging party.

ATTACHMENT 2: REFERENCED WELL RECORDS

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
2213C	CP 01744 POD1	3	2	3	17	21S	28E	583476	3593764

Driller License: 1708 **Driller Company:** ZIA DRILLING AND GEOTHERMAL, LLC

Driller Name: AINSWORTH, RYAN

Drill Start Date:	09/19/2018	**Drill Finish Date:**	09/20/2018	**Plug Date:**	
Log File Date:	01/23/2019	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	20 GPM
Casing Size:	5.75	**Depth Well:**	90 feet	**Depth Water:**	82 feet

Water Bearing Stratifications:	Top	Bottom	Description
	82	90	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	0	90

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
CP 01744 POD 1	2213C	CP 01744 POD 1

WELL OWNER NAME(S)	PHONE (OPTIONAL)
ELLIPSE GLOBAL	

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
1429 AVE D #166	SNOHOMISH	WA	98290

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	32	28	~~678~~ 10.68	N
LONGITUDE	104	06	~~697~~ 41.82	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND

* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

ON THE EAST SIDE OF PROPERTY OFF OF QUAHADA ROAD

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
1708	RYAN AINSOWRTH	ZIA DRILLING

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
9-19-18	9-20-18	90'	92'	82'

COMPLETED WELL IS: ☐ ARTESIAN ☐ DRY HOLE ☑ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): 82'

DRILLING FLUID: ☐ AIR ☑ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☐ ROTARY ☐ HAMMER ☐ CABLE TOOL ☑ OTHER – SPECIFY: MUD ROTARY

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	90	11"	PVC SCH 40	GLUE AND SCREW	5.75"	.025	.030

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
13	90	11"	WASHED PEA GRAVEL 1/4"	1.8 YD	TREMMIE

FOR OSE INTERNAL USE WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO.	CP-1744	POD NO.	1	TRN NO.	632209
LOCATION	Multi	21S.28E.17.323		WELL TAG ID NO.	2213C

PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	82	82	RED CLAY	Y N	
82	90	8	SAND AND SMALL GRAVEL	Y N	15-20
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☑ PUMP ☐ AIR LIFT ☐ BAILER ☐ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm): 15-20

5. TEST; RIG SUPERVISION

WELL TEST — TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION: RED CLAY ALL THE WAY DOWN. SAND AND GRAVEL DRILLED FAST.

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE: 9-25-18

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/30/2017)

FILE NO. CP-1744	POD NO. 1	TRN NO. 632209	
LOCATION Multi 21S.28E.17.323		WELL TAG ID NO. 2213C	PAGE 2 OF 2

New Mexico Office of the State Engineer
Water Right Summary

get image list

WR File Number: CP 00627 **Subbasin:** CP **Cross Reference:** -

Primary Purpose: DOM 72-12-1 DOMESTIC ONE HOUSEHOLD

Primary Status: PMT PERMIT

Total Acres: **Subfile:** - **Header:** -

Total Diversion: 3 **Cause/Case:** -

Owner: CLINTON C. WEST

x

Documents on File

	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images	475176	72121	2005-12-20	EXP	EXP	CP 00627	T		3	
get images	475174	72121	1982-01-04	PMT	LOG	CP 00627	T		3	
get images	475173	72121	1980-10-16	EXP	EXP	CP 00627	T		3	

x

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q16	Q4	Sec	Tws	Rng	X	Y	Other Location Desc
CP 00627		Shallow		2	3	17	21S	28E	583547	3593816*	
CP 00627 POD2			1	2	3	17	21S	28E	583360	3593982	

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

File Number: _____

2-20840
A S

NEW MEXICO OFFICE OF THE STATE ENGINEER
APPLICATION FOR PERMIT TO USE UNDERGROUND WATERS
IN ACCORDANCE WITH SECTION 72-12-1 NEW MEXICO STATUTES

1. APPLICANT

Name: GERRY PETREE
Contact: SAMSON RESOURCES
Address: 200 North Loraine Suite 1010
City: Midland State: TX Zip: 79701
Work Phone: 432-683-7063
Home Phone: 432-661 6286

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. NW 1/4 NE 1/4 SW 1/4 Section: 17 Township: 21S Range: 28E N.M.P.M.
in Eddy County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: N32 d 28 m 42.8 s Longitude: W104 d 06 m 46.2 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD ___ (27 or 83)

E. Tract No. ____, Map No. ____ of the _____ Hydrographic Survey

F. Lot No. 1, Block No. 1 of Unit/Tract Guadalupe Acres of the
_____ Subdivision recorded in Eddy County.

G. Is this well within a municipality? No if yes, where? _____

H. Give State Engineer File Number if existing well: CP-627

I. On land owned by (required): SAMSON RESOURCES

2005 DEC 20 AM 8:30
STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO

3. USE OF WATER (check use applied for)

X One household, non-commercial trees, lawn and garden not to exceed a total of one acre.

___ Livestock watering.

Note: If any of the following items are marked, give the name and nature of business or use under item 5 of the additional statements or explanations section.

___ More than one household, non-commercial trees, lawns and gardens not to exceed a total of one acre.

___ Drinking and sanitary purposes and the irrigation of non-commercial trees, shrubs and lawns not to exceed one acre in conjunction with a commercial operation.

___ Prospecting, mining or drilling operations to discover or develop natural resources.

___ Construction of public works, highways and roads.

Trn Desc: _____ File Number: CP-627
Log Due Date: _____ Trn Number: ~~348538~~ 475176
Form: wr-01 page 1 of 4

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
APPLICATION FOR PERMIT TO USE UNDERGROUND WATERS
IN ACCORDANCE WITH SECTION 72-12-1 NEW MEXICO STATUTES

4. WELL INFORMATION (Change, Repair, Drill, Test, Supplement)

Name of well driller and driller license number:
B & H Drilling # W-1227
Approximate depth 125 feet; Outside diameter of casing 2 inches.

X Change Location of existing well or replacement well

___ Repair or Deepen:
___ Clean out well to original depth
___ Deepen well from _____ to _____ feet
___ Other _____

___ Drill and test a well for _____ use.

___ Supplemental well

5. ADDITIONAL STATEMENTS OR EXPLANATIONS:

4" PVC Casing Damaged
Move Well Approx 100' SE

2005 DEC 20 AM 8:30
STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO

ACKNOWLEDGEMENT

(I, We) GERRY PETREE affirm that the
(Please Print)
foregoing statements are true to the best of (my, our) knowledge and belief.

Gerry Petree
Applicant Signature

Applicant Signature

Trn Desc: _____
Log Due Date: _____
Form: wr-01

File Number: CP-627
Trn Number: ~~378538~~ 475176

NEW MEXICO STATE ENGINEER OFFICE
APPLICATION FOR PERMIT TO USE UNDERGROUND WATERS
IN ACCORDANCE WITH SECTION 72-12-1 NEW MEXICO STATUTES

GENERAL CONDITIONS OF APPROVAL (A thru I)

A The maximum amount of water that may be appropriated under this permit is 3.000 acre-feet in any year.

B The well shall be drilled by a driller licensed in the State of New Mexico in accordance with Section 72-12-12 New Mexico Statutes Annotated. A licensed driller shall not be required for the construction of a driven well; provided, that the casing shall not exceed two and three-eighths (2 3/8) inches outside diameter (Section 72-12-12).

C Driller's well record must be filed with the State Engineer within 10 days after the well is drilled or driven. Well record forms will be provided by the State Engineer upon request.

D The casing shall not exceed 7 inches outside diameter except under specific conditions in which reasons satisfactory to the State Engineer are shown.

E If the well under this permit is used at any time to serve more than one household or livestock in a commercial feed lot operation, or for drinking and sanitation purposes in conjunction with a commercial operation, the permittee shall notify the State Engineer Office in writing.

F In the event this well is combined with other wells permitted under Section 72-12-1 New Mexico Statutes Annotated, the total outdoor use shall not exceed the irrigation of one acre of non-commercial trees, lawn, and garden, or the equivalent outside consumptive use, and the total appropriation for household and outdoor use from the entire water distribution system shall not exceed 3.000 acre-feet in any year.

G If artesian water is encountered, all rules and regulations pertaining to the drilling and casing of artesian wells shall be complied with.

H The amount and uses of water permitted under this Application are subject to such limitations as may be imposed by the courts or by lawful municipal and county ordinances which are more restrictive than applicable State Engineer Regulations and the conditions of this permit.

Trn Desc: CP 00627 File Number: CP 00627
Log Due Date: 12/31/2006 Trn Number: ~~348538~~ 475176
Form: wr-01 page: 1

NEW MEXICO STATE ENGINEER OFFICE
APPLICATION FOR PERMIT TO USE UNDERGROUND WATERS
IN ACCORDANCE WITH SECTION 72-12-1 NEW MEXICO STATUTES

GENERAL CONDITIONS OF APPROVAL (Continued)

I The permittee shall utilize the highest and best technology available to ensure conservation of water to the maximum extent practical.

SPECIFIC CONDITIONS OF APPROVAL

4 Use shall be limited to household, non-commercial trees, lawn and garden not to exceed one acre and/or stock use.

11 This permit is for a single household. The total diversion of water under this permit shall not exceed 3.000 acre-feet per year. Permit will be subject to cancellation if the conditions of approval are not met or if the actions of the permittee are not in accordance with the permit.

LOG This permit will automatically expire unless the well CP 00627 POD2 is completed and the well record filed on or before 12/31/2006.

ACTION OF STATE ENGINEER

This application is approved for the use indicated, subject to all general conditions and to specific conditions listed above.

Witness my hand and seal this 20 day of Dec A.D., 2005

John R. D Antonio, Jr., P.E. , State Engineer

By: Margaret Wolf
Margaret Wolf

The well shall be set back a minimum of fifty (50) feet from an existing well of other ownership, unless a variance has been granted by the State Engineer.

The replaced well shall be plugged and the well driller shall file a complete plugging record with the State Engineer's Office and permit holder no later than 20 days after completion of plugging.

Trn Desc: CP 00627 File Number: CP 00627
Log Due Date: 12/31/2006 Trn Number: ~~348538~~ 476176
Form: wr-01 page: 2

John R. D Antonio, Jr., P.E.
State Engineer

Roswell Office
1900 WEST SECOND STREET
ROSWELL, NM 88201

Trn Nbr: ~~348538~~ 475176
File Nbr: CP 00627

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER

December 20, 2005

SAMSON RESOURCES
c/o GERRY PETREE
200 NORTH LORIANE
SUITE 1010
MIDLAND, TX 79701

Greetings:

Enclosed is your copy of the 72-12-1 Permit which has been approved. Your attention is called to the Specific and the General Conditions of Approval of this permit.

In accordance with General Condition C, a well record shall be filed in this office within ten (10) days after completion of drilling. The well record is proof of completion of the well. IT IS YOUR RESPONSIBILITY TO ASSURE THAT THE WELL LOG BE FILED WITHIN 10 DAYS OF DRILLING THE WELL.

This permit will expire on or before 12/31/2006, unless the well has been drilled and the well log filed in this office.

Sincerely,

Margaret Wolf

Margaret Wolf
(505)622-6521

Enclosure

cc: Santa Fe Office

wr_01app

ATTACHMENT 3: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG		
XTO ENERGY, INC.	Big Eddy Unit 150 Eddy County, New Mexico	TE012920126

Photo No.	Date
1	July 19, 2021

South view of the Site during excavation activities.

Photo No.	Date
2	July 21, 2021

South view of the Site during excavation activities.

PHOTOGRAPHIC LOG		
XTO ENERGY, INC.	Big Eddy Unit 150 Eddy County, New Mexico	TE012920126

Photo No.	Date
3	July 26, 2021

View of the final excavation extent.

Photo No.	Date
4	July 26, 2021

View of the final excavation extent.

ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-964-1
Laboratory Sample Delivery Group: TE012920126
Client Project/Site: Big Eddy Unit 150

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

Attn: Dan Moir

JKramer

Authorized for release by:
7/23/2021 1:58:20 PM

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

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Laboratory Job ID: 890-964-1
SDG: TE012920126

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-964-1
Project/Site: Big Eddy Unit 150 SDG: TE012920126

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-964-1
SDG: TE012920126

Job ID: 890-964-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-964-1

Receipt
The sample was received on 7/21/2021 12:31 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.0°C

Receipt Exceptions
The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: SW05 (890-964-1)

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

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

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

Client Sample Results

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-964-1
SDG: TE012920126

Client Sample ID: SW05

Date Collected: 07/20/21 07:14
Date Received: 07/21/21 12:31
Sample Depth: 0 - 4

Lab Sample ID: 890-964-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/22/21 10:00	07/22/21 13:43	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/22/21 10:00	07/22/21 13:43	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/22/21 10:00	07/22/21 13:43	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		07/22/21 10:00	07/22/21 13:43	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/22/21 10:00	07/22/21 13:43	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		07/22/21 10:00	07/22/21 13:43	1
Total BTEX	<0.00401	U	0.00401		mg/Kg		07/22/21 10:00	07/22/21 13:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*07/22/21 10:00*	*07/22/21 13:43*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*07/22/21 10:00*	*07/22/21 13:43*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/22/21 08:46	07/22/21 14:12	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/22/21 08:46	07/22/21 14:12	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/22/21 08:46	07/22/21 14:12	1
Total TPH	<50.0	U	50.0		mg/Kg		07/22/21 08:46	07/22/21 14:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*07/22/21 08:46*	*07/22/21 14:12*	*1*
o-Terphenyl	*111*		*70 - 130*	*07/22/21 08:46*	*07/22/21 14:12*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3420**		24.8		mg/Kg			07/23/21 06:00	5

Surrogate Summary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-964-1
SDG: TE012920126

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)											
		BFB1	DFBZ1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
890-964-1	SW05	116	96										
890-964-1 MS	SW05	107	109										
890-964-1 MSD	SW05	107	108										
LCS 880-5481/1-A	Lab Control Sample	100	102										
LCSD 880-5481/2-A	Lab Control Sample Dup	102	105										
MB 880-5481/5-A	Method Blank	126	95										

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
890-964-1	SW05	101	111										
LCS 880-5350/2-A	Lab Control Sample	89	88										
LCSD 880-5350/3-A	Lab Control Sample Dup	96	96										
MB 880-5350/1-A	Method Blank	100	115										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-964-1
SDG: TE012920126

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-5481/5-A
Matrix: Solid
Analysis Batch: 5527

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5481

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/22/21 10:00	07/22/21 13:22	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/22/21 10:00	07/22/21 13:22	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/22/21 10:00	07/22/21 13:22	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/22/21 10:00	07/22/21 13:22	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/22/21 10:00	07/22/21 13:22	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/22/21 10:00	07/22/21 13:22	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		07/22/21 10:00	07/22/21 13:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*126*		*70 - 130*	*07/22/21 10:00*	*07/22/21 13:22*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*07/22/21 10:00*	*07/22/21 13:22*	*1*

Lab Sample ID: LCS 880-5481/1-A
Matrix: Solid
Analysis Batch: 5527

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5481

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.09320		mg/Kg		93	70 - 130		
Toluene			0.100	0.08476		mg/Kg		85	70 - 130		
Ethylbenzene			0.100	0.08492		mg/Kg		85	70 - 130		
m-Xylene & p-Xylene			0.200	0.1734		mg/Kg		87	70 - 130		
o-Xylene			0.100	0.08447		mg/Kg		84	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: LCSD 880-5481/2-A
Matrix: Solid
Analysis Batch: 5527

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 5481

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1016		mg/Kg		102	70 - 130	9	35
Toluene			0.100	0.09156		mg/Kg		92	70 - 130	8	35
Ethylbenzene			0.100	0.09037		mg/Kg		90	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.1847		mg/Kg		92	70 - 130	6	35
o-Xylene			0.100	0.09124		mg/Kg		91	70 - 130	8	35

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

Lab Sample ID: 890-964-1 MS
Matrix: Solid
Analysis Batch: 5527

Client Sample ID: SW05
Prep Type: Total/NA
Prep Batch: 5481

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00200	U	0.0990	0.09053		mg/Kg		91	70 - 130		

QC Sample Results

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-964-1
SDG: TE012920126

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

Lab Sample ID: 890-964-1 MS
Matrix: Solid
Analysis Batch: 5527

Client Sample ID: SW05
Prep Type: Total/NA
Prep Batch: 5481

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	<0.00200	U	0.0990	0.08163		mg/Kg		82	70 - 130
Ethylbenzene	<0.00200	U	0.0990	0.07729		mg/Kg		78	70 - 130
m-Xylene & p-Xylene	<0.00401	U	0.198	0.1583		mg/Kg		80	70 - 130
o-Xylene	<0.00200	U	0.0990	0.07972		mg/Kg		81	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: 890-964-1 MSD
Matrix: Solid
Analysis Batch: 5527

Client Sample ID: SW05
Prep Type: Total/NA
Prep Batch: 5481

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.101	0.09563		mg/Kg		95	70 - 130	5	35
Toluene	<0.00200	U	0.101	0.08383		mg/Kg		83	70 - 130	3	35
Ethylbenzene	<0.00200	U	0.101	0.08119		mg/Kg		81	70 - 130	5	35
m-Xylene & p-Xylene	<0.00401	U	0.202	0.1653		mg/Kg		82	70 - 130	4	35
o-Xylene	<0.00200	U	0.101	0.08252		mg/Kg		82	70 - 130	3	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

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

Lab Sample ID: MB 880-5350/1-A
Matrix: Solid
Analysis Batch: 5510

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5350

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Oange (rganics)GO(v-C6-C10	<50.0	U	50.0		mg/Kg		07/19/21 08:46	07/22/21 12:07	1
Diesel Oange (rganics)(Her C10-C28v	<50.0	U	50.0		mg/Kg		07/19/21 08:46	07/22/21 12:07	1
(II Oange (rganics)(Her C28-C36v	<50.0	U	50.0		mg/Kg		07/19/21 08:46	07/22/21 12:07	1
Total TPf	<50.0	U	50.0		mg/Kg		07/19/21 08:46	07/22/21 12:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*07/19/21 08:46*	*07/22/21 12:07*	*1*
o-Terphenyl	*115*		*70 - 130*	*07/19/21 08:46*	*07/22/21 12:07*	*1*

Lab Sample ID: LCS 880-5350/2-A
Matrix: Solid
Analysis Batch: 5510

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5350

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Oange (rganics)GO(v-C6-C10	1000	762.1		mg/Kg		76	70 - 130

QC Sample Results

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-964-1
SDG: TE012920126

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

Lab Sample ID: LCS 880-5350/2-A
Matrix: Solid
Analysis Batch: 5510

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5350

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Oange (rganics)(Her C10-C28v			1000	881.8		mg/Kg		88	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*89*		*70 - 130*
o-Terphenyl	*88*		*70 - 130*

Lab Sample ID: LCSD 880-5350/3-A
Matrix: Solid
Analysis Batch: 5510

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 5350

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Oange (rganics)GO(v-C6-C10			1000	808.2		mg/Kg		81	70 - 130	6	20
Diesel Oange (rganics)(Her C10-C28v			1000	949.4		mg/Kg		95	70 - 130	7	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*96*		*70 - 130*
o-Terphenyl	*96*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-5537/1-A
Matrix: Solid
Analysis Batch: 5560

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			07/23/21 03:45	1

Lab Sample ID: LCS 880-5537/2-A
Matrix: Solid
Analysis Batch: 5560

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	249.2		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 880-5537/3-A
Matrix: Solid
Analysis Batch: 5560

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	249.9		mg/Kg		100	90 - 110	0	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-964-1
SDG: TE012920126

GC VOA

Prep Batch: 5481

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-964-1	SW05	Total/NA	Solid	5035	
MB 880-5481/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-5481/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-5481/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-964-1 MS	SW05	Total/NA	Solid	5035	
890-964-1 MSD	SW05	Total/NA	Solid	5035	

Analysis Batch: 5527

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-964-1	SW05	Total/NA	Solid	8021B	5481
MB 880-5481/5-A	Method Blank	Total/NA	Solid	8021B	5481
LCS 880-5481/1-A	Lab Control Sample	Total/NA	Solid	8021B	5481
LCSD 880-5481/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	5481
890-964-1 MS	SW05	Total/NA	Solid	8021B	5481
890-964-1 MSD	SW05	Total/NA	Solid	8021B	5481

GC Semi VOA

Prep Batch: 5350

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-964-1	SW05	Total/NA	Solid	8015NM Prep	
MB 880-5350/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-5350/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-5350/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 5510

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-964-1	SW05	Total/NA	Solid	8015B NM	5350
MB 880-5350/1-A	Method Blank	Total/NA	Solid	8015B NM	5350
LCS 880-5350/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	5350
LCSD 880-5350/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	5350

HPLC/IC

Leach Batch: 5537

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-964-1	SW05	Soluble	Solid	DI Leach	
MB 880-5537/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-5537/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-5537/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 5560

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-964-1	SW05	Soluble	Solid	300.0	5537
MB 880-5537/1-A	Method Blank	Soluble	Solid	300.0	5537
LCS 880-5537/2-A	Lab Control Sample	Soluble	Solid	300.0	5537
LCSD 880-5537/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	5537

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-964-1
SDG: TE012920126

Client Sample ID: SW05

Date Collected: 07/20/21 07:14
Date Received: 07/21/21 12:31

Lab Sample ID: 890-964-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5481	07/22/21 10:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5527	07/22/21 13:43	KL	XEN MID
Total/NA	Prep	8015NM Prep			5350	07/22/21 08:46	DM	XEN MID
Total/NA	Analysis	8015B NM		1	5510	07/22/21 14:12	AJ	XEN MID
Soluble	Leach	DI Leach			5537	07/22/21 12:08	CH	XEN MID
Soluble	Analysis	300.0		5	5560	07/23/21 06:00	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-964-1
SDG: TE012920126

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	06-30-22

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

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

Method Summary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-964-1
SDG: TE012920126

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

Protocol References:

ASTM = ASTM International

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

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

Laboratory References:

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

Sample Summary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-964-1
SDG: TE012920126

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-964-1	SW05	Solid	07/20/21 07:14	07/21/21 12:31	0 - 4

Chain of Custody

Work Order No: _____

XENCO LABORATORIES

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

Page 1 of 6

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	WSP USA	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	522 W. Mermod St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	Jeremy.Hill@wsp.com, Dan.Moir@wsp.com

Work Order Comments

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

Project Name:	Big Eddy Unit 150	Turn Around	
Project Number:	TE01292012C	Routine ☐	
P.O. Number:	Inc. NRM2034854885	Rush: 24hr	
Sampler's Name:	Jeremy Hill	Due Date: 7/22/21	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	5.2/5.0	Thermometer ID	
Received Intact:	(Yes) No	TNM-007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SW05	S	7/20/21	0714	0-4'	1	X	X	X

890-964 Chain of Custody

Work Order Notes

CC
1080741001
AFE
EW 2021.0156d. Ep.01

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

Sample Comments

Composite

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		7-21-21 1229	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-964-1
SDG Number: TE012920126

Login Number: 964
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: 890-964-1
SDG Number: TE012920126

Login Number: 964
List Number: 2
Creator: Phillips, Kerianna

List Source: Eurofins Xenco, Midland
List Creation: 07/22/21 10:10 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	

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-965-1
Client Project/Site: Big Eddy Unit 150

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

Attn: Dan Moir

JKramer

Authorized for release by:
7/23/2021 2:00:35 PM

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

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Laboratory Job ID: 890-965-1

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-965-1
Project/Site: Big Eddy Unit 150

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-965-1

Job ID: 890-965-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-965-1

Receipt
The samples were received on 7/21/2021 12:29 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 5.0°C

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

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

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

Client Sample Results

Client: WSP USA Inc.
PGoTectESite: 2ir j / / B Unit 140

Job ID: 890-964-1

Client Sample ID: FS06

Lab Sample ID: 890-965-1

Date Collected: 07/20/21 07:40

Matrix: Solid

Date Received: 07/21/21 12:29

Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2engene	d0.00y0y	U	0.00y0y	5 r Ez r		0<Eyy Ey1 10:00	0<Eyy Ey1 1m0m	1
Kol7ene	d0.00y0y	U	0.00y0y	5 r Ez r		0<Eyy Ey1 10:00	0<Eyy Ey1 1m0m	1
j t3Elbengene	d0.00y0y	U	0.00y0y	5 r Ez r		0<Eyy Ey1 10:00	0<Eyy Ey1 1m0m	1
5 -u Elene h X-u Elene	d0.00m0m	U	0.00m0m	5 r Ez r		0<Eyy Ey1 10:00	0<Eyy Ey1 1m0m	1
o-u Elene	d0.00y0y	U	0.00y0y	5 r Ez r		0<Eyy Ey1 10:00	0<Eyy Ey1 1m0m	1
u Elene&pKotsl	d0.00m0m	U	0.00m0m	5 r Ez r		0<Eyy Ey1 10:00	0<Eyy Ey1 1m0m	1
Kotsl 2Kj u	d0.00m0m	U	0.00m0m	5 r Ez r		0<Eyy Ey1 10:00	0<Eyy Ey1 1m0m	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*26 - 176*	*620330 1 16/66*	*620330 1 14/64*	*1*
1:4-9 5luorobenzene (Surr)	*, 2*		*26 - 176*	*620330 1 16/66*	*620330 1 14/64*	*1*

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
, s&oline a snr e RGsnic& Ọ a R(-C6-C10	dm9.9	U	m9.9	5 r Ez r		0<Eyy Ey1 08:m6	0<Eyy Ey1 1m))	1
Die&el a snr e RGsnic& ORveG C10-Cy8(	dm9.9	U	m9.9	5 r Ez r		0<Eyy Ey1 08:m6	0<Eyy Ey1 1m))	1
RIl a snr e RGsnic& ORveGCy8-C) 6(	dm9.9	U	m9.9	5 r Ez r		0<Eyy Ey1 08:m6	0<Eyy Ey1 1m))	1
Kotsl KPH	dm9.9	U	m9.9	5 r Ez r		0<Eyy Ey1 08:m6	0<Eyy Ey1 1m))	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Di loroo8Cane	*, 3*		*26 - 176*	*620330 1 6c/4t*	*620330 1 14/77*	*1*
o-aerTi enpl	*161*		*26 - 176*	*620330 1 6c/4t*	*620330 1 14/77*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**167**		m9.9	5 r Ez r			0<E) Ey1 06:06	10

Client Sample ID: FS07

Lab Sample ID: 890-965-2

Date Collected: 07/20/21 07:43

Matrix: Solid

Date Received: 07/21/21 12:29

Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2engene	d0.00y00	U	0.00y00	5 r Ez r		0<Eyy Ey1 10:00	0<Eyy Ey1 1mym	1
Kol7ene	d0.00y00	U	0.00y00	5 r Ez r		0<Eyy Ey1 10:00	0<Eyy Ey1 1mym	1
j t3Elbengene	d0.00y00	U	0.00y00	5 r Ez r		0<Eyy Ey1 10:00	0<Eyy Ey1 1mym	1
5 -u Elene h X-u Elene	d0.00m00	U	0.00m00	5 r Ez r		0<Eyy Ey1 10:00	0<Eyy Ey1 1mym	1
o-u Elene	d0.00y00	U	0.00y00	5 r Ez r		0<Eyy Ey1 10:00	0<Eyy Ey1 1mym	1
u Elene&pKotsl	d0.00m00	U	0.00m00	5 r Ez r		0<Eyy Ey1 10:00	0<Eyy Ey1 1mym	1
Kotsl 2Kj u	d0.00m00	U	0.00m00	5 r Ez r		0<Eyy Ey1 10:00	0<Eyy Ey1 1mym	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*16t*		*26 - 176*	*620330 1 16/66*	*620330 1 14/34*	*1*
1:4-9 5luorobenzene (Surr)	*, 2*		*26 - 176*	*620330 1 16/66*	*620330 1 14/34*	*1*

j 7Gofin& u encopCsGE&bs/

Client Sample Results

Client: WSP USA Inc. Job ID: 890-964-1
PGoTectESite: 2ir j / / BUnit 140

Client Sample ID: FS07
Date Collected: 07/20/21 07:43
Date Received: 07/21/21 12:29
Sample Depth: - 4

Lab Sample ID: 890-965-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
, s&oline a snr e RGsnic& Q, a R(-C6-C10	d40.0	U	40.0		5 r Ezr		0<Eyy5y1 08:m6	0<Eyy5y1 1m4m	1
Die&el a snr e RGsnic&ORveG C10-Cy8(	d40.0	U	40.0		5 r Ezr		0<Eyy5y1 08:m6	0<Eyy5y1 1m4m	1
RIl a snr e RGsnic&ORveGCy8-C) 6(	d40.0	U	40.0		5 r Ezr		0<Eyy5y1 08:m6	0<Eyy5y1 1m4m	1
KotsI KPH	d40.0	U	40.0		5 r Ezr		0<Eyy5y1 08:m6	0<Eyy5y1 1m4m	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Di loroo8Cne	*167*		*26 - 176*	*620830l 6c/4t*	*620830l 14/y4*	*1*
o-aerTi enpl	*11t*		*26 - 176*	*620830l 6c/4t*	*620830l 14/y4*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4410		100		5 r Ezr			0<Ey) Ey1 06:11	y0

Client Sample ID: FS08
Date Collected: 07/20/21 07:46
Date Received: 07/21/21 12:29
Sample Depth: - 4

Lab Sample ID: 890-965-3
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
2engene	d0.00y0y	U	0.00y0y		5 r Ezr		0<Eyy5y1 10:00	0<Eyy5y1 1mm4	1
Kol7ene	d0.00y0y	U	0.00y0y		5 r Ezr		0<Eyy5y1 10:00	0<Eyy5y1 1mm4	1
j t3Blbengene	d0.00y0y	U	0.00y0y		5 r Ezr		0<Eyy5y1 10:00	0<Eyy5y1 1mm4	1
5 -uBlene h X-uBlene	d0.00m0)	U	0.00m0)		5 r Ezr		0<Eyy5y1 10:00	0<Eyy5y1 1mm4	1
o-uBlene	d0.00y0y	U	0.00y0y		5 r Ezr		0<Eyy5y1 10:00	0<Eyy5y1 1mm4	1
uBlene&pKotsI	d0.00m0)	U	0.00m0)		5 r Ezr		0<Eyy5y1 10:00	0<Eyy5y1 1mm4	1
KotsI 2Kj u	d0.00m0)	U	0.00m0)		5 r Ezr		0<Eyy5y1 10:00	0<Eyy5y1 1mm4	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*26 - 176*	*620830l 16/66*	*620830l 14/4y*	*1*
1:4-9 5fluorobenzene (Surr)	*, c*		*26 - 176*	*620830l 16/66*	*620830l 14/4y*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
, s&oline a snr e RGsnic& Q, a R(-C6-C10	d40.0	U	40.0		5 r Ezr		0<Eyy5y1 08:m6	0<Eyy5y1 14:14	1
Die&el a snr e RGsnic&ORveG C10-Cy8(	d40.0	U	40.0		5 r Ezr		0<Eyy5y1 08:m6	0<Eyy5y1 14:14	1
RIl a snr e RGsnic&ORveGCy8-C) 6(	d40.0	U	40.0		5 r Ezr		0<Eyy5y1 08:m6	0<Eyy5y1 14:14	1
KotsI KPH	d40.0	U	40.0		5 r Ezr		0<Eyy5y1 08:m6	0<Eyy5y1 14:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Di loroo8Cne	*167*		*26 - 176*	*620830l 6c/4t*	*620830l 1y/1y*	*1*
o-aerTi enpl	*11y*		*26 - 176*	*620830l 6c/4t*	*620830l 1y/1y*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2040		m9.<		5 r Ezr			0<Ey) Ey1 06:16	10

j 7Gofin&uencopCsG8bs/

Client Sample Results

Client: WSP USA Inc.
PG0TectESite: 2ir j / / BUnit 140

Job ID: 890-964-1

Client Sample ID: FS09

Date Collected: 07/21/21 07:48
Date Received: 07/21/21 12:29
Sample Depth: - 4

Lab Sample ID: 890-965-4

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
2engene	d0.00y00	U	0.00y00		5 r Ezr		0<Eyy5y1 10:00	0<Eyy5y1 14:04	1
Kol7ene	d0.00y00	U	0.00y00		5 r Ezr		0<Eyy5y1 10:00	0<Eyy5y1 14:04	1
j t3Elbengene	d0.00y00	U	0.00y00		5 r Ezr		0<Eyy5y1 10:00	0<Eyy5y1 14:04	1
5 -uElene h X-uElene	d0.00m00	U	0.00m00		5 r Ezr		0<Eyy5y1 10:00	0<Eyy5y1 14:04	1
o-uElene	d0.00y00	U	0.00y00		5 r Ezr		0<Eyy5y1 10:00	0<Eyy5y1 14:04	1
uElene&pKotsl	d0.00m00	U	0.00m00		5 r Ezr		0<Eyy5y1 10:00	0<Eyy5y1 14:04	1
Kotsl 2Kj u	d0.00m00	U	0.00m00		5 r Ezr		0<Eyy5y1 10:00	0<Eyy5y1 14:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*133*		*26 - 176*	*620830E1 16/66*	*620830E1 1y/6y*	*1*
1:4-95fluorobenzene (Surr)	*16y*		*26 - 176*	*620830E1 16/66*	*620830E1 1y/6y*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
, s&oline a snr e RGsnic& O, a R(-C6-C10	d40.0	U	40.0		5 r Ezr		0<Eyy5y1 08:m6	0<Eyy5y1 14:) 6	1
Diesel Range Organics (Over C10-C28)	**83.9**		40.0		5 r Ezr		0<Eyy5y1 08:m6	0<Eyy5y1 14:) 6	1
RIl a snr e RGsnic& ORveGCy8-C) 6(	d40.0	U	40.0		5 r Ezr		0<Eyy5y1 08:m6	0<Eyy5y1 14:) 6	1
Total TPH	**83.9**		40.0		5 r Ezr		0<Eyy5y1 08:m6	0<Eyy5y1 14:) 6	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Di loroo8Cne	*, 6*		*26 - 176*	*620830E1 6c/4t*	*620830E1 1y/7t*	*1*
o-aerTi enpl	*, c*		*26 - 176*	*620830E1 6c/4t*	*620830E1 1y/7t*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2470**		40.0		5 r Ezr			0<Ey) Ey1 06:yy	10

j 7Gofin&uencopCsG8bs/

Surrogate Summary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-965-1

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-965-1	FS06	117	97
890-965-2	FS07	106	97
890-965-3	FS08	112	98
890-965-4	FS09	122	105
LCS 880-5481/1-A	Lab Control Sample	100	102
LCSD 880-5481/2-A	Lab Control Sample Dup	102	105
MB 880-5481/5-A	Method Blank	126	95

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-965-1	FS06	92	101
890-965-2	FS07	103	116
890-965-3	FS08	103	115
890-965-4	FS09	90	98
LCS 880-5350/2-A	Lab Control Sample	89	88
LCSD 880-5350/3-A	Lab Control Sample Dup	96	96
MB 880-5350/1-A	Method Blank	100	115

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
PQeTectESite: 2ir j / / BUnit 140

Job ID: 890-964-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-5481/5-A
Matrix: Solid
Analysis Batch: 5527

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5481

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
2engene	d0.00y00	U	0.00y00		5 r Ez r		0<Eyy5y1 10:00	0<Eyy5y1 1myy	1
Kol7ene	d0.00y00	U	0.00y00		5 r Ez r		0<Eyy5y1 10:00	0<Eyy5y1 1myy	1
j t3Blbengene	d0.00y00	U	0.00y00		5 r Ez r		0<Eyy5y1 10:00	0<Eyy5y1 1myy	1
5 -hBlene X &-hBlene	d0.00u00	U	0.00u00		5 r Ez r		0<Eyy5y1 10:00	0<Eyy5y1 1myy	1
o-hBlene	d0.00y00	U	0.00y00		5 r Ez r		0<Eyy5y1 10:00	0<Eyy5y1 1myy	1
hBlenepsKot, l	d0.00u00	U	0.00u00		5 r Ez r		0<Eyy5y1 10:00	0<Eyy5y1 1myy	1
Kot, l 2Kj h	d0.00u00	U	0.00u00		5 r Ez r		0<Eyy5y1 10:00	0<Eyy5y1 1myy	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*126*		*70 - 130*	*07/22/21 10:00*	*07/22/21 13:22*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*07/22/21 10:00*	*07/22/21 13:22*	*1*

Lab Sample ID: LCS 880-5481/1-A
Matrix: Solid
Analysis Batch: 5527

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5481

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
2engene			0.100	0.09my0		5 r Ez r		9m	<0 - 1m0		
Kol7ene			0.100	0.08u<6		5 r Ez r		84	<0 - 1m0		
j t3Blbengene			0.100	0.08u9y		5 r Ez r		84	<0 - 1m0		
5 -hBlene X &-hBlene			0.y00	0.1<mu		5 r Ez r		8<	<0 - 1m0		
o-hBlene			0.100	0.08uu<		5 r Ez r		8u	<0 - 1m0		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: LCSD 880-5481/2-A
Matrix: Solid
Analysis Batch: 5527

