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	NAPP2103630448
District RP	
Facility ID	
Application ID	

#### **Release Notification**

	Party XTO	Energy		OGRID	5380
Contact Name Kyle Littrell		Contact Te	Contact Telephone 432-221-7331		
Contact email kyle.littrell@exxonmobil.com			n	Incident #	(assigned by OCD)
Contact mail	ing address	522 W. Mermod	Carlsbad, NM 88	220	
				of Release So	OU MOO
20.4	10001		Location	of Release St	
atitude 32.4	18981		0/10 02 : 1	Longitude _	-103.98737
			(NAD 83 in dec	imal degrees to 5 decin	nal places)
ite Name E	BEU DI 28			Site Type C	СТВ
Date Release	Discovered	1/23/2021		API# (if app	licable)
	nit Letter   Section   Township   Range   Cour		Range	Cour	*·
Unit Letter	Section			County	
Unit Letter	Section 9	-			
Unit Letter O	Section 9	21S	29E	Edd	
0	9	-	29E	Edd	
0	9	21S	29E ibal Private (A	Edd	y
0	9 r: State	21S ▼ Federal □ Tr	29E ibal Private (A	Eddy	Release
O urface Owner	9 r: State	21S  ▼ Federal □ Tr  (s) Released (Select al	29E ibal ☐ Private (A Nature and that apply and attach	Eddy	Release justification for the volumes provided below)
Ourface Owner Crude Oil	9 r: State	21S  * Federal  Tr  (s) Released (Select al	29E ibal Private (A Nature and that apply and attach d (bbls)	Eddy	Release justification for the volumes provided below) Volume Recovered (bbls)
O urface Owner	9 r: State	21S  * Federal  Tr  (s) Released (Select al Volume Released Volume Released	29E  ibal Private (A  Nature and  that apply and attach d (bbls) d (bbls) 220	Eddy	Release justification for the volumes provided below) Volume Recovered (bbls) Volume Recovered (bbls)
Ourface Owner Crude Oil	9 r: State	21S  * Federal  Tr  (s) Released (Select al Volume Released Volume Released Is the concentrat	29E  ibal Private (A  Nature and  that apply and attach id (bbls) id (bbls) 220 ion of total dissolv	Eddy  lame:  Volume of I  calculations or specific  ved solids (TDS)	Release justification for the volumes provided below) Volume Recovered (bbls)
Ourface Owner Crude Oil	9 r: State  Material  Water	21S  * Federal  Tr  (s) Released (Select al Volume Released Volume Released Is the concentrat	29E  ibal Private (A  Nature and  that apply and attach d (bbls) d (bbls) 220 ion of total dissolv water >10,000 mg	Eddy  lame:  Volume of I  calculations or specific  ved solids (TDS)	Release justification for the volumes provided below) Volume Recovered (bbls) Volume Recovered (bbls)
Ourface Owner Crude Oil Produced	9 r: State  Material  Water	21S  * Federal  Tr  (s) Released (Select al  Volume Released  Volume Released  Is the concentrate in the produced volume of the produced	29E  ibal Private (A  Nature and  that apply and attach id (bbls) id (bbls) 220 ion of total dissolv water >10,000 mg id (bbls)	Eddy  lame:  Volume of I  calculations or specific  ved solids (TDS)	Release  justification for the volumes provided below)  Volume Recovered (bbls)  Volume Recovered (bbls)  220  Yes No
Ourface Owner Crude Oil Produced Condensa	9 r: State  Material  Water  te as	21S  * Federal  Tr  (s) Released (Select al Volume Released Volume Released Is the concentration the produced Volume Released Volume Released Volume Released Volume Released Volume Released	29E  ibal Private (A  Nature and  that apply and attach id (bbls) id (bbls) 220 ion of total dissolv water >10,000 mg id (bbls)	Eddy  //ame:  L Volume of I  calculations or specific  //ed solids (TDS)  //!?	Release  justification for the volumes provided below)  Volume Recovered (bbls)  Volume Recovered (bbls)  220  Yes No  Volume Recovered (bbls)
O urface Owner Crude Oil Produced Condensa Natural G	9 r: State  Material  Water  te as	21S  * Federal  Tr  (s) Released (Select al Volume Released Volume Released Is the concentration the produced Volume Released Volume Released Volume Released Volume Released Volume Released	29E  ibal Private (A  Nature and  that apply and attach d (bbls) d (bbls) 220 ion of total dissolv water >10,000 mg d (bbls) d (Mcf)	Eddy  //ame:  L Volume of I  calculations or specific  //ed solids (TDS)  //!?	Release  justification for the volumes provided below)  Volume Recovered (bbls)  Volume Recovered (bbls)  220  Yes No  Volume Recovered (bbls)  Volume Recovered (bbls)
Ourface Owner Crude Oil Produced Condensa Natural G	9 r: State  Material  Water  te as scribe)	21S  * Federal  Tr  (s) Released (Select al Volume Released Volume/Weight	29E  ibal Private (A  Nature and  that apply and attach d (bbls) d (bbls) 220 ion of total dissolv water >10,000 mg d (bbls) d (Mcf)  Released (provide	Eddy  //ame:  L Volume of I  calculations or specific  //ed solids (TDS)  //!?	Release  justification for the volumes provided below)  Volume Recovered (bbls)  Volume Recovered (bbls)  220  Yes No  Volume Recovered (bbls)  Volume Recovered (bbls)  Volume Recovered (bbls)

Page 2

## State of New Mexico Oil Conservation Division

Incident ID	NAPP2103630448
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Facility ID	
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Was this a major	If YES, for what reason(s) does the res	ponsible party consider this a major release?			
release as defined by	A release equal to or greater than 25 barrels.				
19.15.29.7(A) NMAC?					
✓ Yes    No					
If YES, was immediate n	otice given to the OCD? By whom? To	whom? When and by what means (phone, email, etc)?			
		t, EMNRD'; 'Venegas, Victoria, EMNRD';			
'emily.hernandez@state.n	ım.us'; 'BLM_NM_CFO_Spill@blm.gov'	; 'Morgan, Crisha A' on Saturday, January 23, 2021 5:01 PM via email.			
,					
	Initial	Response			
The responsible	party must undertake the following actions immedi	ately unless they could create a safety hazard that would result in injury			
The source of the rele	ease has been stopped.				
	as been secured to protect human health a	and the environment.			
1 = '	·	or dikes, absorbent pads, or other containment devices.			
▲ All free liquids and r	recoverable materials have been removed	and managed appropriately.			
If all the actions describe	ed above have not been undertaken, explain	in why:			
NA					
1111					
Dog 10 15 20 9 D (4) NIN	AAC the responsible next, may commone	a warmadiation immediately after discovery of a valence. If remodiation			
		e remediation immediately after discovery of a release. If remediation al efforts have been successfully completed or if the release occurred			
		), please attach all information needed for closure evaluation.			
I hereby certify that the info	ormation given above is true and complete to t	he best of my knowledge and understand that pursuant to OCD rules and			
		otifications and perform corrective actions for releases which may endanger			
		e OCD does not relieve the operator of liability should their operations have hreat to groundwater, surface water, human health or the environment. In			
addition, OCD acceptance of		of responsibility for compliance with any other federal, state, or local laws			
and/or regulations.					
Printed Name: Kyle Litti	rell	Title: Environmental Manager			
s: te	Hu M	Date: 2-5-21			
Signature	enter				
email: kyle littrell@exxo	onmobil.com	Telephone: 432-221-7331			
OCD Only					
Received by		Date:			

BEU DI 28 CTB	
1/23/2021	
Area 1	
rea =	1235.21 cu. ft.
VOLUME OF LEAK	
Water =	220.00 bbls
TOTAL VOLUME OF LEAK	
Water =	220.00 bbls
TOTAL VOLUME RECOVERED	)
Water =	220.00 bbls
֡	1/23/2021 Area 1  rea =  VOLUME OF LEAK  Water =  TOTAL VOLUME OF LEAK  Water =  TOTAL VOLUME RECOVERED

e of New Mexico

Incident ID NA PP2103630448

Incident ID	NAPP2103630448
District RP	
Facility ID	
Application ID	

#### Site Assessment/Characterization

 $This information \ must be provided \ to \ the \ appropriate \ district \ of fice \ no \ later \ than \ 90 \ days \ after \ the \ release \ discovery \ date.$ 

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>&gt;110</u> (ft bgs)	
Did this release impact groundwater or surface water?	☐ Yes ⊠ No	
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ⊠ No	
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ⊠ No	
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ⊠ No	
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ⊠ No	
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ⊠ No	
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ⊠ No	
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ⊠ No	
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ⊠ No	
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ⊠ No	
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ⊠ No	
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	☐ Yes ⊠ No	
Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.		
Characterization Report Checklist: Each of the following items must be included in the report.		
<ul> <li>         Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring well Field data</li> <li>         Data table of soil contaminant concentration data     </li> </ul>	ls.	
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		
🔼 Laboratory data including chain of custody		

