District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

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

Incident ID	NAPP2111850266
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Kyle Littrell	Contact Telephone 432-221-7331
Contact email kyle.littrell@exxonmobil.com	Incident # *(assigned by OCD)*
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.27680 Longitude -103.94270
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Remuda 100	Site Type CTB
Date Release Discovered 4/14/2021	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
E	25	23S	29E	Eddy

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 15.0	Volume Recovered (bbls) 15.0
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Cause of Release	A pin hole on the 4" inlet line released fluids into impermeable containment.All fluids were recovered and returned to the process. A 48-hour advance liner inspection notice was sent to NMOCD District 2. Liner was inspected an determined not to be operating as designed. A third-party contractor has been retained for remediation activities.	

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2111850266
District RP	
Facility ID	
Application ID	

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

Initial Response

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

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

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

NA

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

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

Printed Name: Adrian Baker Title: SSHE Coordinator

Signature: Adrian Baker Date: 4/28/21

email: adrian.baker@exxonmobil.com Telephone: 432-221-7331

OCD Only

Received by: Ramona Marcus Date: 5/10/2021

NAPP2111850266

Location:	Remuda 100 CTB	
Spill Date:	4/14/2021	
Area 1		
Approximate Area =	84.22	cu.ft.
VOLUME OF LEAK		
Total Produced Water =	15.00	bbls
TOTAL VOLUME OF LEAK		
Total Produced Water =	**15.00**	**bbls**
TOTAL VOLUME RECOVERED		
Total Produced Water =	**15.00**	**bbls**

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

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

CONDITIONS

Action 26072

CONDITIONS OF APPROVAL

Operator:	OGRID:	Action Number:	Action Type:
XTO ENERGY, INC 6401 Holiday Hill Road Building #5 Midland, TX79707	5380	26072	C-141

OCD Reviewer	Condition
rmarcus	None

Incident ID	NAP2111850266
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	>105 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NAP2111850266
District RP	
Facility ID	
Application ID	

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

Printed Name: Kyle Littrell Title: Environmental Manager

Signature: Date: 06/07/2021

email: Kyle_Littrell@exxonmobil.com Telephone: (432)-221-7331

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	NAP2111850266
District RP	
Facility ID	
Application ID	

Closure

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

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

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: Environmental Manager

Signature: Date: 06/07/2021

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

OCD Only

Received by: Chad Hensley Date: 07/14/2021

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

Closure Approved by: Chad Hensley Date: 07/14/2021

Printed Name: Chad Hensley Title: Environmental Specialist Advanced

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

June 7, 2021

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

Re: Closure Request
Remuda 100
Incident Number nAPP2111850266
Eddy County, New Mexico

To Whom It May Concern:

WSP USA Inc. (WSP) on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing site assessment and soil sampling activities at the Remuda 100 (Site) located in Unit E, Section 25, Township 23 South, Range 29 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment and soil sampling activities was to assess for the presence or absence of impacts to soil following the release of produced water within lined containment at the Site. Based on field observations, field screening activities, and soil sample laboratory analytical results, XTO is submitting this Closure Request and requesting no further action (NFA) for Incident Number nAPP2111850266.

RELEASE BACKGROUND

On April 14, 2021, a pin hole leak on the 4-inch inlet line resulted in the release of approximately 15 barrels (bbls) of produced water into the lined tank battery containment. A vacuum truck was immediately dispatched to the Site to recover freestanding fluids; all 15 bbls of the released produced water were recovered from within the lined containment. A 48-hour advance notice of liner inspection was provided via email to New Mexico Oil Conservation Division (NMOCD) District II office. A liner integrity inspection was conducted by XTO personnel following the fluid recovery and upon inspection, the liner was determined to be insufficient. XTO submitted a Release Notification Form C-141 (Form C-141) on April 28, 2021. The release was assigned Incident Number nAPP2111850266.