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 5481

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2engene			0.100	0.1016		5 r Ez r		10y	<0 - 1m0	9	m4
Kol7ene			0.100	0.09146		5 r Ez r		9y	<0 - 1m0	8	m4
j t3Blbengene			0.100	0.090m<		5 r Ez r		90	<0 - 1m0	6	m4
5 -hBlene X &-hBlene			0.y00	0.18u<		5 r Ez r		9y	<0 - 1m0	6	m4
o-hBlene			0.100	0.091yu		5 r Ez r		91	<0 - 1m0	8	m4

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

QC Sample Results

Client: WSP USA Inc. Job ID: 890-964-1
PG TectE Site: 2ir j / / B Unit 140

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

Lab Sample ID: MB 880-5350/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 5510 — **Prep Batch: 5350**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
R, poline O, nr e (G, nicp)RO(v-C6-C10	d40.0	U	40.0		5 r Ez r		0<E195y1 08:u6	0<5yy5y1 1y:0<	1
Diepel O, nr e (G, nicp)(HeG C10-Cy8v	d40.0	U	40.0		5 r Ez r		0<E195y1 08:u6	0<5yy5y1 1y:0<	1
(ll O, nr e (G, nicp)(HeGCy8-Cm6v	d40.0	U	40.0		5 r Ez r		0<E195y1 08:u6	0<5yy5y1 1y:0<	1
Kot, l KPf	d40.0	U	40.0		5 r Ez r		0<E195y1 08:u6	0<5yy5y1 1y:0<	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-8 Cloroohd ne	*100*		*70 - 130*	*07/19/21 0a:46*	*07/22/21 12:07*	*1*
o-TerpCenyl	*115*		*70 - 130*	*07/19/21 0a:46*	*07/22/21 12:07*	*1*

Lab Sample ID: LCS 880-5350/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 5510 — **Prep Batch: 5350**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
R, poline O, nr e (G, nicp)RO(v-C6-C10			1000	<6y.1		5 r Ez r		<6	<0 - 1m0		
Diepel O, nr e (G, nicp)(HeG C10-Cy8v			1000	881.8		5 r Ez r		88	<0 - 1m0		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-8 Cloroohd ne	*a9*		*70 - 130*
o-TerpCenyl	*aa*		*70 - 130*

Lab Sample ID: LCSD 880-5350/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 5510 — **Prep Batch: 5350**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
R, poline O, nr e (G, nicp)RO(v-C6-C10			1000	808.y		5 r Ez r		81	<0 - 1m0	6	y0
Diepel O, nr e (G, nicp)(HeG C10-Cy8v			1000	9u9.u		5 r Ez r		94	<0 - 1m0	<	y0

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-8 Cloroohd ne	*96*		*70 - 130*
o-TerpCenyl	*96*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-5537/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 5560

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C3loG e	d4.00	U	4.00		5 r Ez r			0<5ym5y1 0mu4	1

j 7Gainp hencosC, Gpb, /

QC Sample Results

Client: WSP USA Inc. Job ID: 890-964-1
PGoTectESite: 2ir j / / B Unit 140

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-5537/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 5560

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
C3loG' e			y40	yu9.y		5 r E r		100	90 - 110		

Lab Sample ID: LCSD 880-5537/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 5560

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C3loG' e			y40	yu9.9		5 r E r		100	90 - 110	0	y0

j 7Goanp hencosC, Cpb, /

QC Association Summary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-965-1

GC VOA

Prep Batch: 5481

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-965-1	FS06	Total/NA	Solid	5035	
890-965-2	FS07	Total/NA	Solid	5035	
890-965-3	FS08	Total/NA	Solid	5035	
890-965-4	FS09	Total/NA	Solid	5035	
MB 880-5481/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-5481/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-5481/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 5527

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-965-1	FS06	Total/NA	Solid	8021B	5481
890-965-2	FS07	Total/NA	Solid	8021B	5481
890-965-3	FS08	Total/NA	Solid	8021B	5481
890-965-4	FS09	Total/NA	Solid	8021B	5481
MB 880-5481/5-A	Method Blank	Total/NA	Solid	8021B	5481
LCS 880-5481/1-A	Lab Control Sample	Total/NA	Solid	8021B	5481
LCSD 880-5481/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	5481

GC Semi VOA

Prep Batch: 5350

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-965-1	FS06	Total/NA	Solid	8015NM Prep	
890-965-2	FS07	Total/NA	Solid	8015NM Prep	
890-965-3	FS08	Total/NA	Solid	8015NM Prep	
890-965-4	FS09	Total/NA	Solid	8015NM Prep	
MB 880-5350/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-5350/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-5350/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 5510

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-965-1	FS06	Total/NA	Solid	8015B NM	5350
890-965-2	FS07	Total/NA	Solid	8015B NM	5350
890-965-3	FS08	Total/NA	Solid	8015B NM	5350
890-965-4	FS09	Total/NA	Solid	8015B NM	5350
MB 880-5350/1-A	Method Blank	Total/NA	Solid	8015B NM	5350
LCS 880-5350/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	5350
LCSD 880-5350/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	5350

HPLC/IC

Leach Batch: 5537

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-965-1	FS06	Soluble	Solid	DI Leach	
890-965-2	FS07	Soluble	Solid	DI Leach	
890-965-3	FS08	Soluble	Solid	DI Leach	
890-965-4	FS09	Soluble	Solid	DI Leach	
MB 880-5537/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-5537/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-5537/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-965-1

HPLC/IC

Analysis Batch: 5560

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-965-1	FS06	Soluble	Solid	300.0	5537
890-965-2	FS07	Soluble	Solid	300.0	5537
890-965-3	FS08	Soluble	Solid	300.0	5537
890-965-4	FS09	Soluble	Solid	300.0	5537
MB 880-5537/1-A	Method Blank	Soluble	Solid	300.0	5537
LCS 880-5537/2-A	Lab Control Sample	Soluble	Solid	300.0	5537
LCSD 880-5537/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	5537

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-965-1

Client Sample ID: FS06

Lab Sample ID: 890-965-1
Matrix: Solid
Date Collected: 07/20/21 07:40
Date Received: 07/21/21 12:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5481	07/22/21 10:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5527	07/22/21 14:04	KL	XEN MID
Total/NA	Prep	8015NM Prep			5350	07/22/21 08:46	DM	XEN MID
Total/NA	Analysis	8015B NM		1	5510	07/22/21 14:33	AJ	XEN MID
Soluble	Leach	DI Leach			5537	07/22/21 12:08	CH	XEN MID
Soluble	Analysis	300.0		10	5560	07/23/21 06:06	CH	XEN MID

Client Sample ID: FS07

Lab Sample ID: 890-965-2
Matrix: Solid
Date Collected: 07/20/21 07:43
Date Received: 07/21/21 12:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5481	07/22/21 10:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5527	07/22/21 14:24	KL	XEN MID
Total/NA	Prep	8015NM Prep			5350	07/22/21 08:46	DM	XEN MID
Total/NA	Analysis	8015B NM		1	5510	07/22/21 14:54	AJ	XEN MID
Soluble	Leach	DI Leach			5537	07/22/21 12:08	CH	XEN MID
Soluble	Analysis	300.0		20	5560	07/23/21 06:11	CH	XEN MID

Client Sample ID: FS08

Lab Sample ID: 890-965-3
Matrix: Solid
Date Collected: 07/20/21 07:46
Date Received: 07/21/21 12:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5481	07/22/21 10:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5527	07/22/21 14:45	KL	XEN MID
Total/NA	Prep	8015NM Prep			5350	07/22/21 08:46	DM	XEN MID
Total/NA	Analysis	8015B NM		1	5510	07/22/21 15:15	AJ	XEN MID
Soluble	Leach	DI Leach			5537	07/22/21 12:08	CH	XEN MID
Soluble	Analysis	300.0		10	5560	07/23/21 06:16	CH	XEN MID

Client Sample ID: FS09

Lab Sample ID: 890-965-4
Matrix: Solid
Date Collected: 07/21/21 07:48
Date Received: 07/21/21 12:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5481	07/22/21 10:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5527	07/22/21 15:05	KL	XEN MID
Total/NA	Prep	8015NM Prep			5350	07/22/21 08:46	DM	XEN MID
Total/NA	Analysis	8015B NM		1	5510	07/22/21 15:36	AJ	XEN MID
Soluble	Leach	DI Leach			5537	07/22/21 12:08	CH	XEN MID
Soluble	Analysis	300.0		10	5560	07/23/21 06:22	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc.
Job ID: 890-965-1
Project/Site: Big Eddy Unit 150

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	06-30-22

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

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

Method Summary

Client: WSP USA Inc. Job ID: 890-964-1
PGoTectESite: 2ir j / / BUnit 140

Method	Method Description	Protocol	Laboratory
80d12	yol5tile VG5nic Coa Comn/ p us C(	SW8g6	) j X NID
80142 XN	Diepel M5nr e VG5nicp uDMV (us C(	SW8g6	) j X NID
R00.0	Anionp3Ion C, Goa 5tor G5O, B	NCAWW	) j X NID
40R4	Clope/ SBptea PmG5e 5n/ hG5O	SW8g6	) j X NID
8014XN PGeO	NicGextG5ction	SW8g6	) j X NID
DI Le5c,	Deionize/ W5teGLe5c, inr PGoce/ mGe	AShN	) j X NID

Protocol References:

AShN = AShN InteGn5tion5l

NCAWW = "Net, o/ p FoGC, ea ic5l An5lBpip Vf W5teGAn/ W5ptep"3j PA-600Eg-79-0d03N5Gs, 198RAn/ Smbpeqment Mevipionp.

SW8g6 = "hept Net, o/ p FoGj v5lm5tinr Soli/ W5pte3P, Bpic5lEC, ea ic5l Net, o/ p"3h, iG j / ition3Xovea beG1986 An/ ltp UO/ 5tep.

Laboratory References:

) j X NID = j mGofinp) enco3Ni/ l5n/ 31d11 W. FloG/ 5 Ave3Ni/ l5n/ 3h) 797013hj LugRd(70g-4gg0

Sample Summary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-965-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-965-1	FS06	Solid	07/20/21 07:40	07/21/21 12:29	- 4
890-965-2	FS07	Solid	07/20/21 07:43	07/21/21 12:29	- 4
890-965-3	FS08	Solid	07/20/21 07:46	07/21/21 12:29	- 4
890-965-4	FS09	Solid	07/21/21 07:48	07/21/21 12:29	- 4

Chain of Custody

XENCO LABORATORIES

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

Work Order No: _____

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Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	WSP USA	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	522 W. Mermod St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	Jeremy.Hill@wsp.com, Dan.Moir@wsp.com

Work Order Comments

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

Project Name:	Big Eddy Unit 150	Turn Around	
Project Number:	Inc. NRM2024854885	Routine	☐
P.O. Number:	TE01892026	Rush:	24hr
Sampler's Name:	Jeremy Hill	Due Date:	7/21/21

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Temperature (°C):	5.2/5.0	Thermometer ID	TRN007	
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes (No) N/A	Total Containers:		

ANALYSIS REQUEST

890-965 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
FS06	S	7/20/21	0740	4'	1	X	X	X
FS07	↓	↓	0743	4'	↓	↓	↓	↓
FS08	↓	↓	0746	4'	↓	↓	↓	↓
FS09	↓	7/21/21	0748	4'	↓	↓	↓	↓

Work Order Notes

CC
1086741001
AFE
EW.2021.01562.EXP.01

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

Sample Comments

Composite
↓

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Clive Cortez	7.21.21 1229	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-965-1
SDG Number:

Login Number: 965
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: 890-965-1
SDG Number:

Login Number: 965
List Number: 2
Creator: Phillips, Kerianna

List Source: Eurofins Xenco, Midland
List Creation: 07/22/21 10:09 AM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-980-1
Laboratory Sample Delivery Group: TE012920126
Client Project/Site: Big Eddy Unit 150

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

Attn: Dan Moir

JKramer

Authorized for release by:
7/26/2021 5:43:14 PM

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

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Laboratory Job ID: 890-980-1
SDG: TE012920126

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-980-1
Project/Site: Big Eddy Unit 150 SDG: TE012920126

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-980-1
SDG: TE012920126

Job ID: 890-980-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-980-1

Receipt
The sample was received on 7/22/2021 4:31 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 9.4°C

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

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

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

Client Sample Results

4 1Ci e n t WSt P li UA
W2orl Uɉt Ga : / GB Gggd Si Ga6y0

Job ID: 890-980-6
t Dc : . G06T9T06TE

Client Sample ID: S4 01

Lab Sample ID: 890-980-6
Wat5iM Sr lix

Date Cr lleotex: 0dd1cl6 60:7d
Date Reoei/ ex: 0dd1cl6 62:v6
Sample Dept3: 0 - h

Wet3r x: 8016B - Vr latile O5ganio Cr mpr unxs (GC)

Analyte	Result	Qualifie5	RL		Unit	D	P5epa5ex	Analyzex	Dil Fao
/ l i 5l i l	z0A00T0T	S	0A00T0T		< BjmB		0KjT7jT6 66:06	0KjT3jT6 0T:63	6
. o1ul i l	z0A00T0T	S	0A00T0T		< BjmB		0KjT7jT6 66:06	0KjT3jT6 0T:63	6
Gehd1bl i 5l i l	z0A00T0T	S	0A00T0T		< BjmB		0KjT7jT6 66:06	0KjT3jT6 0T:63	6
< -Xd1 i l & p-Xd1 i l	z0A00307	S	0A00307		< BjmB		0KjT7jT6 66:06	0KjT3jT6 0T:63	6
o-Xd1 i l	z0A00T0T	S	0A00T0T		< BjmB		0KjT7jT6 66:06	0KjT3jT6 0T:63	6
Xd1 i l s, . oea1	z0A00307	S	0A00307		< BjmB		0KjT7jT6 66:06	0KjT3jT6 0T:63	6
. oea1/ . GX	z0A00307	S	0A00307		< BjmB		0KjT7jT6 66:06	0KjT3jT6 0T:63	6

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*67 - 107*	*763' 03' 1 11:71*	*763' 43' 1 7/ :14*	*1*
194-5 ,fluorobenzene (Surr)	*Di*		*67 - 107*	*763' 03' 1 11:71*	*763' 43' 1 7/ :14*	*1*

Wet3r x: 8067B NW - Diesel Range O5ganios (DRO) (GC)

Analyte	Result	Qualifie5	RL		Unit	D	P5epa5ex	Analyzex	Dil Fao
c aso1Cl Rai Bl O2Bai Cls (c RO)-4 E-4 60	z39A9	S	39A9		< BjmB		0KjT7jT6 63:T9	0KjT3jT6 69:y3	6
DCsl 1Rai Bl O2Bai Cls (Ovl 2 4 60-4 T8)	z39A9	S	39A9		< BjmB		0KjT7jT6 63:T9	0KjT3jT6 69:y3	6
Ol1Rai Bl O2Bai Cls (Ovl 24 T8-4 7E)	z39A9	S	39A9		< BjmB		0KjT7jT6 63:T9	0KjT3jT6 69:y3	6
. oea1. WH	z39A9	S	39A9		< BjmB		0KjT7jT6 63:T9	0KjT3jT6 69:y3	6

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-8 Cloroohct ne	*Di*		*67 - 107*	*763' 03' 1 14:/ D*	*763' 43' 1 1D:a4*	*1*
o-TerpCenyl	*11i*		*67 - 107*	*763' 03' 1 14:/ D*	*763' 43' 1 1D:a4*	*1*

Wet3r x: v00.0 - Anir ns, Ir n C35r matr g5ap3y - Sr luble

Analyte	Result	Qualifie5	RL		Unit	D	P5epa5ex	Analyzex	Dil Fao
C3lr 5ixe	**hh9**		yA06		< BjmB			0KjT3jT6 TT:Ty	6

Gu2ofCs Xl i Ub, 4 a2tsbag

Surrogate Summary

4 1Ci e n t WSt P li UA
W2orl Uajt G: / GB Gggd Si G6y0

Job ID: 890-980-6
t Dc : . G06T9T06TE

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)								
890-980-6	t n 0T	66E	98								
890-980-6 5 t	t n 0T	6T6	60E								
890-980-6 5 t D	t n 0T	666	607								
M4 t 880-yy8Lj6-P	Mab 4 oi e2b1t amp1	666	607								
M4 t D 880-yy8LjT-P	Mab 4 oi e2b1t amp1 Dup	60L	607								
5 / 880-yy70jy-P	5 l ehog / 1ai k	608	9E								
5 / 880-yy8Ljy-P	5 l ehog / 1ai k	60E	9L								

Surrogate Legend

/ F/ = f -/ 2omozuo2bl i (l i l)t u2ZZ

DF/ , = 63f -D@2uo2bl i (l i l)t u2ZZ

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)								
890-980-6	t n 0T	98	668								
890-980-6 5 t	t n 0T	9f	60L								
890-980-6 5 t D	t n 0T	9E	60y								
M4 t 880-yE0LjT-P	Mab 4 oi e2b1t amp1	99	666								
M4 t D 880-yE0LjL-P	Mab 4 oi e2b1t amp1 Dup	97	609								
5 / 880-yE0Lj6-P	5 l ehog / 1ai k	9T	66f								

Surrogate Legend

64 O = 6-4 h1b2oUaai l

O. WH = o-. l 2phl i d1

Gu2bzCs Xl i Ub34 a2tsbag

QC Sample Results

4 1Ci e n t WSt P li UA
W2orl Uajt G: / GB Gggd Si G6y0

Job ID: 890-980-6
t Dc : . G06T9T06TE

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-5570/5-A
Matrix: Solid
Analysis Batch: 5575

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5570

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
/ l i 5l i l	z0A00T00	S	0A00T00		< BjmB		0KjT7jT6 60:TT	0KjT7jT6 6y:06	6
. o13l i l	z0A00T00	S	0A00T00		< BjmB		0KjT7jT6 60:TT	0KjT7jT6 6y:06	6
Gaud1bl i 5l i l	z0A00T00	S	0A00T00		< BjmB		0KjT7jT6 60:TT	0KjT7jT6 6y:06	6
< -Xd1 i l & p-Xd1 i l	z0A00h00	S	0A00h00		< BjmB		0KjT7jT6 60:TT	0KjT7jT6 6y:06	6
o-Xd1 i l	z0A00T00	S	0A00T00		< BjmB		0KjT7jT6 60:TT	0KjT7jT6 6y:06	6
Xd1 i l s, . oea1	z0A00h00	S	0A00h00		< BjmB		0KjT7jT6 60:TT	0KjT7jT6 6y:06	6
. oea1/ . GX	z0A00h00	S	0A00h00		< BjmB		0KjT7jT6 60:TT	0KjT7jT6 6y:06	6

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*126*		*72 - 102*	*273'03'1 129'/*	*273'03'1 1: 921*	*1*
1D4-i 8luorobenzene (Surr)	*5,*		*72 - 102*	*273'03'1 129'/*	*273'03'1 1: 921*	*1*

Lab Sample ID: MB 880-5583/5-A
Matrix: Solid
Analysis Batch: 5575

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5583

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
/ l i 5l i l	z0A00T00	S	0A00T00		< BjmB		0KjT7jT6 66:06	0KjThjT6 06:yT	6
. o13l i l	z0A00T00	S	0A00T00		< BjmB		0KjT7jT6 66:06	0KjThjT6 06:yT	6
Gaud1bl i 5l i l	z0A00T00	S	0A00T00		< BjmB		0KjT7jT6 66:06	0KjThjT6 06:yT	6
< -Xd1 i l & p-Xd1 i l	z0A00h00	S	0A00h00		< BjmB		0KjT7jT6 66:06	0KjThjT6 06:yT	6
o-Xd1 i l	z0A00T00	S	0A00T00		< BjmB		0KjT7jT6 66:06	0KjThjT6 06:yT	6
Xd1 i l s, . oea1	z0A00h00	S	0A00h00		< BjmB		0KjT7jT6 66:06	0KjThjT6 06:yT	6
. oea1/ . GX	z0A00h00	S	0A00h00		< BjmB		0KjT7jT6 66:06	0KjThjT6 06:yT	6

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*12,*		*72 - 102*	*273'03'1 1192 1*	*273'43'1 219 /*	*1*
1D4-i 8luorobenzene (Surr)	*50*		*72 - 102*	*273'03'1 1192 1*	*273'43'1 219 /*	*1*

Lab Sample ID: LCS 880-5583/1-A
Matrix: Solid
Analysis Batch: 5575

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5583

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
/ l i 5l i l			0A600	0A60TT		< BjmB		60T	K0 - 670		
. o13l i l			0A600	0A09Th7		< BjmB		9T	K0 - 670		
Gaud1bl i 5l i l			0A600	0A089h0		< BjmB		89	K0 - 670		
< -Xd1 i l & p-Xd1 i l			0AT00	0A6876		< BjmB		9T	K0 - 670		
o-Xd1 i l			0A600	0A09T0K		< BjmB		9T	K0 - 670		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*72 - 102*
1D4-i 8luorobenzene (Surr)	*127*		*72 - 102*

G32oRCs Xl i Ub, 4 a2tsbag

QC Sample Results

4 1Ci e n t WSt P li UA
W2orl Uajt G: / GB Gggd Si G6y0

Job ID: 890-980-6
t Dc : . G06T9T06TE

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

Lab Sample ID: LCSD 880-5583/2-A
Matrix: Solid
Analysis Batch: 5575

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 5583

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
/ l i 5l i l			0A600	0A60T8		< BjmB		607	K0 - 670	6	7y
. o 3l i l			0A600	0A089K8		< BjmB		90	K0 - 670	7	7y
Gaud1bl i 5l i l			0A600	0A08Ehy		< BjmB		8E	K0 - 670	7	7y
< -Xd1 i l & p-Xd1 i l			0AT00	0A6KyT		< BjmB		88	K0 - 670	h	7y
o-Xd1 i l			0A600	0A08K9h		< BjmB		88	K0 - 670	y	7y

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*120*		*72 - 102*
1D4-i 8luorobenzene (Surr)	*127*		*72 - 102*

Lab Sample ID: 890-980-1 MS
Matrix: Solid
Analysis Batch: 5575

Client Sample ID: SW02
Prep Type: Total/NA
Prep Batch: 5583

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
/ l i 5l i l	z0A00T0T	S	0A099E	0A096T7		< BjmB		9T	K0 - 670		
. o 3l i l	z0A00T0T	S	0A099E	0A08777		< BjmB		8h	K0 - 670		
Gaud1bl i 5l i l	z0A00T0T	S	0A099E	0A086Ky		< BjmB		8T	K0 - 670		
< -Xd1 i l & p-Xd1 i l	z0A00h07	S	0A699	0A6E9h		< BjmB		8y	K0 - 670		
o-Xd1 i l	z0A00T0T	S	0A099E	0A087Eh		< BjmB		8h	K0 - 670		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*1/ 1*		*72 - 102*
1D4-i 8luorobenzene (Surr)	*12,*		*72 - 102*

Lab Sample ID: 890-980-1 MSD
Matrix: Solid
Analysis Batch: 5575

Client Sample ID: SW02
Prep Type: Total/NA
Prep Batch: 5583

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
/ l i 5l i l	z0A00T0T	S	0A099h	0A08E9E		< BjmB		8K	K0 - 670	y	7y
. o 3l i l	z0A00T0T	S	0A099h	0AKKy7		< BjmB		K8	K0 - 670	K	7y
Gaud1bl i 5l i l	z0A00T0T	S	0A099h	0AK7Ty		< BjmB		Kh	K0 - 670	66	7y
< -Xd1 i l & p-Xd1 i l	z0A00h07	S	0A699	0A6h99		< BjmB		Ky	K0 - 670	6T	7y
o-Xd1 i l	z0A00T0T	S	0A099h	0AKhEK		< BjmB		Ky	K0 - 670	66	7y

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*72 - 102*
1D4-i 8luorobenzene (Surr)	*127*		*72 - 102*

QC Sample Results

4 1Ci e n t WSt P li UA
W2orl Uajt G: / GB Gggd Si G6y0

Job ID: 890-980-6
t Dc : . G06T9T06TE

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

Lab Sample ID: MB 880-5603/1-A
Matrix: Solid
Analysis Batch: 5611

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5603

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
c aso1ClOai Bl (2Bai Cls)c O(v-4 E-4 60	zy0A0	S	y0A0		< BjmB		0KjT7jT6 6h:T9	0KjThjT6 68:y6	6
DCsl 1Oai Bl (2Bai Cls)(H 2 4 60-4 T8v	zy0A0	S	y0A0		< BjmB		0KjT7jT6 6h:T9	0KjThjT6 68:y6	6
(l1Oai Bl (2Bai Cls)(H 24 T8-4 7Ev	zy0A0	S	y0A0		< BjmB		0KjT7jT6 6h:T9	0KjThjT6 68:y6	6
. oea1. Wf	zy0A0	S	y0A0		< BjmB		0KjT7jT6 6h:T9	0KjThjT6 68:y6	6

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*5/*		*72 - 102*	*273'03'1 149'5*	*273'43'1 169 1*	*1*
o-Terphenyl	*114*		*72 - 102*	*273'03'1 149'5*	*273'43'1 169 1*	*1*

Lab Sample ID: LCS 880-5603/2-A
Matrix: Solid
Analysis Batch: 5611

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5603

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
c aso1ClOai Bl (2Bai Cls)c O(v-4 E-4 60			6000	8y7AT		< BjmB		8y	K0 - 670		
DCsl 1Oai Bl (2Bai Cls)(H 2 4 60-4 T8v			6000	988AT		< BjmB		99	K0 - 670		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*55*		*72 - 102*
o-Terphenyl	*111*		*72 - 102*

Lab Sample ID: LCSD 880-5603/3-A
Matrix: Solid
Analysis Batch: 5611

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 5603

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
c aso1ClOai Bl (2Bai Cls)c O(v-4 E-4 60			6000	86yA7		< BjmB		8T	K0 - 670	y	T0
DCsl 1Oai Bl (2Bai Cls)(H 2 4 60-4 T8v			6000	98hA0		< BjmB		98	K0 - 670	0	T0

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*57*		*72 - 102*
o-Terphenyl	*125*		*72 - 102*

Lab Sample ID: 890-980-1 MS
Matrix: Solid
Analysis Batch: 5611

Client Sample ID: SW02
Prep Type: Total/NA
Prep Batch: 5603

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
c aso1ClOai Bl (2Bai Cls)c O(v-4 E-4 60	zh9A9	S	999	8y6A0		< BjmB		8h	K0 - 670		
DCsl 1Oai Bl (2Bai Cls)(H 2 4 60-4 T8v	zh9A9	S	999	9ThA0		< BjmB		9T	K0 - 670		

G32bRCs Xl i Ub, 4 a2tsbag

QC Sample Results

4 1Ci e n t WSt P li UA
W2orl Uajt G: / GB Gggd Si G6y0

Job ID: 890-980-6
t Dc : . G06T9T06TE

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

Lab Sample ID: 890-980-1 MS
Matrix: Solid
Analysis Batch: 5611

Client Sample ID: SW02
Prep Type: Total/NA
Prep Batch: 5603

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	54		72 - 102
o-Terphenyl	120		72 - 102

Lab Sample ID: 890-980-1 MSD
Matrix: Solid
Analysis Batch: 5611

Client Sample ID: SW02
Prep Type: Total/NA
Prep Batch: 5603

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
c aso1Cl Oai Bl (2Bai Cls)c O(v-4 E-4 60	zh9A9	S	99K	8h9A0		< BjmB		8h	K0 - 670	0	T0
DCsl 1Oai Bl (2Bai Cls)(H 2 4 60-4 T8v	zh9A9	S	99K	9E0A0		< BjmB		9E	K0 - 670	h	T0

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	5,		72 - 102
o-Terphenyl	12:		72 - 102

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-5608/1-A
Matrix: Solid
Analysis Batch: 5616

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
4 u'b2Cgl	zyA00	S	yA00		< BjmB			0KjThjT6 T0:yT	6

Lab Sample ID: LCS 880-5608/2-A
Matrix: Solid
Analysis Batch: 5616

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
4 u'b2Cgl			Ty0	TyEA6		< BjmB		60T	90 - 660		

Lab Sample ID: LCSD 880-5608/3-A
Matrix: Solid
Analysis Batch: 5616

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
4 u'b2Cgl			Ty0	Ty7A9		< BjmB		60T	90 - 660	6	T0

Lab Sample ID: 890-980-1 MS
Matrix: Solid
Analysis Batch: 5616

Client Sample ID: SW02
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
4 u'b2Cgl	hh9		Ty6	K66AT		< BjmB		60h	90 - 660		

G32bRCs Xl i Ub, 4 a2tsbag

QC Sample Results

4 1Ci e n t WSt P li UA
W2orl Uajt G: / GB Gggd Si G6y0

Job ID: 890-980-6
t Dc : . G06T9T06TE

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-980-1 MSD
Matrix: Solid
Analysis Batch: 5616

Client Sample ID: SW02
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4 u1b2Gl	hh9		Ty6	K6TA7		< BjmB		60y	90 - 660	0	T0

G32oRCs Xl i Ub, 4 a2tsbag

QC Association Summary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-980-1
SDG: TE012920126

GC VOA

Prep Batch: 5570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-5570/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 5575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-980-1	SW02	Total/NA	Solid	8021B	5583
MB 880-5570/5-A	Method Blank	Total/NA	Solid	8021B	5570
MB 880-5583/5-A	Method Blank	Total/NA	Solid	8021B	5583
LCS 880-5583/1-A	Lab Control Sample	Total/NA	Solid	8021B	5583
LCSD 880-5583/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	5583
890-980-1 MS	SW02	Total/NA	Solid	8021B	5583
890-980-1 MSD	SW02	Total/NA	Solid	8021B	5583

Prep Batch: 5583

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-980-1	SW02	Total/NA	Solid	5035	
MB 880-5583/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-5583/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-5583/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-980-1 MS	SW02	Total/NA	Solid	5035	
890-980-1 MSD	SW02	Total/NA	Solid	5035	

GC Semi VOA

Prep Batch: 5603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-980-1	SW02	Total/NA	Solid	8015NM Prep	
MB 880-5603/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-5603/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-5603/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-980-1 MS	SW02	Total/NA	Solid	8015NM Prep	
890-980-1 MSD	SW02	Total/NA	Solid	8015NM Prep	

Analysis Batch: 5611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-980-1	SW02	Total/NA	Solid	8015B NM	5603
MB 880-5603/1-A	Method Blank	Total/NA	Solid	8015B NM	5603
LCS 880-5603/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	5603
LCSD 880-5603/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	5603
890-980-1 MS	SW02	Total/NA	Solid	8015B NM	5603
890-980-1 MSD	SW02	Total/NA	Solid	8015B NM	5603

HPLC/IC

Leach Batch: 5608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-980-1	SW02	Soluble	Solid	DI Leach	
MB 880-5608/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-5608/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-5608/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-980-1 MS	SW02	Soluble	Solid	DI Leach	
890-980-1 MSD	SW02	Soluble	Solid	DI Leach	

QC Association Summary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-980-1
SDG: TE012920126

HPLC/IC

Analysis Batch: 5616

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-980-1	SW02	Soluble	Solid	300.0	5608
MB 880-5608/1-A	Method Blank	Soluble	Solid	300.0	5608
LCS 880-5608/2-A	Lab Control Sample	Soluble	Solid	300.0	5608
LCSD 880-5608/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	5608
890-980-1 MS	SW02	Soluble	Solid	300.0	5608
890-980-1 MSD	SW02	Soluble	Solid	300.0	5608

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-980-1
SDG: TE012920126

Client Sample ID: SW02

Date Collected: 07/22/21 10:57
Date Received: 07/22/21 16:31

Lab Sample ID: 890-980-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5583	07/23/21 11:01	KL	XEN MID
Total/NA	Analysis	8021B		1	5575	07/24/21 02:14	KL	XEN MID
Total/NA	Prep	8015NM Prep			5603	07/23/21 14:29	AJ	XEN MID
Total/NA	Analysis	8015B NM		1	5611	07/24/21 19:54	AJ	XEN MID
Soluble	Leach	DI Leach			5608	07/23/21 16:33	SC	XEN MID
Soluble	Analysis	300.0		1	5616	07/24/21 22:25	SC	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc.
P4o1ectrSite: j i/ BggE Unit 6d0

Job ID: 890-980-6
SDy : 5B06G9G06GT

Laboratory: Eurofins Xenco, Midland

Unle22 otse4h i2e notegw, ll , n, lEte2 ao4tsi2 l, bo4, to4E h e4e cof e4eg vnge4e, cs , cc4egit, tionrce4tiaic, tion beloh .

Authority	Program	Identification Number	Expiration Date
5eu, 2	NBLAP	560x70xx00-G0-G6	0T-30-GG

5se aolloh in/ , n, lEte2 , 4e inclvgeg in tsi2 4epo4twbvt tse l, bo4, to4E i2 not ce4tiaieg bE tse / of e4hin/ , vtso4tE 5si2 li2t m, E inclvge , n, lEte2 ao4h sics tse , / encE goe2 not oae4 ce4tiaic, tion .