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

Received by OCD: 6/23/2021 2:20:13 PM Form C-141 State of New Mexico Oil Conservation Division Page 4

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Incident ID	NAPP2103630448
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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. Printed Name: Kyle Littrell Title: Environmental Manager

Signature: Date: 6/8/2021\_ email: Kyle\_Littrell@exxonmobil.com Telephone: (432)-221-7331 **OCD Only** Received by: Date:

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	- "8" " " " " " " " " " " " " " " " " "
Incident ID	NAPP2103630448
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 follows	ing items must be inclu	ded in the closure report.
A scaled site and sampling diagram as described in 19.15	5.29.11 NMAC	
Photographs of the remediated site prior to backfill or ph must be notified 2 days prior to liner inspection)	notos of the liner integrit	y if applicable (Note: appropriate OCD District office
□ Laboratory analyses of final sampling (Note: appropriate)	ODC District office mu	st be notified 2 days prior to final sampling)
Description of remediation activities		
I hereby certify that the information given above is true and contained regulations all operators are required to report and/or file commay endanger public health or the environment. The acceptance should their operations have failed to adequately investigate an human health or the environment. In addition, OCD acceptance compliance with any other federal, state, or local laws and/or refrestore, reclaim, and re-vegetate the impacted surface area to the accordance with 19.15.29.13 NMAC including notification to the	pertain release notification ce of a C-141 report by the different contamination of a C-141 report does to be conditions. The responsing conditions that existed	ns and perform corrective actions for releases which the OCD does not relieve the operator of liability for that pose a threat to groundwater, surface water, a not relieve the operator of responsibility for ible party acknowledges they must substantially I prior to the release or their final land use in
Printed Name: Kyle Littrell		
Signature:	Date: <u>6/8/2</u>	2021
email:Kyle_Littrell@exxonmobil.com	Telephone:	432-221-7331
OCD Only		
Received by:	Date:	
Closure approval by the OCD does not relieve the responsible premediate contamination that poses a threat to groundwater, surlearty of compliance with any other federal, state, or local laws	face water, human health	
Closure Approved by:	Date:	
Printed Name:	Title:	

Page 7 of 55

	- "8"
Incident ID	NAPP2103630448
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.

Clasura Danart Attachment Charliste Each of the fellowing	tame must bais al-	edad in the elegane venout	
Closure Report Attachment Checklist: Each of the following i	tems must de incli	uea in the ciosure 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 must be notified 2 days prior to liner inspection)	of the liner integri	ty if applicable (Note: appropriate OCD District office	
☐ Laboratory analyses of final sampling (Note: appropriate ODG	C District office mu	ust be notified 2 days prior to final sampling)	
Description of remediation activities			
and regulations all operators are required to report and/or file certai may endanger public health or the environment. The acceptance of should their operations have failed to adequately investigate and rer human health or the environment. In addition, OCD acceptance of compliance with any other federal, state, or local laws and/or regular restore, reclaim, and re-vegetate the impacted surface area to the coaccordance with 19.15.29.13 NMAC including notification to the Coeping Name:    Kyle Littrell   Signature:   Kyle Littrell   Signature:   Si	Ta C-141 report by mediate contaminate a C-141 report does ations. The responsibilities are completely with the contamination of the co	the OCD does not relieve the operator of liability tion that pose a threat to groundwater, surface water, s not relieve the operator of responsibility for sible party acknowledges they must substantially d prior to the release or their final land use in tion and re-vegetation are complete.  Environmental Manager	
Signature:			
email: Kyle_Littrell@exxonmobil.com	Telephone:	432-221-7331	
OCD Only			
Received by: Robert Hamlet	Date:	9/16/2021_	
Closure approval by the OCD does not relieve the responsible party remediate contamination that poses a threat to groundwater, surface party of compliance with any other federal, state, or local laws and	water, human healt		
Closure Approved by: Robert Hamlet	Date: _	9/16/2021	
Printed Name: Robert Hamlet	Title: _	Environmental Specialist - Advanced	



WSP USA

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

June 8, 2021

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

RE: Closure Request
BEU DI 28
Incident Number NAPP2103630448
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 BEU DI 28 (Site) in Unit O, Section 9, Township 21 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 resulting from a 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 NAPP2103630448.

#### **RELEASE BACKGROUND**

On January 23, 2021, internal corrosion caused a nipple connection to rupture, resulting in the release of 220 barrels (bbls) of produced water into a lined steel containment. Approximately 220 bbls of produced water were recovered and returned to production. 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 reported the release to the NMOCD immediately via email on January 23, 2021 and subsequently submitted a Form C-141 on February 5, 2021. The release was assigned Incident Number NAPP2103630448.



District II Page 2

#### SITE CHARACTERIZATION

WSP characterized the Site according to Table 1, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is United States Geological Society (USGS) well 323035103582201, located approximately 1.6 miles northeast of the Site. The groundwater well has a reported depth to groundwater of 219 feet bgs and a total depth of 360 feet bgs. Ground surface elevation at the groundwater well location is 3,425 feet amsl, which is approximately 16 feet higher in elevation than the Site.

On April 21, 2019, a soil boring (C-4507) was drilled within 1 mile of the Site utilizing a trackmounted hollow stem rig. Soil boring C-4507 was drilled to a depth of 110 feet bgs. A WSP geologist logged and described soils continuously. No moisture or groundwater was encountered during drilling activities. The location of the borehole is approximately 1 mile west 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 without observing groundwater, it was confirmed that groundwater beneath the Site is greater than 110 feet bgs. The well record and log for C-4507 is included in Attachment 1. The borehole was properly abandoned with drill cuttings and hydrated bentonite chips. The borehole was drilled in a similar geologic setting and elevation as the Site. The combination of the additional borehole data with numerous data north of the Site on the opposing side of Quahada Ridge present multiple lines of evidence for depth to groundwater being greater than 100 feet, even though regional data are sparse. The Site is on the southern flank of Quahada Ridge and greater than 100 feet higher in elevation than the nearest drainage to the south. There are no nearby features, such as drainages, ponds, or wetland vegetation, indicative of shallow groundwater. All wells and topographic observations used for depth to groundwater determination are depicted on Figure 1 and the referenced well records are included in Attachment 1.

The closest continuously flowing or significant watercourse to the Site is an intermittent riverine, located approximately 7,483 feet 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.



District II Page 3

#### **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

On May 4, 2021, WSP personnel were at the Site to evaluate the release extent and conduct delineation activities. One borehole (BH01) was advanced via hand auger at the location of the tear in the liner to assess the vertical extent of impacted soil. Borehole BH01 was advanced to a depth of 2 feet 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. Two delineation soil samples were collected from the borehole at depths of 0.5 feet and 2 feet bgs. Field screening results and observations for the borehole were logged on a lithologic/soil sampling log, which is included in Attachment 2. The borehole soil sample location is depicted on Figure 2. Photographic documentation of the delineation activities is included in Attachment 3. Following delineation activities, the tear in the liner was bonded and repaired by XTO to restore the integrity of the liner.

The delineation 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 Xenco Laboratories (Eurofins Xenco) 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 0.5 feet and 2 feet 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 reports are included as Attachment 4.



District II Page 4

#### **CLOSURE REQUEST**

Following the failed liner integrity inspection at the Site, WSP personnel advanced one borehole (BH01) within the lined containment to assess for the presence or absence of impacted soil resulting from the January 23, 2021 produced water release within lined containment. Two delineation soil samples were collected from the borehole (BH01) at depths of 0.5 feet and 2 feet bgs. Laboratory analytical results for the delineation soil samples indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Additionally, the release was vertically delineated to the most stringent Closure Criteria. 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 and soil sample laboratory analytical results compliant with the Closure Criteria, XTO respectfully requests NFA for Incident Number NAPP2103630448.

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

Sincerely,

WSP USA Inc.

Kaleb Henry

Kaleb Henry

Assistant Consultant, Geologist

Ashley L. Ager, P.G.