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 100 feet below ground surface (bgs) based on a recent soil boring drilled for determination of regional groundwater depth. During January 2021, WSP installed a soil boring (C-4494) within 0.5 miles of the Site

utilizing a truck-mounted hollow-stem auger rig. Soil boring C-4494 was drilled to a depth of 105 feet bgs. A WSP geologist logged and described soils continuously. The lithologic soil sampling log is included in Attachment 1. The location of the borehole is approximately 0.24 miles southeast of the Site and is depicted on Figure 1. The borehole was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period, it was confirmed that groundwater beneath the Site is greater than 105 feet bgs. The borehole was properly abandoned with drill cuttings and hydrated bentonite chips.

The closest continuously flowing water or significant watercourse to the Site is an intermittent wetland, located approximately 0.81 miles south-southeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (medium potential karst designation area). Site receptors are identified on Figure 1.

CLOSURE CRITERIA

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

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

SITE ASSESSMENT ACTIVITIES AND ANALYTICAL RESULTS

On May 17, 2021, WSP personnel were at the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. WSP personnel advanced one borehole (BH01) via hand-auger at the location of the tear in the liner identified during the liner integrity inspection. Two soil samples were collected from borehole BH01 at depths of approximately 0.5 feet and 1-foot bgs. Soil from the borehole was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photo-ionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations from the borehole were documented on a lithologic/soil sampling log which is included as Attachment 2. The borehole was backfilled with the soil removed and XTO repaired the tear in the liner. The borehole delineation soil sample location is depicted on Figure 2. Photographic documentation was conducted during the Site visit. The photographic log is included in Attachment 3.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of 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 EPA Method 300.0.

SOIL ANALYTICAL RESULTS

Laboratory analytical results for delineation soil samples BH01 and BH01A, collected at depths of approximately 0.5 feet and 1-foot bgs, indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical report is included as Attachment 4.

CLOSURE REQUEST

Following the failed liner integrity inspection at the Site, WSP personnel advanced one borehole (BH01) at the location of the tear in the liner to assess for the presence or absence of soil impacts resulting from the April 14, 2021 produced water release within lined containment. Two delineation soil samples were collected from borehole BH01 at depths of approximately 0.5 feet and 1-foot bgs. Laboratory analytical results indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Additionally, field screening of soil from the borehole indicated no elevated volatile aromatic hydrocarbons or chloride concentrations beneath the tear in the liner. The release was contained laterally by the lined containment and all released fluids were recovered during initial response activities. The tear in the liner was subsequently repaired.

Based on initial response efforts, absence of elevated field screening results, and soil sample laboratory analytical results compliant with the Closure Criteria directly below the tear in the liner, XTO respectfully requests NFA for Incident Number nAPP2111850266.

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

Sincerely,

WSP USA Inc.

Kaeli Jennings

Ashley L. Ager

Kalei Jennings
Associate Consultant

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

cc: Kyle Littrell, XTO
Ryan Mann, New Mexico State Land Office

Attachments:

