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	nAPP2100547196
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@xtoenergy.com	Incident # *(assigned by OCD)*
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.15411 Longitude -104.01620
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Goldenchild	Site Type SWD
Date Release Discovered 12/22/2020	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
P	06	25S	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) 14	Volume Recovered (bbls) 14
	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: LO discovered a leak in a Victaulic connection on water dump line from tester going to the storage tanks. Victaulic Tee had a hole in a groove caused by internal corrosion. Vacuum truck was dispatched and recovered all fluids. A 48-hour liner inspection notification was sent to NMOCD District 2. Liner was inspected and 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	nAPP2100547196
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: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 01-05-21

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

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2100547196
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?	<50 (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	nAPP2100547196
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: SH&E Supervisor

Signature: Date: 03/09/2021

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

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2100547196
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: SH&E Supervisor

Signature: Date: 03/09/2021

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

OCD Only

Received by: Chad Hensley Date: 04/16/2021

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: 04/16/2021

Printed Name: Chad Hensley Title: Environmental Specialist Advanced

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

March 10, 2021

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

Re: Closure Request
Goldenchild SWD
Incident Number nAPP2100547196
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 Goldenchild SWD (Site) located in Unit P, Section 06, Township 25 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 nAPP2100547196.

RELEASE BACKGROUND

On December 22, 2020, a connection on a water dump line developed a corrosion hole, which resulted in the release of approximately 14 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 14 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 reported the release to the NMOCD on a Release Notification Form C-141 on January 5, 2021. The release was assigned Incident Number nAPP2100547196.

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 less than 50 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is New Mexico Office of the State Engineer (NMOSE) well

C-01880, located approximately 0.57 miles northwest of the Site. The groundwater well has a reported depth to groundwater of 40 feet bgs and a total depth of 85 feet bgs. All wells used for depth to groundwater determination are depicted on Figure 1 and referenced well records are provided in Attachment 1.

During November 2020, in an effort to confirm depth to water in the area, a borehole (C-04493) was advanced to a depth of 57 feet bgs via truck-mounted sonic drill rig. The borehole was located approximately 0.1 miles south of the Site. The location of borehole C-04493 is provided on Figure 1. A WSP geologist logged and described soils continuously. The borehole lithologic/soil sampling log is included in Attachment 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 approximately 39 feet bgs. The borehole was properly abandoned with hydrated bentonite chips.

The closest continuously flowing water or significant watercourse to the Site is the Pecos River, located approximately 0.3 miles west 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
- TPH: 100 mg/kg
- Chloride: 600 mg/kg

SITE ASSESSMENT ACTIVITIES AND ANALYTICAL RESULTS

On February 8, 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 and are 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, 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 December 22, 2020 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, 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 nAPP2100547196.

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
Assistant Consultant, Geophysicist