Ashley L. Ager

Managing Director, Geologist

cc: Kyle Littrell, XTO

Bureau of Land Management

#### Attachments:

Figure 1 Site Location Map

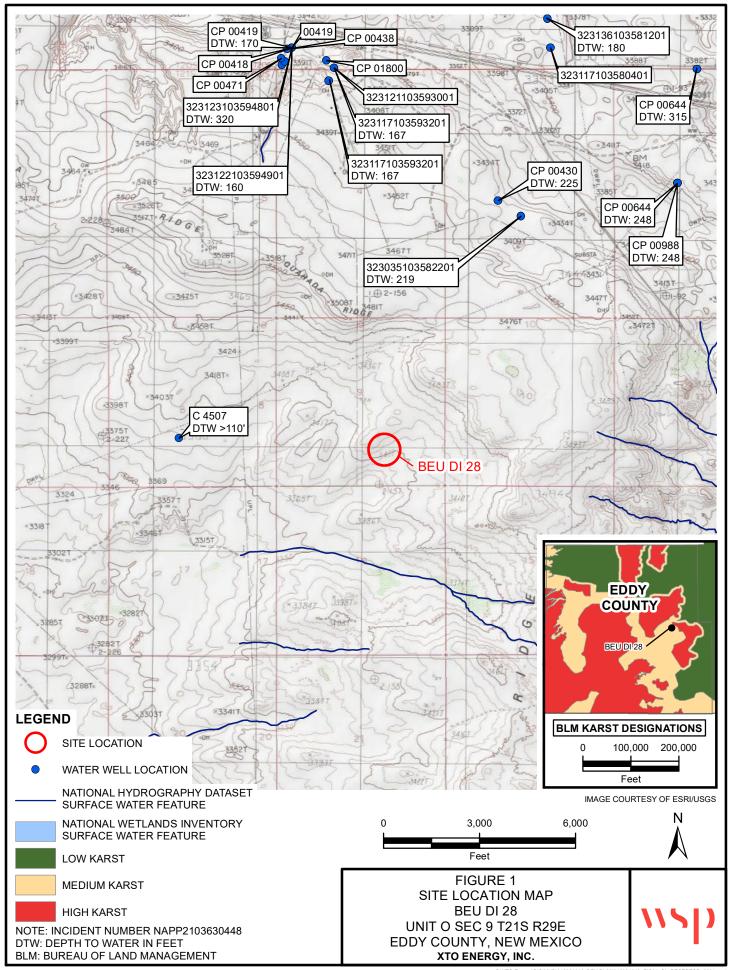
Figure 2 Delineation Soil Sample Locations

Table 1 Soil Analytical Results
Attachment 1 Referenced Well Records

Attachment 2 Lithologic/Soil Sampling Logs

Attachment 3 Photographic Log

Attachment 4 Laboratory Analytical Reports



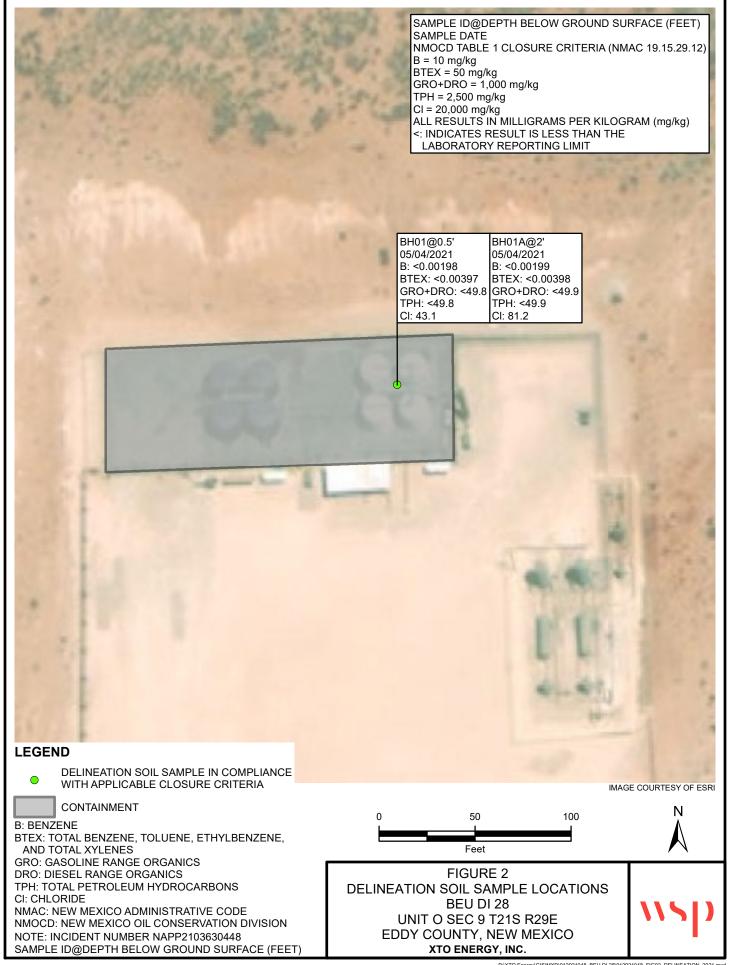


Table 1

## Soil Analytical Results BEU DI 28 Incident Number NAPP2103630448 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	1,000	2,500	20,000
<b>Delineation Samples</b>										
BH01	05/04/2021	0.5	< 0.00198	< 0.00397	<49.8	<49.8	<49.8	<49.8	<49.8	43.1
BH01A	05/04/2021	2	< 0.00199	< 0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	81.2

ft - feet/foot

mg/kg - milligrams per kilograms

BTEX - benzene, toluene, ethylbenzene, and total xylenes

TPH - total petroleum hydrocarbons

DRO - diesel range organics

GRO - gasoline range organics

ORO - motor oil range organics

NMOCD - New Mexico Oil Conservation Division

NMAC - New Mexico Administrative Code

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

NE - Not Established

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

Text impated soil was removed

<sup>\* -</sup> indicates sample was collected in area to be reclaimed after remediation is complete; closure criteria for chloride concentration in the top 4 feet of soil is 600 mg/kg

#### DESCRIPTION:

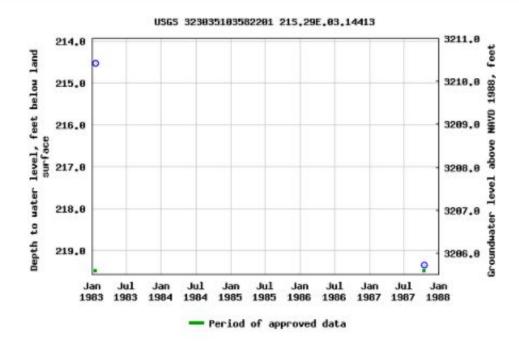
Latitude 32°30'35", Longitude 103°58'22" NAD27
Eddy County, New Mexico , Hydrologic Unit 13060011
Well depth: 360 feet
Land surface altitude: 3,425 feet above NAVD88.
Well completed in "Other aquifers" (N9999OTHER) national aquifer.
Well completed in "Seven Rivers Formation" (313SVRV) local aquifer

#### AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1983-01-18	1987-10-14	2
Revisions	Unavailable (	site:0) (timese	eries:0)

#### OPERATION:

Record for this site is maintained by the USGS New Mexico Water Science Center Email questions about this site to <u>New Mexico Water Science Center Water-Data Inquiries</u>





#### 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)

POD Number

Q64 Q16 Q4 Sec Tws Rng

X Y

CP 00430

1 4 1 03 21S 29E

596221 3597558\*

Driller License: 46

Driller Company:

ABBOTT BROTHERS COMPANY

Driller Name:

Casing Size:

Well Tag

ABBOTT, MURRELL

Drill Start Date: 04/04/1967

Drill Finish Date:

04/06/1967

Plug Date:

06/27/1967

Log File Date: 04/21/1967 PCW Rcv Date:

Source:

Shallow

Pump Type:

Estimated Yield:

Pipe Discharge Size: Depth Well:

360 feet

Depth Water:

225 feet

Water Bearing Stratifications:

7.00

Top Bottom Description

175 205 Other/Unknown

350 Limestone/Dolomite/Chalk

Casing Perforations:

Top Bottom 310 360

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

<sup>\*</sup>UTM location was derived from PLSS - see Help



2904 W 2nd St. Roswell, NM 88201 voice: 575.624.2420 fax: 575.624.2421 www.afkinseng.com

05/05/2021

DII-NMOSE 1900 W 2<sup>nd</sup> Street Roswell, NM 88201

Hand Delivered to the DII Office of the State Engineer

Re: Well Record C-4507 Pod1

To whom it may concern:

Attached please find a well record and a plugging record, in duplicate, for a one (1) soil borings, C-4507

If you have any questions, please contact me at 575.499.9244 or lucas@atkinseng.com.