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

FIGURES

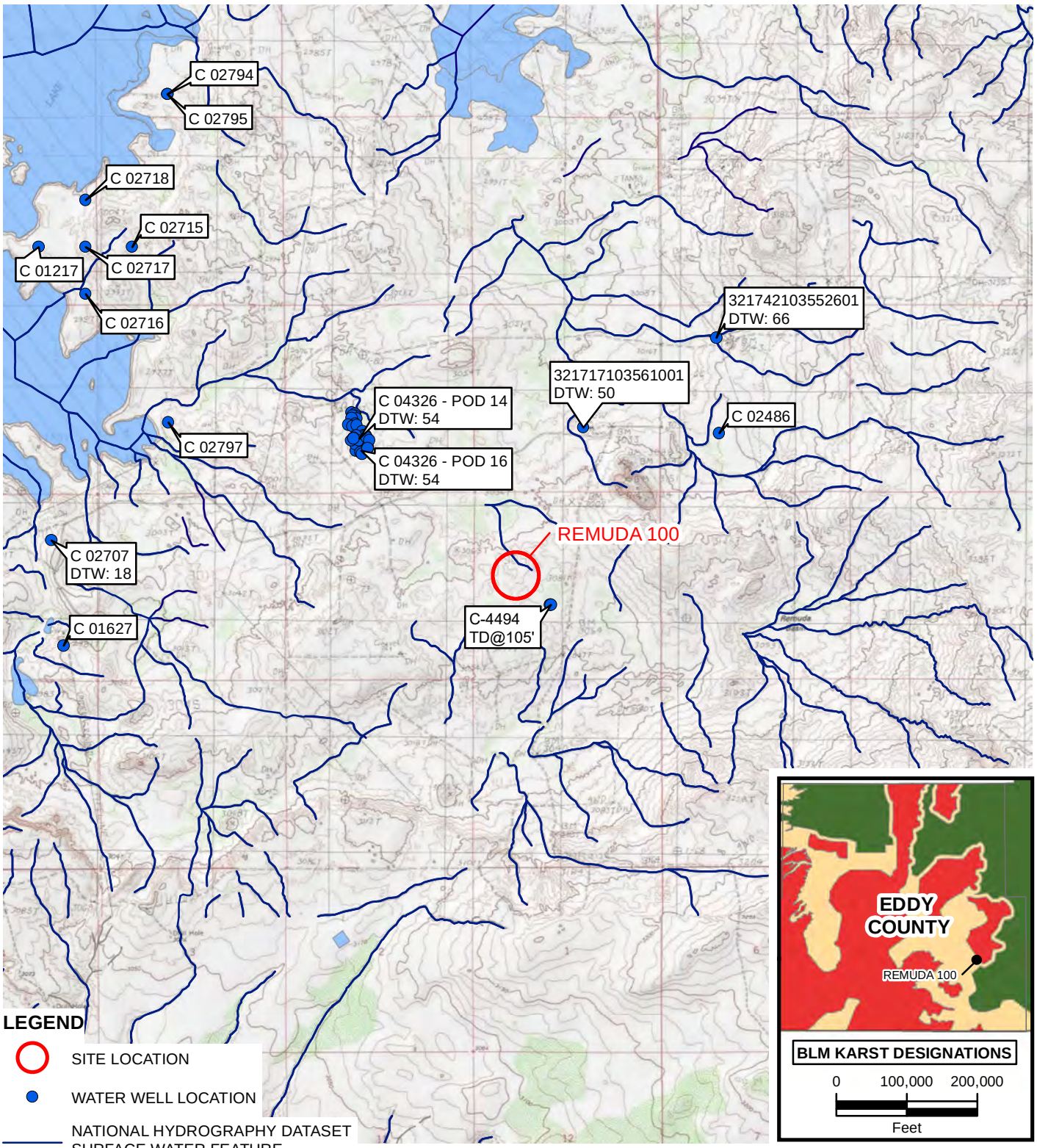

FIGURE 1
SITE LOCATION MAP
REMUDA 100
UNIT E SEC 25 T23S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC

P:\XTO Energy\GIS\MXD\31403236.004.0129_REMUDA 100\31403236.004.0129_FIG01_SL_RECEPTOR_2021.mxd

IMAGE COURTESY OF ESRI

LEGEND

DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA

INFRASTRUCTURE

0 50 100

Feet

N

NOTE: INCIDENT NUMBER NAPP2111850266
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

FIGURE 2
DELINEATION SOIL SAMPLE LOCATIONS
REMUDA 100
UNIT E SEC 25 T23S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\31403236.004.0129_REMUDA 100\31403236.004.0129_FIG02_DELINEATION_2021.mxd

TABLES

Table 1

Soil Analytical Results
Remuda 100
Incident Number NAPP2111850266
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			**10**	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**
Delineation Samples										
BH01	05/17/2021	0.5	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	117
BH01A	05/17/2021	1	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	95.5

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

ATTACHMENT 1: REFERENCED WELL RECORD

WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220	BH or MW Name: BH01 (POD 1, C-4494)	Date: 11/18/2020-12/02/2020
	Site Name: Remuda N 25 State	
	RP or Incident Number: NAB1927332462	
	WSP Job Number: TE012919195	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: BB, LD, FS	Method: Hollow Stem Auger
Lat/Long: 32.274194,-103.939575	Field Screening: N/A	Hole Diameter: 6.25", 4.25"
		Total Depth: 56.1
		Depth to Water: DRY