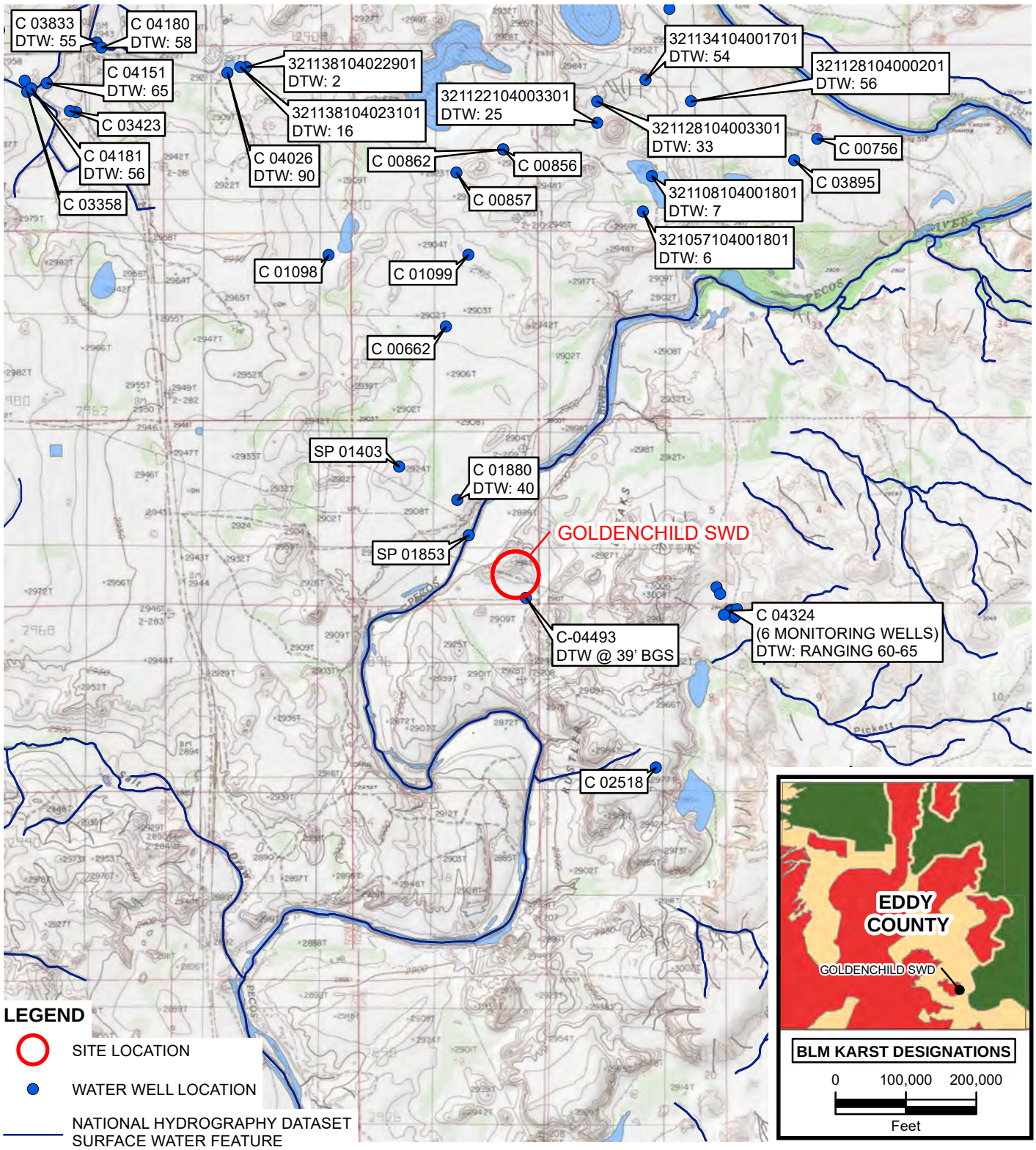
Ashley L. Ager, P.G.
Managing Director, Geologist

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



DTW: DEPTH TO WATER IN FEET
BLM: BUREAU OF LAND MANAGEMENT
BGS: BELOW GROUND SURFACE
NOTE: INCIDENT NUMBER NAPP2100547196

FIGURE 1
SITE LOCATION MAP
GOLDENCHILD SWD
UNIT P SEC 06 T25S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC

P:\XTO Energy\GIS\MXD\012921017_GOLDENCHILD SWD LINER\012921017_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 NAPP2100547196
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

FIGURE 2
DELINEATION SOIL SAMPLE LOCATIONS
GOLDENCHILD SWD
UNIT P SEC 06 T25S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012921017_GOLDENCHILD SWD LINER\012921017_FIG02_DELINEATION_2021.mxd

TABLES

Table 1

Soil Analytical Results
Goldenchild SWD
Incident Number nAPP2100547196
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
Delineation Samples										
BH01	02/08/2021	0.5	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	211
BH01A	02/08/2021	1	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	35.7

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

New Mexico Office of the State Engineer
Water Right Summary

get image list

WR File Number: C 01880 **Subbasin:** C **Cross Reference:** -

Primary Purpose: PRO 72-12-1 PROSPECTING OR DEVELOPMENT OF NATURAL RESOURCE

Primary Status: PMT PERMIT

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

Total Diversion: 0 **Cause/Case:** -

Owner: GULF OIL CORPORATION

Contact: MURRELL ABBOTT

Documents on File

	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images	464985	72121	1979-10-26	PMT	LOG	C 01880	T		3	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q16	Q4	Sec	Tws	Rng	X	Y	Other Location Desc
C 01880		Shallow	3	3	2	06	25S	29E	592161	3558605*	RUSTLER BLUFFS WI UNIT #1