Sincerely,

Lucas Middleton

Enclosures: as noted above

Garan Middle



## PLUGGING RECORD



NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

<u>I. GE</u>	NERAL / WELL OWNERSHIP:					
State I	Engineer Well Number: C-4507- POD1					
Well o	owner: XTO ENERGY (Kyle Littrell)			Ph	one No.: 43	32.682.8873
Mailir	ng address: 6401 Holiday Hill Dr.					
City:	k fi dlam d	State:		Texas	<u> </u>	Zip code:
II. W	ELL PLUGGING INFORMATION:					
1)	Name of well drilling company that plugged w	/ell: _	Jackie D. A	Atkins ( Atkir	s Engineerir	g Associates Inc.)
2)	New Mexico Well Driller License No.: 1249					ration Date: <u>04/30/23</u>
3)	Well plugging activities were supervised by th Shane Eldridge	e follo	owing well	driller(s)/ri	g supervisor	(s):
4)	Date well plugging began: 04/27/2021		_ Date	well pluggir	ng concluded	: <u>04/27/2021</u>
5)	GPS Well Location: Latitude: 32 Longitude: 10	)4	deg, deg,		in, 28.44 in, 28.00	
6)	Depth of well confirmed at initiation of pluggi by the following manner: weighted tape	ng as:	110	ft below	ground level	(bgl),
7)	Static water level measured at initiation of plu					
8)	Date well plugging plan of operations was app	roved	by the Sta	te Engineer	01/29/202	21 ——
9)	Were all plugging activities consistent with an differences between the approved plugging pla	appro in and	oved plugg the well a	ing plan? _ s it was pluį	Yes gged (attach	If not, please describ additional pages as needed):
						- 
						eer oo saa alaa maha

Version: September 8, 2009

Page 1 of 2

10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

#### For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging <u>Material Used</u> (include any additives used)	Volume of <u>Material Placed</u> (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement  Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
7	0-10' Hydrated Bentonite	Approx. 15.8 gallons	16 gallons	Augers	
=	10'-110'	Anney 172 gallone	172 gallana	Boring	
0 <del></del> 2- <del></del> 2	Drill Cuttings	Approx. 172 gallons	172 gallons	Boring	
S <del></del>					
2.	v				
70 <del></del>					
R					
( <del>-</del>					
_		MULTIPLY	BY AND OBTAIN		
		cubic feet x 7.4 cubic yards x 201.	4805 = gallons		

#### III. SIGNATURE:

I. Jackie D. Atkins , say that I am familiar with the rules of the	Office of the State
Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Rec	ord and attachments
are true to the best of my knowledge and belief.	
Jack Atkins	05/05/2021
Signature of Well Driller	Date

Version: September 8, 2009 Page 2 of 2

# 2021-05-04\_C-4507\_Plugging Record\_golden-forsign

Final Audit Report 2021-05-05

Created: 2021-05-05

By: Lucas Middleton (lucas@atkinseng.com)

Status: Signed

Transaction ID: CBJCHBCAABAAusM-6cPyH0hTk8dumyZPnasZJw9Df5Tw

### "2021-05-04\_C-4507\_Plugging Record\_golden-forsign" History

- Document created by Lucas Middleton (lucas@atkinseng.com) 2021-05-05 8:55:06 PM GMT- IP address: 69.21.248.123
- Document emailed to Jack Atkins (jack@atkinseng.com) for signature 2021-05-05 8:55:20 PM GMT
- Email viewed by Jack Atkins (jack@atkinseng.com) 2021-05-05 9:28:36 PM GMT- IP address: 64.90.153.232
- Document e-signed by Jack Atkins (jack@atkinseng.com)

  Signature Date: 2021-05-05 9:29:02 PM GMT Time Source: server- IP address: 64.90.153.232
- Agreement completed. 2021-05-05 - 9:29:02 PM GMT



PAGE 1 OF 2

WELL TAG ID NO.



	OSE POD NO	-	l.)		WELL TAG ID	NO.			ILE NO(	S).			
NOI	POD1 (B)				n/a			C-450		-i			
OCAT		WELL OWNER NAME(S) XTO Energy (Kyle Littrell)								ONAL)			
TT	WELL OWN							CITY			STATI		ZIP
WEI	6401 Holid	lay Hill D	r.					Midla	and ———		TX	79707	
GENERAL AND WELL LOCATION	WELL LOCATIO	N LA	DE	GREES MINUTES SECONDS 32 29 28.44 N			ACCURACY REQUIRED: ONE TENTH OF A SECOND						
KER	(FROM GP	S) LO	NGITUDE	104	0	28	8.00 W	* DA	TUM REC	QUIRED: WGS 84			
1. GE	DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE  NE SW Sec. 8 T21S R29E												
	LICENSE NO		NAME OF LICENSED		Jackie D. Atk	ins				NAME OF WELL DRI Atkins Eng		COMPANY ag Associates, I	nc.
	DRILLING S' 04/21/		DRILLING ENDED 04/21/2021		MPLETED WELL		BORE HO	LE DEPT	TH (FT)	DEPTH WATER FIRS	T ENC		
-	COMPLETE	O WELL IS:	ARTESIAN	✓ DRY HOI	LE SHAI	LLOW (UNC	ONFINED)			STATIC WATER LEV	EL IN C		LL (FT)
NO.	DRILLING F	LUID:	☐ AIR	MUD	ADD	ITIVES – SPI	ECIFY:						
MA]	DRILLING M		ROTARY	HAMMEI	R CABI	LE TOOL	✓ OTHE	R – SPE	CIFY:	Hollo	w Ste	m Auger	
FOR			<del></del>	CASING	MATERIAL A	NTD/OP	1						
2. DRILLING & CASING INFORMATION	FROM TO DIAM			(include	GRADE CONN		ASING NECTION TYPE		CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)		SLOT SIZE (inches)	
C	0	110	±6.5		Boring- HSA		(322 000)						
NG													
LLI													
DR													
4													
							<b>!</b>				_		
							ł						
	DEPTH	(feet bgl)	BORE HOLE	Li	ST ANNULAI	R SEAL M	ATERIAL A	AND	==	AMOUNT		METHO	D OF
I∳I	FROM	то	DIAM. (inches)	GRA	VEL PACK SI	ZE-RANG	E BY INTE	ERVAL		(cubic feet)		PLACEM	ENT
TEX													
MA										254 8.0 000 Was feeting at		and the same of th	
ANNULAR MATERIAL										white about the	11	2021 783/3/	
NOI											-	-	
3. A.N			_										
40			-										
EOn	OSE INTER	NIAT TIOT		1					WR-2	0 WELL RECORD	e I OG	(Version 06/3	0/17)
	E NO.	TANT OSE			POD	NO.			TRN I		200	- 1 0.01011 00/J	

LOCATION

	DEPTH (f	eet bgl)		001.00.430		NGO I IN WIT	The Ports				ESTIMATED
	FROM	то	THICKNESS (feet)	INCLUDE WATE	D TYPE OF MATERIAL E R-BEARING CAVITIES O plemental sheets to fully de	R FRACTU	JRE ZONES	В	WATE EARIN YES / N	rG?	YIELD FOR WATER- BEARING ZONES (gpm)
	0	4	4	Sand w/ caliche, brown, no odor, no stain, m-f, well sorted, low consolidation						/ N	
	4	9	5	Caliche, tan, low cons	solidation, brown sand, m-f	grained, mo	oderately sorte	:d	Y,	/ N	
	9	11	-	Sand w/ caliche, l	ight brown, low consolidation	on, moderat	teley sorted,		Y ·	/ N	
		11	2		small tan caliche gravel	l			Y ·	/ N	
	11	110	99	Sand w/ caliche, l	light brown, low consolidation	on, moderat	teley sorted,		Y ,	/ N	
ا بر									Y	N	
4. HYDROGEOLOGIC LOG OF WELL									Y	N	
OF									Y	N	
90									Y	N	
];;									Y	N	
ĭ									Y	N	
GEO									Y	N	
)RO									Y	N	
HXI									Y	N	
4									Y	N	
									Y	N	
									Y	N	
									Y	N	
									Y	N	
3									Y	N	
									Y	N	
	METHOD U	SED TO ES	TIMATE YIELD	OF WATER-BEARING	G STRATA:			TOTAL E			
	PUM	P	IR LIFT	BAILER OT	HER - SPECIFY:			WELL Y	ELD (	gpm):	0.00
NO	WELL TES	TEST	RESULTS - ATT T TIME, END TI	ACH A COPY OF DAT ME, AND A TABLE SH	A COLLECTED DURING IOWING DISCHARGE AN	WELL TES D DRAWI	STING, INCL DOWN OVER	UDING I	DISCHA STING	ARGE N PERIO	METHOD, DD.
TEST; RIG SUPERVISION	MISCELLA	NEOUS INF	ire su	olden 8 Fed Battery .T om total depth to ten f rface to surface. ogs adapted from WSI	Cemporary well materials cet below ground surface P on-site geologist.	removed , then hyd	and the soil	boring be	ackfille from t	ed using en feet	g drill cuttings t below ground
TEST	PRINT NAM	Æ(S) OF DI	RILL RIG SUPER	RVISOR(S) THAT PRO	VIDED ONSITE SUPERVI	SION OF V	VELL CONS	TRUCTIO	N OTH	ER TH	IAN LICENSEE:
S. T	Shane Eldric										
TURE	CORRECT I	RECORD O	F THE ABOVE I	DESCRIBED HOLE AN	EST OF HIS OR HER KNO D THAT HE OR SHE WIL PLETION OF WELL DRIL	L FILE TH	AND BELIE	EF, THE F	OREG	OING I HE STA	S A TRUE AND ATE ENGINEER
6. SIGNATURE	Jack A	tkins		Jac	ckie D. Atkins	<b>-</b> }:		(	)5/05/2	2021	
		SIGNAT	URE OF DRILLE	ER / PRINT SIGNEE	NAME				D	ATE	
FOI	R OSE INTERI	NAL USE					WR-20 WELI	RECOR	D & LC	OG (Ver	rsion 06/30/2017)
	E NO.				POD NO.	1	TRN NO.				
LO	CATION					WELL T	AG ID NO.				PAGE 2 OF 2