An, lE2i2 Metsog	P4ep Metsog	M, t4u	An, lEte
806dj NM	806dNM P4ep	Solig	5ot, l 5PH
80G6j	d03d	Solig	5ot, l j 5BX

Bv4oain2 XencowC, 42b, g

Method Summary

4 1Ci e n t WSt P li UA
W2orl Uajt G: / GB Gggd Si G6y0

Job ID: 890-980-6
t Dc : . G06T9T06TE

Method	Method Description	Protocol	Laboratory
80T6/	Vo1aeG1 O2Bai GJ4 ompoui gs (c 4)	t n 85E	XGN MID
806y/ NM	DGsl 1Rai Bl O2Bai Gs (DRO) (c 4)	t n 85E	XGN MID
300A0	Pi G i s, loi 4 h2omaeoB2aphd	M4 Pn n	XGN MID
y03y	4 1osl g t dsel m Wu2Bl ai g . 2ap	t n 85E	XGN MID
806yNM W2l p	MGL2ol xe2aUs0i	t n 85E	XGN MID
Dl Ll aUh	Dl G i G2l g n ael 2LI aUhGB W2oU gu2	Pt . M	XGN MID

Protocol References:

Pt . M = Pt . M li el 2 aeGi a1

M4 Pn n = "Ml enogs Fo24 hl mGa1Pi a1tsG Of n ael 2Pi g n asel s", GWP-E00j5-79-0T0, Ma2Uh 6983 Pi g t ubsl qul i eRl vG0i sA

t n 85E = ". l seMl enogs Fo2Gva1uaeGB t o1g n ael , WhdsGa14 hl mGa1Ml enogs", . h2g Gg0i , Novl mbl 2698E Pi g les Spgael sA

Laboratory References:

XGN MID = Gu2ofGs Xl i Ub, MG1ai g, 6T66 n AF1b2Ga Pvl , MG1ai g, . X 79706, . GL (53T)705-y550

Sample Summary

Client: WSP USA Inc.
P2brectjSite: / iB Gggd Unit 6y0

Job ID: 890-980-6
SD4 : 1G06T9T06TE

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-980-6	SW0T	Solig	05jTTjT6 60:y5	05jTTjT6 6E:76	0 - 3

Chain of Custody

Work Order No: _____

XENCO LABORATORIES

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

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	WSP USA	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	522 W. Mermod St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	Jeremy.Hill@wsp.com, Dan.Moir@wsp.com

Work Order Comments

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

Project Name:	Big Eddy Unit 150	Turn Around	
Project Number:	TE01924016	Routine	☐
P.O. Number:	Inc. NRM2024854885	Rush:	3 412
Sampler's Name:	Jeremy Hill	Due Date:	7/26/21

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	9.4/9.4	Thermometer ID	TWN-007	
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:		
Sample Custody Seals:	Yes No (N/A)	Total Containers:		

ANALYSIS REQUEST

890-980 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
SW02	S	7/22/21	1057	0-4'	1	X	X	X

Work Order Notes

CC
108074/1001
AFE
EW.2021.01562.EXP.01

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

Sample Comments

Composite

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		7.22.21 1624			
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

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

eurofins | Environment Testing America

7/26/2021

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer, Jessica	Carrier Tracking No(s):	COC No: 890-314 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jessica kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-980-1
Address: 1211 W Florida Ave,	Due Date Requested: 7/23/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: Big Eddy Unit 150	Project #: 89000004			
Site:	SSOW#:			

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
SW02 (890-980-1)	7/22/21	10 57 Mountain		Solid			X	X	X	1	

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

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

Possible Hazard Identification
Unconfirmed

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

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

Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date	Time	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[signature] 7·23·21			[signature]	7/23/21	

Custody Seals Intact: Δ Yes Δ No | Custody Seal No

Cooler Temperature(s) °C and Other Remarks:

Page 19 of 21

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-980-6
S4 1 Number: DG06T9T06TE

Login Number: 980
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Xenco, Carlsbad

Question	Answer	Comment
D2e coolerh cu' tosd ' eylai, f re' entai' intyct.	Drue	
Symf le cu' tosd ' eyl' ai, f re' entayre intyct.	Drue	
D2e cooler or ' ymf le' so not yf f eyr to 2ype been comf romi' es or tymf eres v it2.	Drue	
Symf le' v ere receipes on ice.	Drue	
Cooler Demf eryture i' yccef tyble.	Drue	
Cooler Demf eryture i' recorses.	Drue	
CwC i' f re' ent.	Drue	
CwC i' ,illes out in inOyns lekible.	Drue	
CwC i' ,illes out v it2 yll f ertinent in,ormytion.	Drue	
I' t2e giels Symf lerh nyme f re' ent on CwCF	Drue	
D2ere yre no si' cref yncie' betv een t2e contyiner' receipes yns t2e CwC.	Drue	
Symf le' yre receipes v it2in ? olsink Dime He(clusink te' t' v it2 immesiyte ? D x	Drue	
Symf le contyiner' 2ype lekible lybel' .	Drue	
Contyiner' yre not broOen or leyOnk.	Drue	
Symf le collection syte)time' yre f ropises.	Drue	
Af f rof riyte ' ymf le contyiner' yre u' es.	Drue	
Symf le bottle' yre comf leteld ,illes.	Drue	
Symf le Pre' erpytion / eri,ies.	N)A	
D2ere i' ' u,,icient pol. ,or yll reVue' tes ynyld' e' aincl. ynd reVue' tes q S)q S4 '	Drue	
Contyiner' reVuirink Mero 2eys' f yce 2ype no 2eys' f yce or bubble i' zEmm H6)<"x	N)A	

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-980-6
S4 1 Number: DG06T9T06TE

Login Number: 980
List Number: 2
Creator: Phillips, Kerianna

List Source: Eurofins Xenco, Midland
List Creation: 07/23/21 02:12 PM

Question	Answer	Comment
D2e coolerh cu' tosd ' eylai, f re' entai' intyct.	Drue	
Symf le cu' tosd ' eyl' ai, f re' entayre intyct.	Drue	
D2e cooler or ' ymf le' so not yf f eyr to 2ype been comf romi' es or tymf eres v it2.	Drue	
Symf le' v ere receipes on ice.	Drue	
Cooler Demf eryture i' yccef tyble.	Drue	
Cooler Demf eryture i' recorses.	Drue	
CwC i' f re' ent.	Drue	
CwC i' ,illes out in inOyns lekible.	Drue	
CwC i' ,illes out v it2 yll f ertinent in,ormytion.	Drue	
I' t2e giels Symf lerh nyme f re' ent on CwCF	Drue	
D2ere yre no si' cref yncie' betv een t2e contyiner' receipes yns t2e CwC.	Drue	
Symf le' yre receipes v it2in ? olsink Dime He(clusink te' t' v it2 immesiyte ? D x	Drue	
Symf le contyiner' 2ype lekible lybel' .	Drue	
Contyiner' yre not broOen or leyOnk.	Drue	
Symf le collection syte)time' yre f ropises.	Drue	
Af f rof riyte ' ymf le contyiner' yre u' es.	Drue	
Symf le bottle' yre comf leteld ,illes.	Drue	
Symf le Pre' erpytion / eri,ies.	Drue	
D2ere i' ' u,,icient pol. ,or yll reVue' tes ynyld' e' aincl. ynd reVue' tes q S)q S4 '	Drue	
Contyiner' reVuirink Mero 2eys' f yce 2ype no 2eys' f yce or bubble i' zEmm H6)<"x	Drue	

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-981-1
Laboratory Sample Delivery Group: TE012920126
Client Project/Site: Big Eddy Unit 150
Revision: 2

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

Attn: Dan Moir

JKramer

Authorized for release by:
8/5/2021 4:34:58 PM

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

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Laboratory Job ID: 890-981-1
SDG: TE012920126

Table of Contents

Definitions/Glossary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-981-1
SDG: TE012920126

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-981-1
SDG: TE012920126

Job ID: 890-981-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-981-1

REVISION

The report being provided is a revision of the original report sent on 7/26/2021. The report (revision 1) is being revised due to Per client email, requesting laboratory to re-homogenize/extract and re run TPH FS23.

Report revision history

Receipt
The samples were received on 7/22/2021 4:24 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 9.4°C

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

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

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

Client Sample Results

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-981-1
SDG: TE012920126

Client Sample ID: FS23
Date Collected: 07/22/21 11:38
Date Received: 07/22/21 16:24
Sample Depth: - 4

Lab Sample ID: 890-981-1
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/23/21 11:01	07/24/21 02:34	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/23/21 11:01	07/24/21 02:34	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/23/21 11:01	07/24/21 02:34	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/23/21 11:01	07/24/21 02:34	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/23/21 11:01	07/24/21 02:34	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/23/21 11:01	07/24/21 02:34	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		07/23/21 11:01	07/24/21 02:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*131*	*S1+*	*70 - 130*	*07/23/21 11:01*	*07/24/21 02:34*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*07/23/21 11:01*	*07/24/21 02:34*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/05/21 08:40	08/05/21 14:52	1
Diesel Range Organics (Over C10-C28)	**75.3**		50.0		mg/Kg		08/05/21 08:40	08/05/21 14:52	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/05/21 08:40	08/05/21 14:52	1
Total TPH	**75.3**		50.0		mg/Kg		08/05/21 08:40	08/05/21 14:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*08/05/21 08:40*	*08/05/21 14:52*	*1*
o-Terphenyl	*98*		*70 - 130*	*08/05/21 08:40*	*08/05/21 14:52*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**489**		25.0		mg/Kg			07/24/21 22:42	5

Client Sample ID: FS17
Date Collected: 07/22/21 12:34
Date Received: 07/22/21 16:24
Sample Depth: - 4

Lab Sample ID: 890-981-2
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/23/21 11:01	07/24/21 02:55	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/23/21 11:01	07/24/21 02:55	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/23/21 11:01	07/24/21 02:55	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/23/21 11:01	07/24/21 02:55	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/23/21 11:01	07/24/21 02:55	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/23/21 11:01	07/24/21 02:55	1
Total BTEX	<0.00399	U	0.00399		mg/Kg		07/23/21 11:01	07/24/21 02:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*	*07/23/21 11:01*	*07/24/21 02:55*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*07/23/21 11:01*	*07/24/21 02:55*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-981-1
SDG: TE012920126

Client Sample ID: FS17

Date Collected: 07/22/21 12:34
Date Received: 07/22/21 16:24
Sample Depth: - 4

Lab Sample ID: 890-981-2

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/23/21 14:29	07/24/21 21:17	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/23/21 14:29	07/24/21 21:17	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/23/21 14:29	07/24/21 21:17	1
Total TPH	<50.0	U	50.0		mg/Kg		07/23/21 14:29	07/24/21 21:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*07/23/21 14:29*	*07/24/21 21:17*	*1*
o-Terphenyl	*112*		*70 - 130*	*07/23/21 14:29*	*07/24/21 21:17*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**737**		50.3		mg/Kg			07/24/21 22:47	10

Surrogate Summary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-981-1
SDG: TE012920126

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)
890-981-1	FS23	131 S1+	107
890-981-2	FS17	120	104
LCS 880-5583/1-A	Lab Control Sample	111	107
LCSD 880-5583/2-A	Lab Control Sample Dup	103	107
MB 880-5570/5-A	Method Blank	108	96
MB 880-5583/5-A	Method Blank	106	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)
890-981-1	FS23	94	98
890-981-2	FS17	95	112
LCS 880-5603/2-A	Lab Control Sample	99	111
LCS 880-6092/2-A	Lab Control Sample	91	89
LCSD 880-5603/3-A	Lab Control Sample Dup	97	109
LCSD 880-6092/3-A	Lab Control Sample Dup	95	96
MB 880-5603/1-A	Method Blank	92	114
MB 880-6092/1-A	Method Blank	88	97

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-981-1
SDG: TE012920126

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-5570/5-A
Matrix: Solid
Analysis Batch: 5575

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5570

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/23/21 10:22	07/23/21 15:01	1
Tol4ene	<0.00200	U	0.00200		mg/Kg		07/23/21 10:22	07/23/21 15:01	1
Etuylbenzene	<0.00200	U	0.00200		mg/Kg		07/23/21 10:22	07/23/21 15:01	1
m-Xylene & p-Xylene	<0.00h00	U	0.00h00		mg/Kg		07/23/21 10:22	07/23/21 15:01	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/23/21 10:22	07/23/21 15:01	1
Xylenes, Total	<0.00h00	U	0.00h00		mg/Kg		07/23/21 10:22	07/23/21 15:01	1
Total BTEX	<0.00h00	U	0.00h00		mg/Kg		07/23/21 10:22	07/23/21 15:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*07/23/21 10:22*	*07/23/21 15:01*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*07/23/21 10:22*	*07/23/21 15:01*	*1*

Lab Sample ID: MB 880-5583/5-A
Matrix: Solid
Analysis Batch: 5575

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5583

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/23/21 11:01	07/2h/21 01:52	1
Tol4ene	<0.00200	U	0.00200		mg/Kg		07/23/21 11:01	07/2h/21 01:52	1
Etuylbenzene	<0.00200	U	0.00200		mg/Kg		07/23/21 11:01	07/2h/21 01:52	1
m-Xylene & p-Xylene	<0.00h00	U	0.00h00		mg/Kg		07/23/21 11:01	07/2h/21 01:52	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/23/21 11:01	07/2h/21 01:52	1
Xylenes, Total	<0.00h00	U	0.00h00		mg/Kg		07/23/21 11:01	07/2h/21 01:52	1
Total BTEX	<0.00h00	U	0.00h00		mg/Kg		07/23/21 11:01	07/2h/21 01:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*07/23/21 11:01*	*07/24/21 01:52*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*07/23/21 11:01*	*07/24/21 01:52*	*1*

Lab Sample ID: LCS 880-5583/1-A
Matrix: Solid
Analysis Batch: 5575

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5583

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.1022		mg/Kg		102	70 - 130		
Tol4ene			0.100	0.092h3		mg/Kg		92	70 - 130		
Etuylbenzene			0.100	0.089h0		mg/Kg		89	70 - 130		
m-Xylene & p-Xylene			0.200	0.1831		mg/Kg		92	70 - 130		
o-Xylene			0.100	0.09207		mg/Kg		92	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

QC Sample Results

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-981-1
SDG: TE012920126

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

Lab Sample ID: LCSD 880-5583/2-A
Matrix: Solid
Analysis Batch: 5575

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 5583

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1028		mg/Kg		103	70 - 130	1	35
Tol4ene			0.100	0.08978		mg/Kg		90	70 - 130	3	35
Etuylbenzene			0.100	0.086h5		mg/Kg		86	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1752		mg/Kg		88	70 - 130	h	35
o-Xylene			0.100	0.0879h		mg/Kg		88	70 - 130	5	35

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

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

Lab Sample ID: MB 880-5603/1-A
Matrix: Solid
Analysis Batch: 5611

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5603

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Oange (rganics)GO(v-C6-C10	<50.0	U	50.0		mg/Kg		07/23/21 1h:29	07/2h/21 18:51	1
Diesel Oange (rganics)(f er C10-C28v	<50.0	U	50.0		mg/Kg		07/23/21 1h:29	07/2h/21 18:51	1
(ll Oange (rganics)(f er C28-C36v	<50.0	U	50.0		mg/Kg		07/23/21 1h:29	07/2h/21 18:51	1
Total TPH	<50.0	U	50.0		mg/Kg		07/23/21 1h:29	07/2h/21 18:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*07/23/21 14:29*	*07/24/21 18:51*	*1*
o-Terphenyl	*114*		*70 - 130*	*07/23/21 14:29*	*07/24/21 18:51*	*1*

Lab Sample ID: LCS 880-5603/2-A
Matrix: Solid
Analysis Batch: 5611

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5603

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Oange (rganics)GO(v-C6-C10			1000	853.2		mg/Kg		85	70 - 130		
Diesel Oange (rganics)(f er C10-C28v			1000	988.2		mg/Kg		99	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*99*		*70 - 130*
o-Terphenyl	*111*		*70 - 130*

Lab Sample ID: LCSD 880-5603/3-A
Matrix: Solid
Analysis Batch: 5611

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 5603

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Oange (rganics)GO(v-C6-C10			1000	815.3		mg/Kg		82	70 - 130	5	20

E4roRns Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-981-1
SDG: TE012920126

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

Lab Sample ID: LCSD 880-5603/3-A
Matrix: Solid
Analysis Batch: 5611

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 5603

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Oange (rganics)(f er C10-C28v			1000	98h.0		mg/Kg		98	70 - 130	0	20

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

Lab Sample ID: MB 880-6092/1-A
Matrix: Solid
Analysis Batch: 6104

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 6092

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Oange (rganics)GO(v-C6-C10	<50.0	U	50.0		mg/Kg		08/05/21 08:h0	08/05/21 12:50	1
Diesel Oange (rganics)(f er C10-C28v	<50.0	U	50.0		mg/Kg		08/05/21 08:h0	08/05/21 12:50	1
(ll Oange (rganics)(f er C28-C36v	<50.0	U	50.0		mg/Kg		08/05/21 08:h0	08/05/21 12:50	1
Total TPH	<50.0	U	50.0		mg/Kg		08/05/21 08:h0	08/05/21 12:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*08/05/21 08:40*	*08/05/21 12:50*	*1*
o-Terphenyl	*97*		*70 - 130*	*08/05/21 08:40*	*08/05/21 12:50*	*1*

Lab Sample ID: LCS 880-6092/2-A
Matrix: Solid
Analysis Batch: 6104

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 6092

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Oange (rganics)GO(v-C6-C10			1000	918.h		mg/Kg		92	70 - 130
Diesel Oange (rganics)(f er C10-C28v			1000	870.h		mg/Kg		87	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*91*		*70 - 130*
o-Terphenyl	*89*		*70 - 130*

Lab Sample ID: LCSD 880-6092/3-A
Matrix: Solid
Analysis Batch: 6104

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 6092

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Oange (rganics)GO(v-C6-C10			1000	869.5		mg/Kg		87	70 - 130	5	20
Diesel Oange (rganics)(f er C10-C28v			1000	931.5		mg/Kg		93	70 - 130	7	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*95*		*70 - 130*

E4roRns Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-981-1
SDG: TE012920126

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

Lab Sample ID: LCSD 880-6092/3-A
Matrix: Solid
Analysis Batch: 6104

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 6092

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*96*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-5608/1-A
Matrix: Solid
Analysis Batch: 5616

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Culoride	<5.00	U	5.00		mg/Kg			07/2h/21 20:52	1

Lab Sample ID: LCS 880-5608/2-A
Matrix: Solid
Analysis Batch: 5616

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Culoride			250	256.1		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-5608/3-A
Matrix: Solid
Analysis Batch: 5616

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
Culoride			250	253.9		mg/Kg		102	90 - 110	1	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-981-1
SDG: TE012920126

GC VOA

Prep Batch: 5570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-5570/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 5575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-981-1	FS23	Total/NA	Solid	8021B	5583
890-981-2	FS17	Total/NA	Solid	8021B	5583
MB 880-5570/5-A	Method Blank	Total/NA	Solid	8021B	5570
MB 880-5583/5-A	Method Blank	Total/NA	Solid	8021B	5583
LCS 880-5583/1-A	Lab Control Sample	Total/NA	Solid	8021B	5583
LCSD 880-5583/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	5583

Prep Batch: 5583

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-981-1	FS23	Total/NA	Solid	5035	
890-981-2	FS17	Total/NA	Solid	5035	
MB 880-5583/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-5583/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-5583/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

GC Semi VOA

Prep Batch: 5603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-981-2	FS17	Total/NA	Solid	8015NM Prep	
MB 880-5603/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-5603/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-5603/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 5611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-981-2	FS17	Total/NA	Solid	8015B NM	5603
MB 880-5603/1-A	Method Blank	Total/NA	Solid	8015B NM	5603
LCS 880-5603/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	5603
LCSD 880-5603/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	5603

Prep Batch: 6092

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-981-1	FS23	Total/NA	Solid	8015NM Prep	
MB 880-6092/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-6092/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-6092/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 6104

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-981-1	FS23	Total/NA	Solid	8015B NM	6092
MB 880-6092/1-A	Method Blank	Total/NA	Solid	8015B NM	6092
LCS 880-6092/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	6092
LCSD 880-6092/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	6092

QC Association Summary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-981-1
SDG: TE012920126

HPLC/IC

Leach Batch: 5608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-981-1	FS23	Soluble	Solid	DI Leach	
890-981-2	FS17	Soluble	Solid	DI Leach	
MB 880-5608/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-5608/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-5608/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 5616

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-981-1	FS23	Soluble	Solid	300.0	5608
890-981-2	FS17	Soluble	Solid	300.0	5608
MB 880-5608/1-A	Method Blank	Soluble	Solid	300.0	5608
LCS 880-5608/2-A	Lab Control Sample	Soluble	Solid	300.0	5608
LCSD 880-5608/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	5608

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-981-1
SDG: TE012920126

Client Sample ID: FS23
Date Collected: 07/22/21 11:38
Date Received: 07/22/21 16:24

Lab Sample ID: 890-981-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5583	07/23/21 11:01	KL	XEN MID
Total/NA	Analysis	8021B		1	5575	07/24/21 02:34	KL	XEN MID
Total/NA	Prep	8015NM Prep			6092	08/05/21 08:40	DM	XEN MID
Total/NA	Analysis	8015B NM		1	6104	08/05/21 14:52	AJ	XEN MID
Soluble	Leach	DI Leach			5608	07/23/21 16:33	SC	XEN MID
Soluble	Analysis	300.0		5	5616	07/24/21 22:42	SC	XEN MID

Client Sample ID: FS17
Date Collected: 07/22/21 12:34
Date Received: 07/22/21 16:24

Lab Sample ID: 890-981-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5583	07/23/21 11:01	KL	XEN MID
Total/NA	Analysis	8021B		1	5575	07/24/21 02:55	KL	XEN MID
Total/NA	Prep	8015NM Prep			5603	07/23/21 14:29	AJ	XEN MID
Total/NA	Analysis	8015B NM		1	5611	07/24/21 21:17	AJ	XEN MID
Soluble	Leach	DI Leach			5608	07/23/21 16:33	SC	XEN MID
Soluble	Analysis	300.0		10	5616	07/24/21 22:47	SC	XEN MID

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

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-981-1
SDG: TE012920126

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	06-30-22

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

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

Method Summary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-981-1
SDG: TE012920126

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

Protocol References:

ASTM = ASTM International

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

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

Laboratory References:

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

Sample Summary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-981-1
SDG: TE012920126

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-981-1	FS23	Solid	07/22/21 11:38	07/22/21 16:24	- 4
890-981-2	FS17	Solid	07/22/21 12:34	07/22/21 16:24	- 4

Chain of Custody

Work Order No: ______

XENCO LABORATORIES

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

www.xenco.com Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	WSP USA	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	522 W. Mermod St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	Jeremy.Hill@wsp.com, Dan.Moir@wsp.com

Work Order Comments

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

State of Project:

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

Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Big Eddy Unit 150	Turn Around	
Project Number:	TE012921626	Routine	☐
P.O. Number:	Inc NRM 2024854885	Rush:	24 Hr
Sampler's Name:	Jeremy Hill	Due Date:	7/26/21

ANALYSIS REQUEST

890-981 Chain of Custody

Work Order Notes

ic
1080741001
AFE
EW.2021.01562.EXP.01

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

SAMPLE RECEIPT	Temp Blank: (Yes) No	Wet Ice: (Yes) No
Temperature (°C):	9.6/9.4	Thermometer ID: TNM-007
Received Intact:	(Yes) No	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:
Sample Custody Seals:	Yes No (N/A)	Total Containers:

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
FS23	S	7/22/21	1138	4'	1	X	X	X	Composite
~~FS25~~ FS17	S	7/22/21	1234	4'	1	X	X	X	Composite

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 [signature]	[signature]	7-22-21 1624	2		
3			4		
5			6		

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-981-1
SDG Number: TE012920126

Login Number: 981
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: 890-981-1
SDG Number: TE012920126

Login Number: 981
List Number: 2
Creator: Phillips, Kerianna

List Source: Eurofins Xenco, Midland
List Creation: 07/23/21 02:11 PM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-982-1
Laboratory Sample Delivery Group: TE012920126
Client Project/Site: Big Eddy Unit 150

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

Attn: Dan Moir

JKramer

Authorized for release by:
7/26/2021 5:45:05 PM

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

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

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

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Laboratory Job ID: 890-982-1
SDG: TE012920126

Table of Contents

Definitions/Glossary

Qualifiers

GC VOA

Qualifier	Qualifier Description
A	It de aWs Wn at aiyW was at aiyznd for buWoWdnW. WdG

GC Semi VOA

Qualifier	Qualifier Description
A	It de aWs Wn at aiyW was at aiyznd for buWoWdnW. WdG

HPLC/IC

Qualifier	Qualifier Description
A	It de aWs Wn at aiyW was at aiyznd for buWoWdnW. WdG

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	LesWd ut dnr Wn "D" . oiumt Wdnsegt aW WaWn rnsuiWs rnporWd ot a dry wneghWbases
%R	Unr. nt WRn. ovnry
I FL	I ot Wet s Frnn Lequed
I FA	I oiot y Formet g At eW
I NF	I ot Wet s No Frnn Lequed
D2R	Dupie aW 2rror RaWb (t ormaiend absoiuW defnrnt . n)
Det Fa.	DeuWbt Fa. Wr
DL	DnW. Wbt LeneW(DoD/DO2)
DL, Rc, R2, IN	It de aWs a DeuWbt , Rn-at aiyses, Rn-nxWa. Wbt , or addeWbt ai It eWai mnWis/at ebt at aiyses of Wn sampin
DLI	Dn. esebt Lnvni I ot . nt WaWbt (Radeb. hnmesWy)
2DL	2sWnaWd DnW. Wbt LeneW(Debxet)
LOD	LeneWof DnW. Wbt (DoD/DO2)
LOQ	LeneWof Quat WaWbt (DoD/DO2)
MI L	2Uc rn. ommnt dnd "MaxenumI ot Wmet at WLnvni"
MDc	Met enum DnW. Wbin c . WeW (Radeb. hnmesWy)
MDI	Met enum DnW. Wbin I ot . nt WaWbt (Radeb. hnmesWy)
MDL	MnWod DnW. Wbt LeneW
ML	Met enum Lnvni (Debxet)
MUN	MosWUrobabin Numbnr
MQL	MnWod Quat WaWbt LeneW
NI	NoW ai. uiaWd
ND	NoWDnW. Wd aWn rnporWg ieneW(or MDL or 2DL e showt)
N2T	NngaWn / c bsnt W
UOP	UoseWn / Urnsnt W
UQL	Ura. We ai Quat WaWbt LeneW
UR2P	Urnsump Wn
QI	QuaieW I ot Wbi
R2R	RniaWn 2rror RaWb (Radeb. hnmesWy)
RL	RnporWg LeneW(or Rnqunswd LeneW(Radeb. hnmesWy)
RUD	RniaWn Unr. nt WDefnrnt . n, a mnasurn of Wn rniaWn defnrnt . n bnWnnt Wo poet We
E2F	Eoxe eW 2quevaint W Fa. Wr (Debxet)
E2Q	Eoxe eW 2quevaint WQuoWt W(Debxet)
ENEI	Eoo Numnrous Eo I out W

Case Narrative

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-982-1
SDG: TE012920126

Job ID: 890-982-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-982-1

Receipt
The samples were received on 7/22/2021 4:24 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 9.4°C

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

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

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

Client Sample Results

1 Ct en t WS PWU leAc
S2ori AnjWni : / IB Tggd Peln4y0

Job ID: 890-986-4
WD. : GT04696046E

Client Sample ID: SW06

Date Collected: 07/22/21 07:42
Date Received: 07/22/21 16:24
Sample Depth: 0 - 4

Lab Sample ID: 890-982-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
/ i e5i ei	z0d00606	P	0d00606		< BjmB		0Kj67j64 44:04	0Kj63j64 07:4y	4
GoQi ei	z0d00606	P	0d00606		< BjmB		0Kj67j64 44:04	0Kj63j64 07:4y	4
TrhdQi e5i ei	z0d00606	P	0d00606		< BjmB		0Kj67j64 44:04	0Kj63j64 07:4y	4
< -XdCei & p-XdCei	z0d00307	P	0d00307		< BjmB		0Kj67j64 44:04	0Kj63j64 07:4y	4
o-XdCei	z0d00606	P	0d00606		< BjmB		0Kj67j64 44:04	0Kj63j64 07:4y	4
XdCei s, GbraC	z0d00307	P	0d00307		< BjmB		0Kj67j64 44:04	0Kj63j64 07:4y	4
GbraC/ GTX	z0d00307	P	0d00307		< BjmB		0Kj67j64 44:04	0Kj63j64 07:4y	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*67 - 107*	*763'03'1 11:71*	*763'43'1 70:19*	*1*
154-, fluorobenzene (Surr)	*177*		*67 - 107*	*763'03'1 11:71*	*763'43'1 70:19*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
. asoQei RaeBi O2BaelAs (. RO)-1 E-1 40	zy0d0	P	y0d0		< BjmB		0Kj67j64 43:69	0Kj63j64 64:78	4
Dli si CRaeBi O2BaelAs (Ovi 2 1 40-1 68)	zy0d0	P	y0d0		< BjmB		0Kj67j64 43:69	0Kj63j64 64:78	4
OlCRaeBi O2BaelAs (Ovi 21 68-1 7E)	zy0d0	P	y0d0		< BjmB		0Kj67j64 43:69	0Kj63j64 64:78	4
GbraCGSH	zy0d0	P	y0d0		< BjmB		0Kj67j64 43:69	0Kj63j64 64:78	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-i 8lorooCtcne	*179*		*67 - 107*	*763'03'1 14:/ t*	*763'43'1 / 1:02*	*1*
o-aerT8enpl	*1/ y*		*67 - 107*	*763'03'1 14:/ t*	*763'43'1 / 1:02*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**407**		yd07		< BjmB			0Kj63j64 67:03	4

Client Sample ID: SW04

Date Collected: 07/22/21 08:01
Date Received: 07/22/21 16:24
Sample Depth: 0 - 4

Lab Sample ID: 890-982-2

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
/ i e5i ei	z0d00499	P	0d00499		< BjmB		0Kj67j64 44:04	0Kj63j64 07:7E	4
GoQi ei	z0d00499	P	0d00499		< BjmB		0Kj67j64 44:04	0Kj63j64 07:7E	4
TrhdQi e5i ei	z0d00499	P	0d00499		< BjmB		0Kj67j64 44:04	0Kj63j64 07:7E	4
< -XdCei & p-XdCei	z0d00798	P	0d00798		< BjmB		0Kj67j64 44:04	0Kj63j64 07:7E	4
o-XdCei	z0d00499	P	0d00499		< BjmB		0Kj67j64 44:04	0Kj63j64 07:7E	4
XdCei s, GbraC	z0d00798	P	0d00798		< BjmB		0Kj67j64 44:04	0Kj63j64 07:7E	4
GbraC/ GTX	z0d00798	P	0d00798		< BjmB		0Kj67j64 44:04	0Kj63j64 07:7E	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*67 - 107*	*763'03'1 11:71*	*763'43'1 70:0y*	*1*
154-, fluorobenzene (Surr)	*177*		*67 - 107*	*763'03'1 11:71*	*763'43'1 70:0y*	*1*

Tu2ofles Xi eAo, 1 a2Sbag

Client Sample Results

1 Ct en t WS PWU IeAc
S2ori AnjWni : / IB Tggd Peln4y0

Job ID: 890-986-4
WD. : GT04696046E

Client Sample ID: SW04

Date Collected: 07/22/21 08:01
Date Received: 07/22/21 16:24
Sample Depth: 0 - 4

Lab Sample ID: 890-982-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
. asoCei RaeBi O2BaelAs (. RO)-1 E-1 40	zy0c0	P	y0c0		< BjmB		0Kj67j64 43:69	0Kj63j64 64:y9	4
Dli si CRaeBi O2BaelAs (Ovi 2 1 40-1 68)	zy0c0	P	y0c0		< BjmB		0Kj67j64 43:69	0Kj63j64 64:y9	4
OICRaeBi O2BaelAs (Ovi 21 68-1 7E)	zy0c0	P	y0c0		< BjmB		0Kj67j64 43:69	0Kj63j64 64:y9	4
GoraCGSH	zy0c0	P	y0c0		< BjmB		0Kj67j64 43:69	0Kj63j64 64:y9	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-i 8lorooOrcne	*t 9*		*67 - 107*	*763' 03' 1 14:/ t*	*763' 43' 1 / 1:9t*	*1*
o-aerT8enpl	*114*		*67 - 107*	*763' 03' 1 14:/ t*	*763' 43' 1 / 1:9t*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	521		6yc7		< BjmB			0Kj63j64 67:09	y

Client Sample ID: SW03

Date Collected: 07/22/21 08:04
Date Received: 07/22/21 16:24
Sample Depth: 0 - 4

Lab Sample ID: 890-982-3
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
/ i e5i ei	z0c00499	P	0c00499		< BjmB		0Kj67j64 44:04	0Kj63j64 07:yE	4
GoCi ei	z0c00499	P	0c00499		< BjmB		0Kj67j64 44:04	0Kj63j64 07:yE	4
TrhdCi e5i ei	z0c00499	P	0c00499		< BjmB		0Kj67j64 44:04	0Kj63j64 07:yE	4
< -XdCei & p-XdCei	z0c00798	P	0c00798		< BjmB		0Kj67j64 44:04	0Kj63j64 07:yE	4
o-XdCei	z0c00499	P	0c00499		< BjmB		0Kj67j64 44:04	0Kj63j64 07:yE	4
XdCei s, GoraC	z0c00798	P	0c00798		< BjmB		0Kj67j64 44:04	0Kj63j64 07:yE	4
GoraC/ GTX	z0c00798	P	0c00798		< BjmB		0Kj67j64 44:04	0Kj63j64 07:yE	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*1/ y*		*67 - 107*	*763' 03' 1 11:71*	*763' 43' 1 70:9y*	*1*
154-, fluorobenzene (Surr)	*t 9*		*67 - 107*	*763' 03' 1 11:71*	*763' 43' 1 70:9y*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
. asoCei RaeBi O2BaelAs (. RO)-1 E-1 40	zy0c0	P	y0c0		< BjmB		0Kj67j64 43:69	0Kj63j64 66:60	4
Dli si CRaeBi O2BaelAs (Ovi 2 1 40-1 68)	zy0c0	P	y0c0		< BjmB		0Kj67j64 43:69	0Kj63j64 66:60	4
OICRaeBi O2BaelAs (Ovi 21 68-1 7E)	zy0c0	P	y0c0		< BjmB		0Kj67j64 43:69	0Kj63j64 66:60	4
GoraCGSH	zy0c0	P	y0c0		< BjmB		0Kj67j64 43:69	0Kj63j64 66:60	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-i 8lorooOrcne	*179*		*67 - 107*	*763' 03' 1 14:/ t*	*763' 43' 1 / / :/ 7*	*1*
o-aerT8enpl	*1/ 9*		*67 - 107*	*763' 03' 1 14:/ t*	*763' 43' 1 / / :/ 7*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	411		3c9K		< BjmB			0Kj63j64 67:4y	4

Tu2ofles Xi eAo, 1 a2Sbag

Client Sample Results

1 Ct en t WS PWU leAc
S2ori AnjWni : / IB Tggd Peln4y0

Job ID: 890-986-4
WD. : GT04696046E

Client Sample ID: SW09

Date Collected: 07/22/21 09:15
Date Received: 07/22/21 16:24
Sample Depth: 0 - 4

Lab Sample ID: 890-982-4

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
/ i e5i ei	z0d00499	P	0d00499		< BjmB		0Kj67j64 44:04	0Kj63j64 03:4E	4
GbQi ei	z0d00499	P	0d00499		< BjmB		0Kj67j64 44:04	0Kj63j64 03:4E	4
TrhdQi e5i ei	z0d00499	P	0d00499		< BjmB		0Kj67j64 44:04	0Kj63j64 03:4E	4
< -XdCei & p-XdCei	z0d00798	P	0d00798		< BjmB		0Kj67j64 44:04	0Kj63j64 03:4E	4
o-XdCei	z0d00499	P	0d00499		< BjmB		0Kj67j64 44:04	0Kj63j64 03:4E	4
XdCei s, GbraC	z0d00798	P	0d00798		< BjmB		0Kj67j64 44:04	0Kj63j64 03:4E	4
GbraC/ GTX	z0d00798	P	0d00798		< BjmB		0Kj67j64 44:04	0Kj63j64 03:4E	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*17t*		*67 - 107*	*763'03'1 11:71*	*763'43'1 74:1y*	*1*
154-, fluorobenzene (Surr)	*t 2*		*67 - 107*	*763'03'1 11:71*	*763'43'1 74:1y*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
. asoQei RaeBi O2BaelAs (. RO)-1 E-1 40	z39c9	P	39c9		< BjmB		0Kj67j64 43:69	0Kj63j64 66:34	4
Dli si CRaeBi O2BaelAs (Ovi 2 1 40-1 68)	z39c9	P	39c9		< BjmB		0Kj67j64 43:69	0Kj63j64 66:34	4
OlCRaeBi O2BaelAs (Ovi 21 68-1 7E)	z39c9	P	39c9		< BjmB		0Kj67j64 43:69	0Kj63j64 66:34	4
GbraCGSH	z39c9	P	39c9		< BjmB		0Kj67j64 43:69	0Kj63j64 66:34	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-i 8lorooCtcne	*171*		*67 - 107*	*763'03'1 14:/t*	*763'43'1 / / :41*	*1*
o-aerT8enpl	*1/ /*		*67 - 107*	*763'03'1 14:/t*	*763'43'1 / / :41*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**438**		3c98		< BjmB			0Kj63j64 67:60	4

Client Sample ID: SW08

Date Collected: 07/22/21 10:28
Date Received: 07/22/21 16:24
Sample Depth: 0 - 4

Lab Sample ID: 890-982-5

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
/ i e5i ei	z0d00604	P	0d00604		< BjmB		0Kj67j64 44:04	0Kj63j64 03:7K	4
GbQi ei	z0d00604	P	0d00604		< BjmB		0Kj67j64 44:04	0Kj63j64 03:7K	4
TrhdQi e5i ei	z0d00604	P	0d00604		< BjmB		0Kj67j64 44:04	0Kj63j64 03:7K	4
< -XdCei & p-XdCei	z0d00306	P	0d00306		< BjmB		0Kj67j64 44:04	0Kj63j64 03:7K	4
o-XdCei	z0d00604	P	0d00604		< BjmB		0Kj67j64 44:04	0Kj63j64 03:7K	4
XdCei s, GbraC	z0d00306	P	0d00306		< BjmB		0Kj67j64 44:04	0Kj63j64 03:7K	4
GbraC/ GTX	z0d00306	P	0d00306		< BjmB		0Kj67j64 44:04	0Kj63j64 03:7K	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*17t*		*67 - 107*	*763'03'1 11:71*	*763'43'1 74:06*	*1*
154-, fluorobenzene (Surr)	*t y*		*67 - 107*	*763'03'1 11:71*	*763'43'1 74:06*	*1*

Tu2bfles Xi eAo, 1a2Sbag

Client Sample Results

1 Ct en t WS PWU leAc
S2ori AnjWni : / IB Tggd Peln4y0

Job ID: 890-986-4
WD. : GT04696046E

Client Sample ID: SW08

Lab Sample ID: 890-982-5

Date Collected: 07/22/21 10:28
Matrix: Solid
Date Received: 07/22/21 16:24
Sample Depth: 0 - 4

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
. asoCei RaeBi O2BaelAs (. RO)-1 E-1 40	z39c9	P	39c9		< BjmB		0Kj67j64 43:69	0Kj63j64 67:06	4
Dli si CRaeBi O2BaelAs (Ovi 2 1 40-1 68)	z39c9	P	39c9		< BjmB		0Kj67j64 43:69	0Kj63j64 67:06	4
OlCRaeBi O2BaelAs (Ovi 21 68-1 7E)	z39c9	P	39c9		< BjmB		0Kj67j64 43:69	0Kj63j64 67:06	4
GoraCGSH	z39c9	P	39c9		< BjmB		0Kj67j64 43:69	0Kj63j64 67:06	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-i 8lorooOtcne	*t y*		*67 - 107*	*763' 03' 1 14:/ t*	*763' 43' 1 / 0:7/*	*1*
o-aerT8enpl	*119*		*67 - 107*	*763' 03' 1 14:/ t*	*763' 43' 1 / 0:7/*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	37.3		3c99		< BjmB			0Kj63j64 67:6E	4