Backfill or Well Construction Materials / Comments:
Lithology and descriptions only, no field screening. Borehole backfilled with drill cuttings from 56.1' to 10', hydrated bentonite from 10' to surface.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks	Backfill / Well Completion
						1	SP-SC	0-4', SAND w/ clay, dry brown, poorly graded, fine grained, 10% clay, some roots, no stain, no odor.	Hydrated Bentonite Chips from 10' to surface
							CCHE	4'-24', CALICHE, dry, light brown-tan, poorly consolidated, some sub-round caliche pebble and gravel, very silty, gradational transition, no stain, no odor.	
						10			
								19', moderately consolidated.	
						20	CL-S	24'-39', MUDSTONE, dry, reddish-brown, low plasticity, cohesive, well consolidated, trace sub-angular caliche pebbles, sharp transition, no stain, no odor.	
						30		34', tan-light brown sub-angular calcium carbonate gravel with dissolution features (1-3mm).	
								39'-56.1', air rotary, hole diameter to 4.25".	
						40	LS	39'-48', DOLOMITIC LIMESTONE, dry, tan-light brown, well consolidated, some dissolution features (1-3 mm), sharp transition, light reaction to HCL, no stain, no odor.	
								11/18/2020: air rotary refusal, TD@48' bgs. 12/02/2020: Continue drilling @ 48'bgs	
						50	DOLO	48'-56.1', DOLOMITE, dry, off white, moderately consolidated, thin dark gray laminations, no stain, no odor.	Drill Cuttings backfilled from 56.1' to 10'
						60		TD @ 56.1 feet bgs.	

WSP USA
508 West Stevens Street
Carlsbad, New Mexico 88220

BH or PH Name: BH01 (cont) Date: 1-5-2021
Site Name: Remuda N 25 State
RP or Incident Number:
WSP Job Number: TE02919260 TE02919195, TE02914039

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: BB F.S Method: Sonic
Lat/Long: 32.274194, -103.939575 Field Screening: NM Hole Diameter: 6" Total Depth: 105'

Comments: Borehole backfilled w/ drill cuttings from 105'-10', hydrated bentonite chips from 10'-surface, Lithology descriptions only, no field screening.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						51	DOL	
						52		
						53		
						54		
						55		@ 55'
						56		1/5/2021
						57		55'-65' DOLOMITE, dry, light gray-gray, well consolidated, some calcite crystalline veins (<1mm), some dissolution features (2mm) with fine calcite crystallin, trace orange oxidation staining within dissolution features, no stain, no odor.
						58		
						59		
						60		
						61		
						62		62', brown-pale yellow coarse crystalline dolomitic limestone stringer (2cm).
						63		
						64		63'-65' Abundant calcite crystalline veins (<1mm)
						65		63'-65 Pale green-gray, poorly consolidated.
						66	CH-S	65'-69' MUDSTONE, moist, reddish brown, poorly consolidated, high plasticity, cohesive, abundant coarse crystalline gypsum, few pale green-gray mottling, no stain, no odor.
						67		
						68		
						69		
						70	GYP	69'-81' GYPSUM w/ Anhydrite, dry, greenish gray, some pale yellow, well consolidated, fine crystalline, 20% anhydrite, no stain, no odor.
						71		
						72		
						73		
						74		
						75		

WSP USA
508 West Stevens Street
Carlsbad, New Mexico 88220

BH or PH Name: BH01 (cmt) Date: 1-5-2021
Site Name: Remuda N 25 State
RP or Incident Number:
WSP Job Number: TE01291916260, TE01291915, TE01291903
Logged By: BB, FS Method: Grab
Hole Diameter: 6" Total Depth: 105'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: 32.2741194, -103.939575 Field Screening: NA