# 2021-05-04\_C-4507\_OSE\_Well Record and Log\_golden-forsign

Final Audit Report 2021-05-05

Created: 2021-05-05

By: Lucas Middleton (lucas@atkinseng.com)

Status: Signed

Transaction ID: CBJCHBCAABAAwFWBSMHf8LZfeG-H9rfnRsallPfQ\_tG4

## "2021-05-04\_C-4507\_OSE\_Well Record and Log\_golden-forsign "History

- Document created by Lucas Middleton (lucas@atkinseng.com) 2021-05-05 8:54:35 PM GMT- IP address: 69.21.248.123
- Document emailed to Jack Atkins (jack@atkinseng.com) for signature 2021-05-05 8:54:50 PM GMT
- Email viewed by Jack Atkins (jack@atkinseng.com) 2021-05-05 9:27:55 PM GMT- IP address: 64.90.153.232
- Document e-signed by Jack Atkins (jack@atkinseng.com)

  Signature Date: 2021-05-05 9:28:26 PM GMT Time Source: server- IP address: 64.90.153.232
- Agreement completed. 2021-05-05 - 9:28:26 PM GMT

COE OF HAW \$ 2021 MG/59

WSP USA  508 West Stevens Street Carlsbad, New Mexico 88220  LITHOLOGIC / SOIL SAMPLING LOG							BH or PH Name: BH01 Site Name: BEU DI RP or Incident Numb LTE Job Number: TI	ber: NAPP210	
LITH Lat/Long:	OLOG		Field Scre		G		Logged By LAD Hole Diameter:		Method: Hand Auger Total Depth:
LavLong.			Chloride, F				3"		2'
Comments:			•						
Moisture Content Chloride (ppm) Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	(ft bgs)	USCS/Rock Symbol			Lithology/R	
dry >179.2 0.2	п	BH01	0.5'	<u> </u>	CCHE	CALICHE odor.	E, dry, off white,	trace silt, sı	mall angular gravel, no stain, no
dm. 5.470.0		DUGAA	-	_ 1	SM	SAND, di stain, no		n, unconsc	olidated, large caliche gravel, no
dry >179.2 0.0	n	BH01A	2'	2 - - - - - - - - - - - - - - - - - - -		Auger Re	efusal		Total Depth: 2 ft bgs



PHOTOGRAPHIC LOG						
XTO Energy, Inc.	BEU DI 28	NAPP2103630448				
	Eddy County, New Mexico					

Photo No.	Date				
1	May 5, 2021				
View of delineation soil sempling					

View of delineation soil sampling activities.



Photo No.	Date
2	May 5, 2021
View of delineat	tion soil sampling

View of delineation soil sampling activities following backfilling procedures.





#### **ANALYTICAL REPORT**

Job Number: 890-629-1

SDG Number: TE012921048

Job Description: BEU DI 28

For:

WSP USA Inc.

2777 N. Stemmons Freeway

Suite 1600

Dallas, TX 75207

Attention: Dan Moir

Approved for release Jessica Kramer Project Manager 5/10/2021 11:09 AM

Jessica Kramer, Project Manager 1211 W. Florida Ave, Midland, TX, 79701 jessica.kramer@eurofinset.com 05/10/2021

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

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.

ELLY ACCREDING

Client: WSP USA Inc.

Project/Site: BEU DI 28

Job ID: 890-629-1 SDG: TE012921048

 Lab Sample ID:
 890-629-1
 890-629-2

 Client Sample ID:
 BH01
 BH01A

 Depth:
 0.5
 2

 Matrix:
 Solid
 Solid

**Date Collected:** 05/04/2021 14:22 05/04/2021 14:52

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

	Prepared:	05/06/2021 11:00		05/06/2021 11	1:00	
	Analyzed:	05/06/2021 19	9:25	05/06/2021 19:46		
Analyte	Unit/RL:	mg/Kg	RL	mg/Kg	RL	
Benzene		<0.00198 U	0.00198	<0.00199 U	0.00199	
Toluene		<0.00198 U	0.00198	<0.00199 U	0.00199	
Ethylbenzene		<0.00198 U	0.00198	<0.00199 U	0.00199	
m-Xylene & p-Xylene		<0.00397 U	0.00397	<0.00398 U	0.00398	
o-Xylene		<0.00198 U	0.00198	<0.00199 U	0.00199	
Xylenes, Total		<0.00397 U	0.00397	<0.00398 U	0.00398	
Total BTEX		<0.00397 U	0.00397	<0.00398 U	0.00398	

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

	Prepared:	05/06/2021 16	6:52	05/06/2021 11	:32
	Analyzed:	05/07/2021 13:41		05/07/2021 05:14	
Analyte	Unit/RL:	mg/Kg	RL	mg/Kg	RL
Gasoline Range Organics (GRO)-C6-C10		<49.8 U	49.8	<49.9 U	49.9
Diesel Range Organics (Over C10-C28)		<49.8 U	49.8	<49.9 U	49.9
Oll Range Organics (Over		<49.8 U	49.8	<49.9 U	49.9
C28-C36)					
Total TPH		<49.8 U	49.8	<49.9 U	49.9

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

Prepared:

 Analyzed:
 05/07/2021 09:51
 05/07/2021 10:07

 Analyte
 Unit/RL:
 mg/Kg
 RL
 mg/Kg
 RL

 Chloride
 43.1
 4.99
 81.2
 5.04



## **Environment Testing America**

### **ANALYTICAL REPORT**

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

Laboratory Job ID: 890-629-1

Laboratory Sample Delivery Group: TE012921048

Client Project/Site: BEU DI 28

For:

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

Attn: Dan Moir

MRAMER

Authorized for release by: 5/10/2021 11:08:44 AM

Jessica Kramer, Project Manager (432)704-5440

jessica.kramer@eurofinset.com

LINKS

Review your project results through

**Have a Question?** 



Visit us at:

www.eurofinsus.com/Env
Released to Imaging: 9/16/2021 1:50:05 PM

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.

1

2

3

4

6

Q Q

11

13

14

Client: WSP USA Inc.

Project/Site: BEU DI 28

Laboratory Job ID: 890-629-1 SDG: TE012921048

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#### **Definitions/Glossary**

Client: WSP USA Inc. Job ID: 890-629-1 Project/Site: BEU DI 28 SDG: TE012921048

#### **Qualifiers**

#### **GC VOA**

Qualifier **Qualifier Description** 

Indicates the analyte was analyzed for but not detected.

**GC Semi VOA** 

Qualifier **Qualifier Description** 

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

Decision Level Concentration (Radiochemistry) DLC

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 MLMinimum Level (Dioxin) MPN Most Probable Number Method Quantitation Limit MQL

Not Calculated NC

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)

Reporting Limit or Requested Limit (Radiochemistry) RL

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

Toxicity Equivalent Factor (Dioxin) TFF Toxicity Equivalent Quotient (Dioxin) **TEQ** 

TNTC Too Numerous To Count

Eurofins Xenco, Carlsbad

#### **Case Narrative**

Client: WSP USA Inc.

Project/Site: BEU DI 28

Job ID: 890-629-1

SDG: TE012921048

Job ID: 890-629-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-629-1

#### Receipt

The samples were received on 5/5/2021 10:35 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.8°C

#### **Receipt Exceptions**

The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: BH01 (890-629-1) and BH01A (890-629-2).