Client Sample ID: SW07

Lab Sample ID: 890-982-6

Date Collected: 07/21/21 14:26
Matrix: Solid
Date Received: 07/22/21 16:24
Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
/ i e5i ei	z0c00600	P	0c00600		< BjmB		0Kj67j64 44:04	0Kj63j64 03:yK	4
GoCi ei	z0c00600	P	0c00600		< BjmB		0Kj67j64 44:04	0Kj63j64 03:yK	4
TrhdCi e5i ei	z0c00600	P	0c00600		< BjmB		0Kj67j64 44:04	0Kj63j64 03:yK	4
< -XdCei & p-XdCei	z0c00300	P	0c00300		< BjmB		0Kj67j64 44:04	0Kj63j64 03:yK	4
o-XdCei	z0c00600	P	0c00600		< BjmB		0Kj67j64 44:04	0Kj63j64 03:yK	4
XdCei s, GoraC	z0c00300	P	0c00300		< BjmB		0Kj67j64 44:04	0Kj63j64 03:yK	4
GoraC/ GTX	z0c00300	P	0c00300		< BjmB		0Kj67j64 44:04	0Kj63j64 03:yK	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*67 - 107*	*763' 03' 1 11:71*	*763' 43' 1 74:96*	*1*
154-, fluorobenzene (Surr)	*t 9*		*67 - 107*	*763' 03' 1 11:71*	*763' 43' 1 74:96*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
. asoCei RaeBi O2BaelAs (. RO)-1 E-1 40	zy0c0	P	y0c0		< BjmB		0Kj67j64 43:69	0Kj63j64 67:66	4
Dli si CRaeBi O2BaelAs (Ovi 2 1 40-1 68)	zy0c0	P	y0c0		< BjmB		0Kj67j64 43:69	0Kj63j64 67:66	4
OlCRaeBi O2BaelAs (Ovi 21 68-1 7E)	zy0c0	P	y0c0		< BjmB		0Kj67j64 43:69	0Kj63j64 67:66	4
GoraCGSH	zy0c0	P	y0c0		< BjmB		0Kj67j64 43:69	0Kj63j64 67:66	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-i 8lorooOtcne	*t 0*		*67 - 107*	*763' 03' 1 14:/ t*	*763' 43' 1 / 0:/ /*	*1*
o-aerT8enpl	*117*		*67 - 107*	*763' 03' 1 14:/ t*	*763' 43' 1 / 0:/ /*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	375		3c99		< BjmB			0Kj63j64 67:74	4

Tu2ofles Xi eAo, 1 a2Sbag

Client Sample Results

1 Ct en t WS PWU leAc
S2ori AnjWni : / IB Tggd Peln4y0

Job ID: 890-986-4
WD. : GT04696046E

Client Sample ID: SW01

Date Collected: 07/21/21 07:57
Date Received: 07/22/21 16:24
Sample Depth: 0 - 4

Lab Sample ID: 890-982-7

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
/ i e5i ei	z0d00600	P	0d00600		< BjmB		0Kj67j64 44:04	0Kj63j64 0y:48	4
GoQi ei	z0d00600	P	0d00600		< BjmB		0Kj67j64 44:04	0Kj63j64 0y:48	4
TrhdCi e5i ei	z0d00600	P	0d00600		< BjmB		0Kj67j64 44:04	0Kj63j64 0y:48	4
< -XdCei & p-XdCei	z0d00304	P	0d00304		< BjmB		0Kj67j64 44:04	0Kj63j64 0y:48	4
o-XdCei	z0d00600	P	0d00600		< BjmB		0Kj67j64 44:04	0Kj63j64 0y:48	4
XdCei s, GbraC	z0d00304	P	0d00304		< BjmB		0Kj67j64 44:04	0Kj63j64 0y:48	4
GbraC/ GTX	z0d00304	P	0d00304		< BjmB		0Kj67j64 44:04	0Kj63j64 0y:48	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*179*		*67 - 107*	*763'03'1 11:71*	*763'43'1 79:12*	*1*
154-, fluorobenzene (Surr)	*t 2*		*67 - 107*	*763'03'1 11:71*	*763'43'1 79:12*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
. asoQei RaeBi O2BaelAs (. RO)-1 E-1 40	z39c9	P	39c9		< BjmB		0Kj67j64 43:69	0Kj63j64 67:37	4
Diesel Range Organics (Over C10-C28)	**86.3**		39c9		< BjmB		0Kj67j64 43:69	0Kj63j64 67:37	4
OlCRaeBi O2BaelAs (Ovi 21 68-1 7E)	z39c9	P	39c9		< BjmB		0Kj67j64 43:69	0Kj63j64 67:37	4
Total TPH	**86.3**		39c9		< BjmB		0Kj67j64 43:69	0Kj63j64 67:37	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-i 8lorooCtcne	*t 6*		*67 - 107*	*763'03'1 14:/ t*	*763'43'1 / 0:40*	*1*
o-aerT8enpl	*11y*		*67 - 107*	*763'03'1 14:/ t*	*763'43'1 / 0:40*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**317**		3c99		< BjmB			0Kj63j64 67:7E	4

Tu2ofles Xi eAo, 1 a2Sbag

Surrogate Summary

1ΩCen t WS PWU leAc
S2ori AnjWri : / IB Tggd Peln4y0

Job ID: 890-986-4
WD. : GT04696046E

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-986-4	Wt 0E	448	400
890-986-6	Wt 05	445	400
890-986-7	Wt 07	46E	9y
890-986-5	Wt 09	409	98
890-986-y	Wt 08	409	9E
890-986-E	Wt 0M	440	9y
890-986-M	Wt 04	40y	98
L1W880-yy87j4-U	Lab 1oem2oCWampC	444	40M
L1WD 880-yy87j6-U	Lab 1oem2oCWampC Dup	407	40M
h / 880-yyM0jy-U	h i rkog / QaeF	408	9E
h / 880-yy87jy-U	h i rkog / QaeF	40E	97

Surrogate Legend

/ =/ f 5-/ 2omozQo2obi e(i ei)Wu2Z

D=/ , f 435-DlzQo2obi e(i ei)Wu2Z

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-986-4	Wt 0E	40y	46E
890-986-6	Wt 05	9y	445
890-986-7	Wt 07	40y	46y
890-986-5	Wt 09	404	466
890-986-y	Wt 08	9E	44y
890-986-E	Wt 0M	97	440
890-986-M	Wt 04	9M	44E
L1W880-yE07j6-U	Lab 1oem2oCWampC	99	444
L1WD 880-yE07j7-U	Lab 1oem2oCWampC Dup	9M	409
h / 880-yE07j4-U	h i rkog / QaeF	96	445

Surrogate Legend

41Of 4-1kC2ooAmaei

OGSHf o-G 2pki edC

Tu2ozles Xi eAo31 a2Gbag

QC Sample Results

1 Ct en t WS PWU leAc
S2ori AnjWni : / IB Tggd Peln4y0

Job ID: 890-986-4
WD. : GT04696046E

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-5570/5-A
Matrix: Solid
Analysis Batch: 5575

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5570

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
/ i e5i ei	z0d00600	P	0d00600		< BjmB		0Kj67j64 40:66	0Kj67j64 4y:04	4
GbCi ei	z0d00600	P	0d00600		< BjmB		0Kj67j64 40:66	0Kj67j64 4y:04	4
TrudCi e5i ei	z0d00600	P	0d00600		< BjmB		0Kj67j64 40:66	0Kj67j64 4y:04	4
< -XdCei & p-XdCei	z0d00h00	P	0d00h00		< BjmB		0Kj67j64 40:66	0Kj67j64 4y:04	4
o-XdCei	z0d00600	P	0d00600		< BjmB		0Kj67j64 40:66	0Kj67j64 4y:04	4
XdCei s, GbraC	z0d00h00	P	0d00h00		< BjmB		0Kj67j64 40:66	0Kj67j64 4y:04	4
GbraC/ GTX	z0d00h00	P	0d00h00		< BjmB		0Kj67j64 40:66	0Kj67j64 4y:04	4

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*126*		*72 - 102*	*273'03'1 129'/*	*273'03'1 1: 921*	*1*
1D4-i 8luorobenzene (Surr)	*5,*		*72 - 102*	*273'03'1 129'/*	*273'03'1 1: 921*	*1*

Lab Sample ID: MB 880-5583/5-A
Matrix: Solid
Analysis Batch: 5575

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5583

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
/ i e5i ei	z0d00600	P	0d00600		< BjmB		0Kj67j64 44:04	0Kj6hj64 04:y6	4
GbCi ei	z0d00600	P	0d00600		< BjmB		0Kj67j64 44:04	0Kj6hj64 04:y6	4
TrudCi e5i ei	z0d00600	P	0d00600		< BjmB		0Kj67j64 44:04	0Kj6hj64 04:y6	4
< -XdCei & p-XdCei	z0d00h00	P	0d00h00		< BjmB		0Kj67j64 44:04	0Kj6hj64 04:y6	4
o-XdCei	z0d00600	P	0d00600		< BjmB		0Kj67j64 44:04	0Kj6hj64 04:y6	4
XdCei s, GbraC	z0d00h00	P	0d00h00		< BjmB		0Kj67j64 44:04	0Kj6hj64 04:y6	4
GbraC/ GTX	z0d00h00	P	0d00h00		< BjmB		0Kj67j64 44:04	0Kj6hj64 04:y6	4

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*12,*		*72 - 102*	*273'03'1 1192 1*	*273'43'1 219 /*	*1*
1D4-i 8luorobenzene (Surr)	*50*		*72 - 102*	*273'03'1 1192 1*	*273'43'1 219 /*	*1*

Lab Sample ID: LCS 880-5583/1-A
Matrix: Solid
Analysis Batch: 5575

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5583

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
/ i e5i ei			0d400	0d4066		< BjmB		406	K0 - 470		
GbCi ei			0d400	0d096h7		< BjmB		96	K0 - 470		
TrudCi e5i ei			0d400	0d089h0		< BjmB		89	K0 - 470		
< -XdCei & p-XdCei			0d600	0d4874		< BjmB		96	K0 - 470		
o-XdCei			0d400	0d0960K		< BjmB		96	K0 - 470		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*72 - 102*
1D4-i 8luorobenzene (Surr)	*127*		*72 - 102*

T32bRes Xi eAo, 1a2Sbag

QC Sample Results

1 Ct en t WS PWU leAc
S2ori AnjWni : / IB Tggd Peln4y0

Job ID: 890-986-4
WD. : GT04696046E

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

Lab Sample ID: LCSD 880-5583/2-A
Matrix: Solid
Analysis Batch: 5575

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 5583

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
/ i e5i ei			0c400	0c4068		< BjmB		407	K0 - 470	4	7y
GoCi ei			0c400	0c089K8		< BjmB		90	K0 - 470	7	7y
TrudCi e5i ei			0c400	0c08Ehy		< BjmB		8E	K0 - 470	7	7y
< -XdCei & p-XdCei			0c600	0c4Ky6		< BjmB		88	K0 - 470	h	7y
o-XdCei			0c400	0c08K9h		< BjmB		88	K0 - 470	y	7y

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*120*		*72 - 102*
1D4-i 8fluorobenzene (Surr)	*127*		*72 - 102*

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

Lab Sample ID: MB 880-5603/1-A
Matrix: Solid
Analysis Batch: 5611

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5603

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
. asoCei OaeBi (2BaelAs). O(v-1 E-1 40	zy0c0	P	y0c0		< BjmB		0Kj67j64 4h:69	0Kj6hj64 48:y4	4
Dli si COaeBi (2BaelAs)(H 2 1 40-1 68v	zy0c0	P	y0c0		< BjmB		0Kj67j64 4h:69	0Kj6hj64 48:y4	4
(ICOaeBi (2BaelAs)(H 21 68-1 7Ev	zy0c0	P	y0c0		< BjmB		0Kj67j64 4h:69	0Kj6hj64 48:y4	4
GbnaCGSf	zy0c0	P	y0c0		< BjmB		0Kj67j64 4h:69	0Kj6hj64 48:y4	4

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*5/*		*72 - 102*	*273'03'1 149'5*	*273'43'1 169 1*	*1*
o-Terphenyl	*114*		*72 - 102*	*273'03'1 149'5*	*273'43'1 169 1*	*1*

Lab Sample ID: LCS 880-5603/2-A
Matrix: Solid
Analysis Batch: 5611

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5603

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
. asoCei OaeBi (2BaelAs). O(v-1 E-1 40			4000	8y7c6		< BjmB		8y	K0 - 470		
Dli si COaeBi (2BaelAs)(H 2 1 40-1 68v			4000	988c6		< BjmB		99	K0 - 470		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*55*		*72 - 102*
o-Terphenyl	*111*		*72 - 102*

Lab Sample ID: LCSD 880-5603/3-A
Matrix: Solid
Analysis Batch: 5611

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 5603

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
. asoCei OaeBi (2BaelAs). O(v-1 E-1 40			4000	84yc7		< BjmB		86	K0 - 470	y	60

T32bRes Xi eAo, 1a2Sbag

QC Sample Results

1 Œ en t WS PWU leAc
S2ori AnjWni : / IB Tggd Peln4y0

Job ID: 890-986-4
WD. : GT04696046E

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

Lab Sample ID: LCSD 880-5603/3-A
Matrix: Solid
Analysis Batch: 5611

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 5603

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dli si COaeBi (2BaelAs)(H 2 140-168v			4000	98hc0		< BjmB		98	K0 - 470	0	60

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*57*		*72 - 102*
o-Terphenyl	*125*		*72 - 102*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-5608/1-A
Matrix: Solid
Analysis Batch: 5616

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1 uC2gi	zyc00	P	yc00		< BjmB			0Kj6hj64 60:y6	4

Lab Sample ID: LCS 880-5608/2-A
Matrix: Solid
Analysis Batch: 5616

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1 uC2gi			6y0	6yEc4		< BjmB		406	90 - 440		

Lab Sample ID: LCSD 880-5608/3-A
Matrix: Solid
Analysis Batch: 5616

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
1 uC2gi			6y0	6y7c9		< BjmB		406	90 - 440	4	60

T32oRes Xi eAo, 1 a2Sbag

QC Association Summary

1 Ct en t WS PWU leAc
S2ori AnjWni : / IB Tggd Peln4y0

Job ID: 890-986-4
WD. : GT04696046E

GC VOA

Prep Batch: 5570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
3 / 880-yya0jy-U	3 i nNog / Meh	GonMpk U	Wo0g	y05y	

Analysis Batch: 5575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-986-4	Wt 0E	GonMpk U	Wo0g	8064/	yy85
890-986-6	Wt 0L	GonMpk U	Wo0g	8064/	yy85
890-986-5	Wt 05	GonMpk U	Wo0g	8064/	yy85
890-986-L	Wt 09	GonMpk U	Wo0g	8064/	yy85
890-986-y	Wt 08	GonMpk U	Wo0g	8064/	yy85
890-986-E	Wt 0a	GonMpk U	Wo0g	8064/	yy85
890-986-a	Wt 04	GonMpk U	Wo0g	8064/	yy85
3 / 880-yya0jy-U	3 i nNog / Meh	GonMpk U	Wo0g	8064/	yya0
3 / 880-yy85jy-U	3 i nNog / Meh	GonMpk U	Wo0g	8064/	yy85
m l W880-yy85j4-U	mMo 1 oen2oCWMp uC	GonMpk U	Wo0g	8064/	yy85
m l WD 880-yy85j6-U	mMo 1 oen2oCWMp uC D7u	GonMpk U	Wo0g	8064/	yy85

Prep Batch: 5583

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-986-4	Wt 0E	GonMpk U	Wo0g	y05y	
890-986-6	Wt 0L	GonMpk U	Wo0g	y05y	
890-986-5	Wt 05	GonMpk U	Wo0g	y05y	
890-986-L	Wt 09	GonMpk U	Wo0g	y05y	
890-986-y	Wt 08	GonMpk U	Wo0g	y05y	
890-986-E	Wt 0a	GonMpk U	Wo0g	y05y	
890-986-a	Wt 04	GonMpk U	Wo0g	y05y	
3 / 880-yy85jy-U	3 i nNog / Meh	GonMpk U	Wo0g	y05y	
m l W880-yy85j4-U	mMo 1 oen2oCWMp uC	GonMpk U	Wo0g	y05y	
m l WD 880-yy85j6-U	mMo 1 oen2oCWMp uC D7u	GonMpk U	Wo0g	y05y	

GC Semi VOA

Prep Batch: 5603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-986-4	Wt 0E	GonMpk U	Wo0g	804yk 3 S2 u	
890-986-6	Wt 0L	GonMpk U	Wo0g	804yk 3 S2 u	
890-986-5	Wt 05	GonMpk U	Wo0g	804yk 3 S2 u	
890-986-L	Wt 09	GonMpk U	Wo0g	804yk 3 S2 u	
890-986-y	Wt 08	GonMpk U	Wo0g	804yk 3 S2 u	
890-986-E	Wt 0a	GonMpk U	Wo0g	804yk 3 S2 u	
890-986-a	Wt 04	GonMpk U	Wo0g	804yk 3 S2 u	
3 / 880-yE05j4-U	3 i nNog / Meh	GonMpk U	Wo0g	804yk 3 S2 u	
m l W880-yE05j6-U	mMo 1 oen2oCWMp uC	GonMpk U	Wo0g	804yk 3 S2 u	
m l WD 880-yE05j5-U	mMo 1 oen2oCWMp uC D7u	GonMpk U	Wo0g	804yk 3 S2 u	

Analysis Batch: 5611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-986-4	Wt 0E	GonMpk U	Wo0g	804y/ k 3	yE05
890-986-6	Wt 0L	GonMpk U	Wo0g	804y/ k 3	yE05
890-986-5	Wt 05	GonMpk U	Wo0g	804y/ k 3	yE05
890-986-L	Wt 09	GonMpk U	Wo0g	804y/ k 3	yE05
890-986-y	Wt 08	GonMpk U	Wo0g	804y/ k 3	yE05

T72ofles Xi eAo, 1 M2SbMg

QC Association Summary

1 Ct en t WS PWU leAc
S2ori AnjWni : / IB Tggd Peln4y0

Job ID: 890-986-4
WD. : GT04696046E

GC Semi VOA (Continued)

Analysis Batch: 5611 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-986-E	Wt 0a	GbrMDk U	Wb0g	804y/ k 3	yE05
890-986-a	Wt 04	GbrMDk U	Wb0g	804y/ k 3	yE05
3 / 880-yE05j4-U	3 i rNbg / 0Meh	GbrMDk U	Wb0g	804y/ k 3	yE05
m l W880-yE05j6-U	mMb 1 oer2bOWMp uC	GbrMDk U	Wb0g	804y/ k 3	yE05
m l WD 880-yE05j5-U	mMb 1 oer2bOWMp uC D7u	GbrMDk U	Wb0g	804y/ k 3	yE05

HPLC/IC

Leach Batch: 5608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-986-4	Wt 0E	WbO7bC	Wb0g	DI mi MAN	
890-986-6	Wt 0L	WbO7bC	Wb0g	DI mi MAN	
890-986-5	Wt 05	WbO7bC	Wb0g	DI mi MAN	
890-986-L	Wt 09	WbO7bC	Wb0g	DI mi MAN	
890-986-y	Wt 08	WbO7bC	Wb0g	DI mi MAN	
890-986-E	Wt 0a	WbO7bC	Wb0g	DI mi MAN	
890-986-a	Wt 04	WbO7bC	Wb0g	DI mi MAN	
3 / 880-yE08j4-U	3 i rNbg / 0Meh	WbO7bC	Wb0g	DI mi MAN	
m l W880-yE08j6-U	mMb 1 oer2bOWMp uC	WbO7bC	Wb0g	DI mi MAN	
m l WD 880-yE08j5-U	mMb 1 oer2bOWMp uC D7u	WbO7bC	Wb0g	DI mi MAN	

Analysis Batch: 5616

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-986-4	Wt 0E	WbO7bC	Wb0g	500c0	yE08
890-986-6	Wt 0L	WbO7bC	Wb0g	500c0	yE08
890-986-5	Wt 05	WbO7bC	Wb0g	500c0	yE08
890-986-L	Wt 09	WbO7bC	Wb0g	500c0	yE08
890-986-y	Wt 08	WbO7bC	Wb0g	500c0	yE08
890-986-E	Wt 0a	WbO7bC	Wb0g	500c0	yE08
890-986-a	Wt 04	WbO7bC	Wb0g	500c0	yE08
3 / 880-yE08j4-U	3 i rNbg / 0Meh	WbO7bC	Wb0g	500c0	yE08
m l W880-yE08j6-U	mMb 1 oer2bOWMp uC	WbO7bC	Wb0g	500c0	yE08
m l WD 880-yE08j5-U	mMb 1 oer2bOWMp uC D7u	WbO7bC	Wb0g	500c0	yE08

T72ofles Xi eAo, 1 M2SbMg

Lab Chronicle

Client: WSP USA Inc.
Pjo/ectBSite: giE dyy5 Unit r G0

Job ID: 890-981-r
SDT: 2d0r 1910r 16

Client Sample ID: SW05
Date Collectex: 0d7667640d:/ 6
Date 2eceiRex: 0d766764 45:6/

Lab Sample ID: 890-986-4
1 atriM Solix

yrep v3pe	Tatch v3pe	Tatch 1 ethox	2An	DilAtion zactor	Tatch uAmber	yreparex or Bnal3sex	Bnal3Pt	Lab
2otalBNA	Pjep	G03G			GG83	07B13Br rr:0r	KL	XdN MID
2otalBNA	Anal5sis	801rg		r	GG7G	07B14Br 03:rG	KL	XdN MID
2otalBNA	Pjep	80rGNM Pjep			G603	07B13Br r4:19	AJ	XdN MID
2otalBNA	Anal5sis	80rGg NM		r	G6rr	07B14Br 1r:38	AJ	XdN MID
Soluble	Leach	DI Leach			G608	07B13Br r6:33	SC	XdN MID
Soluble	Anal5sis	300.0		r	G6r6	07B14Br 13:04	SC	XdN MID

Client Sample ID: SW0/
Date Collectex: 0d766764 08:04
Date 2eceiRex: 0d766764 45:6/

Lab Sample ID: 890-986-6
1 atriM Solix

yrep v3pe	Tatch v3pe	Tatch 1 ethox	2An	DilAtion zactor	Tatch uAmber	yreparex or Bnal3sex	Bnal3Pt	Lab
2otalBNA	Pjep	G03G			GG83	07B13Br rr:0r	KL	XdN MID
2otalBNA	Anal5sis	801rg		r	GG7G	07B14Br 03:36	KL	XdN MID
2otalBNA	Pjep	80rGNM Pjep			G603	07B13Br r4:19	AJ	XdN MID
2otalBNA	Anal5sis	80rGg NM		r	G6rr	07B14Br 1r:G9	AJ	XdN MID
Soluble	Leach	DI Leach			G608	07B13Br r6:33	SC	XdN MID
Soluble	Anal5sis	300.0		G	G6r6	07B14Br 13:09	SC	XdN MID

Client Sample ID: SW0N
Date Collectex: 0d766764 08:0/
Date 2eceiRex: 0d766764 45:6/

Lab Sample ID: 890-986-N
1 atriM Solix

yrep v3pe	Tatch v3pe	Tatch 1 ethox	2An	DilAtion zactor	Tatch uAmber	yreparex or Bnal3sex	Bnal3Pt	Lab
2otalBNA	Pjep	G03G			GG83	07B13Br rr:0r	KL	XdN MID
2otalBNA	Anal5sis	801rg		r	GG7G	07B14Br 03:G6	KL	XdN MID
2otalBNA	Pjep	80rGNM Pjep			G603	07B13Br r4:19	AJ	XdN MID
2otalBNA	Anal5sis	80rGg NM		r	G6rr	07B14Br 11:10	AJ	XdN MID
Soluble	Leach	DI Leach			G608	07B14Br r6:33	SC	XdN MID
Soluble	Anal5sis	300.0		r	G6r6	07B14Br 13:rG	SC	XdN MID

Client Sample ID: SW09
Date Collectex: 0d766764 09:4F
Date 2eceiRex: 0d766764 45:6/

Lab Sample ID: 890-986-/
1 atriM Solix

yrep v3pe	Tatch v3pe	Tatch 1 ethox	2An	DilAtion zactor	Tatch uAmber	yreparex or Bnal3sex	Bnal3Pt	Lab
2otalBNA	Pjep	G03G			GG83	07B13Br rr:0r	KL	XdN MID
2otalBNA	Anal5sis	801rg		r	GG7G	07B14Br 04:r6	KL	XdN MID
2otalBNA	Pjep	80rGNM Pjep			G603	07B13Br r4:19	AJ	XdN MID
2otalBNA	Anal5sis	80rGg NM		r	G6rr	07B14Br 11:4r	AJ	XdN MID
Soluble	Leach	DI Leach			G608	07B13Br r6:33	SC	XdN MID
Soluble	Anal5sis	300.0		r	G6r6	07B14Br 13:10	SC	XdN MID

dujo=ns Xencof Cajlsbay

Lab Chronicle

Client: WSP USA Inc.
Pjo/ectBSite: giE dyy5 Unit r G0

Job ID: 890-981-r
SDT: 2d0r 1910r 16

Client Sample ID: SW08
Date Collectex: 0d7667640 40:68
Date 2eceiRex: 0d7667640 45:6/

Lab Sample ID: 890-986-F
1 atriM Solix

yrep v3pe	Tatch v3pe	Tatch 1 ethox	2An	DilAtion zactor	Tatch uAmber	yreparex or Bnal3sex	Bnal3Pt	Lab
2otalBNA	Pjep	G03G			GG83	07B13Br rr:0r	KL	XdN MID
2otalBNA	Anal5sis	801rg		r	GG7G	07B14Br 04:37	KL	XdN MID
2otalBNA	Pjep	80rGNM Pjep			G603	07B13Br r4:19	AJ	XdN MID
2otalBNA	Anal5sis	80rGg NM		r	G6rr	07B14Br 13:01	AJ	XdN MID
Soluble	Leach	DI Leach			G608	07B13Br r6:33	SC	XdN MID
Soluble	Anal5sis	300.0		r	G6r6	07B14Br 13:16	SC	XdN MID

Client Sample ID: SW0d
Date Collectex: 0d7647640 4/ :65
Date 2eceiRex: 0d7667640 45:6/

Lab Sample ID: 890-986-5
1 atriM Solix

yrep v3pe	Tatch v3pe	Tatch 1 ethox	2An	DilAtion zactor	Tatch uAmber	yreparex or Bnal3sex	Bnal3Pt	Lab
2otalBNA	Pjep	G03G			GG83	07B13Br rr:0r	KL	XdN MID
2otalBNA	Anal5sis	801rg		r	GG7G	07B14Br 04:G7	KL	XdN MID
2otalBNA	Pjep	80rGNM Pjep			G603	07B13Br r4:19	AJ	XdN MID
2otalBNA	Anal5sis	80rGg NM		r	G6rr	07B14Br 13:11	AJ	XdN MID
Soluble	Leach	DI Leach			G608	07B13Br r6:33	SC	XdN MID
Soluble	Anal5sis	300.0		r	G6r6	07B14Br 13:3r	SC	XdN MID

Client Sample ID: SW04
Date Collectex: 0d7647640 0d:Fd
Date 2eceiRex: 0d7667640 45:6/

Lab Sample ID: 890-986-d
1 atriM Solix

yrep v3pe	Tatch v3pe	Tatch 1 ethox	2An	DilAtion zactor	Tatch uAmber	yreparex or Bnal3sex	Bnal3Pt	Lab
2otalBNA	Pjep	G03G			GG83	07B13Br rr:0r	KL	XdN MID
2otalBNA	Anal5sis	801rg		r	GG7G	07B14Br 0Gr8	KL	XdN MID
2otalBNA	Pjep	80rGNM Pjep			G603	07B13Br r4:19	AJ	XdN MID
2otalBNA	Anal5sis	80rGg NM		r	G6rr	07B14Br 13:43	AJ	XdN MID
Soluble	Leach	DI Leach			G608	07B13Br r6:33	SC	XdN MID
Soluble	Anal5sis	300.0		r	G6r6	07B14Br 13:36	SC	XdN MID

Laborator3 2eferenceP:
XdN MID , dujo÷ins Xencof Miylanyf r 1rr W. Flojiya Avef Miylanyf 2X 7970r f 2dL (431)704-G440

dujo÷ins Xencof Cajlsbay

Accreditation/Certification Summary

Client: WSP USA Inc.
P1orectjSite: / iB g EEd Unit 4y0

Job ID: 890-986-4
SD5 : Gg 04696046T

Laboratory: Eurofins Xenco, Midland

Unle22 otse1h i2e noteEw, ll , n, ldte2 ao1tsi2 l, bo1, to1d h e1e cof e1eE vnEe1e, cs , cc1eEit, tionjce1tiac, tion beloh .

Authority	Program	Identification Number	Expiration Date
Geu, 2	Ng LAP	G40x70xx00-60-64	0T-30-66

Gse aolloh inB , n, ldte2 , 1e inclvEeE in tsi2 1epo1twbvt tse l, bo1, to1d i2 not ce1tiaeE bd tse Bof e1ninB , vtso1itd. Gsi2 li2t m, d inclvEe , n, ldte2 ao1h sics tse , Bencd Eoe2 not oae1ce1tiac, tion .

An, ld2i2 MetsoE	P1ep MetsoE	M, t1iu	An, ldte
804y/ NM	804yNM P1ep	SoliE	Got, l GPH
8064/	y03y	SoliE	Got, l / GgX

Method Summary

1 Ct en t WS PWU IeAc
S2ori AnjWni : / IB Tggd Peln4y0

Job ID: 890-986-4
WD. : GT04696046E

Method	Method Description	Protocol	Laboratory
8064/	VoGanC O2BaelA 1 ompouegs (. 1)	Wt 85E	XTN MID
804y/ NM	Dli si ORaeBi O2BaelAs (DRO) (. 1)	Wt 85E	XTN MID
300c0	Ueloes, Ioe 1 h2omanoB2aphd	M1 Ut t	XTN MID
y03y	1 Gosi g Wdsni m Su2Bi aeg G2ap	Wt 85E	XTN MID
804yNM S2l p	MlA2oi xn2aAnloe	Wt 85E	XTN MID
DI Li aAh	Di loelzi g t ani 2Li aAhleB S2oAi gu2l	UWGM	XTN MID

Protocol References:

UWGM = UWGM Ieni 2earloeaC

M1 Ut t = "Mi rnogs Fo21 hi mlAaCUeaGsls Of t ani 2Ueg t asni s", TSU-E00j5-79-060, Ma2Ah 4983 Ueg Wubsi qui enRi vlsloesc

Wt 85E = "Gi snMi rnogs Fo2TvaGanleB WbGg t asni , ShdslAaG1 hi mlAaCMi rnogs", Ghl2g Tglnloe, Novi mbi 2498E Ueg Ins Ppgani sc

Laboratory References:

XTN MID = Tu2ofles Xi eAo, MIg@aeg, 4644 t cFG2ga Uvi , MIg@aeg, GX 79704, GTL (536)705-y550

Tu2ofles Xi eAo, 1 a2Sbag

Sample Summary

Client: WSP USA Inc.
P2brectjSite: / iB Tggd Unit 4y0

Job ID: 890-986-4
SD1 : GT04696046E

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-986-4	SW0E	Solig	05j66j64 05:76	05j66j64 4E:67	0 - 7
890-986-6	SW07	Solig	05j66j64 08:04	05j66j64 4E:67	0 - 7
890-986-3	SW03	Solig	05j66j64 08:07	05j66j64 4E:67	0 - 7
890-986-7	SW09	Solig	05j66j64 09:4y	05j66j64 4E:67	0 - 7
890-986-y	SW08	Solig	05j66j64 40:68	05j66j64 4E:67	0 - 7
890-986-E	SW05	Solig	05j64j64 47:6E	05j66j64 4E:67	0 - 7
890-986-5	SW04	Solig	05j64j64 05:y5	05j66j64 4E:67	0 - 7

Chain of Custody

Work Order No: _____

XENCO LABORATORIES

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

www.xenco.com Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	WSP USA	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	522 W. Mermod St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	Jeremy.Hill@wsp.com, Dan.Moir@wsp.com

Work Order Comments

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

Project Name:	Big Eddy Unit 180	Turn Around	
Project Number:	7E01092 0125	Routine ☐	
P.O. Number:	Em. NRM2024854885	Rush: 3 Bd	
Sampler's Name:	Jeremy Hill	Due Date: ~~7/29/21~~ 8/2/21	

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):	9.6/9.4	Thermometer ID	TMM-007
Received Intact:	Yes No	Correction Factor:	-0.2
Cooler Custody Seals:	Yes No N/A	Total Containers:	
Sample Custody Seals:	Yes No N/A		

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SW06	S	7/20/21	0742	0-4	1	X	X	X
SW04			0801					
SW03			0804					
SW09			0915					
SW08			1038					
SW07		7/21/21	~~0812~~ 1425	0-4'				
SW01		7/21/21	0757	0-4'				

890-982 Chain of Custody

Work Order Notes

cc
104074/001
AFE
EW 2601.01562 EX1.01

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

Sample Comments

Composite

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		7.22.21 1600			
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

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

eurofins | Environment Testing America

7/26/2021

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 890-314 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jessica kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana, NELAP - Texas		Job #: 890-982-1
Address: 1211 W Florida Ave,	Due Date Requested: 7/23/2021			
City: Midland	TAT Requested (days):			
State Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: Big Eddy Unit 150	Project #: 89000004			
Site:	SSOW#:			

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
SW06 (890-982-1)	7/22/21	07 42 Mountain		Solid			X	X	X	1	
SW04 (890-982-2)	7/22/21	08 01 Mountain		Solid			X	X	X	1	
SW03 (890-982-3)	7/22/21	08 04 Mountain		Solid			X	X	X	1	
SW09 (890-982-4)	7/22/21	09 15 Mountain		Solid			X	X	X	1	
SW08 (890-982-5)	7/22/21	10 28 Mountain		Solid			X	X	X	1	
SW07 (890-982-6)	7/21/21	14 26 Mountain		Solid			X	X	X	1	
SW01 (890-982-7)	7/21/21	07 57 Mountain		Solid			X	X	X	1	

Preservation Codes

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

Other:

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

Possible Hazard Identification
Unconfirmed

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

Deliverable Requested I II III IV Other (specify) | Primary Deliverable Rank. 2 | Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment

Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company
[signature] 7-23-21			KEM	7/23/21	
Relinquished by:	Date/Time	Company	Received by	Date/Time	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company

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

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-986-4
S1D Number: GT04696046E

Login Number: 982
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Xenco, Carlsbad

Question	Answer	Comment
G2e coolerh cu' tosd ' eylai, f re' entai' intyct.	Grue	
Symf le cu' tosd ' eyl' ai, f re' entayre intyct.	Grue	
G2e cooler or ' ymf le' so not yf f eyr to 2ype been comf romi' es or tymf eres v it2.	Grue	
Symf le' v ere receipes on ice.	Grue	
Cooler Gemf eryture i' yccef tyble.	Grue	
Cooler Gemf eryture i' recorses.	Grue	
CwC i' f re' ent.	Grue	
CwC i' ,illes out in inOyns lekible.	Grue	
CwC i' ,illes out v it2 yll f ertinent in,ormytion.	Grue	
I' t2e giels Symf lerh nyme f re' ent on CwCF	Grue	
G2ere yre no si' cref yncie' betv een t2e contyiner' receipes yns t2e CwC.	Grue	
Symf le' yre receipes v it2in ?olsink Gime He(clusink te' t' v it2 immesiyte ?G x	Grue	
Symf le contyiner' 2ype lekible lybel' .	Grue	
Contyiner' yre not broOen or leyOnk.	Grue	
Symf le collection syte)time' yre f ropises.	Grue	
Af f rof riyte ' ymf le contyiner' yre u' es.	Grue	
Symf le bottle' yre comf leteld ,illes.	Grue	
Symf le Pre' erpytion / eri,ies.	N)A	
G2ere i' ' u,,icient pol. ,or yll reVue' tes ynyld' e' aincl. ynd reVue' tes q S)q S1 '	Grue	
Contyiner' reVuirink Mero 2eys' f yce 2ype no 2eys' f yce or bubble i' zEmm H4)<"x	N)A	

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-986-4
S1D Number: GT04696046E

Login Number: 982
List Number: 2
Creator: Phillips, Kerianna

List Source: Eurofins Xenco, Midland
List Creation: 07/23/21 02:09 PM

Question	Answer	Comment
G2e coolerh cu' tosd ' eylai, f re' entai' intyct.	Grue	
Symf le cu' tosd ' eyl' ai, f re' entayre intyct.	Grue	
G2e cooler or ' ymf le' so not yf f eyr to 2ype been comf romi' es or tymf eres v it2.	Grue	
Symf le' v ere receipes on ice.	Grue	
Cooler Gemf eryture i' yccef tyble.	Grue	
Cooler Gemf eryture i' recorses.	Grue	
CwC i' f re' ent.	Grue	
CwC i' ,illes out in inOyns lekible.	Grue	
CwC i' ,illes out v it2 yll f ertinent in,ormytion.	Grue	
I' t2e giels Symf lerh nyme f re' ent on CwCF	Grue	
G2ere yre no si' cref yncie' betv een t2e contyiner' receipes yns t2e CwC.	Grue	
Symf le' yre receipes v it2in ?olsink Gime He(clusink te' t' v it2 immesiyte ?G x	Grue	
Symf le contyiner' 2ype lekible lybel' .	Grue	
Contyiner' yre not broOen or leyOnk.	Grue	
Symf le collection syte)time' yre f ropises.	Grue	
Af f rof riyte ' ymf le contyiner' yre u' es.	Grue	
Symf le bottle' yre comf leteld ,illes.	Grue	
Symf le Pre' erpytion / eri,ies.	Grue	
G2ere i' ' u,,icient pol. ,or yll reVue' tes ynyld' e' aincl. ynd reVue' tes q S)q S1 '	Grue	
Contyiner' reVuirink Mero 2eys' f yce 2ype no 2eys' f yce or bubble i' zEmm H4)<"x	Grue	

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-983-1
Laboratory Sample Delivery Group: TE012920126
Client Project/Site: Big Eddy Unit 150

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

Attn: Dan Moir

JKramer

Authorized for release by:
7/28/2021 8:59:19 PM

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

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

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

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Laboratory Job ID: 890-983-1
SDG: TE012920126

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-983-1
Project/Site: Big Eddy Unit 150 SDG: TE012920126

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc. Job ID: 890-981-r
Pjo/ectBSite: giE dyy5 Unit r G0 SDT : 2d0r 6960r 6h

Job ID: 890-983-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-983-1

Receipt
2se amp wlea v eje jecei7ey on 4B6B06r 3:63 PM. Unleaa otsejv iae notey belov , tse amp wlea mjji7ey in Eooy conyition, mmy, v seje jequijey, wjowejl5 wjeaej7ey mmy on ice. 2se tep wejmtuje of tse coolej mt jeceiwt tip e v ma 9.3°C

GC VOA
No myyitionml mmm5ticml oj qumlit5 iaauea v eje notey, otsej tsmn tsoae yeacjibey mbo7e oj in tse DefinitionaBT loaamj5 wmEe.