Comments: Lithology descriptions only, no field screening. Borehole backfilled with drill cuttings from 105'-10', hydrated bentonite chips from 10'-surface.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						76	GYP	
						77		81'-98' Mudstone, moist, dark reddish brown, moderately consolidated, high plasticity, cohesive, trace coarse crystalline gypsum inclusions, no stain, no odor.
						78		
						79		
						80		
						81		85'-86.5' greenish-gray well consolidated coarse crystalline gypsum/anhydrite stringer.
						82	CH-S	90'-98' Some fine grain brown sand.
						83		97' dark gray-gray gypsum stringer (4cm).
						84		98'-95.5' GYPSUM, dark gray-gray, some brown, dry, well consolidated, fine-coarse crystalline, no stain, no odor.
						85		
						86		
						87		95.5'-105' Sandy SILTSTONE, moist, brown, some gray-dark gray, poorly consolidated, 20% very fine grain sand, no stain, no odor.
						88		
						89		
						90		
						91		102' thin (1mm) laminated gray well consolidated shale stringer.
						92		
						93		
						94		
						95		
						96		
						97		
						98	GYP	
						99		
						100	ML-S	

WSP USA
[redacted]

BH or PH Name: BH01 (1 of 1)	Date: 1-5-2021
Site Name: Remuda N25 State	
RP or Incident Number:	
WSP Job Number: TE01291976O, TE01291919S, TE07914039	
Logged By: BB, FS	Method: Sonic
Lat/Long: 32.274194, -107.939575	Field Screening: N/A
Hole Diameter: 6"	Total Depth: 105'

LITHOLOGIC / SOIL SAMPLING LOG

Comments: Lithology descriptions only, no field screening. Borehole backfilled with drill cuttings from 105'- 10', hydrated bentonite chips from 10'- surface.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						101	ML-S	102', thin (1mm) laminated black/gray well consolidated shale stringer (4cm thick)
						102		
						103		
						103		
						104		
						105		TDC 105' bgs.
						106	TDC105'	
						107		
						108		
						109		
						110		
						112		
						113		
						114		
						115		
						116		
						117		
						118		
						119		
						120		
						121		
						122		
						123		
						124		
						125		

ATTACHMENT 2: LITHOLOGIC/SAMPLING LOG

WSP USA

508 West Stevens Street
Carlsbad, New Mexico 88220

BH or PH Name:	Date:
BH01	5/17/2021

Site Name: Remuda 100

RP or Incident Number: nAPP2111850266

LTE Job Number: 31403236.004.0129

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: JH	Method: Hand Auger

Lat/Long:	Field Screening: Chloride, PID	Hole Diameter: 3"	Total Depth: 1'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
dry	184	0.6	N	BH01	0.5'	0.5	SM	SAND w/ caliche, dry, tan, fine-medium grain, no stain, no odor
dry	156	0.0	N	BH01A	1'	1		

Total Depth: 1 foot bgs

ATTACHMENT 3: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG		
XTO Energy, Inc	Remuda 100 Eddy County, New Mexico	31403236.004.0129

Photo No.	Date
1	May 17, 2021

View of compromised hole in liner.

Photo No.	Date
2	May 17, 2021

View of delineation activities facing west.

PHOTOGRAPHIC LOG		
XTO Energy, Inc	Remuda 100 Eddy County, New Mexico	31403236.004.0129

Photo No.	Date
3	May 17, 2021

View of delineation activities facing east.

Photo No.	Date
4	May 17, 2021

View of final delineation with borehole backfilled with soil removed.

ATTACHMENT 4: LABORATORY ANALYTICAL RESULTS

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-681-1
Laboratory Sample Delivery Group: 31403236.004.0129
Client Project/Site: Remuda 100

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

Attn: Dan Moir

JKramer

Authorized for release by:
5/21/2021 3:21:28 PM

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

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

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

Client: WSP USA Inc.
Project/Site: Remuda 100

Laboratory Job ID: 890-681-1
SDG: 31403236.004.0129

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Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-681-1
Project/Site: Remuda 100 SDG: 31403236.004.0129

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: Remuda 100

Job ID: 890-681-1
SDG: 31403236.004.0129

Job ID: 890-681-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-681-1

Receipt
The samples were received on 5/18/2021 12:58 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.2°C