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

New Mexico Office of the State Engineer

Point of Diversion Summary

Well Tag	POD Number	Q64	Q16	Q4	Sec	Twn	Rng	X	Y
	C 01880	3	3	2	06	25S	29E	592161	3558605*

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

Driller License: 46 **Driller Company:** ABBOTT BROTHERS COMPANY

Driller Name: MURRELL ABBOTT

Drill Start Date:	10/29/1979	**Drill Finish Date:**	10/30/1979	**Plug Date:**	
Log File Date:	11/05/1979	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	7.00	**Depth Well:**	85 feet	**Depth Water:**	40 feet

Water Bearing Stratifications:	Top	Bottom	Description
	40	85	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	40	60

***UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer
Water Right Summary

get image list

WR File Number: C 04493 **Subbasin:** CUB **Cross Reference:** -

Primary Purpose: MON MONITORING WELL

Primary Status: PMT PERMIT

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

Total Diversion: 0 **Cause/Case:** -

Agent: LT ENVIRONMENTAL INC

Contact: TACOMA MORRISSEY

Documents on File

	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images	681638	EXPL	2020-11-12	PMT	LOG	C 04493 POD1	T	0	0	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q16	Q4	Sec	Tws	Rng	X	Y	Other Location Desc
C 04493 POD1	NA	Shallow	4	4	4	06	25S	29E	592760	3557765	BH01

New Mexico Office of the State Engineer

Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
NA	C 04493 POD1	4	4	4	06	25S	29E	592760	3557765

Driller License: 1249 **Driller Company:** ATKINS ENGINEERING ASSOC. INC.

Driller Name: JACKIE D ATKINS

Drill Start Date: 11/18/2020 **Drill Finish Date:** 11/18/2020 **Plug Date:** 11/23/2020

Log File Date: 12/17/2020 **PCW Rcv Date:** **Source:** Shallow

Pump Type: **Pipe Discharge Size:** **Estimated Yield:** 0 GPM

Casing Size: **Depth Well:** 57 feet **Depth Water:** 39 feet

Water Bearing Stratifications:	Top	Bottom	Description
	29	57	Sandstone/Gravel/Conglomerate

ATTACHMENT 2: LITHOLOGIC/SAMPLING LOG

WSP USA
508 West Stevens Street
Carlsbad, New Mexico 88220

BH or MW Name: BH01	Date: 2/8/2021
Site Name: Goldenchild SWD	
RP or Incident Number:	
WSP Job Number: TE012921017	

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: TC			Method: HAND AUGER
Lat/Long:	Field Screening: PID, CHLORIDES	Hole Diameter: 3.5"	Total Depth: 1'
			Depth to Water: N/A

Backfill or Well Construction Materials / Comments:
All chloride tests include a 40% correction factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks	Backfill / Well Completion
						0	CCHE	CALICHE, moist, light brown, unconsolidated, no stain, no odor, fill.	
M	257.6	0.0	N	BH01	0.5'	0.5			
M	<168	0.0	N	BH01A	1'	1			
								Total Depth: 1' bgs	

ATTACHMENT 3: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG		
XTO Energy, Inc.	Goldenchild SWD Eddy County, New Mexico	TE012921017

Photo No.	Date
1	February 8, 2021

Location of tear in liner and proposed borehole site.

Photo No.	Date
2	February 8, 2021

Location of borehole prior to delineation activities.

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: 890-159-1
Laboratory Sample Delivery Group: TE012921017
Client Project/Site: Goldenchild SWD Spill Date (12-22-20)

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

Attn: Dan Moir

Authorized for release by:
2/9/2021 4:39:44 PM
Kathleen Robb, Client Program Manager
(949)261-1022
Kathleen.Robb@eurofinset.com

Designee for

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: Goldenchild SWD Spill Date (12-22-20)

Laboratory Job ID: 890-159-1
SDG: TE012921017

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-159-1
Project/Site: Goldenchild SWD Spill Date (12-22-20) SDG: TE012921017

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: Goldenchild SWD Spill Date (12-22-20)

Job ID: 890-159-1
SDG: TE012921017

Job ID: 890-159-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-159-1

Comments
No additional comments.