GC Semi VOA
No myyitionml mmm5ticml oj qumlit5 iaauea v eje notey, otsej tsmn tsoae yeacjibey mbo7e oj in tse DefinitionaBT loaamj5 wmEe.

HPLC/IC
No myyitionml mmm5ticml oj qumlit5 iaauea v eje notey, otsej tsmn tsoae yeacjibey mbo7e oj in tse DefinitionaBT loaamj5 wmEe.

Client Sample Results

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-983-1
SDG: TE012920126

Client Sample ID: FS25

Lab Sample ID: 890-983-1
Matrix: Solid
Date Collected: 07/22/21 11:33
Date Received: 07/22/21 16:24
Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.00543**		0.00202		mg/Kg		07/23/21 14:19	07/24/21 02:25	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/23/21 14:19	07/24/21 02:25	1
Ethylbenzene	**0.00863**		0.00202		mg/Kg		07/23/21 14:19	07/24/21 02:25	1
m-Xylene & p-Xylene	**0.00703**		0.00403		mg/Kg		07/23/21 14:19	07/24/21 02:25	1
o-Xylene	**0.00915**	**F1**	0.00202		mg/Kg		07/23/21 14:19	07/24/21 02:25	1
Xylenes, Total	**0.0162**		0.00403		mg/Kg		07/23/21 14:19	07/24/21 02:25	1
Total BTEX	**0.0302**		0.00403		mg/Kg		07/23/21 14:19	07/24/21 02:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*175*	*S1+*	*70 - 130*	*07/23/21 14:19*	*07/24/21 02:25*	*1*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*	*07/23/21 14:19*	*07/24/21 02:25*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/26/21 16:18	07/28/21 12:40	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/26/21 16:18	07/28/21 12:40	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/26/21 16:18	07/28/21 12:40	1
Total TPH	<50.0	U	50.0		mg/Kg		07/26/21 16:18	07/28/21 12:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*07/26/21 16:18*	*07/28/21 12:40*	*1*
o-Terphenyl	*103*		*70 - 130*	*07/26/21 16:18*	*07/28/21 12:40*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3670**		50.3		mg/Kg			07/24/21 20:01	10

Client Sample ID: FS20

Lab Sample ID: 890-983-2
Matrix: Solid
Date Collected: 07/22/21 11:45
Date Received: 07/22/21 16:24
Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		07/23/21 14:19	07/24/21 02:46	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/23/21 14:19	07/24/21 02:46	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/23/21 14:19	07/24/21 02:46	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/23/21 14:19	07/24/21 02:46	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/23/21 14:19	07/24/21 02:46	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/23/21 14:19	07/24/21 02:46	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		07/23/21 14:19	07/24/21 02:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*07/23/21 14:19*	*07/24/21 02:46*	*1*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*07/23/21 14:19*	*07/24/21 02:46*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-983-1
SDG: TE012920126

Client Sample ID: FS20

Lab Sample ID: 890-983-2
Matrix: Solid
Date Collected: 07/22/21 11:45
Date Received: 07/22/21 16:24
Sample Depth: - 4

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		07/26/21 16:18	07/28/21 13:42	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/26/21 16:18	07/28/21 13:42	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/26/21 16:18	07/28/21 13:42	1
Total TPH	<49.9	U	49.9		mg/Kg		07/26/21 16:18	07/28/21 13:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*07/26/21 16:18*	*07/28/21 13:42*	*1*
o-Terphenyl	*101*		*70 - 130*	*07/26/21 16:18*	*07/28/21 13:42*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**286**		5.04		mg/Kg			07/24/21 20:06	1

Client Sample ID: FS19

Lab Sample ID: 890-983-3
Matrix: Solid
Date Collected: 07/22/21 12:31
Date Received: 07/22/21 16:24
Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		07/23/21 14:19	07/24/21 03:07	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/23/21 14:19	07/24/21 03:07	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/23/21 14:19	07/24/21 03:07	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/23/21 14:19	07/24/21 03:07	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/23/21 14:19	07/24/21 03:07	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/23/21 14:19	07/24/21 03:07	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		07/23/21 14:19	07/24/21 03:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*07/23/21 14:19*	*07/24/21 03:07*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*07/23/21 14:19*	*07/24/21 03:07*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/26/21 16:18	07/28/21 14:03	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/26/21 16:18	07/28/21 14:03	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/26/21 16:18	07/28/21 14:03	1
Total TPH	<50.0	U	50.0		mg/Kg		07/26/21 16:18	07/28/21 14:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*07/26/21 16:18*	*07/28/21 14:03*	*1*
o-Terphenyl	*109*		*70 - 130*	*07/26/21 16:18*	*07/28/21 14:03*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**248**		5.01		mg/Kg			07/24/21 20:11	1

Client Sample Results

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-983-1
SDG: TE012920126

Client Sample ID: FS18

Lab Sample ID: 890-983-4
Matrix: Solid
Date Collected: 07/22/21 12:32
Date Received: 07/22/21 16:24
Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		07/23/21 14:19	07/24/21 03:28	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/23/21 14:19	07/24/21 03:28	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/23/21 14:19	07/24/21 03:28	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		07/23/21 14:19	07/24/21 03:28	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/23/21 14:19	07/24/21 03:28	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		07/23/21 14:19	07/24/21 03:28	1
Total BTEX	<0.00396	U	0.00396		mg/Kg		07/23/21 14:19	07/24/21 03:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*126*		*70 - 130*	*07/23/21 14:19*	*07/24/21 03:28*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*07/23/21 14:19*	*07/24/21 03:28*	*1*

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		07/26/21 16:18	07/28/21 14:24	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/26/21 16:18	07/28/21 14:24	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/26/21 16:18	07/28/21 14:24	1
Total TPH	<50.0	U	50.0		mg/Kg		07/26/21 16:18	07/28/21 14:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*07/26/21 16:18*	*07/28/21 14:24*	*1*
o-Terphenyl	*100*		*70 - 130*	*07/26/21 16:18*	*07/28/21 14:24*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1180**		5.04		mg/Kg			07/24/21 18:41	1

Client Sample ID: FS15

Lab Sample ID: 890-983-5
Matrix: Solid
Date Collected: 07/22/21 12:39
Date Received: 07/22/21 16:24
Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/23/21 14:19	07/24/21 03:48	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/23/21 14:19	07/24/21 03:48	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/23/21 14:19	07/24/21 03:48	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/23/21 14:19	07/24/21 03:48	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/23/21 14:19	07/24/21 03:48	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/23/21 14:19	07/24/21 03:48	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		07/23/21 14:19	07/24/21 03:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*07/23/21 14:19*	*07/24/21 03:48*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*07/23/21 14:19*	*07/24/21 03:48*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-983-1
SDG: TE012920126

Client Sample ID: FS15

Lab Sample ID: 890-983-5
Matrix: Solid
Date Collected: 07/22/21 12:39
Date Received: 07/22/21 16:24
Sample Depth: - 4

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		07/26/21 16:18	07/28/21 14:44	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		07/26/21 16:18	07/28/21 14:44	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/26/21 16:18	07/28/21 14:44	1
Total TPH	<49.8	U	49.8		mg/Kg		07/26/21 16:18	07/28/21 14:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*07/26/21 16:18*	*07/28/21 14:44*	*1*
o-Terphenyl	*95*		*70 - 130*	*07/26/21 16:18*	*07/28/21 14:44*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	988		5.00		mg/Kg			07/24/21 18:46	1

Client Sample ID: FS14

Lab Sample ID: 890-983-6
Matrix: Solid
Date Collected: 07/22/21 12:41
Date Received: 07/22/21 16:24
Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		07/23/21 14:19	07/24/21 04:09	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/23/21 14:19	07/24/21 04:09	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/23/21 14:19	07/24/21 04:09	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/23/21 14:19	07/24/21 04:09	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/23/21 14:19	07/24/21 04:09	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/23/21 14:19	07/24/21 04:09	1
Total BTEX	<0.00402	U	0.00402		mg/Kg		07/23/21 14:19	07/24/21 04:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*07/23/21 14:19*	*07/24/21 04:09*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*07/23/21 14:19*	*07/24/21 04:09*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		07/26/21 16:18	07/28/21 15:05	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		07/26/21 16:18	07/28/21 15:05	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		07/26/21 16:18	07/28/21 15:05	1
Total TPH	<49.7	U	49.7		mg/Kg		07/26/21 16:18	07/28/21 15:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*07/26/21 16:18*	*07/28/21 15:05*	*1*
o-Terphenyl	*96*		*70 - 130*	*07/26/21 16:18*	*07/28/21 15:05*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	265		5.00		mg/Kg			07/24/21 18:52	1

Client Sample Results

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-983-1
SDG: TE012920126

Client Sample ID: FS13

Lab Sample ID: 890-983-7
Matrix: Solid
Date Collected: 07/22/21 13:11
Date Received: 07/22/21 16:24
Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		07/23/21 14:19	07/24/21 04:30	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/23/21 14:19	07/24/21 04:30	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/23/21 14:19	07/24/21 04:30	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/23/21 14:19	07/24/21 04:30	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/23/21 14:19	07/24/21 04:30	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/23/21 14:19	07/24/21 04:30	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		07/23/21 14:19	07/24/21 04:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*07/23/21 14:19*	*07/24/21 04:30*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*07/23/21 14:19*	*07/24/21 04:30*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		07/26/21 16:18	07/28/21 15:26	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/26/21 16:18	07/28/21 15:26	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/26/21 16:18	07/28/21 15:26	1
Total TPH	<49.9	U	49.9		mg/Kg		07/26/21 16:18	07/28/21 15:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*07/26/21 16:18*	*07/28/21 15:26*	*1*
o-Terphenyl	*100*		*70 - 130*	*07/26/21 16:18*	*07/28/21 15:26*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1350**		24.8		mg/Kg			07/25/21 21:15	5

Client Sample ID: FS12

Lab Sample ID: 890-983-8
Matrix: Solid
Date Collected: 07/22/21 13:14
Date Received: 07/22/21 16:24
Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/23/21 14:19	07/24/21 04:50	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/23/21 14:19	07/24/21 04:50	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/23/21 14:19	07/24/21 04:50	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		07/23/21 14:19	07/24/21 04:50	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/23/21 14:19	07/24/21 04:50	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		07/23/21 14:19	07/24/21 04:50	1
Total BTEX	<0.00401	U	0.00401		mg/Kg		07/23/21 14:19	07/24/21 04:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*07/23/21 14:19*	*07/24/21 04:50*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*07/23/21 14:19*	*07/24/21 04:50*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-983-1
SDG: TE012920126

Client Sample ID: FS12

Lab Sample ID: 890-983-8
Matrix: Solid
Date Collected: 07/22/21 13:14
Date Received: 07/22/21 16:24
Sample Depth: - 4

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/26/21 16:18	07/28/21 15:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/26/21 16:18	07/28/21 15:47	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/26/21 16:18	07/28/21 15:47	1
Total TPH	<50.0	U	50.0		mg/Kg		07/26/21 16:18	07/28/21 15:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*07/26/21 16:18*	*07/28/21 15:47*	*1*
o-Terphenyl	*101*		*70 - 130*	*07/26/21 16:18*	*07/28/21 15:47*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**654**		4.97		mg/Kg			07/24/21 19:17	1

Client Sample ID: FS11

Lab Sample ID: 890-983-9
Matrix: Solid
Date Collected: 07/22/21 13:18
Date Received: 07/22/21 16:24
Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/23/21 14:19	07/24/21 05:11	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/23/21 14:19	07/24/21 05:11	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/23/21 14:19	07/24/21 05:11	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/23/21 14:19	07/24/21 05:11	1
o-Xylene	**0.00234**		0.00200		mg/Kg		07/23/21 14:19	07/24/21 05:11	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/23/21 14:19	07/24/21 05:11	1
Total BTEX	<0.00399	U	0.00399		mg/Kg		07/23/21 14:19	07/24/21 05:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*07/23/21 14:19*	*07/24/21 05:11*	*1*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*07/23/21 14:19*	*07/24/21 05:11*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/26/21 16:18	07/28/21 16:07	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/26/21 16:18	07/28/21 16:07	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/26/21 16:18	07/28/21 16:07	1
Total TPH	<50.0	U	50.0		mg/Kg		07/26/21 16:18	07/28/21 16:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*07/26/21 16:18*	*07/28/21 16:07*	*1*
o-Terphenyl	*101*		*70 - 130*	*07/26/21 16:18*	*07/28/21 16:07*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1470**		4.97		mg/Kg			07/24/21 19:36	1

Client Sample Results

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-983-1
SDG: TE012920126

Client Sample ID: FS10

Lab Sample ID: 890-983-10
Matrix: Solid
Date Collected: 07/22/21 13:21
Date Received: 07/22/21 16:24
Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		07/23/21 14:19	07/24/21 05:32	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/23/21 14:19	07/24/21 05:32	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/23/21 14:19	07/24/21 05:32	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		07/23/21 14:19	07/24/21 05:32	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/23/21 14:19	07/24/21 05:32	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		07/23/21 14:19	07/24/21 05:32	1
Total BTEX	<0.00396	U	0.00396		mg/Kg		07/23/21 14:19	07/24/21 05:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*07/23/21 14:19*	*07/24/21 05:32*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*07/23/21 14:19*	*07/24/21 05:32*	*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		07/26/21 16:18	07/28/21 16:28	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/26/21 16:18	07/28/21 16:28	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/26/21 16:18	07/28/21 16:28	1
Total TPH	<49.9	U	49.9		mg/Kg		07/26/21 16:18	07/28/21 16:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*07/26/21 16:18*	*07/28/21 16:28*	*1*
o-Terphenyl	*101*		*70 - 130*	*07/26/21 16:18*	*07/28/21 16:28*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**596**		4.96		mg/Kg			07/24/21 19:41	1

Client Sample ID: FS01

Lab Sample ID: 890-983-11
Matrix: Solid
Date Collected: 07/22/21 14:42
Date Received: 07/22/21 16:24
Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		07/23/21 14:19	07/24/21 06:55	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/23/21 14:19	07/24/21 06:55	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/23/21 14:19	07/24/21 06:55	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/23/21 14:19	07/24/21 06:55	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/23/21 14:19	07/24/21 06:55	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/23/21 14:19	07/24/21 06:55	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		07/23/21 14:19	07/24/21 06:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*	*07/23/21 14:19*	*07/24/21 06:55*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*07/23/21 14:19*	*07/24/21 06:55*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-983-1
SDG: TE012920126

Client Sample ID: FS01

Lab Sample ID: 890-983-11
Matrix: Solid
Date Collected: 07/22/21 14:42
Date Received: 07/22/21 16:24
Sample Depth: - 4

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/26/21 16:18	07/28/21 17:09	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/26/21 16:18	07/28/21 17:09	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/26/21 16:18	07/28/21 17:09	1
Total TPH	<50.0	U	50.0		mg/Kg		07/26/21 16:18	07/28/21 17:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*07/26/21 16:18*	*07/28/21 17:09*	*1*
o-Terphenyl	*97*		*70 - 130*	*07/26/21 16:18*	*07/28/21 17:09*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**246**		5.03		mg/Kg			07/24/21 21:09	1

Client Sample ID: FS02

Lab Sample ID: 890-983-12
Matrix: Solid
Date Collected: 07/22/21 14:44
Date Received: 07/22/21 16:24
Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		07/23/21 14:19	07/24/21 07:15	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/23/21 14:19	07/24/21 07:15	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/23/21 14:19	07/24/21 07:15	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/23/21 14:19	07/24/21 07:15	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/23/21 14:19	07/24/21 07:15	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/23/21 14:19	07/24/21 07:15	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		07/23/21 14:19	07/24/21 07:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*	*07/23/21 14:19*	*07/24/21 07:15*	*1*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*	*07/23/21 14:19*	*07/24/21 07:15*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/26/21 16:18	07/28/21 17:30	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/26/21 16:18	07/28/21 17:30	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/26/21 16:18	07/28/21 17:30	1
Total TPH	<50.0	U	50.0		mg/Kg		07/26/21 16:18	07/28/21 17:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*07/26/21 16:18*	*07/28/21 17:30*	*1*
o-Terphenyl	*105*		*70 - 130*	*07/26/21 16:18*	*07/28/21 17:30*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**149**		4.99		mg/Kg			07/24/21 21:25	1

Client Sample Results

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-983-1
SDG: TE012920126

Client Sample ID: FS03

Lab Sample ID: 890-983-13
Matrix: Solid
Date Collected: 07/22/21 14:47
Date Received: 07/22/21 16:24
Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		07/23/21 14:19	07/24/21 07:36	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/23/21 14:19	07/24/21 07:36	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/23/21 14:19	07/24/21 07:36	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/23/21 14:19	07/24/21 07:36	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/23/21 14:19	07/24/21 07:36	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/23/21 14:19	07/24/21 07:36	1
Total BTEX	<0.00402	U	0.00402		mg/Kg		07/23/21 14:19	07/24/21 07:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*07/23/21 14:19*	*07/24/21 07:36*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*07/23/21 14:19*	*07/24/21 07:36*	*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	<49.9	U	49.9		mg/Kg		07/26/21 16:18	07/28/21 17:51	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/26/21 16:18	07/28/21 17:51	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/26/21 16:18	07/28/21 17:51	1
Total TPH	<49.9	U	49.9		mg/Kg		07/26/21 16:18	07/28/21 17:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*90*		*70 - 130*	*07/26/21 16:18*	*07/28/21 17:51*	*1*
o-Terphenyl	*98*		*70 - 130*	*07/26/21 16:18*	*07/28/21 17:51*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**640**		4.96		mg/Kg			07/24/21 21:31	1

Client Sample ID: FS04

Lab Sample ID: 890-983-14
Matrix: Solid
Date Collected: 07/22/21 14:49
Date Received: 07/22/21 16:24
Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		07/23/21 14:19	07/24/21 07:57	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/23/21 14:19	07/24/21 07:57	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/23/21 14:19	07/24/21 07:57	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/23/21 14:19	07/24/21 07:57	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/23/21 14:19	07/24/21 07:57	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/23/21 14:19	07/24/21 07:57	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		07/23/21 14:19	07/24/21 07:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*07/23/21 14:19*	*07/24/21 07:57*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*07/23/21 14:19*	*07/24/21 07:57*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-983-1
SDG: TE012920126

Client Sample ID: FS04

Lab Sample ID: 890-983-14
Matrix: Solid
Date Collected: 07/22/21 14:49
Date Received: 07/22/21 16:24
Sample Depth: - 4

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		07/26/21 16:18	07/28/21 18:12	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/26/21 16:18	07/28/21 18:12	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/26/21 16:18	07/28/21 18:12	1
Total TPH	<49.9	U	49.9		mg/Kg		07/26/21 16:18	07/28/21 18:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*90*		*70 - 130*	*07/26/21 16:18*	*07/28/21 18:12*	*1*
o-Terphenyl	*97*		*70 - 130*	*07/26/21 16:18*	*07/28/21 18:12*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	709		5.00		mg/Kg			07/24/21 21:36	1

Client Sample ID: FS05

Lab Sample ID: 890-983-15
Matrix: Solid
Date Collected: 07/22/21 14:51
Date Received: 07/22/21 16:24
Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		07/23/21 14:19	07/24/21 08:18	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/23/21 14:19	07/24/21 08:18	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/23/21 14:19	07/24/21 08:18	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/23/21 14:19	07/24/21 08:18	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/23/21 14:19	07/24/21 08:18	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/23/21 14:19	07/24/21 08:18	1
Total BTEX	<0.00402	U	0.00402		mg/Kg		07/23/21 14:19	07/24/21 08:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*07/23/21 14:19*	*07/24/21 08:18*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*07/23/21 14:19*	*07/24/21 08:18*	*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		07/26/21 16:18	07/28/21 18:33	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/26/21 16:18	07/28/21 18:33	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/26/21 16:18	07/28/21 18:33	1
Total TPH	<49.9	U	49.9		mg/Kg		07/26/21 16:18	07/28/21 18:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*07/26/21 16:18*	*07/28/21 18:33*	*1*
o-Terphenyl	*100*		*70 - 130*	*07/26/21 16:18*	*07/28/21 18:33*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1610		24.9		mg/Kg			07/25/21 20:46	5

Surrogate Summary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-983-1
SDG: TE012920126

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)
890-983-1	FS25	175 S1+	115
890-983-1 MS	FS25	102	97
890-983-1 MSD	FS25	96	89
890-983-2	FS20	113	108
890-983-3	FS19	115	103
890-983-4	FS18	126	105
890-983-5	FS15	110	102
890-983-6	FS14	112	104
890-983-7	FS13	118	99
890-983-8	FS12	101	98
890-983-9	FS11	107	108
890-983-10	FS10	119	101
890-983-11	FS01	121	105
890-983-12	FS02	85	81
890-983-13	FS03	113	107
890-983-14	FS04	113	106
890-983-15	FS05	112	103
LCS 880-5601/1-A	Lab Control Sample	94	90
LCSD 880-5601/2-A	Lab Control Sample Dup	98	102
MB 880-5574/5-A	Method Blank	107	100
MB 880-5601/5-A	Method Blank	113	97

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)
890-983-1	FS25	95	103
890-983-1 MS	FS25	92	94
890-983-1 MSD	FS25	89	90
890-983-2	FS20	94	101
890-983-3	FS19	104	109
890-983-4	FS18	93	100
890-983-5	FS15	89	95
890-983-6	FS14	92	96
890-983-7	FS13	93	100
890-983-8	FS12	95	101
890-983-9	FS11	93	101
890-983-10	FS10	94	101
890-983-11	FS01	92	97
890-983-12	FS02	97	105
890-983-13	FS03	90	98
890-983-14	FS04	90	97
890-983-15	FS05	93	100
LCS 880-5671/2-A	Lab Control Sample	91	96

Surrogate Summary

Client: WSP USA Inc. Job ID: 890-983-1
Project/Site: Big Eddy Unit 150 SDG: TE012920126

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

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

		Percent Surrogate Recovery (Acceptance Limits)									
		1CO1	OTPH1								
Lab Sample ID	Client Sample ID	(70-130)	(70-130)								
LCSD 880-5671/3-A	Lab Control Sample Dup	93	100								
MB 880-5671/1-A	Method Blank	86	95								

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-983-1
SDG: TE012920126

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-5574/5-A
Matrix: Solid
Analysis Batch: 5576

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5574

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/23/21 10:39	07/23/21 15:02	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/23/21 10:39	07/23/21 15:02	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/23/21 10:39	07/23/21 15:02	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/23/21 10:39	07/23/21 15:02	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/23/21 10:39	07/23/21 15:02	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/23/21 10:39	07/23/21 15:02	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		07/23/21 10:39	07/23/21 15:02	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*126*		*62 - 172*	*07/23/21 12:79*	*07/24/21 1/ :23*	*1*
1,4-Difluorobenzene (Surr)	*122*		*62 - 172*	*07/23/21 12:79*	*07/24/21 1/ :23*	*1*

Lab Sample ID: MB 880-5601/5-A
Matrix: Solid
Analysis Batch: 5576

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5601

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/23/21 14:19	07/24/21 02:04	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/23/21 14:19	07/24/21 02:04	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/23/21 14:19	07/24/21 02:04	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/23/21 14:19	07/24/21 02:04	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/23/21 14:19	07/24/21 02:04	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/23/21 14:19	07/24/21 02:04	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		07/23/21 14:19	07/24/21 02:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*62 - 172*	*07/23/21 14:19*	*07/24/21 23:24*	*1*
1,4-Difluorobenzene (Surr)	*96*		*62 - 172*	*07/23/21 14:19*	*07/24/21 23:24*	*1*

Lab Sample ID: LCS 880-5601/1-A
Matrix: Solid
Analysis Batch: 5576

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5601

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.1022		mg/Kg		102	70 - 130		
Toluene			0.100	0.09442		mg/Kg		94	70 - 130		
Ethylbenzene			0.100	0.08224		mg/Kg		82	70 - 130		
m-Xylene & p-Xylene			0.200	0.1744		mg/Kg		87	70 - 130		
o-Xylene			0.100	0.08746		mg/Kg		87	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*62 - 172*
1,4-Difluorobenzene (Surr)	*92*		*62 - 172*

QC Sample Results

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-983-1
SDG: TE012920126

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

Lab Sample ID: LCSD 880-5601/2-A
Matrix: Solid
Analysis Batch: 5576

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 5601

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1231		mg/Kg		123	70 - 130	19	35
Toluene			0.100	0.09686		mg/Kg		97	70 - 130	3	35
Ethylbenzene			0.100	0.09021		mg/Kg		90	70 - 130	9	35
m-Xylene & p-Xylene			0.200	0.1881		mg/Kg		94	70 - 130	8	35
o-Xylene			0.100	0.09010		mg/Kg		90	70 - 130	3	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*9i*		*62 - 172*
1,4-Difluorobenzene (Surr)	*123*		*62 - 172*

Lab Sample ID: 890-983-1 MS
Matrix: Solid
Analysis Batch: 5576

Client Sample ID: FS25
Prep Type: Total/NA
Prep Batch: 5601

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	0.00543		0.100	0.09457		mg/Kg		89	70 - 130		
Toluene	<0.00202	U	0.100	0.08346		mg/Kg		83	70 - 130		
Ethylbenzene	0.00863		0.100	0.07850		mg/Kg		70	70 - 130		
m-Xylene & p-Xylene	0.00703		0.200	0.1724		mg/Kg		83	70 - 130		
o-Xylene	0.00915	F1	0.100	0.07933		mg/Kg		70	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*123*		*62 - 172*
1,4-Difluorobenzene (Surr)	*96*		*62 - 172*

Lab Sample ID: 890-983-1 MSD
Matrix: Solid
Analysis Batch: 5576

Client Sample ID: FS25
Prep Type: Total/NA
Prep Batch: 5601

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.00543		0.100	0.09070		mg/Kg		85	70 - 130	4	35
Toluene	<0.00202	U	0.100	0.07954		mg/Kg		80	70 - 130	5	35
Ethylbenzene	0.00863		0.100	0.08050		mg/Kg		72	70 - 130	3	35
m-Xylene & p-Xylene	0.00703		0.200	0.1509		mg/Kg		72	70 - 130	13	35
o-Xylene	0.00915	F1	0.100	0.07475	F1	mg/Kg		66	70 - 130	6	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*62 - 172*
1,4-Difluorobenzene (Surr)	*i 9*		*62 - 172*

QC Sample Results

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-983-1
SDG: TE012920126

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

Lab Sample ID: MB 880-5671/1-A
Matrix: Solid
Analysis Batch: 5739

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5671

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		07/26/21 16:18	07/28/21 11:37	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/26/21 16:18	07/28/21 11:37	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/26/21 16:18	07/28/21 11:37	1
Total TPH	<50.0	U	50.0		mg/Kg		07/26/21 16:18	07/28/21 11:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*i 8*		*62 - 172*	*260380 31 18:1i*	*260i 031 11:76*	*1*
o-Terphenyl	*9/*		*62 - 172*	*260380 31 18:1i*	*260i 031 11:76*	*1*

Lab Sample ID: LCS 880-5671/2-A
Matrix: Solid
Analysis Batch: 5739

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5671

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	741.4		mg/Kg		74	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	851.3		mg/Kg		85	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*91*		*62 - 172*
o-Terphenyl	*98*		*62 - 172*

Lab Sample ID: LCSD 880-5671/3-A
Matrix: Solid
Analysis Batch: 5739

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 5671

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	772.9		mg/Kg		77	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			1000	897.0		mg/Kg		90	70 - 130	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*97*		*62 - 172*
o-Terphenyl	*122*		*62 - 172*

Lab Sample ID: 890-983-1 MS
Matrix: Solid
Analysis Batch: 5739

Client Sample ID: FS25
Prep Type: Total/NA
Prep Batch: 5671

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	996	849.3		mg/Kg		85	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	996	898.6		mg/Kg		90	70 - 130		

QC Sample Results

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-983-1
SDG: TE012920126

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

Lab Sample ID: 890-983-1 MS
Matrix: Solid
Analysis Batch: 5739

Client Sample ID: FS25
Prep Type: Total/NA
Prep Batch: 5671

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	*93*		*62 - 172*
o-Terphenyl	*94*		*62 - 172*

Lab Sample ID: 890-983-1 MSD
Matrix: Solid
Analysis Batch: 5739

Client Sample ID: FS25
Prep Type: Total/NA
Prep Batch: 5671

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	996	830.2		mg/Kg		83	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<50.0	U	996	865.2		mg/Kg		87	70 - 130	4	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	*i 9*		*62 - 172*
o-Terphenyl	*92*		*62 - 172*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: LCS 880-5466/2-A
Matrix: Solid
Analysis Batch: 5555

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	247.5		mg/Kg		99	90 - 110

Lab Sample ID: MB 880-5608/1-A
Matrix: Solid
Analysis Batch: 5616

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			07/24/21 20:52	1

Lab Sample ID: LCS 880-5608/2-A
Matrix: Solid
Analysis Batch: 5616

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	256.1		mg/Kg		102	90 - 110

Lab Sample ID: LCSD 880-5608/3-A
Matrix: Solid
Analysis Batch: 5616

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	253.9		mg/Kg		102	90 - 110	1	20

QC Sample Results

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-983-1
SDG: TE012920126

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-983-11 MS
Matrix: Solid
Analysis Batch: 5616

Client Sample ID: FS01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	246		252	485.1		mg/Kg		95	90 - 110

Lab Sample ID: 890-983-11 MSD
Matrix: Solid
Analysis Batch: 5616

Client Sample ID: FS01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	246		252	484.1		mg/Kg		95	90 - 110	0	20

Lab Sample ID: MB 880-5615/1-A
Matrix: Solid
Analysis Batch: 5617

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			07/24/21 17:06	1

Lab Sample ID: LCS 880-5615/2-A
Matrix: Solid
Analysis Batch: 5617

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride			250	269.0		mg/Kg		108	90 - 110

Lab Sample ID: LCSD 880-5615/3-A
Matrix: Solid
Analysis Batch: 5617

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	269.1		mg/Kg		108	90 - 110	0	20

Lab Sample ID: 890-983-6 MS
Matrix: Solid
Analysis Batch: 5617

Client Sample ID: FS14
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	265		250	526.2		mg/Kg		105	90 - 110

Lab Sample ID: 890-983-6 MSD
Matrix: Solid
Analysis Batch: 5617

Client Sample ID: FS14
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	265		250	526.9		mg/Kg		105	90 - 110	0	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-983-1
SDG: TE012920126

GC VOA

Prep Batch: 5574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-5574/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 5576

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-983-1	FS25	Total/NA	Solid	8021B	5601
890-983-2	FS20	Total/NA	Solid	8021B	5601
890-983-3	FS19	Total/NA	Solid	8021B	5601
890-983-4	FS18	Total/NA	Solid	8021B	5601
890-983-5	FS15	Total/NA	Solid	8021B	5601
890-983-6	FS14	Total/NA	Solid	8021B	5601
890-983-7	FS13	Total/NA	Solid	8021B	5601
890-983-8	FS12	Total/NA	Solid	8021B	5601
890-983-9	FS11	Total/NA	Solid	8021B	5601
890-983-10	FS10	Total/NA	Solid	8021B	5601
890-983-11	FS01	Total/NA	Solid	8021B	5601
890-983-12	FS02	Total/NA	Solid	8021B	5601
890-983-13	FS03	Total/NA	Solid	8021B	5601
890-983-14	FS04	Total/NA	Solid	8021B	5601
890-983-15	FS05	Total/NA	Solid	8021B	5601
MB 880-5574/5-A	Method Blank	Total/NA	Solid	8021B	5574
MB 880-5601/5-A	Method Blank	Total/NA	Solid	8021B	5601
LCS 880-5601/1-A	Lab Control Sample	Total/NA	Solid	8021B	5601
LCSD 880-5601/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	5601
890-983-1 MS	FS25	Total/NA	Solid	8021B	5601
890-983-1 MSD	FS25	Total/NA	Solid	8021B	5601

Prep Batch: 5601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-983-1	FS25	Total/NA	Solid	5035	
890-983-2	FS20	Total/NA	Solid	5035	
890-983-3	FS19	Total/NA	Solid	5035	
890-983-4	FS18	Total/NA	Solid	5035	
890-983-5	FS15	Total/NA	Solid	5035	
890-983-6	FS14	Total/NA	Solid	5035	
890-983-7	FS13	Total/NA	Solid	5035	
890-983-8	FS12	Total/NA	Solid	5035	
890-983-9	FS11	Total/NA	Solid	5035	
890-983-10	FS10	Total/NA	Solid	5035	
890-983-11	FS01	Total/NA	Solid	5035	
890-983-12	FS02	Total/NA	Solid	5035	
890-983-13	FS03	Total/NA	Solid	5035	
890-983-14	FS04	Total/NA	Solid	5035	
890-983-15	FS05	Total/NA	Solid	5035	
MB 880-5601/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-5601/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-5601/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-983-1 MS	FS25	Total/NA	Solid	5035	
890-983-1 MSD	FS25	Total/NA	Solid	5035	

QC Association Summary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-983-1
SDG: TE012920126

GC Semi VOA

Prep Batch: 5671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-983-1	FS25	Total/NA	Solid	8015NM Prep	
890-983-2	FS20	Total/NA	Solid	8015NM Prep	
890-983-3	FS19	Total/NA	Solid	8015NM Prep	
890-983-4	FS18	Total/NA	Solid	8015NM Prep	
890-983-5	FS15	Total/NA	Solid	8015NM Prep	
890-983-6	FS14	Total/NA	Solid	8015NM Prep	
890-983-7	FS13	Total/NA	Solid	8015NM Prep	
890-983-8	FS12	Total/NA	Solid	8015NM Prep	
890-983-9	FS11	Total/NA	Solid	8015NM Prep	
890-983-10	FS10	Total/NA	Solid	8015NM Prep	
890-983-11	FS01	Total/NA	Solid	8015NM Prep	
890-983-12	FS02	Total/NA	Solid	8015NM Prep	
890-983-13	FS03	Total/NA	Solid	8015NM Prep	
890-983-14	FS04	Total/NA	Solid	8015NM Prep	
890-983-15	FS05	Total/NA	Solid	8015NM Prep	
MB 880-5671/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-5671/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-5671/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-983-1 MS	FS25	Total/NA	Solid	8015NM Prep	
890-983-1 MSD	FS25	Total/NA	Solid	8015NM Prep	