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

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

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

Client Sample Results

Client: WSP USA Inc.
Project/Site: Remuda 100

Job ID: 890-681-1
SDG: 31403236.004.0129

Client Sample ID: BH01

Lab Sample ID: 890-681-1
Matrix: Solid
Date Collected: 05/17/21 11:20
Date Received: 05/18/21 12:58
Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/19/21 12:00	05/19/21 17:33	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/19/21 12:00	05/19/21 17:33	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/19/21 12:00	05/19/21 17:33	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/19/21 12:00	05/19/21 17:33	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/19/21 12:00	05/19/21 17:33	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/19/21 12:00	05/19/21 17:33	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		05/19/21 12:00	05/19/21 17:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*05/19/21 12:00*	*05/19/21 17:33*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*05/19/21 12:00*	*05/19/21 17:33*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/19/21 11:30	05/19/21 19:46	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/19/21 11:30	05/19/21 19:46	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/19/21 11:30	05/19/21 19:46	1
Total TPH	<49.9	U	49.9		mg/Kg		05/19/21 11:30	05/19/21 19:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*05/19/21 11:30*	*05/19/21 19:46*	*1*
o-Terphenyl	*117*		*70 - 130*	*05/19/21 11:30*	*05/19/21 19:46*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**117**		5.02		mg/Kg			05/20/21 15:02	1

Client Sample ID: BH01A

Lab Sample ID: 890-681-2
Matrix: Solid
Date Collected: 05/17/21 11:24
Date Received: 05/18/21 12:58
Sample Depth: - 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/19/21 12:00	05/19/21 17:54	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/19/21 12:00	05/19/21 17:54	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/19/21 12:00	05/19/21 17:54	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/19/21 12:00	05/19/21 17:54	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/19/21 12:00	05/19/21 17:54	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/19/21 12:00	05/19/21 17:54	1
Total BTEX	<0.00399	U	0.00399		mg/Kg		05/19/21 12:00	05/19/21 17:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*	*05/19/21 12:00*	*05/19/21 17:54*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*05/19/21 12:00*	*05/19/21 17:54*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: Remuda 100

Job ID: 890-681-1
SDG: 31403236.004.0129

Client Sample ID: BH01A

Date Collected: 05/17/21 11:24
Date Received: 05/18/21 12:58
Sample Depth: - 1

Lab Sample ID: 890-681-2

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/19/21 11:30	05/19/21 20:07	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/19/21 11:30	05/19/21 20:07	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/19/21 11:30	05/19/21 20:07	1
Total TPH	<50.0	U	50.0		mg/Kg		05/19/21 11:30	05/19/21 20:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*90*		*70 - 130*	*05/19/21 11:30*	*05/19/21 20:07*	*1*
o-Terphenyl	*104*		*70 - 130*	*05/19/21 11:30*	*05/19/21 20:07*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**95.5**		5.05		mg/Kg			05/20/21 16:20	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: Remuda 100

Job ID: 890-681-1
SDG: 31403236.004.0129

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)
890-681-1	BH01	94	97
890-681-2	BH01A	91	97
LCS 880-3212/1-A	Lab Control Sample	109	101
LCSD 880-3212/2-A	Lab Control Sample Dup	116	99
MB 880-3212/5-A	Method Blank	88	94

Surrogate Legend

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

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-681-1	BH01	98	117
890-681-2	BH01A	90	104
LCS 880-3222/2-A	Lab Control Sample	87	96
LCSD 880-3222/3-A	Lab Control Sample Dup	91	101
MB 880-3222/1-A	Method Blank	91	106

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: Remuda 100

Job ID: 890-681-1
SDG: 31403236.004.0129

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-3212/5-A
Matrix: Solid
Analysis Batch: 3218

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3212

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/19/21 09:00	05/19/21 11:30	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/19/21 09:00	05/19/21 11:30	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/19/21 09:00	05/19/21 11:30	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/19/21 09:00	05/19/21 11:30	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/19/21 09:00	05/19/21 11:30	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/19/21 09:00	05/19/21 11:30	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		05/19/21 09:00	05/19/21 11:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*05/19/21 09:00*	*05/19/21 11:30*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*05/19/21 09:00*	*05/19/21 11:30*	*1*