Receipt
The samples were received on 2/8/2021 3:46 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.8º C.

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

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

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

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

Client Sample Results

Client: WSP USA Inc.
Project/Site: Goldenchild SWD Spill Date (12-22-20)

Job ID: 890-159-1
SDG: TE012921017

Client Sample ID: BH01

Date Collected: 02/08/21 10:20
Date Received: 02/08/21 15:46

Lab Sample ID: 890-159-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		02/08/21 16:22	02/08/21 22:20	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		02/08/21 16:22	02/08/21 22:20	1
Toluene	<0.00198	U	0.00198		mg/Kg		02/08/21 16:22	02/08/21 22:20	1
Total BTEX	<0.00198	U	0.00198		mg/Kg		02/08/21 16:22	02/08/21 22:20	1
Xylenes, Total	<0.00198	U	0.00198		mg/Kg		02/08/21 16:22	02/08/21 22:20	1
m,p-Xylenes	<0.00396	U	0.00396		mg/Kg		02/08/21 16:22	02/08/21 22:20	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		02/08/21 16:22	02/08/21 22:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene	*99*		*70 - 130*	*02/08/21 16:22*	*02/08/21 22:20*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*02/08/21 16:22*	*02/08/21 22:20*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	<49.9	U	49.9		mg/Kg		02/09/21 08:19	02/09/21 11:32	1
Total TPH	<49.9	U	49.9		mg/Kg		02/09/21 08:19	02/09/21 11:32	1
>C10-C28	<49.9	U	49.9		mg/Kg		02/09/21 08:19	02/09/21 11:32	1
>C28-C35	<49.9	U	49.9		mg/Kg		02/09/21 08:19	02/09/21 11:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 135*	*02/09/21 08:19*	*02/09/21 11:32*	*1*
o-Terphenyl	*90*		*70 - 135*	*02/09/21 08:19*	*02/09/21 11:32*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**211**		9.98		mg/Kg			02/09/21 10:57	1

Client Sample ID: BH01 A

Date Collected: 02/08/21 10:31
Date Received: 02/08/21 15:46

Lab Sample ID: 890-159-2

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/08/21 16:22	02/08/21 22:43	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/08/21 16:22	02/08/21 22:43	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/08/21 16:22	02/08/21 22:43	1
Total BTEX	<0.00199	U	0.00199		mg/Kg		02/08/21 16:22	02/08/21 22:43	1
Xylenes, Total	<0.00199	U	0.00199		mg/Kg		02/08/21 16:22	02/08/21 22:43	1
m,p-Xylenes	<0.00398	U	0.00398		mg/Kg		02/08/21 16:22	02/08/21 22:43	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/08/21 16:22	02/08/21 22:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene	*101*		*70 - 130*	*02/08/21 16:22*	*02/08/21 22:43*	*1*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*02/08/21 16:22*	*02/08/21 22:43*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	<50.0	U	50.0		mg/Kg		02/09/21 08:19	02/09/21 11:52	1
Total TPH	<50.0	U	50.0		mg/Kg		02/09/21 08:19	02/09/21 11:52	1
>C10-C28	<50.0	U	50.0		mg/Kg		02/09/21 08:19	02/09/21 11:52	1
>C28-C35	<50.0	U	50.0		mg/Kg		02/09/21 08:19	02/09/21 11:52	1

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Client Sample Results

Client: WSP USA Inc.
Project/Site: Goldenchild SWD Spill Date (12-22-20)

Job ID: 890-159-1
SDG: TE012921017

Client Sample ID: BH01 A

Date Collected: 02/08/21 10:31
Date Received: 02/08/21 15:46

Lab Sample ID: 890-159-2

Matrix: Solid

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 135	02/09/21 08:19	02/09/21 11:52	1
o-Terphenyl	97		70 - 135	02/09/21 08:19	02/09/21 11:52	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	35.7		9.96		mg/Kg			02/09/21 11:03	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: Goldenchild SWD Spill Date (12-22-20)

Job ID: 890-159-1
SDG: TE012921017

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		DFBZ1	BFB1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-158-A-1-L MS	Matrix Spike	97	99
890-158-A-1-M MSD	Matrix Spike Duplicate	94	101
890-159-1	BH01	99	103
890-159-2	BH01 A	101	107
LCS 890-194/2-B	Lab Control Sample	94	93
LCSD 890-194/3-B	Lab Control Sample Dup	97	96
MB 890-194/1-B	Method Blank	101	107