Analysis Batch: 5739

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-983-1	FS25	Total/NA	Solid	8015B NM	5671
890-983-2	FS20	Total/NA	Solid	8015B NM	5671
890-983-3	FS19	Total/NA	Solid	8015B NM	5671
890-983-4	FS18	Total/NA	Solid	8015B NM	5671
890-983-5	FS15	Total/NA	Solid	8015B NM	5671
890-983-6	FS14	Total/NA	Solid	8015B NM	5671
890-983-7	FS13	Total/NA	Solid	8015B NM	5671
890-983-8	FS12	Total/NA	Solid	8015B NM	5671
890-983-9	FS11	Total/NA	Solid	8015B NM	5671
890-983-10	FS10	Total/NA	Solid	8015B NM	5671
890-983-11	FS01	Total/NA	Solid	8015B NM	5671
890-983-12	FS02	Total/NA	Solid	8015B NM	5671
890-983-13	FS03	Total/NA	Solid	8015B NM	5671
890-983-14	FS04	Total/NA	Solid	8015B NM	5671
890-983-15	FS05	Total/NA	Solid	8015B NM	5671
MB 880-5671/1-A	Method Blank	Total/NA	Solid	8015B NM	5671
LCS 880-5671/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	5671
LCSD 880-5671/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	5671
890-983-1 MS	FS25	Total/NA	Solid	8015B NM	5671
890-983-1 MSD	FS25	Total/NA	Solid	8015B NM	5671

HPLC/IC

Leach Batch: 5466

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-983-1	FS25	Soluble	Solid	DI Leach	
890-983-2	FS20	Soluble	Solid	DI Leach	
890-983-3	FS19	Soluble	Solid	DI Leach	

QC Association Summary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-983-1
SDG: TE012920126

HPLC/IC (Continued)

Leach Batch: 5466 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-5466/2-A	Lab Control Sample	Soluble	Solid	DI Leach	

Analysis Batch: 5555

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-983-1	FS25	Soluble	Solid	300.0	5466
890-983-2	FS20	Soluble	Solid	300.0	5466
890-983-3	FS19	Soluble	Solid	300.0	5466
LCS 880-5466/2-A	Lab Control Sample	Soluble	Solid	300.0	5466

Leach Batch: 5608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-983-11	FS01	Soluble	Solid	DI Leach	
890-983-12	FS02	Soluble	Solid	DI Leach	
890-983-13	FS03	Soluble	Solid	DI Leach	
890-983-14	FS04	Soluble	Solid	DI Leach	
890-983-15	FS05	Soluble	Solid	DI Leach	
MB 880-5608/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-5608/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-5608/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-983-11 MS	FS01	Soluble	Solid	DI Leach	
890-983-11 MSD	FS01	Soluble	Solid	DI Leach	

Leach Batch: 5615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-983-4	FS18	Soluble	Solid	DI Leach	
890-983-5	FS15	Soluble	Solid	DI Leach	
890-983-6	FS14	Soluble	Solid	DI Leach	
890-983-7	FS13	Soluble	Solid	DI Leach	
890-983-8	FS12	Soluble	Solid	DI Leach	
890-983-9	FS11	Soluble	Solid	DI Leach	
890-983-10	FS10	Soluble	Solid	DI Leach	
MB 880-5615/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-5615/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-5615/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-983-6 MS	FS14	Soluble	Solid	DI Leach	
890-983-6 MSD	FS14	Soluble	Solid	DI Leach	

Analysis Batch: 5616

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-983-11	FS01	Soluble	Solid	300.0	5608
890-983-12	FS02	Soluble	Solid	300.0	5608
890-983-13	FS03	Soluble	Solid	300.0	5608
890-983-14	FS04	Soluble	Solid	300.0	5608
890-983-15	FS05	Soluble	Solid	300.0	5608
MB 880-5608/1-A	Method Blank	Soluble	Solid	300.0	5608
LCS 880-5608/2-A	Lab Control Sample	Soluble	Solid	300.0	5608
LCSD 880-5608/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	5608
890-983-11 MS	FS01	Soluble	Solid	300.0	5608
890-983-11 MSD	FS01	Soluble	Solid	300.0	5608

QC Association Summary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-983-1
SDG: TE012920126

HPLC/IC

Analysis Batch: 5617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-983-4	FS18	Soluble	Solid	300.0	5615
890-983-5	FS15	Soluble	Solid	300.0	5615
890-983-6	FS14	Soluble	Solid	300.0	5615
890-983-7	FS13	Soluble	Solid	300.0	5615
890-983-8	FS12	Soluble	Solid	300.0	5615
890-983-9	FS11	Soluble	Solid	300.0	5615
890-983-10	FS10	Soluble	Solid	300.0	5615
MB 880-5615/1-A	Method Blank	Soluble	Solid	300.0	5615
LCS 880-5615/2-A	Lab Control Sample	Soluble	Solid	300.0	5615
LCSD 880-5615/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	5615
890-983-6 MS	FS14	Soluble	Solid	300.0	5615
890-983-6 MSD	FS14	Soluble	Solid	300.0	5615

Lab Chronicle

Client: WSP USA Inc.
P1orectjSite: / iB g EEd Unit 4y0

Job ID: 890-986-4
SD5 : Gg04T9T04T2

Client Sample ID: FS06
Date Collecte7: - / 2020MMM11
Date 4eceiRe7: - / 2020MMv:0T

Lab Sample ID: 89- 59815M
x atrid: Soli7

Arep yBpe	Patch yBpe	Patch x etho7	4zn	Dilztion Factor	Patch 3zmber	Arepare7 or s nalBNe7	s nalBut	Lab
GotaljNA	P1ep	y06y			y204	03jT6jT4 47:49	KL	XgN MID
GotaljNA	Analdsis	80T4/		4	yy32	03jT7jT4 0T:Ty	KL	XgN MID
GotaljNA	P1ep	804yNM P1ep			y234	03jT2jT4 42:48	DM	XgN MID
GotaljNA	Analdsis	804y/ NM		4	y369	03jT8jT4 4T:70	AJ	XgN MID
Soluble	Leach	DI Leach			y722	03jT6jT4 43:00	CH	XgN MID
Soluble	Analdsis	600.0		40	yyyy	03jT7jT4 T0:04	SC	XgN MID

Client Sample ID: FS0-
Date Collecte7: - / 2020MMMT6
Date 4eceiRe7: - / 2020MMv:0T

Lab Sample ID: 89- 59815O
x atrid: Soli7

Arep yBpe	Patch yBpe	Patch x etho7	4zn	Dilztion Factor	Patch 3zmber	Arepare7 or s nalBNe7	s nalBut	Lab
GotaljNA	P1ep	y06y			y204	03jT6jT4 47:49	KL	XgN MID
GotaljNA	Analdsis	80T4/		4	yy32	03jT7jT4 0T:72	KL	XgN MID
GotaljNA	P1ep	804yNM P1ep			y234	03jT2jT4 42:48	DM	XgN MID
GotaljNA	Analdsis	804y/ NM		4	y369	03jT8jT4 46:7T	AJ	XgN MID
Soluble	Leach	DI Leach			y722	03jT6jT4 43:00	CH	XgN MID
Soluble	Analdsis	600.0		4	yyyy	03jT7jT4 T0:02	SC	XgN MID

Client Sample ID: FSM9
Date Collecte7: - / 2020MM0:1M
Date 4eceiRe7: - / 2020MMv:0T

Lab Sample ID: 89- 59815I
x atrid: Soli7

Arep yBpe	Patch yBpe	Patch x etho7	4zn	Dilztion Factor	Patch 3zmber	Arepare7 or s nalBNe7	s nalBut	Lab
GotaljNA	P1ep	y06y			y204	03jT6jT4 47:49	KL	XgN MID
GotaljNA	Analdsis	80T4/		4	yy32	03jT7jT4 06:03	KL	XgN MID
GotaljNA	P1ep	804yNM P1ep			y234	03jT2jT4 42:48	DM	XgN MID
GotaljNA	Analdsis	804y/ NM		4	y369	03jT8jT4 47:06	AJ	XgN MID
Soluble	Leach	DI Leach			y722	03jT6jT4 43:00	CH	XgN MID
Soluble	Analdsis	600.0		4	yyyy	03jT7jT4 T0:44	SC	XgN MID

Client Sample ID: FSM8
Date Collecte7: - / 2020MM0:10
Date 4eceiRe7: - / 2020MMv:0T

Lab Sample ID: 89- 59815T
x atrid: Soli7

Arep yBpe	Patch yBpe	Patch x etho7	4zn	Dilztion Factor	Patch 3zmber	Arepare7 or s nalBNe7	s nalBut	Lab
GotaljNA	P1ep	y06y			y204	03jT6jT4 47:49	KL	XgN MID
GotaljNA	Analdsis	80T4/		4	yy32	03jT7jT4 06:T8	KL	XgN MID
GotaljNA	P1ep	804yNM P1ep			y234	03jT2jT4 42:48	DM	XgN MID
GotaljNA	Analdsis	804y/ NM		4	y369	03jT8jT4 47:T7	AJ	XgN MID
Soluble	Leach	DI Leach			y24y	03jT6jT4 49:46	SC	XgN MID
Soluble	Analdsis	600.0		4	y243	03jT7jT4 48:74	SC	XgN MID

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Lab Chronicle

Client: WSP USA Inc. Job ID: 890-986-4
P1orectjSite: / iB g EEd Unit 4y0 SD5 : Gg 04T9T04T2

Client Sample ID: FSM6 Lab Sample ID: 89- 59815 6

Date Collecte7: - / 2020MM0:19 x atrid: Soli7
Date 4 eceiRe7: - / 2020MMv:0T

Arep yBpe	Patch yBpe	Patch x etho7	4 z n	Dilztion Factor	Patch 3 z mber	Arepare7 or s nalBNe7	s nalBut	Lab
GotaljNA	P1ep	y06y			y204	03jT6jT4 47:49	KL	XgN MID
GotaljNA	Analdsis	80T4/		4	yy32	03jT7jT4 06:78	KL	XgN MID
GotaljNA	P1ep	804yNM P1ep			y234	03jT2jT4 42:48	DM	XgN MID
GotaljNA	Analdsis	804y/ NM		4	y369	03jT8jT4 47:77	AJ	XgN MID
Soluble	Leach	DI Leach			y24y	03jT6jT4 49:46	SC	XgN MID
Soluble	Analdsis	600.0		4	y243	03jT7jT4 48:72	SC	XgN MID

Client Sample ID: FSMT Lab Sample ID: 89- 59815v

Date Collecte7: - / 2020MM0:TM x atrid: Soli7
Date 4 eceiRe7: - / 2020MMv:0T

Arep yBpe	Patch yBpe	Patch x etho7	4 z n	Dilztion Factor	Patch 3 z mber	Arepare7 or s nalBNe7	s nalBut	Lab
GotaljNA	P1ep	y06y			y204	03jT6jT4 47:49	KL	XgN MID
GotaljNA	Analdsis	80T4/		4	yy32	03jT7jT4 07:09	KL	XgN MID
GotaljNA	P1ep	804yNM P1ep			y234	03jT2jT4 42:48	DM	XgN MID
GotaljNA	Analdsis	804y/ NM		4	y369	03jT8jT4 4y:0y	AJ	XgN MID
Soluble	Leach	DI Leach			y24y	03jT6jT4 49:46	SC	XgN MID
Soluble	Analdsis	600.0		4	y243	03jT7jT4 48:yT	SC	XgN MID

Client Sample ID: FSM1 Lab Sample ID: 89- 59815 7

Date Collecte7: - / 2020MM1:MM x atrid: Soli7
Date 4 eceiRe7: - / 2020MMv:0T

Arep yBpe	Patch yBpe	Patch x etho7	4 z n	Dilztion Factor	Patch 3 z mber	Arepare7 or s nalBNe7	s nalBut	Lab
GotaljNA	P1ep	y06y			y204	03jT6jT4 47:49	KL	XgN MID
GotaljNA	Analdsis	80T4/		4	yy32	03jT7jT4 07:60	KL	XgN MID
GotaljNA	P1ep	804yNM P1ep			y234	03jT2jT4 42:48	DM	XgN MID
GotaljNA	Analdsis	804y/ NM		4	y369	03jT8jT4 4y:T2	AJ	XgN MID
Soluble	Leach	DI Leach			y24y	03jT6jT4 49:46	SC	XgN MID
Soluble	Analdsis	600.0		y	y243	03jTyjT4 T4:4y	SC	XgN MID

Client Sample ID: FSM0 Lab Sample ID: 89- 59815 8

Date Collecte7: - / 2020MM1:MT x atrid: Soli7
Date 4 eceiRe7: - / 2020MMv:0T

Arep yBpe	Patch yBpe	Patch x etho7	4 z n	Dilztion Factor	Patch 3 z mber	Arepare7 or s nalBNe7	s nalBut	Lab
GotaljNA	P1ep	y06y			y204	03jT6jT4 47:49	KL	XgN MID
GotaljNA	Analdsis	80T4/		4	yy32	03jT7jT4 07:y0	KL	XgN MID
GotaljNA	P1ep	804yNM P1ep			y234	03jT2jT4 42:48	DM	XgN MID
GotaljNA	Analdsis	804y/ NM		4	y369	03jT8jT4 4y:73	AJ	XgN MID
Soluble	Leach	DI Leach			y24y	03jT6jT4 49:46	SC	XgN MID
Soluble	Analdsis	600.0		4	y243	03jT7jT4 49:43	SC	XgN MID

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Lab Chronicle

Client: WSP USA Inc.
P1orectjSite: / iB g EEd Unit 4y0

Job ID: 890-986-4
SD5 : Gg 04T9T04T2

Client Sample ID: FSMM
Lab Sample ID: 89- 59815 9
Date Collecte7: - / 2020MM1:M8
x atrid: Soli7
Date 4 eceiRe7: - / 2020MMv:0T

Arep yBpe	Patch yBpe	Patch x etho7	4zn	Dilztion Factor	Patch 3zmber	Arepare7 or s nalBNe7	s nalBut	Lab
GotaljNA	P1ep	y06y			y204	03jT6jT4 47:49	KL	XgN MID
GotaljNA	Analdsis	80T4/		4	yy32	03jT7jT4 0y:44	KL	XgN MID
GotaljNA	P1ep	804yNM P1ep			y234	03jT2jT4 42:48	DM	XgN MID
GotaljNA	Analdsis	804y/ NM		4	y369	03jT8jT4 42:03	AJ	XgN MID
Soluble	Leach	DI Leach			y24y	03jT6jT4 49:46	SC	XgN MID
Soluble	Analdsis	600.0		4	y243	03jT7jT4 49:62	SC	XgN MID

Client Sample ID: FSM-
Lab Sample ID: 89- 59815M-
Date Collecte7: - / 2020MM1:0M
x atrid: Soli7
Date 4 eceiRe7: - / 2020MMv:0T

Arep yBpe	Patch yBpe	Patch x etho7	4zn	Dilztion Factor	Patch 3zmber	Arepare7 or s nalBNe7	s nalBut	Lab
GotaljNA	P1ep	y06y			y204	03jT6jT4 47:49	KL	XgN MID
GotaljNA	Analdsis	80T4/		4	yy32	03jT7jT4 0y:6T	KL	XgN MID
GotaljNA	P1ep	804yNM P1ep			y234	03jT2jT4 42:48	DM	XgN MID
GotaljNA	Analdsis	804y/ NM		4	y369	03jT8jT4 42:T8	AJ	XgN MID
Soluble	Leach	DI Leach			y24y	03jT6jT4 49:46	SC	XgN MID
Soluble	Analdsis	600.0		4	y243	03jT7jT4 49:74	SC	XgN MID

Client Sample ID: FS- M
Lab Sample ID: 89- 59815MM
Date Collecte7: - / 2020MMT:T0
x atrid: Soli7
Date 4 eceiRe7: - / 2020MMv:0T

Arep yBpe	Patch yBpe	Patch x etho7	4zn	Dilztion Factor	Patch 3zmber	Arepare7 or s nalBNe7	s nalBut	Lab
GotaljNA	P1ep	y06y			y204	03jT6jT4 47:49	KL	XgN MID
GotaljNA	Analdsis	80T4/		4	yy32	03jT7jT4 02:yy	KL	XgN MID
GotaljNA	P1ep	804yNM P1ep			y234	03jT2jT4 42:48	DM	XgN MID
GotaljNA	Analdsis	804y/ NM		4	y369	03jT8jT4 43:09	AJ	XgN MID
Soluble	Leach	DI Leach			y208	03jT6jT4 42:66	SC	XgN MID
Soluble	Analdsis	600.0		4	y242	03jT7jT4 T4:09	SC	XgN MID

Client Sample ID: FS- 0
Lab Sample ID: 89- 59815M0
Date Collecte7: - / 2020MMT:TT
x atrid: Soli7
Date 4 eceiRe7: - / 2020MMv:0T

Arep yBpe	Patch yBpe	Patch x etho7	4zn	Dilztion Factor	Patch 3zmber	Arepare7 or s nalBNe7	s nalBut	Lab
GotaljNA	P1ep	y06y			y204	03jT6jT4 47:49	KL	XgN MID
GotaljNA	Analdsis	80T4/		4	yy32	03jT7jT4 03:4y	KL	XgN MID
GotaljNA	P1ep	804yNM P1ep			y234	03jT2jT4 42:48	DM	XgN MID
GotaljNA	Analdsis	804y/ NM		4	y369	03jT8jT4 43:60	AJ	XgN MID
Soluble	Leach	DI Leach			y208	03jT6jT4 42:66	SC	XgN MID
Soluble	Analdsis	600.0		4	y242	03jT7jT4 T4:Ty	SC	XgN MID

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Lab Chronicle

Client: WSP USA Inc.
P1orectjSite: / iB g EEd Unit 4y0

Job ID: 890-986-4
SD5 : Gg 04T9T04T2

Client Sample ID: FS- 1

Lab Sample ID: 89- 59815M1

Date Collecte7: - / 2020MMT:T/
Date 4 eceiRe7: - / 2020MMv:0T
x atrid: Soli7

Arep yBpe	Patch yBpe	Patch x etho7	4zn	Dilztion Factor	Patch 3zmber	Arepare7 or s nalBNe7	s nalBut	Lab
GotaljNA	P1ep	y06y			y204	03jT6jT4 47:49	KL	XgN MID
GotaljNA	Analdsis	80T4/		4	yy32	03jT7jT4 03:62	KL	XgN MID
GotaljNA	P1ep	804yNM P1ep			y234	03jT2jT4 42:48	DM	XgN MID
GotaljNA	Analdsis	804y/ NM		4	y369	03jT8jT4 43:y4	AJ	XgN MID
Soluble	Leach	DI Leach			y208	03jT6jT4 42:66	SC	XgN MID
Soluble	Analdsis	600.0		4	y242	03jT7jT4 T4:64	SC	XgN MID

Client Sample ID: FS- T

Lab Sample ID: 89- 59815MT

Date Collecte7: - / 2020MMT:T9
Date 4 eceiRe7: - / 2020MMv:0T
x atrid: Soli7

Arep yBpe	Patch yBpe	Patch x etho7	4zn	Dilztion Factor	Patch 3zmber	Arepare7 or s nalBNe7	s nalBut	Lab
GotaljNA	P1ep	y06y			y204	03jT6jT4 47:49	KL	XgN MID
GotaljNA	Analdsis	80T4/		4	yy32	03jT7jT4 03:y3	KL	XgN MID
GotaljNA	P1ep	804yNM P1ep			y234	03jT2jT4 42:48	DM	XgN MID
GotaljNA	Analdsis	804y/ NM		4	y369	03jT8jT4 48:4T	AJ	XgN MID
Soluble	Leach	DI Leach			y208	03jT6jT4 42:66	SC	XgN MID
Soluble	Analdsis	600.0		4	y242	03jT7jT4 T4:62	SC	XgN MID

Client Sample ID: FS- 6

Lab Sample ID: 89- 59815M6

Date Collecte7: - / 2020MMT:6M
Date 4 eceiRe7: - / 2020MMv:0T
x atrid: Soli7

Arep yBpe	Patch yBpe	Patch x etho7	4zn	Dilztion Factor	Patch 3zmber	Arepare7 or s nalBNe7	s nalBut	Lab
GotaljNA	P1ep	y06y			y204	03jT6jT4 47:49	KL	XgN MID
GotaljNA	Analdsis	80T4/		4	yy32	03jT7jT4 08:48	KL	XgN MID
GotaljNA	P1ep	804yNM P1ep			y234	03jT2jT4 42:48	DM	XgN MID
GotaljNA	Analdsis	804y/ NM		4	y369	03jT8jT4 48:66	AJ	XgN MID
Soluble	Leach	DI Leach			y208	03jT6jT4 42:66	SC	XgN MID
Soluble	Analdsis	600.0		y	y242	03jTyjT4 T0:72	SC	XgN MID

LaboratorB 4 eferenceu:

XgN MID , gu1o=ins Xencof MiElanEf 4T44 W. Flo1Ea Avef MiElanEf GX 39304f GgL (76T)307-y770

gu1o=ins Xencof Ca1lsbaE

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-986-4
P1orectjSite: / iB g EEd Unit 4y0 SD5 : Gg 04T9T04T2

Laboratory: Eurofins Xenco, Midland

Unless othe1wise noteE, all analdtes fo1this labo1ato1d we1e cove1eE unEe1each acc1eEitationjce1tification below.

Authority	Program	Identification Number	Expiration Date
Gexas	L g 3AP	G407N07700-T0-T4	02-60-TT

Ghe followinB analdtes a1e incluEeE in this 1epo1t, but the labo1ato1d is not ce1tifiE bd the Bove1ninB autho1itd. Ghis list mad incluEe analdtes fo1which the aBencd Eoes not offe1 ce1tification.

Analdsis MethoE	P1ep MethoE	Mat1ix	Analdte
804y/ L M	804yL M P1ep	SoliE	Gotal GPH
80T4/	y06y	SoliE	Gotal / GgX

Method Summary

1 Ct en t WS PWU leAc
Sroji An/Wni : Blg Tddy Peln450

Job ID: 890-986-4
WD. : GT04E9E04E2

Method	Method Description	Protocol	Laboratory
80E4B	aoCCnC mrgCelA1op uosed( ). 1X	Wt 8V2	NTM RID
8045B MR	Dli (i C3 Cegi mrgCelA( )D3 mX). 1X	Wt 8V2	NTM RID
600c0	Ueloe(, loe 1hrop CnogrCuhy	R1Ut t	NTM RID
5065	1 Cc(i d Wy(ni p Ssrgi Ced GrCu	Wt 8V2	NTM RID
8045MR Sri u	RlAroi xmCAnloe	Wt 8V2	NTM RID
DI Li OAh	Di loelzi d t Cni r Li OAhleg SroAi dsri	UWGR	NTM RID

Protocol References:

UWGR = UWGR leni reCnloeCC

R1Ut t = "Ri rnod(For 1hi p lACCUeCCy(l(mf t Cni r Ued t C(ni (", TSU-200/V-79-0E0, R CrAh 4986 Ued Wsb(i qsi en3i vl(loe(c

Wt 8V2 = "Gi (nRi rnod(For TvOSsCnleg WbCCd t C(ni , Shy(lACCCl hi p lACCCRi rnod(", Ghlrd Tdlnloe, Movi p bi r 4982 Ued In(PudCni (c

Laboratory References:

NTM RID = Tsrofle(Ni eAo, RIdCCed, 4E44 t cFCrldOUvi , RIdCCed, GN 79704, GTL)V6EX70V-5VV0

Sample Summary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-983-1
SDG: TE012920126

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-983-1	FS25	Solid	07/22/21 11:33	07/22/21 16:24	- 4
890-983-2	FS20	Solid	07/22/21 11:45	07/22/21 16:24	- 4
890-983-3	FS19	Solid	07/22/21 12:31	07/22/21 16:24	- 4
890-983-4	FS18	Solid	07/22/21 12:32	07/22/21 16:24	- 4
890-983-5	FS15	Solid	07/22/21 12:39	07/22/21 16:24	- 4
890-983-6	FS14	Solid	07/22/21 12:41	07/22/21 16:24	- 4
890-983-7	FS13	Solid	07/22/21 13:11	07/22/21 16:24	- 4
890-983-8	FS12	Solid	07/22/21 13:14	07/22/21 16:24	- 4
890-983-9	FS11	Solid	07/22/21 13:18	07/22/21 16:24	- 4
890-983-10	FS10	Solid	07/22/21 13:21	07/22/21 16:24	- 4
890-983-11	FS01	Solid	07/22/21 14:42	07/22/21 16:24	- 4
890-983-12	FS02	Solid	07/22/21 14:44	07/22/21 16:24	- 4
890-983-13	FS03	Solid	07/22/21 14:47	07/22/21 16:24	- 4
890-983-14	FS04	Solid	07/22/21 14:49	07/22/21 16:24	- 4
890-983-15	FS05	Solid	07/22/21 14:51	07/22/21 16:24	- 4

Chain of Custody

Work Order No: _____

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)
www.xenco.com Page 1 of 2

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	WSP USA	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	522 W. Mermod St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	Jeremy.Hill@wsp.com, Dan.Moir@wsp.com

Work Order Comments

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

Project Name:	Big Eddy Unit 150	Turn Around	
Project Number:	TE01892/1006	Routine ☐	
P.O. Number:	Inv. NRM2034854885	Rush: 3 dy	
Sampler's Name:	Jeremy Hill	Due Date: 7/23/21	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	9.6/9.4	Thermometer ID	TMW-007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
FS25	S	7/22/21	1133	4'	1	X	X	X
FS20			1145					
FS17			1231					
FS18			1232					
FS15			1239					
FS14			1241					
FS13			1311					
FS12			1314					
FS11			1318					
FS10			1321					

890-983 Chain of Custody

Work Order Notes

CC
108074/001
AFE
EW.2021.01562.EXP.01

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

Sample Comments

Composite

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		7-22-21 1624			
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Chain of Custody

Work Order No: _____

XENCO LABORATORIES

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

www.xenco.com Page 2 of 2

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	WSP USA	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	522 W. Mermod St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	Jeremy.Hill@wsp.com, Dan.Moir@wsp.com

Work Order Comments

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

Project Name:	Big Eddy Unit 150	Turn Around	
Project Number:	7E01992006	Routine	☐
P.O. Number:	Inc NRM2034854885	Rush:	3 days
Sampler's Name:	Jeremy Hill	Due Date:	7/28/21

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	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	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
FS01	S	7/22/21	1443	4'	1	X	X	X
FS02			1444					
FS03			1447					
FS04			1449					
FS05			1451					

ANALYSIS REQUEST

Work Order Notes

CC
168074/001
AFE
EW 2021.0156 Exp. 21

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

Sample Comments

composite

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		7-22-21 1624			
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-983-1
SDG Number: TE012920126

Login Number: 982
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: 890-983-1
SDG Number: TE012920126

Login Number: 982
List Number: 3
Creator: Phillips, Kerianna

List Source: Eurofins Xenco, Midland
List Creation: 07/32/31 03:08 PM

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

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-985-1
Laboratory Sample Delivery Group: TE012920126
Client Project/Site: Big Eddy Unit 150

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

Attn: Dan Moir

JKramer

Authorized for release by:
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Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Laboratory Job ID: 890-985-1
SDG: TE012920126

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-985-1
Project/Site: Big Eddy Unit 150 SDG: TE012920126

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-985-1
SDG: TE012920126

Job ID: 890-985-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-985-1

Receipt
The samples were received on 7/23/2021 1:08 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 6.0°C

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

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

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

Client Sample Results

1 Ct en t WS PWU leAc
Sroji AnWni : Blg Tddy Peln460

Job ID: 890-986-4
WD. : GT04E9E04E2

Client Sample ID: FS24

Date Collected: 07/23/21 10:17
Date Received: 07/23/21 13:08
Sample Depth: 4 - 8

Lab Sample ID: 890-985-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Bi e5i ei	z0d00E00	P	0d00E00		< g/mg		0K/E7/E4 44:00	0K/E2/E4 43:68	4
GbQi ei	z0d00E00	P	0d00E00		< g/mg		0K/E7/E4 44:00	0K/E2/E4 43:68	4
TrhyQi e5i ei	z0d00E00	P	0d00E00		< g/mg		0K/E7/E4 44:00	0K/E2/E4 43:68	4
< -XyCei & p-XyCei	z0d00704	P	0d00704		< g/mg		0K/E7/E4 44:00	0K/E2/E4 43:68	4
o-XyCei	z0d00E00	P	0d00E00		< g/mg		0K/E7/E4 44:00	0K/E2/E4 43:68	4
XyCei s, GbraC	z0d00704	P	0d00704		< g/mg		0K/E7/E4 44:00	0K/E2/E4 43:68	4
GbraCBGTX	z0d00704	P	0d00704		< g/mg		0K/E7/E4 44:00	0K/E2/E4 43:68	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*75 - 1+5*	*5703l4031 11/55*	*5703l2031 1+/: 9*	*1*
1,4-Difluorobenzene (Surr)	*155*		*75 - 1+5*	*5703l4031 11/55*	*5703l2031 1+/: 9*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
. asoQei Raegi OrgaelAs (. RO)-1 2-1 40	z60d0	P	60d0		< g/mg		0K/E2/E4 09:07	0K/E2/E4 4K:40	4
Dli si CRaegi OrgaelAs (Ovi r 1 40-1 E8)	z60d0	P	60d0		< g/mg		0K/E2/E4 09:07	0K/E2/E4 4K:40	4
OlCRaegi OrgaelAs (Ovi r 1 E8-1 32)	z60d0	P	60d0		< g/mg		0K/E2/E4 09:07	0K/E2/E4 4K:40	4
GbraCGSH	z60d0	P	60d0		< g/mg		0K/E2/E4 09:07	0K/E2/E4 4K:40	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*75 - 1+5*	*5703l2031 56/54*	*5703l2031 17/15*	*1*
o-8erThenpl	*69*		*75 - 1+5*	*5703l2031 56/54*	*5703l2031 17/15*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**149**		6d00		< g/mg			0K/E2/E4 4K:E2	4

Client Sample ID: FS22

Date Collected: 07/23/21 10:02
Date Received: 07/23/21 13:08
Sample Depth: 4 - 8

Lab Sample ID: 890-985-2

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Bi e5i ei	z0d00E00	P	0d00E00		< g/mg		0K/E7/E4 44:00	0K/E2/E4 47:48	4
GbQi ei	z0d00E00	P	0d00E00		< g/mg		0K/E7/E4 44:00	0K/E2/E4 47:48	4
TrhyQi e5i ei	z0d00E00	P	0d00E00		< g/mg		0K/E7/E4 44:00	0K/E2/E4 47:48	4
< -XyCei & p-XyCei	z0d00704	P	0d00704		< g/mg		0K/E7/E4 44:00	0K/E2/E4 47:48	4
o-XyCei	z0d00E00	P	0d00E00		< g/mg		0K/E7/E4 44:00	0K/E2/E4 47:48	4
XyCei s, GbraC	z0d00704	P	0d00704		< g/mg		0K/E7/E4 44:00	0K/E2/E4 47:48	4
GbraCBGTX	z0d00704	P	0d00704		< g/mg		0K/E7/E4 44:00	0K/E2/E4 47:48	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*11:*		*75 - 1+5*	*5703l4031 11/55*	*5703l2031 14/19*	*1*
1,4-Difluorobenzene (Surr)	*155*		*75 - 1+5*	*5703l4031 11/55*	*5703l2031 14/19*	*1*

Client Sample Results

1 Ct en t WS PWU leAc
Sroji An/Wri : Blg Tddy Peln460

Job ID: 890-986-4
WD. : GT04E9E04E2

Client Sample ID: FS22

Date Collected: 07/23/21 10:02
Date Received: 07/23/21 13:08
Sample Depth: 4 - 8

Lab Sample ID: 890-985-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
. asoCei Raegi OrgaelAs (. RO)-1 2-1 40	z79c9	P	79c9		< g/mg		0K/E2/E4 09:07	0K/E2/E4 4K:34	4
Dli si CRaegi OrgaelAs (Ovi r 1 40-1 E8)	z79c9	P	79c9		< g/mg		0K/E2/E4 09:07	0K/E2/E4 4K:34	4
OICRaegi OrgaelAs (Ovi r 1 E8-1 32)	z79c9	P	79c9		< g/mg		0K/E2/E4 09:07	0K/E2/E4 4K:34	4
GbraCGSH	z79c9	P	79c9		< g/mg		0K/E2/E4 09:07	0K/E2/E4 4K:34	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*9:*		*75 - 1+5*	*5703203 1 56/54*	*5703203 1 17/+1*	*1*
o-8erThenpl	*151*		*75 - 1+5*	*5703203 1 56/54*	*5703203 1 17/+1*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**24.2**		7c92		< g/mg			0K/E2/E4 4K:3E	4

Client Sample ID: FS21

Date Collected: 07/23/21 11:51
Date Received: 07/23/21 13:08
Sample Depth: - 5.5

Lab Sample ID: 890-985-3
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Bi e5i ei	z0d00E00	P	0d00E00		< g/mg		0K/E7/E4 44:00	0K/E2/E4 47:39	4
GoCi ei	z0d00E00	P	0d00E00		< g/mg		0K/E7/E4 44:00	0K/E2/E4 47:39	4
TrhyCi e5i ei	z0d00E00	P	0d00E00		< g/mg		0K/E7/E4 44:00	0K/E2/E4 47:39	4
< -XyCei & p-XyCei	z0d00704	P	0d00704		< g/mg		0K/E7/E4 44:00	0K/E2/E4 47:39	4
o-XyCei	z0d00E00	P	0d00E00		< g/mg		0K/E7/E4 44:00	0K/E2/E4 47:39	4
XyCei s, GbraC	z0d00704	P	0d00704		< g/mg		0K/E7/E4 44:00	0K/E2/E4 47:39	4
GbraCBGTX	z0d00704	P	0d00704		< g/mg		0K/E7/E4 44:00	0K/E2/E4 47:39	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*1+3*	*S1y*	*75 - 1+5*	*5703403 1 11/55*	*5703203 1 14/+6*	*1*
1,4-Difluorobenzene (Surr)	*153*		*75 - 1+5*	*5703403 1 11/55*	*5703203 1 14/+6*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
. asoCei Raegi OrgaelAs (. RO)-1 2-1 40	z60d0	P	60d0		< g/mg		0K/E2/E4 09:07	0K/E2/E4 48:4E	4
Dli si CRaegi OrgaelAs (Ovi r 1 40-1 E8)	z60d0	P	60d0		< g/mg		0K/E2/E4 09:07	0K/E2/E4 48:4E	4
OICRaegi OrgaelAs (Ovi r 1 E8-1 32)	z60d0	P	60d0		< g/mg		0K/E2/E4 09:07	0K/E2/E4 48:4E	4
GbraCGSH	z60d0	P	60d0		< g/mg		0K/E2/E4 09:07	0K/E2/E4 48:4E	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*9:*		*75 - 1+5*	*5703203 1 56/54*	*5703203 1 19/13*	*1*
o-8erThenpl	*: 7*	*S1-*	*75 - 1+5*	*5703203 1 56/54*	*5703203 1 19/13*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**438**		7c99		< g/mg			0K/E2/E4 4K:3K	4

Client Sample Results

1 Ct en t WS PWU leAc
Sroji AnWni : Blg Tddy Peln460

Job ID: 890-986-4
WD. : GT04E9E04E2

Client Sample ID: FS16

Date Collected: 07/23/21 11:55
Date Received: 07/23/21 13:08
Sample Depth: - 5.5

Lab Sample ID: 890-985-4

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Bi e5i ei	z0d00499	P	0d00499		< g/mg		0K/E7/E4 44:00	0K/E2/E4 47:69	4
GoCi ei	z0d00499	P	0d00499		< g/mg		0K/E7/E4 44:00	0K/E2/E4 47:69	4
TrhyCi e5i ei	z0d00499	P	0d00499		< g/mg		0K/E7/E4 44:00	0K/E2/E4 47:69	4
< -XyCei & p-XyCei	z0d00398	P	0d00398		< g/mg		0K/E7/E4 44:00	0K/E2/E4 47:69	4
o-XyCei	z0d00499	P	0d00499		< g/mg		0K/E7/E4 44:00	0K/E2/E4 47:69	4
XyCei s, GonaC	z0d00398	P	0d00398		< g/mg		0K/E7/E4 44:00	0K/E2/E4 47:69	4
GonaCBGTX	z0d00398	P	0d00398		< g/mg		0K/E7/E4 44:00	0K/E2/E4 47:69	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*159*		*75 - 1+5*	*570340 31 11/55*	*570320 31 14/: 6*	*1*
1,4-Difluorobenzene (Surr)	*15+*		*75 - 1+5*	*570340 31 11/55*	*570320 31 14/: 6*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
. asoCei Raegi OrgaelAs (. RO)-1 2-1 40	z60d0	P	60d0		< g/mg		0K/E2/E4 09:07	0K/E2/E4 48:33	4
Dli si CRaegi OrgaelAs (Ovi r 1 40-1 E8)	z60d0	P	60d0		< g/mg		0K/E2/E4 09:07	0K/E2/E4 48:33	4
OICRaegi OrgaelAs (Ovi r 1 E8-1 32)	z60d0	P	60d0		< g/mg		0K/E2/E4 09:07	0K/E2/E4 48:33	4
GonaCGSH	z60d0	P	60d0		< g/mg		0K/E2/E4 09:07	0K/E2/E4 48:33	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*9:*		*75 - 1+5*	*570320 31 56/54*	*570320 31 19/++*	*1*
o-8erThenpl	*67*		*75 - 1+5*	*570320 31 56/54*	*570320 31 19/++*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1130**		6d07		< g/mg			0K/E2/E4 4K:67	4