Lab Sample ID: LCS 880-3212/1-A
Matrix: Solid
Analysis Batch: 3218

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3212

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.07738		mg/Kg		77	70 - 130		
Toluene			0.100	0.08113		mg/Kg		81	70 - 130		
Ethylbenzene			0.100	0.09084		mg/Kg		91	70 - 130		
m-Xylene & p-Xylene			0.200	0.1903		mg/Kg		95	70 - 130		
o-Xylene			0.100	0.09828		mg/Kg		98	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 880-3212/2-A
Matrix: Solid
Analysis Batch: 3218

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3212

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.07397		mg/Kg		74	70 - 130	5	35
Toluene			0.100	0.07950		mg/Kg		79	70 - 130	2	35
Ethylbenzene			0.100	0.09287		mg/Kg		93	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.1968		mg/Kg		98	70 - 130	3	35
o-Xylene			0.100	0.1026		mg/Kg		103	70 - 130	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

QC Sample Results

Client: WSP USA Inc.
Project/Site: Remuda 100

Job ID: 890-681-1
SDG: 31403236.004.0129

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

Lab Sample ID: MB 880-3222/1-A
Matrix: Solid
Analysis Batch: 3224

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3222

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

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

Lab Sample ID: LCS 880-3222/2-A
Matrix: Solid
Analysis Batch: 3224

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3222

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

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

Lab Sample ID: LCSD 880-3222/3-A
Matrix: Solid
Analysis Batch: 3224

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3222

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

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

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-3234/1-A
Matrix: Solid
Analysis Batch: 3256

Client Sample ID: Method Blank
Prep Type: Soluble

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

QC Sample Results

Client: WSP USA Inc.
Project/Site: Remuda 100

Job ID: 890-681-1
SDG: 31403236.004.0129

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-3234/2-A
Matrix: Solid
Analysis Batch: 3256

Client Sample ID: Lab Control Sample
Prep Type: Soluble

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

Lab Sample ID: LCSD 880-3234/3-A
Matrix: Solid
Analysis Batch: 3256

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

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

QC Association Summary

Client: WSP USA Inc. Job ID: 890-681-1
Project/Site: Remuda 100 SDG: 31403236.004.0129

GC VOA

Prep Batch: 3212

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-681-1	BH01	Total/NA	Solid	5035	
890-681-2	BH01A	Total/NA	Solid	5035	
MB 880-3212/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3212/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3212/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 3218

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-681-1	BH01	Total/NA	Solid	8021B	3212
890-681-2	BH01A	Total/NA	Solid	8021B	3212
MB 880-3212/5-A	Method Blank	Total/NA	Solid	8021B	3212
LCS 880-3212/1-A	Lab Control Sample	Total/NA	Solid	8021B	3212
LCSD 880-3212/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3212

GC Semi VOA

Prep Batch: 3222

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-681-1	BH01	Total/NA	Solid	8015NM Prep	
890-681-2	BH01A	Total/NA	Solid	8015NM Prep	
MB 880-3222/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3222/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3222/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 3224

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-681-1	BH01	Total/NA	Solid	8015B NM	3222
890-681-2	BH01A	Total/NA	Solid	8015B NM	3222
MB 880-3222/1-A	Method Blank	Total/NA	Solid	8015B NM	3222
LCS 880-3222/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3222
LCSD 880-3222/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3222

HPLC/IC

Leach Batch: 3234

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-681-1	BH01	Soluble	Solid	DI Leach	
890-681-2	BH01A	Soluble	Solid	DI Leach	
MB 880-3234/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3234/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3234/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 3256

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-681-1	BH01	Soluble	Solid	300.0	3234
890-681-2	BH01A	Soluble	Solid	300.0	3234
MB 880-3234/1-A	Method Blank	Soluble	Solid	300.0	3234
LCS 880-3234/2-A	Lab Control Sample	Soluble	Solid	300.0	3234
LCSD 880-3234/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3234

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Remuda 100

Job ID: 890-681-1
SDG: 31403236.004.0129

Client Sample ID: BH01
Date Collected: 05/17/21 11:20
Date Received: 05/18/21 12:58

Lab Sample ID: 890-681-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3212	05/19/21 12:00	KL	XEN MID
Total/NA	Analysis	8021B		1	3218	05/19/21 17:33	KL	XEN MID
Total/NA	Prep	8015NM Prep			3222	05/19/21 11:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1	3224	05/19/21 19:46	AJ	XEN MID
Soluble	Leach	DI Leach			3234	05/19/21 09:37	CH	XEN MID
Soluble	Analysis	300.0		1	3256	05/20/21 15:02	CH	XEN MID