Surrogate Legend

DFBZ = 1,4-Difluorobenzene
BFB = 4-Bromofluorobenzene (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	(70-135)	(70-135)
890-158-A-1-O MS	Matrix Spike	113	102
890-158-A-1-P MSD	Matrix Spike Duplicate	114	102
890-159-1	BH01	93	90
890-159-2	BH01 A	97	97
LCS 890-214/2-A	Lab Control Sample	108	98
LCSD 890-214/3-A	Lab Control Sample Dup	101	91
MB 890-214/1-A	Method Blank	91	89

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: Goldenchild SWD Spill Date (12-22-20)

Job ID: 890-159-1
SDG: TE012921017

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 890-194/1-B
Matrix: Solid
Analysis Batch: 210

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 194

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/08/21 16:22	02/08/21 20:05	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/08/21 16:22	02/08/21 20:05	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/08/21 16:22	02/08/21 20:05	1
Total BTEX	<0.00200	U	0.00200		mg/Kg		02/08/21 16:22	02/08/21 20:05	1
Xylenes, Total	<0.00200	U	0.00200		mg/Kg		02/08/21 16:22	02/08/21 20:05	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		02/08/21 16:22	02/08/21 20:05	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/08/21 16:22	02/08/21 20:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene	*101*		*70 - 130*	*02/08/21 16:22*	*02/08/21 20:05*	*1*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*02/08/21 16:22*	*02/08/21 20:05*	*1*

Lab Sample ID: LCS 890-194/2-B
Matrix: Solid
Analysis Batch: 210

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 194

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.1156		mg/Kg		116	70 - 130		
Ethylbenzene			0.100	0.1182		mg/Kg		118	71 - 129		
Toluene			0.100	0.1177		mg/Kg		118	70 - 130		
m,p-Xylenes			0.200	0.2399		mg/Kg		120	70 - 135		
o-Xylene			0.100	0.1170		mg/Kg		117	71 - 133		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Difluorobenzene	*94*		*70 - 130*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*

Lab Sample ID: LCSD 890-194/3-B
Matrix: Solid
Analysis Batch: 210

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 194

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1036		mg/Kg		104	70 - 130	11	35
Ethylbenzene			0.100	0.1035		mg/Kg		104	71 - 129	13	35
Toluene			0.100	0.1027		mg/Kg		103	70 - 130	14	35
m,p-Xylenes			0.200	0.2059		mg/Kg		103	70 - 135	15	35
o-Xylene			0.100	0.1045		mg/Kg		105	71 - 133	11	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,4-Difluorobenzene	*97*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: 890-158-A-1-L MS
Matrix: Solid
Analysis Batch: 210

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 194

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00198	U	0.0998	0.1036		mg/Kg		104	70 - 130		

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QC Sample Results

Client: WSP USA Inc. Job ID: 890-159-1
Project/Site: Goldenchild SWD Spill Date (12-22-20) SDG: TE012921017

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

Lab Sample ID: 890-158-A-1-L MS **Client Sample ID: Matrix Spike**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 210 **Prep Batch: 194**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00198	U	0.0998	0.1007		mg/Kg		101	71 - 129
Toluene	<0.00198	U	0.0998	0.1018		mg/Kg		102	70 - 130
m,p-Xylenes	<0.00396	U	0.200	0.1982		mg/Kg		99	70 - 135
o-Xylene	<0.00198	U	0.0998	0.09725		mg/Kg		97	71 - 133

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,4-Difluorobenzene	*97*		*70 - 130*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 890-158-A-1-M MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 210 **Prep Batch: 194**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00198	U	0.0998	0.1081		mg/Kg		108	70 - 130	4	35
Ethylbenzene	<0.00198	U	0.0998	0.09539		mg/Kg		96	71 - 129	5	35
Toluene	<0.00198	U	0.0998	0.1031		mg/Kg		103	70 - 130	1	35
m,p-Xylenes	<0.00396	U	0.200	0.1934		mg/Kg		97	70 - 135	2	35
o-Xylene	<0.00198	U	0.0998	0.09881		mg/Kg		99	71 - 133	2	35