Turofles Xi eAo, 1 arCbad

Surrogate Summary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 130

Job ID: 890-983-1
SDG: TE012920126

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-983-1	7S25	115	100
890-983-2	7S22	113	100
890-983-+	7S21	1+2 S1F	102
890-983-5	7S16	108	10+
MCS 880-3603/1-A	M4b Control S4L ale	99	105
MCSD 880-3603/2-A	M4b Control S4L ale Dpa	111	10m
u B 880-3603/3-A	u ethod Bl4nk	123	9+

Surrogate Legend

B7B = 5-BroL oflporobenzene (Sprr)
D7BZ = 1,5-Diflporobenzene (Sprr)

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-983-1	7S25	85	98
890-983-2	7S22	83	101
890-983-+	7S21	83	3mS1-
890-983-5	7S16	83	9m
MCS 880-3631/2-A	M4b Control S4L ale	99	110
MCSD 880-3631/+-A	M4b Control S4L ale Dpa	98	109
u B 880-3631/1-A	u ethod Bl4nk	83	100

Surrogate Legend

1Cs = 1-Chlorooct4ne
s TPX = o-Terahenyl

QC Sample Results

1 Ct en t WS PWU leAc
Sroji An/Wri : Blg Tddy Peln460

Job ID: 890-986-4
WD. : GT04E9E04E2

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-5605/5-A
Matrix: Solid
Analysis Batch: 5650

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5605

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Bi e5i ei	z0d00E00	P	0d00E00		< g/mg		0K/E7/E4 44:00	0K/E2/E4 44:67	4
GoCi ei	z0d00E00	P	0d00E00		< g/mg		0K/E7/E4 44:00	0K/E2/E4 44:67	4
TruyCi e5i ei	z0d00E00	P	0d00E00		< g/mg		0K/E7/E4 44:00	0K/E2/E4 44:67	4
< -hyCei X &-hyCei	z0d00700	P	0d00700		< g/mg		0K/E7/E4 44:00	0K/E2/E4 44:67	4
o-hyCei	z0d00E00	P	0d00E00		< g/mg		0K/E7/E4 44:00	0K/E2/E4 44:67	4
hyCei psGon C	z0d00700	P	0d00700		< g/mg		0K/E7/E4 44:00	0K/E2/E4 44:67	4
Gon CBGTh	z0d00700	P	0d00700		< g/mg		0K/E7/E4 44:00	0K/E2/E4 44:67	4

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*126*		*70 - 130*	*07/24/21 1190 0*	*07/2: /21 1196 4*	*1*
1,4-Difluorobenzene (Surr)	*53*		*70 - 130*	*07/24/21 1190 0*	*07/2: /21 1196 4*	*1*

Lab Sample ID: LCS 880-5605/1-A
Matrix: Solid
Analysis Batch: 5650

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5605

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Bi e5i ei			0d400	0d4066		< g/mg		402	K0 - 4a0		
GoCi ei			0d400	0d09844		< g/mg		98	K0 - 4a0		
TruyCi e5i ei			0d400	0d09207		< g/mg		92	K0 - 4a0		
< -hyCei X &-hyCei			0dE00	0d49K8		< g/mg		99	K0 - 4a0		
o-hyCei			0d400	0d09289		< g/mg		9K	K0 - 4a0		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*55*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 880-5605/2-A
Matrix: Solid
Analysis Batch: 5650

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 5605

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bi e5i ei			0d400	0d4078		< g/mg		406	K0 - 4a0	4	a6
GoCi ei			0d400	0d09287		< g/mg		9K	K0 - 4a0	4	a6
TruyCi e5i ei			0d400	0d09K0K		< g/mg		9K	K0 - 4a0	4	a6
< -hyCei X &-hyCei			0dE00	0d499a		< g/mg		400	K0 - 4a0	4	a6
o-hyCei			0d400	0d09888		< g/mg		99	K0 - 4a0	E	a6

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

T3roRep hi eAos1 , rCb, d

QC Sample Results

1Œen t WS PWU leAc
Sroji AnWni : Blg Tddy Peln460

Job ID: 890-986-4
WD. : GT04E9E04E2

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

Lab Sample ID: MB 880-5651/1-A
Matrix: Solid
Analysis Batch: 5658

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5651

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
. , poŒei O, egi (rg, elAp). O(v-1 2-1 40	z60c0	P	60c0		< g/mg		0K/E2/E4 09:07	0K/E2/E4 4E:aE	4
Dli pi CO, egi (rg, elAp)(H r 1 40-1 E8v	z60c0	P	60c0		< g/mg		0K/E2/E4 09:07	0K/E2/E4 4E:aE	4
(ICO, egi (rg, elAp)(H r 1 E8-1 a2v	z60c0	P	60c0		< g/mg		0K/E2/E4 09:07	0K/E2/E4 4E:aE	4
Gon, CGSf	z60c0	P	60c0		< g/mg		0K/E2/E4 09:07	0K/E2/E4 4E:aE	4

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-8 Cloroohd ne	*a6*		*70 - 130*	*07/2: /21 05904*	*07/2: /21 12982*	*1*
o-TerpCenyl	*100*		*70 - 130*	*07/2: /21 05904*	*07/2: /21 12982*	*1*

Lab Sample ID: LCS 880-5651/2-A
Matrix: Solid
Analysis Batch: 5658

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5651

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
. , poŒei O, egi (rg, elAp). O(v-1 2-1 40			4000	824c8		< g/mg		82	K0 - 4a0		
Dli pi CO, egi (rg, elAp)(H r 1 40-1 E8v			4000	968c6		< g/mg		92	K0 - 4a0		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-8 Cloroohd ne	*55*		*70 - 130*
o-TerpCenyl	*110*		*70 - 130*

Lab Sample ID: LCSD 880-5651/3-A
Matrix: Solid
Analysis Batch: 5658

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 5651

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
. , poŒei O, egi (rg, elAp). O(v-1 2-1 40			4000	9E2c4		< g/mg		9a	K0 - 4a0	K	E0
Dli pi CO, egi (rg, elAp)(H r 1 40-1 E8v			4000	976c8		< g/mg		96	K0 - 4a0	4	E0

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-8 Cloroohd ne	*5a*		*70 - 130*
o-TerpCenyl	*105*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-5654/1-A
Matrix: Solid
Analysis Batch: 5670

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1 uCrldi	z6c00	P	6c00		< g/mg			0K/E2/E4 42:78	4

T3roRep hi eAos1 , rCb, d

QC Sample Results

1 Ct en t WS PWU leAc
Sroji AnWni : Blg Tddy Peln460

Job ID: 890-986-4
WD. : GT04E9E04E2

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-5654/2-A
Matrix: Solid
Analysis Batch: 5670

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1 uGrldi			E60	EKEc6		< g/mg		409	90 - 440		

Lab Sample ID: LCSD 880-5654/3-A
Matrix: Solid
Analysis Batch: 5670

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
1 uGrldi			E60	E26c8		< g/mg		402	90 - 440	E	E0

T3roRep hi eAos1 , rGb, d

QC Association Summary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-985-1
SDG: TE012920126

GC VOA

Prep Batch: 5605

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-985-1	FS24	Total/NA	Solid	5035	
890-985-2	FS22	Total/NA	Solid	5035	
890-985-3	FS21	Total/NA	Solid	5035	
890-985-4	FS16	Total/NA	Solid	5035	
MB 880-5605/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-5605/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-5605/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 5650

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-985-1	FS24	Total/NA	Solid	8021B	5605
890-985-2	FS22	Total/NA	Solid	8021B	5605
890-985-3	FS21	Total/NA	Solid	8021B	5605
890-985-4	FS16	Total/NA	Solid	8021B	5605
MB 880-5605/5-A	Method Blank	Total/NA	Solid	8021B	5605
LCS 880-5605/1-A	Lab Control Sample	Total/NA	Solid	8021B	5605
LCSD 880-5605/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	5605

GC Semi VOA

Prep Batch: 5651

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-985-1	FS24	Total/NA	Solid	8015NM Prep	
890-985-2	FS22	Total/NA	Solid	8015NM Prep	
890-985-3	FS21	Total/NA	Solid	8015NM Prep	
890-985-4	FS16	Total/NA	Solid	8015NM Prep	
MB 880-5651/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-5651/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-5651/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 5658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-985-1	FS24	Total/NA	Solid	8015B NM	5651
890-985-2	FS22	Total/NA	Solid	8015B NM	5651
890-985-3	FS21	Total/NA	Solid	8015B NM	5651
890-985-4	FS16	Total/NA	Solid	8015B NM	5651
MB 880-5651/1-A	Method Blank	Total/NA	Solid	8015B NM	5651
LCS 880-5651/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	5651
LCSD 880-5651/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	5651

HPLC/IC

Leach Batch: 5654

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-985-1	FS24	Soluble	Solid	DI Leach	
890-985-2	FS22	Soluble	Solid	DI Leach	
890-985-3	FS21	Soluble	Solid	DI Leach	
890-985-4	FS16	Soluble	Solid	DI Leach	
MB 880-5654/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-5654/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-5654/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-985-1
SDG: TE012920126

HPLC/IC

Analysis Batch: 5670

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-985-1	FS24	Soluble	Solid	300.0	5654
890-985-2	FS22	Soluble	Solid	300.0	5654
890-985-3	FS21	Soluble	Solid	300.0	5654
890-985-4	FS16	Soluble	Solid	300.0	5654
MB 880-5654/1-A	Method Blank	Soluble	Solid	300.0	5654
LCS 880-5654/2-A	Lab Control Sample	Soluble	Solid	300.0	5654
LCSD 880-5654/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	5654

Lab Chronicle

Client: WSP USA Inc.
Pjo/ectBSite: giE dyy5 Unit r 10

Job ID: 890-981-r
SDG: Td0r 2920r 26

Client Sample ID: FS06

Lab Sample ID: 89- 59815M

Date Collecte7: - / 2042 2MM- :M
x atrid: Soli7
Date Receive7: - / 2042 2MM4:- 8

Prep Type	Batch Type	Batch x etho7	Run	Dilution Factor	Batch Number	Prepare7 or Analyze7	Analyst	Lab
TotslBMA	Pjep	1031			1601	07B2K62r rr:00	LX	NdMa ID
TotslBMA	Ansl54i4	802rg		r	1610	07B262r r3:18	LX	NdMa ID
TotslBMA	Pjep	80r 1Ma Pjep			161r	07B262r 09:0K	Da	NdMa ID
TotslBMA	Ansl54i4	80r 1g Ma		r	1618	07B262r r7:r0	AJ	NdMa ID
Soluble	Xesch	DI Xesch			161K	07B262r r0:07	SC	NdMa ID
Soluble	Ansl54i4	300.0		r	1670	07B262r r7:26	SC	NdMa ID

Client Sample ID: FS00

Lab Sample ID: 89- 59815D

Date Collecte7: - / 2042 2MM- :- 0
x atrid: Soli7
Date Receive7: - / 2042 2MM4:- 8

Prep Type	Batch Type	Batch x etho7	Run	Dilution Factor	Batch Number	Prepare7 or Analyze7	Analyst	Lab
TotslBMA	Pjep	1031			1601	07B2K62r rr:00	LX	NdMa ID
TotslBMA	Ansl54i4	802rg		r	1610	07B262r rK:r8	LX	NdMa ID
TotslBMA	Pjep	80r 1Ma Pjep			161r	07B262r 09:0K	Da	NdMa ID
TotslBMA	Ansl54i4	80r 1g Ma		r	1618	07B262r r7:3r	AJ	NdMa ID
Soluble	Xesch	DI Xesch			161K	07B262r r0:07	SC	NdMa ID
Soluble	Ansl54i4	300.0		r	1670	07B262r r7:32	SC	NdMa ID

Client Sample ID: FS0M

Lab Sample ID: 89- 59815A

Date Collecte7: - / 2042 2MMM1M
x atrid: Soli7
Date Receive7: - / 2042 2MM4:- 8

Prep Type	Batch Type	Batch x etho7	Run	Dilution Factor	Batch Number	Prepare7 or Analyze7	Analyst	Lab
TotslBMA	Pjep	1031			1601	07B2K62r rr:00	LX	NdMa ID
TotslBMA	Ansl54i4	802rg		r	1610	07B262r rK:39	LX	NdMa ID
TotslBMA	Pjep	80r 1Ma Pjep			161r	07B262r 09:0K	Da	NdMa ID
TotslBMA	Ansl54i4	80r 1g Ma		r	1618	07B262r r8:r2	AJ	NdMa ID
Soluble	Xesch	DI Xesch			161K	07B262r r0:07	SC	NdMa ID
Soluble	Ansl54i4	300.0		r	1670	07B262r r7:37	SC	NdMa ID

Client Sample ID: FSM8

Lab Sample ID: 89- 59815G

Date Collecte7: - / 2042 2MMM11
x atrid: Soli7
Date Receive7: - / 2042 2MM4:- 8

Prep Type	Batch Type	Batch x etho7	Run	Dilution Factor	Batch Number	Prepare7 or Analyze7	Analyst	Lab
TotslBMA	Pjep	1031			1601	07B2K62r rr:00	LX	NdMa ID
TotslBMA	Ansl54i4	802rg		r	1610	07B262r rK:19	LX	NdMa ID
TotslBMA	Pjep	80r 1Ma Pjep			161r	07B262r 09:0K	Da	NdMa ID
TotslBMA	Ansl54i4	80r 1g Ma		r	1618	07B262r r8:33	AJ	NdMa ID
Soluble	Xesch	DI Xesch			161K	07B262r r0:07	SC	NdMa ID
Soluble	Ansl54i4	300.0		r	1670	07B262r r7:1K	SC	NdMa ID

Laboratory References:

NdMa ID = dujofin4 Nenco, a iylsny, r2rr W. Flojiys Ave, a iylsny, TN 7970r , TdX(K32)70K-1KK0

dujofin4 Nenco, Csjl4bsy

Accreditation/Certification Summary

Client: WSP USA Inc.
P1orectjSite: / iB g EEd Unit 460

Job ID: 890-986-4
SDy : 5g 04G9G04GT

Laboratory: Eurofins Xenco, Midland

Unle22 otse1h i2e noteEw, ll , n, ldte2 ao1tsi2 l, bo1, to1d h e1e cof e1eE vnEe1e, cs , cc1eEit, tionjce1tiac, tion beloh .

Authority	Program	Identification Number	Expiration Date
5eu, 2	Ng LAP	540x70xx00-G0-G4	0T-30-GG

5se aolloh inB , n, ldte2 , 1e inclvEeE in tsi2 1epo1twbvt tse l, bo1, to1d i2 not ce1tiaeE bd tse Bof e1ninB , vtso1itd. 5si2 li2t m, d inclvEe , n, ldte2 ao1h sics tse , Bencd Eoe2 not oae1ce1tiac, tion .

An, ld2i2 MetsoE	P1ep MetsoE	M, t1iu	An, ldte
8046/ NM	8046NM P1ep	SoliE	5ot, l 5PH
80G4/	6036	SoliE	5ot, l / 5g X

g v 1oain2 XencowC, 112b, E

Method Summary

1 Ct en t WS PWU leAc
Sroji AnWni : Blg Tddy Peln460

Job ID: 890-986-4
WD. : GT04E9E04E2

Method	Method Description	Protocol	Laboratory
80E4B	VoGanC OrgaelA 1 ompoueds (. 1)	Wt 852	XTN MID
8046B NM	Dli si CRaegi OrgaelAs (DRO) (. 1)	Wt 852	XTN MID
300c0	Ueloes, loe 1 hromanography	M1 Ut t	XTN MID
6036	1 Cosi d Wysni m Surgi aed Grap	Wt 852	XTN MID
8046NM Sri p	MlAroi xnraAnloe	Wt 852	XTN MID
DI Li aAh	Di loelzi d t ani r Li aAhleg SroAi duri	UWGM	XTN MID

Protocol References:

UWGM = UWGM leni reanloeaC

M1 Ut t = "Mi nhods For 1 hi mlAaCUeaQysls Of t ani r Ued t asni s", TSU-200/5-79-0E0, MarAh 4983 Ued Wubsi qui enRi vlsloesc

Wt 852 = "Gi snMi nhods For TvaQanleg WbCd t asni , ShyslAaC1 hi mlAaCMi nhods", Ghlrd Tdlnloe, Novi mbi r 4982 Ued lns Ppdani sc

Laboratory References:

XTN MID = Turofles Xi eAo, MldCaed, 4E44 t cFCnlda Uvi , MldCaed, GX 79704, GTL (53E)705-6550

Sample Summary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 130

Job ID: 890-983-1
SDG: TE012920126

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-983-1	5S2F	Solid	07/24/21 10:17	07/24/21 14:08	F - 8
890-983-2	5S22	Solid	07/24/21 10:02	07/24/21 14:08	F - 8
890-983-4	5S21	Solid	07/24/21 11:31	07/24/21 14:08	- 3.3
890-983-F	5S16	Solid	07/24/21 11:33	07/24/21 14:08	- 3.3

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

XENCO LABORATORIES

Chain of Custody

Work Order No: ______

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

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7/26/2021

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	WSP USA	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	522 W. Mermod St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	Jeremy.Hill@wsp.com, Dan.Moir@wsp.com

Work Order Comments

Program: UST/PST ☐ RP ☐ rownfields ☐ RC ☐ perfund ☐

State of Project:

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

Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Big Eddy Unit 150	Turn Around	
Project Number:	TE012920166	Routine ☐	
P.O. Number:	Inc. # NRM2034854885	Rush: 24 Hr	
Sampler's Name:	Jeremy Hill	Due Date: 7/26/21	

ANALYSIS REQUEST

890-985 Chain of Custody

Work Order Notes

CC 1080741001

AFE EW.2021.01562.EXP.01

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

SAMPLE RECEIPT	Temp Blank:	Yes (circled) No	Wet Ice:	Yes (circled) No
Temperature (°C):	6.2 / 6.0		Thermometer ID	TNM-007
Received Intact:	Yes (circled) No			
Cooler Custody Seals:	Yes No N/A (circled)		Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A (circled)		Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
FS24	S	7/23/21	1017	4-8'	1	X	X	X	Composite
FS22	↓	↓	1022	4-8'	↓	↓	↓	↓	↓
FS21	↓	↓	1151	5.5'	↓	↓	↓	↓	↓
FS16	↓	↓	1155	5.5'	↓	↓	↓	↓	↓

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 [signature]	[signature]	7-23-21 1308	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

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 890-316 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jessica.kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-985-1
Address: 1211 W Florida Ave,	Due Date Requested: 7/26/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: Big Eddy Unit 150	Project #: 89000004			
Site	SSOW#:			

Analysis Requested

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

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
FS24 (890-985-1)	7/23/21	10 17 Mountain		Solid			X	X	X	1	
FS22 (890-985-2)	7/23/21	10 02 Mountain		Solid			X	X	X	1	
FS21 (890-985-3)	7/23/21	11 51 Mountain		Solid			X	X	X	1	
FS16 (890-985-4)	7/23/21	11 55 Mountain		Solid			X	X	X	1	

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

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

Empty Kit Relinquished by:	Date	Time	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company
Clue Cuty 7:23:21	7.26 21 8:15	Xenco			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-985-1
SDG Number: TE012920126

Login Number: 985
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: 890-985-1
SDG Number: TE012920126

Login Number: 985
List Number: 2
Creator: Lowe, Katie

List Source: Eurofins Xenco, Midland
List Creation: 07/26/21 08:33 AM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-995-1
Laboratory Sample Delivery Group: TE012921026
Client Project/Site: Big Eddy Unit 150
Revision: 4

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

Attn: Dan Moir

JKramer

Authorized for release by:
8/5/2021 9:55:47 AM

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

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

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Laboratory Job ID: 890-995-1
SDG: TE012921026

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Definitions/Glossary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-995-1
SDG: TE012921026

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-995-1
SDG: TE012921026

Job ID: 890-995-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-995-1

REVISION

The report being provided is a revision of the original report sent on 7/28/2021. The report (revision 3) is being revised due to per client email, 08/05/2021 Correct sample ID BH04 to BH03.

Report revision history

The report being provided is a revision of the original report sent on 7/28/2021. The report (revision 3) is being revised due to per client email, 08/05/2021 Correct sample ID BH04 to BH03.
Revision 2 - 8/4/2021 - Reason - Per client email 08/03/2021, requesting laboratory to re-homogenize/extract and re run TPH BH04 @1 and BH04 18.

Revision 2 - 8/4/2021 - Reason - Per client email 08/03/2021, requesting laboratory to re-homogenize/extract and re run TPH BH04 @1 and BH04 18.
Revision 1 - 8/4/2021 - Reason - Per client email, requesting laboratory to re-homogenize/extract and re run TPH for samples BH01 and BH02.

Receipt
The samples were received on 7/26/2021 3:25 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.6°C

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

GC Semi VOA
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

I ient WS PU APc It . G
Ujo/n. WP eW: ged 2yy5 At eWC10

Job ID: 890-991-C
PDT : E20C696C06r

Client Sample ID: BH01
Date Collected: 07/26/21 08:44
Date Received: 07/26/21 15:25
Sample Depth: - 18

Lab Sample ID: 890-995-1
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
gnt znt n	<0G0C98	A	0G0C98		mdBKd		07E68E6C 08:37	07E68E6C C3:0r	C
Eoi4nt n	<0G0C98	A	0G0C98		mdBKd		07E68E6C 08:37	07E68E6C C3:0r	C
2W5ibnt znt n	<0G0C98	A	0G0C98		mdBKd		07E68E6C 08:37	07E68E6C C3:0r	C
m-h5int n X &-h5int n	<0G0039r	A	0G0039r		mdBKd		07E68E6C 08:37	07E68E6C C3:0r	C
o-h5int n	<0G0C98	A	0G0C98		mdBKd		07E68E6C 08:37	07E68E6C C3:0r	C
h5int npsEoWi	<0G0039r	A	0G0039r		mdBKd		07E68E6C 08:37	07E68E6C C3:0r	C
EoWi gE2h	<0G0039r	A	0G0039r		mdBKd		07E68E6C 08:37	07E68E6C C3:0r	C

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*87 - 137*	*78/02/01 7258 38*	*78/02/01 135 7:*	*1*
194-6,fluorobenzene (Surr)	*DD*		*87 - 137*	*78/02/01 7258 38*	*78/02/01 135 7:*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
T, poie1n a, t dn Rjd, t e p CTa R(-l r-l C0	<) 9G9	A	) 9G9		mdBKd		07E3C6E6C C0:) 9	08E5C6E6C 60:C6	C
Denpni a, t dn Rjd, t e p CRvnj l C0-l 68(	<) 9G9	A	) 9G9		mdBKd		07E3C6E6C C0:) 9	08E5C6E6C 60:C6	C
Rli a, t dn Rjd, t e p CRvnj l 68-l 3r(	<) 9G9	A	) 9G9		mdBKd		07E3C6E6C C0:) 9	08E5C6E6C 60:C6	C
EoWi EUf	<) 9G9	A	) 9G9		mdBKd		07E3C6E6C C0:) 9	08E5C6E6C 60:C6	C

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-i Cloroohdne	*172*		*87 - 137*	*78/31/01 1754D*	*72/71/01 075 10*	*1*
o-aerTCenpl	*10y*		*87 - 137*	*78/31/01 1754D*	*72/71/01 075 10*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**342**		) C98		mdBKd			07E68E6C C1:66	C

Client Sample ID: BH02
Date Collected: 07/26/21 10:15
Date Received: 07/26/21 15:25
Sample Depth: - 18

Lab Sample ID: 890-995-2
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
gnt znt n	<0G0600	A	0G0600		mdBKd		07E68E6C 08:37	07E68E6C C3:6r	C
Eoi4nt n	<0G0600	A	0G0600		mdBKd		07E68E6C 08:37	07E68E6C C3:6r	C
2W5ibnt znt n	<0G0600	A	0G0600		mdBKd		07E68E6C 08:37	07E68E6C C3:6r	C
m-h5int n X &-h5int n	<0G0399	A	0G0399		mdBKd		07E68E6C 08:37	07E68E6C C3:6r	C
o-h5int n	<0G0600	A	0G0600		mdBKd		07E68E6C 08:37	07E68E6C C3:6r	C
h5int npsEoWi	<0G0399	A	0G0399		mdBKd		07E68E6C 08:37	07E68E6C C3:6r	C
EoWi gE2h	<0G0399	A	0G0399		mdBKd		07E68E6C 08:37	07E68E6C C3:6r	C

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*D8*		*87 - 137*	*78/02/01 7258 38*	*78/02/01 135 0:*	*1*
194-6,fluorobenzene (Surr)	*D2*		*87 - 137*	*78/02/01 7258 38*	*78/02/01 135 0:*	*1*

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Client Sample Results

I ient WS PU APc It . G
Ujo/n. WPeW: ged 2yy5 At eWC10

Job ID: 890-991-C
PDT : E20C696C06r

Client Sample ID: BH02

Lab Sample ID: 890-995-2
Date Collected: 07/26/21 10:15
Matrix: Solid
Date Received: 07/26/21 15:25
Sample Depth: - 18

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
T , poid n a , t dn Rjd, t e p CT a R(-I r -I C0	<10G	A	10G	mdBKd		07B3C6CC0:) 9	08BC6C60:3)	C
Denpni a , t dn Rjd, t e p CRvnj I C0-I 68(	<10G	A	10G	mdBKd		07B3C6CC0:) 9	08BC6C60:3)	C
Rli a , t dn Rjd, t e p CRvnj I 68-I 3r (	<10G	A	10G	mdBKd		07B3C6CC0:) 9	08BC6C60:3)	C
EoWi EUf	<10G	A	10G	mdBKd		07B3C6CC0:) 9	08BC6C60:3)	C

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-i Cloroohd ne	*17:*		*87 - 137*	*78/31/01 174D*	*72/71/01 0754*	*1*
o-aerTCenpl	*100*		*87 - 137*	*78/31/01 174D*	*72/71/01 0754*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**113**		1G0	mdBKd			07B6BCC1:38	C

Client Sample ID: BH03

Lab Sample ID: 890-995-3
Date Collected: 07/26/21 10:51
Matrix: Solid
Date Received: 07/26/21 15:25
Sample Depth: - 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
gnt znt n	<0G0600	A	0G0600	mdBKd		07B6BC08:37	07B6BCC3:) 7	C
Eoi4nt n	<0G0600	A	0G0600	mdBKd		07B6BC08:37	07B6BCC3:) 7	C
2W5ibnt znt n	<0G0600	A	0G0600	mdBKd		07B6BC08:37	07B6BCC3:) 7	C
m-h 5int n X &-h 5int n	<0G0399	A	0G0399	mdBKd		07B6BC08:37	07B6BCC3:) 7	C
o-h 5int n	<0G0600	A	0G0600	mdBKd		07B6BC08:37	07B6BCC3:) 7	C
h 5int nps EoWi	<0G0399	A	0G0399	mdBKd		07B6BC08:37	07B6BCC3:) 7	C
EoWi gE2h	<0G0399	A	0G0399	mdBKd		07B6BC08:37	07B6BCC3:) 7	C

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*11:*		*87 - 137*	*78/02/01 7258*	*78/02/01 1348*	*1*
194-6 ,fluorobenzene (Surr)	*D4*		*87 - 137*	*78/02/01 7258*	*78/02/01 1348*	*1*

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
T , poid n a , t dn Rjd, t e p CT a R(-I r -I C0	<) 9G	A	) 9G	mdBKd		08B03BCC1:37	08B03BC63:37	C
Denpni a , t dn Rjd, t e p CRvnj I C0-I 68(	<) 9G	A	) 9G	mdBKd		08B03BCC1:37	08B03BC63:37	C
Rli a , t dn Rjd, t e p CRvnj I 68-I 3r (	<) 9G	A	) 9G	mdBKd		08B03BCC1:37	08B03BC63:37	C
EoWi EUf	<) 9G	A	) 9G	mdBKd		08B03BCC1:37	08B03BC63:37	C

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-i Cloroohd ne	*23*		*87 - 137*	*72/73/01 1y58*	*72/73/01 0358*	*1*
o-aerTCenpl	*24*		*87 - 137*	*72/73/01 1y58*	*72/73/01 0358*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**94.8**		1G0	mdBKd			07B6BCC1:) 3	C

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Client Sample Results

I ient WS PU APc It . G
Ujo/n. WP eW: ged 2yy5 At eWC10

Job ID: 890-991-C
PDT : E20C696C06r

Client Sample ID: BH03
Date Collected: 07/26/21 11:02
Date Received: 07/26/21 15:25
Sample Depth: - 5

Lab Sample ID: 890-995-4
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
gnt znt n	<0G0C98	A	0G0C98		mdBKd		07E68E6CC 08:37	07E68E6CC) :07	C
Eoi4nt n	<0G0C98	A	0G0C98		mdBKd		07E68E6CC 08:37	07E68E6CC) :07	C
2W5ibnt znt n	<0G0C98	A	0G0C98		mdBKd		07E68E6CC 08:37	07E68E6CC) :07	C
m-h5int n X &-h5int n	<0G039r	A	0G039r		mdBKd		07E68E6CC 08:37	07E68E6CC) :07	C
o-h5int n	<0G0C98	A	0G0C98		mdBKd		07E68E6CC 08:37	07E68E6CC) :07	C
h5int npsEoWi	<0G039r	A	0G039r		mdBKd		07E68E6CC 08:37	07E68E6CC) :07	C
EoWi gE2h	<0G039r	A	0G039r		mdBKd		07E68E6CC 08:37	07E68E6CC) :07	C

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*11:*		*87 - 137*	*78/02/01 7258 38*	*78/02/01 1457 8*	*1*
194-6,fluorobenzene (Surr)	*D2*		*87 - 137*	*78/02/01 7258 38*	*78/02/01 1457 8*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
T, poie1n a, t dn Rjd, t ep CTaR(-l r-l C0	<10G9	A	10G9		mdBKd		07E68E6CC 0:00	07E68E6CC 1:6r	C
Denpni a, t dn Rjd, t ep CRvnj l C0-l 68(	<10G9	A	10G9		mdBKd		07E68E6CC 0:00	07E68E6CC 1:6r	C
Rli a, t dn Rjd, t ep CRvnj l 68-l 3r(	<10G9	A	10G9		mdBKd		07E68E6CC 0:00	07E68E6CC 1:6r	C
EoWi EUf	<10G9	A	10G9		mdBKd		07E68E6CC 0:00	07E68E6CC 1:6r	C

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-i Cloroohctne	*110*		*87 - 137*	*78/02/01 1757 7*	*78/02/01 1y50:*	*1*
o-aerTCenpl	*113*		*87 - 137*	*78/02/01 1757 7*	*78/02/01 1y50:*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**112**		)G9r		mdBKd			07E68E6CC 1:) 9	C

Client Sample ID: BH03
Date Collected: 07/26/21 11:44
Date Received: 07/26/21 15:25
Sample Depth: - 10

Lab Sample ID: 890-995-5
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
gnt znt n	<0G00600	A	0G00600		mdBKd		07E68E6CC 08:37	07E68E6CC) :67	C
Eoi4nt n	<0G00600	A	0G00600		mdBKd		07E68E6CC 08:37	07E68E6CC) :67	C
2W5ibnt znt n	<0G00600	A	0G00600		mdBKd		07E68E6CC 08:37	07E68E6CC) :67	C
m-h5int n X &-h5int n	<0G00) 00	A	0G00) 00		mdBKd		07E68E6CC 08:37	07E68E6CC) :67	C
o-h5int n	<0G00600	A	0G00600		mdBKd		07E68E6CC 08:37	07E68E6CC) :67	C
h5int npsEoWi	<0G00) 00	A	0G00) 00		mdBKd		07E68E6CC 08:37	07E68E6CC) :67	C
EoWi gE2h	<0G00) 00	A	0G00) 00		mdBKd		07E68E6CC 08:37	07E68E6CC) :67	C

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*87 - 137*	*78/02/01 7258 38*	*78/02/01 1450 8*	*1*
194-6,fluorobenzene (Surr)	*D4*		*87 - 137*	*78/02/01 7258 38*	*78/02/01 1450 8*	*1*

24jokdp hnt . osl , jipb, y

Client Sample Results

I ient WS PU APc It . G
Ujo/n. WPeW: ged 2yy5 At eWC10

Job ID: 890-991-C
PDT : E20C696C06r

Client Sample ID: BH03
Lab Sample ID: 890-995-5
Date Collected: 07/26/21 11:44
Matrix: Solid
Date Received: 07/26/21 15:25
Sample Depth: - 10

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
T, poied n a, t dn Rjd, t e p CT a R(-I r-I C0	<)9G	A	)9G	mdBKd		07B68B6CC0:00	07B68B6CC1:)7	C
Dempni a, t dn Rjd, t e p ORvnj I C0-I 68(	<)9G	A	)9G	mdBKd		07B68B6CC0:00	07B68B6CC1:)7	C
Rli a, t dn Rjd, t e p ORvnj I 68-I 3r (	<)9G	A	)9G	mdBKd		07B68B6CC0:00	07B68B6CC1:)7	C
EoWi EUf	<)9G	A	)9G	mdBKd		07B68B6CC0:00	07B68B6CC1:)7	C

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-i Clorooh d ne	*D2*		*87 - 137*	*78/02/01 1757*	*78/02/01 1y548*	*1*
o-aerTCenpl	*170*		*87 - 137*	*78/02/01 1757*	*78/02/01 1y548*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**200**		)C99	mdBKd			07B68B6CC1:1)	C

Client Sample ID: BH03
Lab Sample ID: 890-995-6
Date Collected: 07/26/21 12:30
Matrix: Solid
Date Received: 07/26/21 15:25
Sample Depth: - 15

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
gnt znt n	<0G0C99	A	0G0C99	mdBKd		07B68B6C08:37	07B68B6CC):)8	C
Eoi4nt n	<0G0C99	A	0G0C99	mdBKd		07B68B6C08:37	07B68B6CC):)8	C
2W5ibnt znt n	<0G0C99	A	0G0C99	mdBKd		07B68B6C08:37	07B68B6CC):)8	C
m-h5int n X &-h5int n	<0G0398	A	0G0398	mdBKd		07B68B6C08:37	07B68B6CC):)8	C
o-h5int n	<0G0C99	A	0G0C99	mdBKd		07B68B6C08:37	07B68B6CC):)8	C
h5int nps EoWi	<0G0398	A	0G0398	mdBKd		07B68B6C08:37	07B68B6CC):)8	C
EoWi gE2h	<0G0398	A	0G0398	mdBKd		07B68B6C08:37	07B68B6CC):)8	C

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*171*		*87 - 137*	*78/02/01 7258*	*78/02/01 1452*	*1*
194-6 ,fluorobenzene (Surr)	*D4*		*87 - 137*	*78/02/01 7258*	*78/02/01 1452*	*1*

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
T, poied n a, t dn Rjd, t e p CT a R(-I r-I C0	<10G	A	10G	mdBKd		07B68B6CC0:00	07B68B6CCr:07	C
Dempni a, t dn Rjd, t e p ORvnj I C0-I 68(	<10G	A	10G	mdBKd		07B68B6CC0:00	07B68B6CCr:07	C
Rli a, t dn Rjd, t e p ORvnj I 68-I 3r (	<10G	A	10G	mdBKd		07B68B6CC0:00	07B68B6CCr:07	C
EoWi EUf	<10G	A	10G	mdBKd		07B68B6CC0:00	07B68B6CCr:07	C

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-i Clorooh d ne	*D:*		*87 - 137*	*78/02/01 1757*	*78/02/01 1: 578*	*1*
o-aerTCenpl	*171*		*87 - 137*	*78/02/01 1757*	*78/02/01 1: 578*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**36.6**		1G)	mdBKd			07B68B6CCr:C0	C

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Client Sample Results

I ient WS PU APc It . G
Ujo/n. WPeW: ged 2yy5 At eWC10

Job ID: 890-991-C
PDT : E20C696C06r

Client Sample ID: BH03
Date Collected: 07/26/21 13:46
Date Received: 07/26/21 15:25
Sample Depth: - 18