Client Sample ID: BH01A
Date Collected: 05/17/21 11:24
Date Received: 05/18/21 12:58

Lab Sample ID: 890-681-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3212	05/19/21 12:00	KL	XEN MID
Total/NA	Analysis	8021B		1	3218	05/19/21 17:54	KL	XEN MID
Total/NA	Prep	8015NM Prep			3222	05/19/21 11:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1	3224	05/19/21 20:07	AJ	XEN MID
Soluble	Leach	DI Leach			3234	05/19/21 09:37	CH	XEN MID
Soluble	Analysis	300.0		1	3256	05/20/21 16:20	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: Remuda 100

Job ID: 890-681-1
SDG: 31403236.004.0129

Laboratory: Eurofins Xenco, Midland

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

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

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

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

Method Summary

Client: WSP USA Inc.
Project/Site: Remuda 100

Job ID: 890-681-1
SDG: 31403236.004.0129

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: Remuda 100

Job ID: 890-681-1
SDG: 31403236.004.0129

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-681-1	BH01	Solid	05/17/21 11:20	05/18/21 12:58	- 0.5
890-681-2	BH01A	Solid	05/17/21 11:24	05/18/21 12:58	- 1

In: NAPP2111850266
CC: 1067621001

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 Crasbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701
www.xenco.com

Project Manager:	Dan Moir	Bill to: (If different)	Kyle Littrell
Company Name:	WSP USA Inc.	Company Name:	XTO Energy
Address:	3300 North A street	Address:	500 W. Main St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432-236-3849	Email:	Jerry.Hill@wsp.com, Dan.Moir@wsp.com

Work Order Comments

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

Project Name:	Remuda 180	Turn Around	
Project Number:	31403236.004.0104	Routine	☑
Project Location	Spill Date: 4/14/21 Eddy	Rush:	
Sampler's Name:	Jerry Hill	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT			
Temp Blank:	Yes / No	Wet Ice:	Yes No
Temperature (°C):	3.4/3.2	Thermometer ID	TWM-007
Received Intact:	Yes No		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Total Containers:	

ANALYSIS REQUEST

Preservative Codes
MeOH: Me
None: NO
HNO3: HN
H2S04: H2
HCL: HL
NaOH: Na
Zn Acetate+ NaOH: Zn
TAT starts the day recevied by the lab, if received by 4:00pm

890-681 Chain of Custody

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	TPH (EPA 8015)	BTEX (EPA 8021B)	Chlorides (EPA 300.0)	Sample Comments
	BH01	S	5/17/21	1120	0.5	1		X	X	X	discrete
	BH01A	S	5/17/21	1124	1.0	1		X	X	X	discrete

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			5/18/21 12:49	2		5-18-21 1258
3				4		
5				6		

Revised Date 022619 Rev 2019 1

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s)	COC No: 890-221 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 #: 890-681-1
Address: 1211 W Florida Ave	Due Date Requested: 5/24/2021			
City: Midland	TAT Requested (days)			
State Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: Remuda 100	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:								
BH01 (890-681-1)	5/17/21	11 20 Mountain		Solid			X	X	X	1	
BH01A (890-681-2)	5/17/21	11 24 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	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested I II, III, IV Other (specify) Primary Deliverable Rank 2	Special Instructions/QC Requirements.

Empty Kit Relinquished by	Date	Time	Method of Shipment:

	Date/Time:	Company		Date/Time:	Company
Relinquished by: Clue Cerft 5.18.21			Received by:	5-19-21 11:00am	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 11/01/2020

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-681-1
SDG Number: 31403236.004.0129

Login Number: 681
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: 890-681-1
SDG Number: 31403236.004.0129

Login Number: 681
List Number: 2
Creator: Copeland, Tatiana

List Source: Eurofins Xenco, Midland
List Creation: 05/19/21 11:07 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	

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

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

CONDITIONS

Action 33550

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 33550
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
chensley	None	7/14/2021