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

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

Lab Sample ID: MB 890-214/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 215 **Prep Batch: 214**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	<50.0	U	50.0		mg/Kg		02/09/21 08:19	02/09/21 09:29	1
Total TPH	<50.0	U	50.0		mg/Kg		02/09/21 08:19	02/09/21 09:29	1
>C10-C28	<50.0	U	50.0		mg/Kg		02/09/21 08:19	02/09/21 09:29	1
>C28-C35	<50.0	U	50.0		mg/Kg		02/09/21 08:19	02/09/21 09:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*91*		*70 - 135*	*02/09/21 08:19*	*02/09/21 09:29*	*1*
o-Terphenyl	*89*		*70 - 135*	*02/09/21 08:19*	*02/09/21 09:29*	*1*

Lab Sample ID: LCS 890-214/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 215 **Prep Batch: 214**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
C6-C10			1000	1016		mg/Kg		102	70 - 135
>C10-C28			1000	1012		mg/Kg		101	70 - 135

QC Sample Results

Client: WSP USA Inc. Job ID: 890-159-1
Project/Site: Goldenchild SWD Spill Date (12-22-20) SDG: TE012921017

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

Lab Sample ID: LCS 890-214/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 215 **Prep Batch: 214**

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	108		70 - 135
o-Terphenyl	98		70 - 135

Lab Sample ID: LCSD 890-214/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 215 **Prep Batch: 214**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C6-C10			1000	969.0		mg/Kg		97	70 - 135	5	25
>C10-C28			1000	977.0		mg/Kg		98	70 - 135	4	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	101		70 - 135
o-Terphenyl	91		70 - 135

Lab Sample ID: 890-158-A-1-O MS **Client Sample ID: Matrix Spike**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 215 **Prep Batch: 214**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
C6-C10	<50.0	U	997	1020		mg/Kg		102	70 - 135
Total TPH	<50.0	U	1990	2033		mg/Kg		0	
>C10-C28	<50.0	U	997	1013		mg/Kg		98	70 - 135

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	113		70 - 135
o-Terphenyl	102		70 - 135

Lab Sample ID: 890-158-A-1-P MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 215 **Prep Batch: 214**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C6-C10	<50.0	U	995	1068		mg/Kg		107	70 - 135	5	35
Total TPH	<50.0	U	1990	2118		mg/Kg		0		NC	
>C10-C28	<50.0	U	995	1050		mg/Kg		102	70 - 135	4	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	114		70 - 135
o-Terphenyl	102		70 - 135

QC Sample Results

Client: WSP USA Inc.
Project/Site: Goldenchild SWD Spill Date (12-22-20)

Job ID: 890-159-1
SDG: TE012921017

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 890-197/1-A
Matrix: Solid
Analysis Batch: 218

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.0	U	10.0		mg/Kg			02/09/21 10:23	1

Lab Sample ID: LCS 890-197/2-A
Matrix: Solid
Analysis Batch: 218

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			500	525.6		mg/Kg		105	90 - 110		

Lab Sample ID: LCSD 890-197/3-A
Matrix: Solid
Analysis Batch: 218

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			500	523.6		mg/Kg		105	90 - 110	0	20

Lab Sample ID: 890-158-A-1-E MS
Matrix: Solid
Analysis Batch: 218

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	<10.0	U	500	528.4		mg/Kg		104	90 - 110		

Lab Sample ID: 890-158-A-1-F MSD
Matrix: Solid
Analysis Batch: 218

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	<10.0	U	497	527.1		mg/Kg		104	90 - 110	0	20

QC Association Summary

Client: WSP USA Inc. Job ID: 890-159-1
Project/Site: Goldenchild SWD Spill Date (12-22-20) SDG: TE012921017

GC VOA

Prep Batch: 194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-159-1	BH01	Total/NA	Solid	5030C	
890-159-2	BH01 A	Total/NA	Solid	5030C	
MB 890-194/1-B	Method Blank	Total/NA	Solid	5030C	
LCS 890-194/2-B	Lab Control Sample	Total/NA	Solid	5030C	
LCSD 890-194/3-B	Lab Control Sample Dup	Total/NA	Solid	5030C	
890-158-A-1-L MS	Matrix Spike	Total/NA	Solid	5030C	
890-158-A-1-M MSD	Matrix Spike Duplicate	Total/NA	Solid	5030C	