#### **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.

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# **Client Sample Results**

Client: WSP USA Inc. Job ID: 890-629-1 Project/Site: BEU DI 28 SDG: TE012921048

**Client Sample ID: BH01** 

Lab Sample ID: 890-629-1 Date Collected: 05/04/21 14:22 Matrix: Solid Date Received: 05/05/21 10:35

Sample Depth: - 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		05/06/21 11:00	05/06/21 19:25	1
Toluene	<0.00198	U	0.00198	mg/Kg		05/06/21 11:00	05/06/21 19:25	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		05/06/21 11:00	05/06/21 19:25	1
m-Xylene & p-Xylene	<0.00397	U	0.00397	mg/Kg		05/06/21 11:00	05/06/21 19:25	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		05/06/21 11:00	05/06/21 19:25	1
Xylenes, Total	< 0.00397	U	0.00397	mg/Kg		05/06/21 11:00	05/06/21 19:25	1
Total BTEX	<0.00397	U	0.00397	mg/Kg		05/06/21 11:00	05/06/21 19:25	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130			05/06/21 11:00	05/06/21 19:25	1
1,4-Difluorobenzene (Surr)	94		70 - 130			05/06/21 11:00	05/06/21 19:25	1
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)						
		DO: (DO)						
Analyte	Result	Qualifier	RL	Unit	<u>D</u>	Prepared 05/06/21 16:52	Analyzed	
Analyte Gasoline Range Organics	• • •	Qualifier	RL 49.8	Unit mg/Kg	<u>D</u>	Prepared 05/06/21 16:52	Analyzed 05/07/21 13:41	
Analyte Gasoline Range Organics	Result	Qualifier U			<u>D</u>			
Analyte Gasoline Range Organics (GRO)-C6-C10	Result <49.8	Qualifier U	49.8	mg/Kg	<u> </u>	05/06/21 16:52	05/07/21 13:41	1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <49.8	Qualifier U	49.8	mg/Kg	<u>D</u>	05/06/21 16:52	05/07/21 13:41	1
C10-C28)	Result   <49.8   <49.8	Qualifier U U	49.8	mg/Kg	<u>D</u>	05/06/21 16:52 05/06/21 16:52	05/07/21 13:41 05/07/21 13:41	1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result   <49.8   <49.8   <49.8	Qualifier U U U U	49.8 49.8 49.8	mg/Kg mg/Kg mg/Kg	<u>D</u>	05/06/21 16:52 05/06/21 16:52 05/06/21 16:52	05/07/21 13:41 05/07/21 13:41 05/07/21 13:41	1 1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Total TPH	Result   <49.8   <49.8   <49.8   <49.8   <49.8   <49.8	Qualifier U U U U	49.8 49.8 49.8 49.8	mg/Kg mg/Kg mg/Kg	<u>D</u>	05/06/21 16:52 05/06/21 16:52 05/06/21 16:52 05/06/21 16:52	05/07/21 13:41 05/07/21 13:41 05/07/21 13:41 05/07/21 13:41	1 1 1 1 Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Total TPH  Surrogate	Result	Qualifier U U U U	49.8 49.8 49.8 49.8 Limits	mg/Kg mg/Kg mg/Kg	<u> </u>	05/06/21 16:52 05/06/21 16:52 05/06/21 16:52 05/06/21 16:52 Prepared	05/07/21 13:41 05/07/21 13:41 05/07/21 13:41 05/07/21 13:41 Analyzed	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Total TPH  Surrogate 1-Chlorooctane	Result <49.8 <49.8 <49.8 <49.8 <49.8  %Recovery 94 106	Qualifier  U  U  U  Qualifier	49.8 49.8 49.8 49.8 <b>Limits</b> 70 - 130	mg/Kg mg/Kg mg/Kg	<u>D</u>	05/06/21 16:52 05/06/21 16:52 05/06/21 16:52 05/06/21 16:52 Prepared 05/06/21 16:52	05/07/21 13:41 05/07/21 13:41 05/07/21 13:41 05/07/21 13:41 Analyzed 05/07/21 13:41	Dil Fac  1  1  1  Dil Fac  1  1  1

Client Sample ID: BH01A Lab Sample ID: 890-629-2

4.99

mg/Kg

43.1

Date Collected: 05/04/21 14:52 Date Received: 05/05/21 10:35

Released to Imaging: 9/16/2021 1:50:05 PM

Sample Depth: - 2

Chloride

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/06/21 11:00	05/06/21 19:46	1
Toluene	<0.00199	U	0.00199	mg/Kg		05/06/21 11:00	05/06/21 19:46	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		05/06/21 11:00	05/06/21 19:46	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/06/21 11:00	05/06/21 19:46	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		05/06/21 11:00	05/06/21 19:46	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		05/06/21 11:00	05/06/21 19:46	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		05/06/21 11:00	05/06/21 19:46	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130			05/06/21 11:00	05/06/21 19:46	1
1,4-Difluorobenzene (Surr)	95		70 - 130			05/06/21 11:00	05/06/21 19:46	1

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05/07/21 09:51

**Matrix: Solid** 

Matrix: Solid

Lab Sample ID: 890-629-2

# **Client Sample Results**

 Client: WSP USA Inc.
 Job ID: 890-629-1

 Project/Site: BEU DI 28
 SDG: TE012921048

Client Sample ID: BH01A

Date Collected: 05/04/21 14:52 Date Received: 05/05/21 10:35

Sample Depth: - 2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U	49.9	mg/Kg		05/06/21 11:32	05/07/21 05:14	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		05/06/21 11:32	05/07/21 05:14	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/06/21 11:32	05/07/21 05:14	1
Total TPH	<49.9	U	49.9	mg/Kg		05/06/21 11:32	05/07/21 05:14	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130			05/06/21 11:32	05/07/21 05:14	1
o-Terphenyl	104		70 - 130			05/06/21 11:32	05/07/21 05:14	1
Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	81.2		5.04	mg/Kg			05/07/21 10:07	1

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DFBZ = 1,4-Difluorobenzene (Surr)

# **Surrogate Summary**

Client: WSP USA Inc. Job ID: 890-629-1 Project/Site: BEU DI 28 SDG: TE012921048

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
ab Sample ID	Client Sample ID	(70-130)	(70-130)	
90-629-1	BH01	98	94	
90-629-2	BH01A	97	95	
.CS 880-2756/1-A	Lab Control Sample	110	107	
CSD 880-2756/2-A	Lab Control Sample Dup	108	109	
MB 880-2756/5-A	Method Blank	91	93	
Surrogate Legend				

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

Matrix: Solid Prep Type: Total/NA

		1001	OTPH1	
_ab Sample ID	Client Sample ID	(70-130)	(70-130)	
90-629-1	BH01	94	106	
390-629-2	BH01A	97	104	
CS 880-2771/2-A	Lab Control Sample	105	105	
CS 880-2794/2-A	Lab Control Sample	97	102	
CSD 880-2771/3-A	Lab Control Sample Dup	105	104	
CSD 880-2794/3-A	Lab Control Sample Dup	105	111	
MB 880-2771/1-A	Method Blank	96	105	
MB 880-2794/1-A	Method Blank	91	101	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Job ID: 890-629-1

Client: WSP USA Inc. Project/Site: BEU DI 28 SDG: TE012921048

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

Lab Sample ID: MB 880-2756/5-A

**Matrix: Solid** 

**Analysis Batch: 2758** 

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 2756

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/06/21 08:25	05/06/21 11:55	
Toluene	<0.00200	U	0.00200	mg/Kg		05/06/21 08:25	05/06/21 11:55	•
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/06/21 08:25	05/06/21 11:55	•
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/06/21 08:25	05/06/21 11:55	
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/06/21 08:25	05/06/21 11:55	•
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/06/21 08:25	05/06/21 11:55	•
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/06/21 08:25	05/06/21 11:55	

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91	70 - 130	05/06/21 08:25	05/06/21 11:55	1
1,4-Difluorobenzene (Surr)	93	70 - 130	05/06/21 08:25	05/06/21 11:55	1

Lab Sample ID: LCS 880-2756/1-A

**Matrix: Solid** 

**Analysis Batch: 2758** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Batch: 2756

Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit %Rec Limits Benzene 0.100 0.1079 mg/Kg 108 70 - 130 Toluene 0.100 0.1028 103 mg/Kg 70 - 130 Ethylbenzene 0.100 0.1049 mg/Kg 105 70 - 130 m-Xylene & p-Xylene 0.200 0.2250 112 70 - 130 mg/Kg 70 - 130 o-Xylene 0.100 0.1130 mg/Kg 113

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	110	70 - 130
1.4-Difluorobenzene (Surr)	107	70 - 130

Lab Sample ID: LCSD 880-2756/2-A

**Matrix: Solid** 

**Analysis Batch: 2758** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 2756

	Spike	LCSD LCSD				%Rec.		RPD
Analyte	Added	Result Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1057	mg/Kg		106	70 - 130	2	35
Toluene	0.100	0.1002	mg/Kg		100	70 - 130	3	35
Ethylbenzene	0.100	0.1010	mg/Kg		101	70 - 130	4	35
m-Xylene & p-Xylene	0.200	0.2169	mg/Kg		108	70 - 130	4	35
o-Xylene	0.100	0.1095	mg/Kg		110	70 - 130	3	35

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	108	70 _ 130
1.4-Difluorobenzene (Surr)	109	70 - 130

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Client: WSP USA Inc. Job ID: 890-629-1 SDG: TE012921048 Project/Site: BEU DI 28