Lab Sample ID: 890-995-7
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
gnt znt n	<0G0606	A	0G0606		mdBKd		07E68E6C 08:37	07E68E6C 1:08	C
Eoi4nt n	<0G0606	A	0G0606		mdBKd		07E68E6C 08:37	07E68E6C 1:08	C
2W5ibnt znt n	<0G0606	A	0G0606		mdBKd		07E68E6C 08:37	07E68E6C 1:08	C
m-h5int n X &-h5int n	<0G0) 03	A	0G0) 03		mdBKd		07E68E6C 08:37	07E68E6C 1:08	C
o-h5int n	<0G0606	A	0G0606		mdBKd		07E68E6C 08:37	07E68E6C 1:08	C
h5int npsEoWi	<0G0) 03	A	0G0) 03		mdBKd		07E68E6C 08:37	07E68E6C 1:08	C
EoWi gE2h	<0G0) 03	A	0G0) 03		mdBKd		07E68E6C 08:37	07E68E6C 1:08	C

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*87 - 137*	*78/02/01 725:38*	*78/02/01 1y572*	*1*
194-6,fluorobenzene (Surr)	*D2*		*87 - 137*	*78/02/01 725:38*	*78/02/01 1y572*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
T, poie1n a, t dn Rjd, t e p CTa R(-l r-l C0	<10G9	A	10G9		mdBKd		08E03E6C 1:37	08E03E6C 63:18	C
De npni a, t dn Rjd, t e p CRvnj l C0-l 68(	<10G9	A	10G9		mdBKd		08E03E6C 1:37	08E03E6C 63:18	C
Rli a, t dn Rjd, t e p CRvnj l 68-l 3r(	<10G9	A	10G9		mdBKd		08E03E6C 1:37	08E03E6C 63:18	C
EoWi EUf	<10G9	A	10G9		mdBKd		08E03E6C 1:37	08E03E6C 63:18	C

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-i Cloroohdne	*DD*		*87 - 137*	*72/73/01 1y538*	*72/73/01 035y2*	*1*
o-aerTCenpl	*D4*		*87 - 137*	*72/73/01 1y538*	*72/73/01 035y2*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**26.5**		1G3		mdBKd			07E68E6C Cr:Cr	C

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Surrogate Summary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-995-1
SDG: TE012921026

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-995-1	BH01	112	99
890-995-1 MS	BH01	105	106
890-995-2	BH02	97	98
890-995-3	BH03	116	94
890-995-4	BH03	116	98
890-995-5	BH03	111	94
890-995-6	BH03	101	94
890-995-7	BH03	110	98
LCS 880-5729/1-A	Lab Control Sample	112	107
LCSD 880-5729/2-A	Lab Control Sample Dup	113	105
MB 880-5729/5-A	Method Blank	99	90

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID		
890-995-1 MSD	BH01		

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-995-1	BH01	108	125
890-995-2	BH02	106	122
890-995-3	BH03	83	84
890-995-4	BH03	112	113
890-995-5	BH03	98	102
890-995-6	BH03	96	101
890-995-7	BH03	99	94
LCS 880-5604/2-A	Lab Control Sample	89	90
LCS 880-5924/2-A	Lab Control Sample	100	107
LCSD 880-5604/3-A	Lab Control Sample Dup	103	102
LCSD 880-5924/3-A	Lab Control Sample Dup	108	115
MB 880-5604/1-A	Method Blank	97	96
MB 880-5924/1-A	Method Blank	92	111

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

I ient W.S PU APc It . G
Ujo/n. W P eW: ged 2yy5 At eWC10

Job ID: 890-991-C
PDT : E2 0C696C06r

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-5729/5-A
Matrix: Solid
Analysis Batch: 5734

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5729

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
gnt znt n	<0G0600	A	0G0600		mdBKd		07E68E6C 08:37	07E68E6C 6:44	C
Eoiunt n	<0G0600	A	0G0600		mdBKd		07E68E6C 08:37	07E68E6C 6:44	C
2W5ibnt znt n	<0G0600	A	0G0600		mdBKd		07E68E6C 08:37	07E68E6C 6:44	C
m-X5int n & p-X5int n	<0G0400	A	0G0400		mdBKd		07E68E6C 08:37	07E68E6C 6:44	C
o-X5int n	<0G0600	A	0G0600		mdBKd		07E68E6C 08:37	07E68E6C 6:44	C
X5int ns, EoWi	<0G0400	A	0G0400		mdBKd		07E68E6C 08:37	07E68E6C 6:44	C
EoWi gE2X	<0G0400	A	0G0400		mdBKd		07E68E6C 08:37	07E68E6C 6:44	C

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*11*		*08 - 738*	*80/25/27 85:30*	*80/25/27 72:44*	*7*
794-6,fluorobenzene (Surr)	*18*		*08 - 738*	*80/25/27 85:30*	*80/25/27 72:44*	*7*

Lab Sample ID: LCS 880-5729/1-A
Matrix: Solid
Analysis Batch: 5734

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5729

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
gnt znt n			0G600	0G6099		mdBKd		C00	70 - C30		
Eoiunt n			0G600	0G6068		mdBKd		C03	70 - C30		
2W5ibnt znt n			0G600	0G6037		mdBKd		C04	70 - C30		
m-X5int n & p-X5int n			0G600	0G6C6r		mdBKd		C0r	70 - C30		
o-X5int n			0G600	0G60r 4		mdBKd		C0r	70 - C30		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*772*		*08 - 738*
794-6,fluorobenzene (Surr)	*780*		*08 - 738*

Lab Sample ID: LCSD 880-5729/2-A
Matrix: Solid
Analysis Batch: 5734

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 5729

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
gnt znt n			0G600	0G6011		mdBKd		C01	70 - C30	4	31
Eoiunt n			0G600	0G69847		mdBKd		98	70 - C30	4	31
2W5ibnt znt n			0G600	0G69811		mdBKd		99	70 - C30	1	31
m-X5int n & p-X5int n			0G600	0G604C		mdBKd		C06	70 - C30	4	31
o-X5int n			0G600	0G60C8		mdBKd		C06	70 - C30	4	31

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*773*		*08 - 738*
794-6,fluorobenzene (Surr)	*78D*		*08 - 738*

Lab Sample ID: 890-995-1 MSD
Matrix: Solid
Analysis Batch: 5734

Client Sample ID: BH01
Prep Type: Total/NA
Prep Batch: 5729

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
gnt znt n	<0G0C98	A	0G9994	0G9989		mdBKd					

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QC Sample Results

I ient WS PU APc It . G   Job ID: 890-991-C
Ujo/n. WPeW: ged 2yy5 At eWC10   PDT : E20C696C06r

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

Lab Sample ID: 890-995-1 MSD — **Client Sample ID: BH01**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 5734 — **Prep Batch: 5729**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Eoiunt n	<0G0C98	A	0G994	0G9634		mdBKd					
2WW5ibnt znt n	<0G0C98	A	0G994	0G968r		mdBKd					
m-X5int n & p-X5int n	<0G039r	A	0G99	0G909		mdBKd					
o-X5int n	<0G0C98	A	0G994	0G94C0		mdBKd					

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)			
794-6 ,fluorobenzene (Surr)			

Lab Sample ID: 890-995-1 MS — **Client Sample ID: BH01**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 5734

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*78D*		*08 - 738*
794-6 ,fluorobenzene (Surr)	*78i*		*08 - 738*

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

Lab Sample ID: MB 880-5604/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 5741 — **Prep Batch: 5604**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tasoiet n Oat dn (jdat e s)T O(v-l r-l C0	<10G	A	10G	mdBKd		07B63BC C4:43	07B8BC CC:37	C
Densni Oat dn (jdat e s)(f nj l C0-l 68v	<10G	A	10G	mdBKd		07B63BC C4:43	07B8BC CC:37	C
(li Oat dn (jdat e s)(f nj l 68-l 3r v	<10G	A	10G	mdBKd		07B63BC C4:43	07B8BC CC:37	C
EoWi EUH	<10G	A	10G	mdBKd		07B63BC C4:43	07B8BC CC:37	C

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
7-Chlorooctane	*10*		*08 - 738*	*80/23/27 74:43*	*80/25/27 77:30*	*7*
o-Terphenyl	*1i*		*08 - 738*	*80/23/27 74:43*	*80/25/27 77:30*	*7*

Lab Sample ID: LCS 880-5604/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 5741 — **Prep Batch: 5604**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Tasoiet n Oat dn (jdat e s)T O(v-l r-l C0	C000	834G3		mdBKd		83	70 - C30
Densni Oat dn (jdat e s)(f nj l C0-l 68v	C000	869G7		mdBKd		83	70 - C30

Surrogate	LCS %Recovery	LCS Qualifier	Limits
7-Chlorooctane	*51*		*08 - 738*
o-Terphenyl	*18*		*08 - 738*

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QC Sample Results

I ient WS PU APc It . G
Ujo/n. WPeW: ged 2yy5 At eWC10

Job ID: 890-991-C
PDT : E20C696C06r

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

Lab Sample ID: LCSD 880-5604/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 5741 — **Prep Batch: 5604**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Tasoiet n Oat dn (jdat e s)T O(v-I r-I C0	C000	948G		mdBKd		91	70 - C30	C3	60
Densni Oat dn (jdat e s)(f nj I C0-I 68v	C000	91r G		mdBKd		9r	70 - C30	C4	60

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
7-Chlorooctane	*783*		*08 - 738*
o-Terphenyl	*782*		*08 - 738*

Lab Sample ID: MB 880-5924/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 5934 — **Prep Batch: 5924**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tasoiet n Oat dn (jdat e s)T O(v-I r-I C0	<10G	A	10G	mdBKd		07BC6C C0:49	08BC6C C3:C3	C
Densni Oat dn (jdat e s)(f nj I C0-I 68v	<10G	A	10G	mdBKd		07BC6C C0:49	08BC6C C3:C3	C
(li Oat dn (jdat e s)(f nj I 68-I 3r v	<10G	A	10G	mdBKd		07BC6C C0:49	08BC6C C3:C3	C
EoWi EUH	<10G	A	10G	mdBKd		07BC6C C0:49	08BC6C C3:C3	C

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
7-Chlorooctane	*12*		*08 - 738*	*80/37/27 78:41*	*85/87/27 73:73*	*7*
o-Terphenyl	*777*		*08 - 738*	*80/37/27 78:41*	*85/87/27 73:73*	*7*

Lab Sample ID: LCS 880-5924/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 5934 — **Prep Batch: 5924**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Tasoiet n Oat dn (jdat e s)T O(v-I r-I C0	C000	971G		mdBKd		98	70 - C30
Densni Oat dn (jdat e s)(f nj I C0-I 68v	C000	C070		mdBKd		C07	70 - C30

Surrogate	LCS %Recovery	LCS Qualifier	Limits
7-Chlorooctane	*788*		*08 - 738*
o-Terphenyl	*780*		*08 - 738*

Lab Sample ID: LCSD 880-5924/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 5934 — **Prep Batch: 5924**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Tasoiet n Oat dn (jdat e s)T O(v-I r-I C0	C000	9C1G		mdBKd		96	70 - C30	r	60
Densni Oat dn (jdat e s)(f nj I C0-I 68v	C000	CCC9		mdBKd		C06	70 - C30	1	60

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QC Sample Results

I ient WS PU APc It . G
Ujo/n. WPeW: ged 2yy5 At eWC10

Job ID: 890-991-C
PDT : E20C696C06r

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

Lab Sample ID: LCSD 880-5924/3-A
Matrix: Solid
Analysis Batch: 5934

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 5924

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
7-Chlorooctane	785		08 - 738
o-Terphenyl	77D		08 - 738

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-5753/1-A
Matrix: Solid
Analysis Batch: 5764

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
I hiojeyn	<1G0	A	1G0		mdBKd			07B68BCC1:0r	C

Lab Sample ID: LCS 880-5753/2-A
Matrix: Solid
Analysis Batch: 5764

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
I hiojeyn			610	64r G4		mdBKd		99	90 - CC0		

Lab Sample ID: LCSD 880-5753/3-A
Matrix: Solid
Analysis Batch: 5764

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
I hiojeyn			610	64r G		mdBKd		99	90 - CC0	0	60

Lab Sample ID: 890-995-1 MS
Matrix: Solid
Analysis Batch: 5764

Client Sample ID: BH01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
I hiojeyn	346		649	176G		mdBKd		96	90 - CC0		

Lab Sample ID: 890-995-1 MSD
Matrix: Solid
Analysis Batch: 5764

Client Sample ID: BH01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
I hiojeyn	346		649	17C3		mdBKd		96	90 - CC0	0	60

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QC Association Summary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-995-1
SDG: TE012921026

GC VOA

Prep Batch: 5729

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-995-1	BH01	Total/NA	Solid	5035	
890-995-2	BH02	Total/NA	Solid	5035	
890-995-3	BH03	Total/NA	Solid	5035	
890-995-4	BH03	Total/NA	Solid	5035	
890-995-5	BH03	Total/NA	Solid	5035	
890-995-6	BH03	Total/NA	Solid	5035	
890-995-7	BH03	Total/NA	Solid	5035	
MB 880-5729/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-5729/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-5729/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-995-1 MSD	BH01	Total/NA	Solid	5035	

Analysis Batch: 5734

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-995-1	BH01	Total/NA	Solid	8021B	5729
890-995-2	BH02	Total/NA	Solid	8021B	5729
890-995-3	BH03	Total/NA	Solid	8021B	5729
890-995-4	BH03	Total/NA	Solid	8021B	5729
890-995-5	BH03	Total/NA	Solid	8021B	5729
890-995-6	BH03	Total/NA	Solid	8021B	5729
890-995-7	BH03	Total/NA	Solid	8021B	5729
MB 880-5729/5-A	Method Blank	Total/NA	Solid	8021B	5729
LCS 880-5729/1-A	Lab Control Sample	Total/NA	Solid	8021B	5729
LCSD 880-5729/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	5729
890-995-1 MS	BH01	Total/NA	Solid	8021B	
890-995-1 MSD	BH01	Total/NA	Solid	8021B	5729

GC Semi VOA

Prep Batch: 5604

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-995-4	BH03	Total/NA	Solid	8015NM Prep	
890-995-5	BH03	Total/NA	Solid	8015NM Prep	
890-995-6	BH03	Total/NA	Solid	8015NM Prep	
MB 880-5604/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-5604/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-5604/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 5741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-995-4	BH03	Total/NA	Solid	8015B NM	5604
890-995-5	BH03	Total/NA	Solid	8015B NM	5604
890-995-6	BH03	Total/NA	Solid	8015B NM	5604
MB 880-5604/1-A	Method Blank	Total/NA	Solid	8015B NM	5604
LCS 880-5604/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	5604
LCSD 880-5604/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	5604

Prep Batch: 5924

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-995-1	BH01	Total/NA	Solid	8015NM Prep	
890-995-2	BH02	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-995-1
SDG: TE012921026

GC Semi VOA (Continued)

Prep Batch: 5924 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-5924/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-5924/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-5924/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 5934

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-995-1	BH01	Total/NA	Solid	8015B NM	5924
890-995-2	BH02	Total/NA	Solid	8015B NM	5924
MB 880-5924/1-A	Method Blank	Total/NA	Solid	8015B NM	5924
LCS 880-5924/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	5924
LCSD 880-5924/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	5924

Analysis Batch: 6001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-995-3	BH03	Total/NA	Solid	8015B NM	6026
890-995-7	BH03	Total/NA	Solid	8015B NM	6026

Prep Batch: 6026

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-995-3	BH03	Total/NA	Solid	8015NM Prep	
890-995-7	BH03	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 5753

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-995-1	BH01	Soluble	Solid	DI Leach	
890-995-2	BH02	Soluble	Solid	DI Leach	
890-995-3	BH03	Soluble	Solid	DI Leach	
890-995-4	BH03	Soluble	Solid	DI Leach	
890-995-5	BH03	Soluble	Solid	DI Leach	
890-995-6	BH03	Soluble	Solid	DI Leach	
890-995-7	BH03	Soluble	Solid	DI Leach	
MB 880-5753/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-5753/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-5753/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-995-1 MS	BH01	Soluble	Solid	DI Leach	
890-995-1 MSD	BH01	Soluble	Solid	DI Leach	

Analysis Batch: 5764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-995-1	BH01	Soluble	Solid	300.0	5753
890-995-2	BH02	Soluble	Solid	300.0	5753
890-995-3	BH03	Soluble	Solid	300.0	5753
890-995-4	BH03	Soluble	Solid	300.0	5753
890-995-5	BH03	Soluble	Solid	300.0	5753
890-995-6	BH03	Soluble	Solid	300.0	5753
890-995-7	BH03	Soluble	Solid	300.0	5753
MB 880-5753/1-A	Method Blank	Soluble	Solid	300.0	5753
LCS 880-5753/2-A	Lab Control Sample	Soluble	Solid	300.0	5753
LCSD 880-5753/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	5753

QC Association Summary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-995-1
SDG: TE012921026

HPLC/IC (Continued)

Analysis Batch: 5764 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-995-1 MS	BH01	Soluble	Solid	300.0	5753
890-995-1 MSD	BH01	Soluble	Solid	300.0	5753

Lab Chronicle

Client: WSP USA Inc.
Pjo/ectBite: giE dyy5 Unit r 10

Job ID: 890-991-r
SDG: Td0r 292r 026

Client Sample ID: BH01
Date Collected: 07/26/21 08:44
Date Received: 07/26/21 15:25

Lab Sample ID: 890-995-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TotalBNA	Pjep	1031			1729	07B28B2r 08:37	KL	XdN MID
TotalBNA	Anal5sis	802r g		r	1734	07B28B2r r3:06	KL	XdN MID
TotalBNA	Pjep	80r 1NM Pjep			1924	07B3r B2r r0:49	DM	XdN MID
TotalBNA	Anal5sis	80r 1g NM		r	1934	08B0r B2r 20:r2	AJ	XdN MID
Soluble	Leach	DI Leach			1713	07B28B2r r3:03	SC	XdN MID
Soluble	Anal5sis	300.0		r	1764	07B28B2r r1:22	SC	XdN MID

Client Sample ID: BH02
Date Collected: 07/26/21 10:15
Date Received: 07/26/21 15:25

Lab Sample ID: 890-995-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TotalBNA	Pjep	1031			1729	07B28B2r 08:37	KL	XdN MID
TotalBNA	Anal5sis	802r g		r	1734	07B28B2r r3:26	KL	XdN MID
TotalBNA	Pjep	80r 1NM Pjep			1924	07B3r B2r r0:49	DM	XdN MID
TotalBNA	Anal5sis	80r 1g NM		r	1934	08B0r B2r 20:34	AJ	XdN MID
Soluble	Leach	DI Leach			1713	07B28B2r r3:03	SC	XdN MID
Soluble	Anal5sis	300.0		r	1764	07B28B2r r1:38	SC	XdN MID

Client Sample ID: BH03
Date Collected: 07/26/21 10:51
Date Received: 07/26/21 15:25

Lab Sample ID: 890-995-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TotalBNA	Pjep	1031			1729	07B28B2r 08:37	KL	XdN MID
TotalBNA	Anal5sis	802r g		r	1734	07B28B2r r3:47	KL	XdN MID
TotalBNA	Pjep	80r 1NM Pjep			6026	08B03B2r r1:37	DM	XdN MID
TotalBNA	Anal5sis	80r 1g NM		r	600r	08B03B2r 23:37	AJ	XdN MID
Soluble	Leach	DI Leach			1713	07B28B2r r3:03	SC	XdN MID
Soluble	Anal5sis	300.0		r	1764	07B28B2r r1:43	SC	XdN MID

Client Sample ID: BH03
Date Collected: 07/26/21 11:02
Date Received: 07/26/21 15:25

Lab Sample ID: 890-995-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TotalBNA	Pjep	1031			1729	07B28B2r 08:37	KL	XdN MID
TotalBNA	Anal5sis	802r g		r	1734	07B28B2r r4:07	KL	XdN MID
TotalBNA	Pjep	80r 1NM Pjep			1604	07B28B2r r0:00	DM	XdN MID
TotalBNA	Anal5sis	80r 1g NM		r	174r	07B28B2r r1:26	AJ	XdN MID
Soluble	Leach	DI Leach			1713	07B28B2r r3:03	SC	XdN MID
Soluble	Anal5sis	300.0		r	1764	07B28B2r r1:49	SC	XdN MID

dujo÷ns Xencof Cajlsbay

Lab Chronicle

Client: WSP USA Inc.
Pjo/ectBSite: giE dyy5 Unit r 10

Job ID: 890-991-r
SDG: Td0r 292r 026

Client Sample ID: BH03
Date Collected: 07/26/21 11:44
Date Received: 07/26/21 15:25

Lab Sample ID: 890-995-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TotalBNA	Pjep	1031			1729	07B28B2r 08:37	KL	XdN MID
TotalBNA	Anal5sis	802r g		r	1734	07B28B2r r4:27	KL	XdN MID
TotalBNA	Pjep	80r 1NM Pjep			1604	07B28B2r r0:00	DM	XdN MID
TotalBNA	Anal5sis	80r 1g NM		r	174r	07B28B2r r1:47	AJ	XdN MID
Soluble	Leach	DI Leach			1713	07B28B2r r3:03	SC	XdN MID
Soluble	Anal5sis	300.0		r	1764	07B28B2r r1:14	SC	XdN MID

Client Sample ID: BH03
Date Collected: 07/26/21 12:30
Date Received: 07/26/21 15:25

Lab Sample ID: 890-995-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TotalBNA	Pjep	1031			1729	07B28B2r 08:37	KL	XdN MID
TotalBNA	Anal5sis	802r g		r	1734	07B28B2r r4:48	KL	XdN MID
TotalBNA	Pjep	80r 1NM Pjep			1604	07B28B2r r0:00	DM	XdN MID
TotalBNA	Anal5sis	80r 1g NM		r	174r	07B28B2r r6:07	AJ	XdN MID
Soluble	Leach	DI Leach			1713	07B28B2r r3:03	SC	XdN MID
Soluble	Anal5sis	300.0		r	1764	07B28B2r r6:r0	SC	XdN MID

Client Sample ID: BH03
Date Collected: 07/26/21 13:46
Date Received: 07/26/21 15:25

Lab Sample ID: 890-995-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TotalBNA	Pjep	1031			1729	07B28B2r 08:37	KL	XdN MID
TotalBNA	Anal5sis	802r g		r	1734	07B28B2r r1:08	KL	XdN MID
TotalBNA	Pjep	80r 1NM Pjep			6026	08B03B2r r1:37	DM	XdN MID
TotalBNA	Anal5sis	80r 1g NM		r	600r	08B03B2r 23:18	AJ	XdN MID
Soluble	Leach	DI Leach			1713	07B28B2r r3:03	SC	XdN MID
Soluble	Anal5sis	300.0		r	1764	07B28B2r r6:r6	SC	XdN MID

Laboratory References:
XdN MID , dujo÷ns Xencof Miylanyf r 2r r W. Flojiya Avef Miylanyf TX 7970r f TdL (432)704-1440

dujo÷ns Xencof Cajlsbay

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-991-r
Pjo/ectB Site: giE dyy5 Unit r 10 SDG: Td 0r 292r 026

Laboratory: Eurofins Xenco, Midland

Unless othejwise notey, all anal5tes foj this labojatoj5 weje covejey unyej each accjeyitationB ejtification below.

Authority	Program	Identification Number	Expiration Date
Texas	NdLAP	Tr 04704400-20-2r	06-30-22

The followinE anal5tes aje incluyey in this jepojt, but the labojatoj5 is not cejtifiey b5 the EovejninE authojit5. This list ma5 incluye anal5tes foj which the aEenc5 yoes not offej cejtification.

Anal5sis Methoy	Pjep Methoy	Matjix	Anal5te
80r 1g NM	80r 1NM Pjep	Soliy	Total TPH
802r g	1031	Soliy	Total gTdX

Method Summary

I ient WS PU APc It . G
Ujo/n. WPeW: ged 2yy5 At eWC10

Job ID: 890-991-C
PDT : E20C696C06r

Method	Method Description	Protocol	Laboratory
806Cg	VoiaWh Ojdat e I ompout ys (TI)	PS 84r	X2N MID
80C1g NM	Densni Rat dn Ojdat e s (DRO) (TI)	PS 84r	X2N MID
300G	ct eot s, Iot I hjomaWdjaph5	MI cS S	X2N MID
1031	I iosny P5sWm Uujdn at y Ejap	PS 84r	X2N MID
80C1NM Ujnp	Me jonxWa. Wot	PS 84r	X2N MID
DI Lna. h	Dneot ezny S aWj Lna. het d Ujo. nyujn	cPEM	X2N MID

Protocol References:

cPEM = cPEM It Wjt aWot ai

MI cS S = "MnWoys Foj I hnme ai ct ai5ses Of S aWj ct y S asWs", 2Uc-r 00B4-79-060, Maj. h C983 ct y Pubsnqunt WRnveseot sG

PS 84r = "EnsWMnWoys Foj 2vaiuaWd Poiey S asW, Uh5se aiB hnme ai MnWoys", Ehejy 2yeWot , Novnmbnj C98r ct y IWApyaWsG

Laboratory References:

X2N MID = 2ujofet s Xnt . o, Meyiat y, C6CC S GFiojeya cvn, Meyiat y, EX 7970C, E2L (436)704-1440

2ujofet s Xnt . o, I ajisbay

Sample Summary

Client: WSP USA Inc.
Project/Site: Big Eddy Unit 150

Job ID: 890-995-1
SDG: TE012921026

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-995-1	BH01	Solid	07/26/21 08:44	07/26/21 15:25	- 18
890-995-2	BH02	Solid	07/26/21 10:15	07/26/21 15:25	- 18
890-995-3	BH03	Solid	07/26/21 10:51	07/26/21 15:25	- 1
890-995-4	BH03	Solid	07/26/21 11:02	07/26/21 15:25	- 5
890-995-5	BH03	Solid	07/26/21 11:44	07/26/21 15:25	- 10
890-995-6	BH03	Solid	07/26/21 12:30	07/26/21 15:25	- 15
890-995-7	BH03	Solid	07/26/21 13:46	07/26/21 15:25	- 18

XENCO LABORATORIES

Chain of Custody

Work Order No: ____________

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

www.xenco.com Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	WSP USA	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	522 W. Mermod St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	Jeremy.Hill@wsp.com, Dan.Moir@wsp.com

Work Order Comments

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

Project Name:	Big Eddy Unit 150	Turn Around	
Project Number:	TE012921026	Routine ☐	
P.O. Number:	NRM 2024854885	Rush: 24HR	
Sampler's Name:	Jeremy Hill	Due Date: 7/27/21	

ANALYSIS REQUEST: Number of Containers; TPH (EPA 8015); BTEX (EPA 8021); Chloride (EPA 300.0)

890-995 Chain of Custody

Work Order Notes

CC 1080741001
AFE
EW. 2021.01560.EXP.01

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

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	4.8/4.6	Thermometer ID	TNM-007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
BH01	S	7/26/21	0844	18'	1	X	X	X	discrete
BH02	↓	↓	1015	18'	↓	↓	↓	↓	↓
BH04	↓	↓	1051	1'	↓	↓	↓	↓	↓
BH04	↓	↓	1100	5'	↓	↓	↓	↓	↓
BH04	↓	↓	1144	10'	↓	↓	↓	↓	↓
BH04	↓	↓	1330	15'	↓	↓	↓	↓	↓
BH04	↓	↓	1346	18'	↓	↓	↓	↓	↓

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 [signature]	[signature]	7-26-21 1520	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

eurofins | Environment Testing America

8/5/2021 (Rev. 4)

Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s)	COC No: 890-320 1
Client Contact: Shipping/Receiving	Phone	E-Mail: jessica kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-995-1
Address: 1211 W Florida Ave,	Due Date Requested: 7/28/2021			
City: Midland	TAT Requested (days)			
State Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #			
Email	WO #			
Project Name: Big Eddy Unit 150	Project #: 89000004			
Site	SSOW#			

Analysis Requested

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

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total Number of containers	Special Instructions/Note:
				Preservation Code:							
BH01 (890-995-1)	7/26/21	08 44 Mountain		Solid			X	X	X	1	
BH02 (890-995-2)	7/26/21	10 15 Mountain		Solid			X	X	X	1	
BH04 (890-995-3)	7/26/21	10 51 Mountain		Solid			X	X	X	1	
BH04 (890-995-4)	7/26/21	11 02 Mountain		Solid			X	X	X	1	
BH04 (890-995-5)	7/26/21	11 44 Mountain		Solid			X	X	X	1	
BH04 (890-995-6)	7/26/21	12 30 Mountain		Solid			X	X	X	1	
BH04 (890-995-7)	7/26/21	13 46 Mountain		Solid			X	X	X	1	

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

Possible Hazard Identification
Unconfirmed

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

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

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by: [signature]	7 28 21 10:45	Xenco	Received by: [signature]		
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

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

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Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-995-1
SDG Number: TE012921026

Login Number: 995
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: 890-995-1
SDG Number: TE012921026

Login Number: 995
List Number: 2
Creator: Lowe, Katie

List Source: Eurofins Xenco, Midland
List Creation: 07/28/21 10:55 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	

ATTACHMENT 5: LITHOLOGIC/SOIL SAMPLING LOG

WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220	PH Name: BH01	Date: 7/21/2021 & 7/26/2021
	Site Name: Big Eddy Unit 150	
	Incident Number NRM2024854885	
	WSP Job Number: TE012920126	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: JH	Method: Backhoe/Core Drill
Lat/Long: 32.47872, -104.111181	Field Screening: HACH chloride strips, PID	Hole Diameter: NA / Total Depth: 18 feet bgs

Comments:
Chloride test performed with 1:4 dilution factor of soil to distilled water. Values do not include correction factor. SAA - Same As Above

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
						5		
						10		
						12		
Dry	1,652	0.2	N	BH01	15	15	SP-SC	Red poorly-graded sand (f.) with clay, slight plasticity, no stain, no odor
Dry	340	0.1	N	BH01	18	18	CCHE	CALICHE, dry, off white, moderately consolidated, no stain, no odor

TD 18' bgs

WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220	PH Name: BH02	Date: 7/21/2021 & 7/26/2021
	Site Name: Big Eddy Unit 150	
	Incident Number NRM2024854885	
	WSP Job Number: TE012920126	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: JH	Method: Backhoe/Core Drill
Lat/Long: 32.478727, -104.111295	Field Screening: HACH chloride strips, PID	Hole Diameter: NA / Total Depth: 18 feet bgs

Comments:
Chloride test performed with 1:4 dilution factor of soil to distilled water. Values do not include correction factor. SAA - Same As Above

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
						5		
						10		
Dry	1,268	0.1	N	BH02	12	12	SP-SC	Red poorly-graded sand (f.) with clay, slight plasticity, no stain, no odor
Dry	1,268	0.1	N	BH02	15	15	SP-SC	SAA
Dry	240	0.2	N	BH02	18	18	CCHE	CALICHE, dry, off white, moderately consolidated, no stain, no odor

TD 18' bgs

WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220	PH Name: BH03	Date: 7/21/2021 & 7/26/2021
	Site Name: Big Eddy Unit 150	
	Incident Number NRM2024854885	
	WSP Job Number: TE012920126	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: JH	Method: Core Drill
Lat/Long: 32.478705, -104.111032	Field Screening: HACH chloride strips, PID	Hole Diameter: 1.75" / Total Depth: 18 feet bgs

Comments:
Chloride test performed with 1:4 dilution factor of soil to distilled water. Values do not include correction factor. SAA - Same As Above

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
Dry	212	0.1	N	BH03	1	1	SP	Brown - red, poorly-graded sand (f.), low plasticity, no stain and no odor
Dry	240	0.2	N	BH03	5	5	SP-SC	Red poorly-graded sand (f.) with clay, low plasticity, no stain and no odor
Dry	212	0.4	N	BH03	10	10	SP-SC	SAA
Dry	132	0.3	N	BH03	15	15	CCHE	CALICHE, dry, off white, moderately consolidated, no stain, no odor
Dry	132	0.4	N	BH03	18	18	SP-SC	Red poorly-graded sand (f.) with clay, low plasticity, no stain and no odor
								TD 18' bgs

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QUESTIONS

Action 500946

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 500946
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nRM2024854885**
Incident Name	**NRM2024854885 BIG EDDY UNIT 150 @ 30-015-33231**
Incident Type	**Produced Water Release**
Incident Status	**Remediation Closure Report Received**
Incident Well	**[30-015-33231] BIG EDDY UNIT #150**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	BIG EDDY UNIT 150
Date Release Discovered	08/19/2020
Surface Owner	Private

Incident Details	
Please answer all the questions in this group.	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	*Not answered.*
Produced Water Released (bbls) Details	Cause: Corrosion | Other (Specify) | Produced Water | Released: 623 BBL | Recovered: 1 BBL | Lost: 622 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	*Not answered.*

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
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	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**Yes**
Reasons why this would be considered a submission for a notification of a major release	**From paragraph A. "Major release" determine using:** **(1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.**
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.	
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	*Not answered.*
Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.	

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.

I hereby agree and sign off to the above statement	Name: Ashley Mcafee Email: ashley.a.mcafee@exxonmobil.com Date: 09/02/2025

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 500946
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 26 and 50 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between ½ and 1 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 200 and 300 (ft.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 100 and 200 (ft.)
Any other fresh water well or spring	Between 300 and 500 (ft.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Between 1 and 5 (mi.)
A wetland	Between ½ and 1 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Zero feet, overlying, or within area
Categorize the risk of this well / site being in a karst geology	High
A 100-year floodplain	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	Yes

Remediation Plan		
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.		
Requesting a remediation plan approval with this submission		Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.		
Have the lateral and vertical extents of contamination been fully delineated		Yes
Was this release entirely contained within a lined containment area		No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)		
Chloride	(EPA 300.0 or SM4500 Cl B)	384
TPH (GRO+DRO+MRO)	(EPA SW-846 Method 8015M)	0
GRO+DRO	(EPA SW-846 Method 8015M)	0
BTEX	(EPA SW-846 Method 8021B or 8260B)	0
Benzene	(EPA SW-846 Method 8021B or 8260B)	0
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.		
On what estimated date will the remediation commence		09/01/2020
On what date will (or did) the final sampling or liner inspection occur		02/15/2025
On what date will (or was) the remediation complete(d)		02/15/2025
What is the estimated surface area (in square feet) that will be reclaimed		5305
What is the estimated volume (in cubic yards) that will be reclaimed		1230
What is the estimated surface area (in square feet) that will be remediated		5305
What is the estimated volume (in cubic yards) that will be remediated		1230
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.		
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.		

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QUESTIONS (continued)

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	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for **off-site** disposal	fEEM0112334510 HALFWAY DISPOSAL AND LANDFILL
OR which OCD approved well (API) will be used for **off-site** disposal	*Not answered.*
OR is the **off-site** disposal site, to be used, out-of-state	*Not answered.*
OR is the **off-site** disposal site, to be used, an NMED facility	*Not answered.*
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	*Not answered.*
(In Situ) Soil Vapor Extraction	*Not answered.*
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	*Not answered.*
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	*Not answered.*
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	*Not answered.*
Ground Water Abatement pursuant to 19.15.30 NMAC	*Not answered.*
OTHER (Non-listed remedial process)	*Not answered.*
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
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.	
I hereby agree and sign off to the above statement	Name: Ashley Mcafee Email: ashley.a.mcafee@exxonmobil.com Date: 09/02/2025
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 500946
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Deferral Requests Only *Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.*	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
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	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**428947**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**02/13/2025**
What was the (estimated) number of samples that were to be gathered	**25**
What was the sampling surface area in square feet	**5000**

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	**Yes**
Was this release entirely contained within a lined containment area	**No**
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	5305
What was the total volume (cubic yards) remediated	1230
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	5305
What was the total volume (in cubic yards) reclaimed	1230
Summarize any additional remediation activities not included by answers (above)	Excavation activities were conducted at the Site to address the August 19, 2020, suction line failure resulting in the release of 623 bbls of produced water at the Site. Laboratory analytical results for all confirmation soil samples indicated all COC concentrations were compliant with the Closure Criteria. Based on laboratory analytical results, no further remediation was required. XTO backfilled the excavation with material purchased locally and recontoured the Site to match pre-existing site conditions. The release will be reseeded with a BLM approved seed mix during the next BLM recommended planting season and a revegetation report will be completed. Excavation of impacted soil has mitigated potential impacts at this Site. Depth to groundwater has been estimated to be less than 50 feet bgs and sensitive receptors were identified near the Site. XTO believes these remedial actions are protective of human health, the environment, and groundwater. As such, XTO respectfully requests closure for Incident Number NRM2024854885.
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 (in .pdf format) 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.	

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.

I hereby agree and sign off to the above statement	Name: Ashley Mcafee Email: ashley.a.mcafee@exxonmobil.com Date: 09/02/2025

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QUESTIONS (continued)

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QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	No

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CONDITIONS

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CONDITIONS

Created By	Condition	Condition Date
nvelez	None	9/12/2025