Analysis Batch: 210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-159-1	BH01	Total/NA	Solid	8021B	194
890-159-2	BH01 A	Total/NA	Solid	8021B	194
MB 890-194/1-B	Method Blank	Total/NA	Solid	8021B	194
LCS 890-194/2-B	Lab Control Sample	Total/NA	Solid	8021B	194
LCSD 890-194/3-B	Lab Control Sample Dup	Total/NA	Solid	8021B	194
890-158-A-1-L MS	Matrix Spike	Total/NA	Solid	8021B	194
890-158-A-1-M MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	194

GC Semi VOA

Prep Batch: 214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-159-1	BH01	Total/NA	Solid	8015NM Prep	
890-159-2	BH01 A	Total/NA	Solid	8015NM Prep	
MB 890-214/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 890-214/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 890-214/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-158-A-1-O MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-158-A-1-P MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-159-1	BH01	Total/NA	Solid	8015B NM	214
890-159-2	BH01 A	Total/NA	Solid	8015B NM	214
MB 890-214/1-A	Method Blank	Total/NA	Solid	8015B NM	214
LCS 890-214/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	214
LCSD 890-214/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	214
890-158-A-1-O MS	Matrix Spike	Total/NA	Solid	8015B NM	214
890-158-A-1-P MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	214

HPLC/IC

Leach Batch: 197

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-159-1	BH01	Soluble	Solid	DI Leach	
890-159-2	BH01 A	Soluble	Solid	DI Leach	
MB 890-197/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 890-197/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 890-197/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-158-A-1-E MS	Matrix Spike	Soluble	Solid	DI Leach	
890-158-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

QC Association Summary

Client: WSP USA Inc.
Project/Site: Goldenchild SWD Spill Date (12-22-20)

Job ID: 890-159-1
SDG: TE012921017

HPLC/IC

Analysis Batch: 218

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-159-1	BH01	Soluble	Solid	300.0	197
890-159-2	BH01 A	Soluble	Solid	300.0	197
MB 890-197/1-A	Method Blank	Soluble	Solid	300.0	197
LCS 890-197/2-A	Lab Control Sample	Soluble	Solid	300.0	197
LCSD 890-197/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	197
890-158-A-1-E MS	Matrix Spike	Soluble	Solid	300.0	197
890-158-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	197

Lab Chronicle

Client: WSP USA Inc. Job ID: 890-159-1
Project/Site: Goldenchild SWD Spill Date (12-22-20) SDG: TE012921017

Client Sample ID: BH01 Lab Sample ID: 890-159-1

Date Collected: 02/08/21 10:20 **Matrix: Solid**
Date Received: 02/08/21 15:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			194	02/08/21 16:22	MC	XC
Total/NA	Analysis	8021B		1	210	02/08/21 22:20	PXS	XC
Total/NA	Prep	8015NM Prep			214	02/09/21 08:19		XC
Total/NA	Analysis	8015B NM		1	215	02/09/21 11:32	BJH	XC
Soluble	Leach	DI Leach			197	02/08/21 17:20	MC	XC
Soluble	Analysis	300.0		1	218	02/09/21 10:57	JM	XC

Client Sample ID: BH01 A Lab Sample ID: 890-159-2

Date Collected: 02/08/21 10:31 **Matrix: Solid**
Date Received: 02/08/21 15:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			194	02/08/21 16:22	MC	XC
Total/NA	Analysis	8021B		1	210	02/08/21 22:43	PXS	XC
Total/NA	Prep	8015NM Prep			214	02/09/21 08:19		XC
Total/NA	Analysis	8015B NM		1	215	02/09/21 11:52	BJH	XC
Soluble	Leach	DI Leach			197	02/08/21 17:20	MC	XC
Soluble	Analysis	300.0		1	218	02/09/21 11:03	JM	XC

Laboratory References:

XC = Eurofins Xenco, Carlsbad, 1089 N Canal St., Carlsbad, NM 88220, TEL (575)988-3199