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

Lab Sample ID: MB 880-2771/1-A

**Matrix: Solid Analysis Batch: 2795**  Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 2771

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		05/06/21 11:32	05/06/21 21:36	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		05/06/21 11:32	05/06/21 21:36	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/06/21 11:32	05/06/21 21:36	1
Total TPH	<50.0	U	50.0	mg/Kg		05/06/21 11:32	05/06/21 21:36	1

мв мв

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130	05/06/21 11:32	05/06/21 21:36	1
o-Terphenyl	105		70 - 130	05/06/21 11:32	05/06/21 21:36	1

Lab Sample ID: LCS 880-2771/2-A **Client Sample ID: Lab Control Sample** Matrix: Solid Prep Type: Total/NA

**Analysis Batch: 2795** Prep Batch: 2771

LCS LCS Spike %Rec. Added Result Qualifier Analyte Unit %Rec Limits Gasoline Range Organics 1000 830.9 83 70 - 130 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 1091 mg/Kg 109 70 - 130 C10-C28)

LCS LCS

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

Lab Sample ID: LCSD 880-2771/3-A Client Sample ID: Lab Control Sample Dup

**Matrix: Solid** 

**Analysis Batch: 2795** 

Prep Type: Total/NA

Prep Batch: 2771

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	866.9		mg/Kg		87	70 - 130	4	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	1079		mg/Kg		108	70 - 130	1	20
C10-C28)									

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	105	70 _ 130
o-Terphenyl	104	70 - 130

Lab Sample ID: MB 880-2794/1-A Client Sample ID: Method Blank

**Matrix: Solid** Prep Type: Total/NA Prep Batch: 2794 **Analysis Batch: 2814** 

MB	MB

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		05/06/21 16:52	05/07/21 11:15	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		05/06/21 16:52	05/07/21 11:15	1
C10-C28)								
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/06/21 16:52	05/07/21 11:15	1
Total TPH	<50.0	U	50.0	mg/Kg		05/06/21 16:52	05/07/21 11:15	1

Client: WSP USA Inc. Job ID: 890-629-1 Project/Site: BEU DI 28 SDG: TE012921048

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

	MB	МВ				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	91		70 - 130	05/06/21 16:52	05/07/21 11:15	1
o-Terphenyl	101		70 - 130	05/06/21 16:52	05/07/21 11:15	1

Lab Sample ID: LCS 880-2794/2-A Client Sample ID: Lab Control Sample **Matrix: Solid** Prep Type: Total/NA Prep Batch: 2794

**Analysis Batch: 2814** 

Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics 1000 925.4 93 mg/Kg 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over 1000 1044 mg/Kg 104 70 - 130 C10-C28)

LCS LCS %Recovery Qualifier Surrogate Limits 1-Chlorooctane 97 70 - 130 o-Terphenyl 102 70 - 130

Lab Sample ID: LCSD 880-2794/3-A Client Sample ID: Lab Control Sample Dup

**Matrix: Solid** 

Prep Type: Total/NA **Analysis Batch: 2814** Prep Batch: 2794

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	1018		mg/Kg		102	70 - 130	10	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	1135		mg/Kg		113	70 - 130	8	20
C10-C28)									

LCSD LCSD %Recovery Qualifier Limits Surrogate 105 70 - 130 1-Chlorooctane 70 - 130 o-Terphenyl 111

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-2803/1-A Client Sample ID: Method Blank **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 2806** 

	INID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5 00	ma/Ka			05/07/21 09:29	1

Lab Sample ID: LCS 880-2803/2-A Client Sample ID: Lab Control Sample **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 2806** 

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	240.8		mg/Kg		96	90 - 110	

Lab Sample ID: LCSD 880-2803/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 2806** 

LCSD LCSD RPD Spike %Rec. Analyte Added Result Qualifier Unit D %Rec Limits RPD Limit Chloride 250 240.3 96 90 - 110 mg/Kg

# **QC Sample Results**

 Client: WSP USA Inc.
 Job ID: 890-629-1

 Project/Site: BEU DI 28
 SDG: TE012921048

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 890-629-1 MS	Client Sample ID: BH01
Matrix: Solid	Prep Type: Soluble
Analysis Batch: 2006	

Analysis Batch: 2806

	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	43.1		250	291.9		mg/Kg		100	90 - 110	

Lab Sample ID: 890-629-1 MSD

Matrix: Solid

Client Sample ID: BH01

Prep Type: Soluble

Analysis Batch: 2806

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	43.1		250	279.4		mg/Kg		95	90 - 110	4	20

# **QC Association Summary**

 Client: WSP USA Inc.
 Job ID: 890-629-1

 Project/Site: BEU DI 28
 SDG: TE012921048

#### **GC VOA**

#### Prep Batch: 2756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-629-1	BH01	Total/NA	Solid	5035	
890-629-2	BH01A	Total/NA	Solid	5035	
MB 880-2756/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-2756/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-2756/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

#### **Analysis Batch: 2758**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-629-1	BH01	Total/NA	Solid	8021B	2756
890-629-2	BH01A	Total/NA	Solid	8021B	2756
MB 880-2756/5-A	Method Blank	Total/NA	Solid	8021B	2756
LCS 880-2756/1-A	Lab Control Sample	Total/NA	Solid	8021B	2756
LCSD 880-2756/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	2756

#### **GC Semi VOA**

#### Prep Batch: 2771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-629-2	BH01A	Total/NA	Solid	8015NM Prep	
MB 880-2771/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-2771/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-2771/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

#### Prep Batch: 2794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-629-1	BH01	Total/NA	Solid	8015NM Prep	
MB 880-2794/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-2794/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-2794/3	-A Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 2795

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-629-2	BH01A	Total/NA	Solid	8015B NM	2771
MB 880-2771/1-A	Method Blank	Total/NA	Solid	8015B NM	2771
LCS 880-2771/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	2771
LCSD 880-2771/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	2771

#### Analysis Batch: 2814

<b>Lab Sample ID</b> 890-629-1	Client Sample ID BH01	Prep Type Total/NA	Matrix Solid	Method 8015B NM	Prep Batch 2794
MB 880-2794/1-A	Method Blank	Total/NA	Solid	8015B NM	2794
LCS 880-2794/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	2794
LCSD 880-2794/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	2794

#### **HPLC/IC**

### Leach Batch: 2803

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-629-1	BH01	Soluble	Solid	DI Leach	
890-629-2	BH01A	Soluble	Solid	DI Leach	
MB 880-2803/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-2803/2-A	Lab Control Sample	Soluble	Solid	DI Leach	

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# **QC Association Summary**

 Client: WSP USA Inc.
 Job ID: 890-629-1

 Project/Site: BEU DI 28
 SDG: TE012921048

# **HPLC/IC (Continued)**

### Leach Batch: 2803 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-2803/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-629-1 MS	BH01	Soluble	Solid	DI Leach	
890-629-1 MSD	BH01	Soluble	Solid	DI Leach	

#### Analysis Batch: 2806

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-629-1	BH01	Soluble	Solid	300.0	2803
890-629-2	BH01A	Soluble	Solid	300.0	2803
MB 880-2803/1-A	Method Blank	Soluble	Solid	300.0	2803
LCS 880-2803/2-A	Lab Control Sample	Soluble	Solid	300.0	2803
LCSD 880-2803/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	2803
890-629-1 MS	BH01	Soluble	Solid	300.0	2803
890-629-1 MSD	BH01	Soluble	Solid	300.0	2803

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#### Lab Chronicle

 Client: WSP USA Inc.
 Job ID: 890-629-1

 Project/Site: BEU DI 28
 SDG: TE012921048

Client Sample ID: BH01

Date Collected: 05/04/21 14:22 Date Received: 05/05/21 10:35 Lab Sample ID: 890-629-1

Matrix: Solid

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2756	05/06/21 11:00	KL	XM
Total/NA	Analysis	8021B		1	2758	05/06/21 19:25	KL	XM
Total/NA	Prep	8015NM Prep			2794	05/06/21 16:52	DM	XM
Total/NA	Analysis	8015B NM		1	2814	05/07/21 13:41	AJ	XM
Soluble	Leach	DI Leach			2803	05/06/21 17:18	SC	XM
Soluble	Analysis	300.0		1	2806	05/07/21 09:51	CH	XM

Client Sample ID: BH01A

Date Collected: 05/04/21 14:52

Lab Sample ID: 890-629-2

Matrix: Solid

Date Received: 05/05/21 10:35

Batch Batch Dilution Batch Prepared Prep Type Туре Method Run Factor Number or Analyzed Analyst Lab Total/NA Prep 5035 2756 05/06/21 11:00 KL XM Total/NA 8021B Analysis 2758 05/06/21 19:46 KL $\mathsf{XM}$ 1 Total/NA Prep 8015NM Prep 05/06/21 11:32 ΧM 2771 DM Total/NA 8015B NM ΧM Analysis 1 2795 05/07/21 05:14 ΑJ Soluble XM Leach DI Leach 2803 05/06/21 17:18 SC Soluble Analysis 300.0 1 2806 05/07/21 10:07 CH XM