Accreditation/Certification Summary

Client: WSP USA Inc.
Job ID: 890-159-1
Project/Site: Goldenchild SWD Spill Date (12-22-20)
SDG: TE012921017

Laboratory: Eurofins Xenco, Carlsbad

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

Authority	Program	Identification Number	Expiration Date
Louisiana	NELAP	05092	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	>C10-C28
8015B NM	8015NM Prep	Solid	>C28-C35
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5030C	Solid	Total BTEX

Method Summary

Client: WSP USA Inc.
Project/Site: Goldenchild SWD Spill Date (12-22-20)

Job ID: 890-159-1
SDG: TE012921017

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XC
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XC
300.0	Anions, Ion Chromatography	MCAWW	XC
5030C	Purge and Trap	SW846	XC
8015NM Prep	Microextraction	SW846	XC
DI Leach	Deionized Water Leaching Procedure	ASTM	XC

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:

XC = Eurofins Xenco, Carlsbad, 1089 N Canal St., Carlsbad, NM 88220, TEL (575)988-3199

Sample Summary

Client: WSP USA Inc.
Project/Site: Goldenchild SWD Spill Date (12-22-20)

Job ID: 890-159-1
SDG: TE012921017

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
890-159-1	BH01	Solid	02/08/21 10:20	02/08/21 15:46	
890-159-2	BH01 A	Solid	02/08/21 10:31	02/08/21 15:46	

Chain of Custody

XENCO LABORATORIES

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

W

890-159 Chain of Custody

2/9/2021

Page ___ of ___

Project Manager:	Kalei Jennings	Bill to: (if different)	Kyle Littrell
Company Name:	WSP USA Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A St. Bldg 1, Unit 222	Address:	3104 E Greene St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:	(432) 704-5178 Email:		travis.casey@wsp.com, kalei.jennings@wsp.com, dan.moir@w

Work Order Comments

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

Project Name:	Goldenchild SWD Spill Date(12-22-20)	Turn Around	
Project Number:	TE012921017	Routine	X
P.O. Number:		Rush:	
Sampler's Name:	Travis Casey	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Temperature (°C):	3.0/2.8	Thermometer ID		
Received Intact:	(Yes) No	IR-NM-007		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes (No) N/A	Total Containers:	2	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
BH01	s	2/8/2021	10:20	0.5'	1	x	x	x
BH01A	s	2/8/2021	10:31	1'	1	x	x	x

Work Order Notes

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

Sample Comments

BH01: Discrete
BH01A: 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	Cloe Cuffo	2.8.21 1546	2		
3			4		
5			6		

Revised Date 051418 Rev 2018.1

Login Sam

Client: WSP USA Inc.

Login Number: 159
List Number: 1
Creator: Clifton, Cloe

Question

The cooler's custody seal, if present, is intact.

Sample custody seals, if present, are intact.

The cooler or samples do not appear to have been compromise tampered with.

Samples were received on ice.

Cooler Temperature is acceptable.

Eurofins Carlsbad

Login Sam

Client: WSP USA Inc.

Login Number: 159
List Number: 1
Creator: Clifton, Cloe

Question

Cooler Temperature is recorded.

COC is present.

COC is filled out in ink and legible.

COC is filled out with all pertinent information.

Is the Field Sampler's name present on COC?

There are no discrepancies between the containers received an

Eurofins Carlsbad

Login Sam

Client: WSP USA Inc.

Login Number: 159
List Number: 1
Creator: Clifton, Cloe

Question

Samples are received within Holding Time (excluding tests with HTs)

Sample containers have legible labels.

Containers are not broken or leaking.

Sample collection date/times are provided.

Appropriate sample containers are used.

Eurofins Carlsbad

Login Sam

Client: WSP USA Inc.

Login Number: 159
List Number: 1
Creator: Clifton, Cloe

Question

Sample bottles are completely filled.

Sample Preservation Verified.

There is sufficient vol. for all requested analyses, incl. any reque
MS/MSDs

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

Eurofins Carlsbad

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 21392

CONDITIONS OF APPROVAL

Operator:	OGRID:	Action Number:	Action Type:
XTO ENERGY, INC 6401 Holiday Hill Road Building #5 Midland, TX79707	5380	21392	C-141

OCD Reviewer	Condition
chensley	None