Laboratory References:

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

Eurofins Xenco, Carlsbad

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# **Accreditation/Certification Summary**

 Client: WSP USA Inc.
 Job ID: 890-629-1

 Project/Site: BEU DI 28
 SDG: TE012921048

#### **Laboratory: Eurofins Xenco, Midland**

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

Authority		ogram	Identification Number	<b>Expiration Date</b>	
Texas	NELAP		T104704400-20-21	06-30-21	
The following analytes:	are included in this report hi	it the laboratory is not certifi	ed by the governing authority. This list ma	v include analytes for	
the agency does not of	. ,	at the laboratory is not certifi	ed by the governing admonty. This list me	ay include analytes for	
0 ,	. ,	Matrix	Analyte	ay include analytes for	
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# **Method Summary**

 Client: WSP USA Inc.
 Job ID: 890-629-1

 Project/Site: BEU DI 28
 SDG: TE012921048

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

#### **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:

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

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# **Sample Summary**

Client: WSP USA Inc. Project/Site: BEU DI 28 Job ID: 890-629-1

SDG: TE012921048

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-629-1	BH01	Solid	05/04/21 14:22	05/05/21 10:35	- 0.5
890-629-2	BH01A	Solid	05/04/21 14:52	05/05/21 10:35	- 2

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X	XIIZCO		Houston,T	Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334	0 Dalli	ıs,TX (2	214) 90	2-0300	San An	onio,T	(210)	09-333	4										•		-	
LAB		Hobbs	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)	Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)/94-1296 75-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (8	10) EL Z (480-	Paso, T 355-09	X (915) 00) Atl	585-34 <i>i</i> anta,GA	3 Lubb (770-4	ock, I X 19-8800	(806)/9 ) Tamp	4-1296 a,FL (8	13-620	-2000)			www	.xen	www.xenco.com	13	Page	<del>0</del> 	1	<u>으</u> ,	1	
Project Manager:	Tacoma Morrissey			Bill to: (if different)		Kyle Littrell	ttrell										5	ork	Orde	ဂ္ဂ	Work Order Comments	ıts				
	WSP USA Inc.			Company Name:		XTO Energy	nergy						_	Program: UST/PST		ST/PS		<b>PP</b> [	□PRP □Brownfields	nfiel		<u>ე</u>	Ĕ	□uperfund		
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e ZIP:	Midland, TX 79705			City, State ZIP:		Carlsb	ad, NN	Carlsbad, NM 88220					<u>_</u>	Reporting:Level II	ing:Le	vel II		□evel III	©.	□ST/UST		무	□vel IV	e		
	432.236.3849		Email:	Email: luis.delval@wsp.com;	vsp.cc		oma.	norris	tacoma.morrissey@wsp.com	vsp.cc	∥B			Deliverables: EDD	ables	EDE			ADa	ADaPT 🗆		Other:	er:			
Project Name:	BEU	BEU DI 28	Tur	Turn Around						AN,	ANALYSIS		REQUEST	٦							5	/ork	Work Order Notes	Note	Š	
Project Number:	TE012	TE012921048	Routine	ē X																Fi	ncide	Incident #	11			
	CC: 1080751001		Rush:	Ι,																7	APP	200	NAPP2103030448	T	(~	
Sampler's Name: L	Luis Del Val		Due Date:	ate:							_	_	_	_			_	-		<b>→</b> :	前					
SAMPLE RECEIPT	Temp Blank:	nk: (Yes) No	Wet Ice:	Yes No						=											30-(	V	30-015-36455	ध		
Temperature (°C):	5.0/4.6		Thermometer ID		iners			)) 					┋													-
Received Intact: Cooler Custody Seals:	Yes No N/A		Correction Factor:	1	Conta	15)	=8021	A 300.		89	890-629 C		nain of Custody	tody						. 1	TAT et	arts the	TAT starts the day received by the	Deiver	hy the	
Sample Custody Seals:	Yes (- No		Total Containers:		r of	PA 80	PA (	e (EP		_	_	_					_	_			lat	o, if rec	lab, if received by 4:30pm	y 4:30	m.	
Sample Identification	ication Matrix	Date Sampled	Time Sampled	Depth	Numbe	TPH (E	BTEX (	Chlorid													ျှ	ampl	Sample Comments	nmen	उं	Ь
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Total 200.7 / 6010	otal 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed	#1	8RCRA 13PPM	ICRA 13PPM Texas 11 AI		Sb As Ba Sb As Ba	s Ba	Be B C	Cd Ca	_ "	Cr Co Cu Cu Pb M	u Fe	Pb Mg Mn Mo Ni o Ni Se Ag TI U	Mg Mi	Mn Mo N Ag TI U	⊂ <u>Z</u> .	( Se	Ag	SiO2	Na 1631	Sr T	Na Sr Tl Sn ∪ V 1631 / 245.1 / 7470	Na Sr Tl Sn U V Zn 1631 / 245.1 / 7470 / 7471 : Hg	Zn 7471	: Нg	┢━━┛
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 esponsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of samples and shall not assume any esponsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of samples and shall not assume any esponsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of samples and shall not assume any esponsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of samples and shall not assume any esponsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of samples and shall not assume any esponsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of samples and shall not assume any esponsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of samples and shall not assume any esponsibility for any losses or expenses incurred by the client if such losses are due to circumstances.	cument and relinquishmen	nt of samples constit	utes a valid purci	nase order from consibility for any	lient co	mpany t	o Xenco	, its affil irred by	iates and the clien	subcor	tractors.	. It ass	It assigns standard terms and conditions to the control of the con	ndard	terms a	and con	ditions	<u> </u>				1				
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1089 N Canal St.

**Eurofins Xenco, Carlsbad** 

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# Chain of Custody Record

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Environment Testing

Project Name: BEU DI 28 State, Zip TX, 79701 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 brough 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. BH01A (890-629-2) BH01 (890-629-1) Midland Eurofins Xenco Shipping/Receiving Client Information Carlsbad NM 88220 Phone 575-988-3199 Fax: 575-988-3199 Possible Hazard Identification 1211 W Florida Ave 132-704-5440(Tel) Deliverable Requested | II III IV Other (specify) elinquished by ample Identification - Client ID (Lab ID) elinquished by mpty Kit Relinquished by linquished by: Custody Seals Intact Yes No (Sub Contract Lab) Custody Seal No Ō Ŏ Ũ Project #: 89000004 Due Date Requested 5/11/2021 Phone: Date/Time Date/Time: Primary Deliverable Rank 2 SOW#: TAT Requested (days) 5/4/21 5/4/21 Mountain 14 52 Date Mountain Sample 14 22 (C=comp Sample Preservation Code: Type Company Company Company Matrix Solid Solid Lab PM jessica kramer@eurofinset.com E-Mail Kramer Jessica Time NELAP - Louisiana NELAP - Texas Perform MS/MSD (Yes or No) Special Instructions/QC Requirements Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return To Client Disposal By Lab Archive For Mont 8015MOD\_NM/8015NM\_S\_Prep Full TPH × Received by × Cooler Temperature(s) °C and Other Remarks × × 300\_ORGFM\_28D/DI\_LEACH Chloride 8021B/5035FP\_Calc BTEX × Analysis Requested Disposal By Lab State of Origin New Mexico Carrier Tracking No(s) Date/Time Total Number of containers COC No: 890-201 1 Page 1 of IOUUCUP Preservation Codes 890-629-1 Zn Acetate
) Nitric Acid
: NaHSO4
: MeOH
3 Amchlor lce
DI Water
EDTA
EDA Ascorbic Acid Na H Special Instructions/Note M Hexane
N None
O AsNaO2
P-NaZO4S
Q NaZSO3
R NaZSO3
R NaZSO3
S HZSO4
T TSP Dodecahydrate
U Acetone
V MCAA
W pH 4-5
Z other (specify) Company Ver: 11/01/2020 Months

# **Login Sample Receipt Checklist**

Client: WSP USA Inc. Job Number: 890-629-1 SDG Number: TE012921048

List Source: Eurofins Carlsbad

Login Number: 629 List Number: 1

Creator: Ordonez, Gabby

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	

Released to Imaging: 9/16/2021 1:50:05 PM

# **Login Sample Receipt Checklist**

Client: WSP USA Inc.

Job Number: 890-629-1 SDG Number: TE012921048

Login Number: 629
List Source: Eurofins Midland
List Number: 2
List Creation: 05/06/21 11:20 AM

Creator: Copeland, Tatiana

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

<6mm (1/4").

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

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 33388

#### **CONDITIONS**

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	33388
	Action Type:
	[C-141] Release Corrective Action (C-141)

#### CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your closure report and final C-141 for Incident #NAPP2103630448 BEU DI 28 CTB, thank you. This closure is approved.	9/16/2021