

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	
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 32.15437 Longitude -104.01635
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Goldenchild	Site Type	Battery
Date Release Discovered	12/4/2020	API#	(if applicable)

Unit Letter	Section	Township	Range	County
P	6	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)	.04	Volume Recovered (bbls)	0
☐ Produced Water	Volume Released (bbls)		Volume Recovered (bbls)	
	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 arrived to find fluid burping out of low pressure flare. Fluid ignited and hit the ground but extinguished itself within seconds. A third-party contractor has been retained for remediation activities.

Page 2

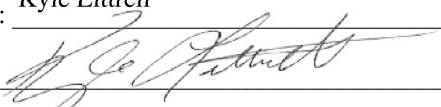
State of New Mexico
Oil Conservation Division

Incident ID	
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? A fire occurred at facility.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, by Amy Ruth to Mike Bratcher; Rob Hamlet; Victoria Venegas; 'Griswold, Jim, EMNRD'; 'rmann@slo.state.nm.us' on Friday, December 4, 2020 1:46 PM via email.	

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 <u>not</u> 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: 12-17-20
email: Kyle_Littrell@xtoenergy.com	Telephone: 432-221-7331
<u>OCD Only</u>	
Received by: _____	Date: _____



WSP USA

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

May 28, 2021

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

**RE: Deferral Request
 Goldenchild CTB
 Incident Numbers nAPP2035256230, nAPP2101331137, nAPP2101335437,
 nAPP2102237559
 Eddy County, New Mexico**

To Whom It May Concern:

WSP USA Inc. (WSP), on behalf of XTO Energy, Inc. (XTO), presents the following Deferral Request detailing site assessment, excavation, and soil sampling activities at the Goldenchild Central Tank Battery (CTB) (Site) in Unit P, Section 6, Township 25 South, Range 29 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment, excavation, and soil sampling activities was to address impacts to soil following four flare fire release events at the Site. Based on the excavation activities and soil sample laboratory analytical results, XTO is submitting this Deferral Request, describing remediation that has occurred and requesting deferral of final remediation for Incident Numbers nAPP2035256230, nAPP2101331137, nAPP2101335437, and nAPP2102237559 until the Site is reconstructed, and/or the well pad is abandoned.

RELEASE BACKGROUND

On December 4, 2020, the low-pressure flare malfunctioned, resulting in the release of approximately 0.04 barrels (bbls) of crude oil through the flare stack which resulted in a small fire. The fire extinguished itself and there were no standing fluids to recover. XTO immediately reported the release to the New Mexico Oil Conservation Division (NMOCD) via email on December 4, 2020. A Release Notification and Corrective Action Form C-141 (Form C-141) was submitted on December 17, 2020 and the release was assigned Incident Number nAPP2035256230.

On January 7, 2021, the low-pressure flare malfunctioned due to the jatco pot, resulting in the release of approximately 0.03 bbls of condensate through the flare stack which resulted in a small fire. The fire extinguished itself and there were no standing fluids to recover. XTO reported the release to the NMOCD via email on January 7, 2021. A Form C-141 was submitted on January 13, 2021 and the release was assigned Incident Number nAPP2101331137.



On January 8, 2021, a flare stack malfunctioned, resulting in the release of approximately 0.12 bbls of condensate onto the surface of the well pad. The fire extinguished itself and there were no standing fluids to recover. XTO reported the release to the NMOCD via email on January 8, 2021. A Form C-141 was submitted on January 13, 2021 and the release was assigned Incident Number nAPP2101335437.

On January 15, 2021, the low-pressure flare malfunctioned, resulting in the release of approximately 0.11 bbls of condensate through the flare stack which resulted in a small fire. The fire extinguished itself and there were no standing fluids to recover. XTO reported the release to the NMOCD via email on January 15, 2021. A Form C-141 was submitted on January 22, 2021 and the release was assigned Incident Number nAPP2102237559.

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 a recent soil boring drilled for determination of regional groundwater depth. During November 2020, WSP installed a soil boring (C-4493) within 0.5 miles of the Site utilizing a truck-mounted hollow-stem auger rig. Soil boring C-4493 was drilled to a depth of 57 feet bgs. A WSP geologist logged and described soils continuously. The well record and log are included in Attachment 1. The location of the borehole is approximately 0.16 miles south of the Site and is depicted on Figure 1. The borehole was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period, it was confirmed that groundwater beneath the Site is 39 feet bgs. The borehole was properly abandoned with drill cuttings and hydrated bentonite chips.

The closest continuously flowing or significant watercourse to the Site is the Pecos River, located approximately 1,895 feet 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



- Total Petroleum Hydrocarbons (TPH): 100 mg/kg
- Chloride: 600 mg/kg

SITE ASSESSMENT ACTIVITIES AND ANALYTICAL RESULTS

On February 1, 2021, WSP personnel visited the Site to evaluate the release extents based on information provided on the Form C-141s and visual observations. The release extents from the four flare fires overlapped and were evaluated simultaneously. WSP personnel collected three preliminary assessment soil samples (SS01 through SS03) within the release extents from a depth of approximately 0.5 feet bgs to assess the lateral extent of the releases. Soil was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. The combined release extents and preliminary soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2.

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

Laboratory analytical results for preliminary soil sample SS01 indicated TPH and chloride concentrations exceeded the Closure Criteria. Laboratory analytical results for preliminary soil samples SS02 and SS03 indicated chloride concentrations exceeded the Closure Criteria. Based on visible staining in the release area, field screening activities, and laboratory analytical results for the preliminary soil samples, delineation and excavation activities were warranted.

EXCAVATION AND DELINEATION ACTIVITIES AND ANALYTICAL RESULTS

Between March 12, 2021 and April 22, 2021, WSP personnel returned to the Site to oversee excavation and delineation activities as indicated by visible staining in the release area, field screening activities, and laboratory analytical results for the preliminary soil samples.

Initial Excavation Activities

Excavation activities were performed to remove the surficial staining in the release footprint and excavate the impacted soil in the areas surrounding preliminary soil samples SS01 through SS02. Excavation activities were performed using track-mounted backhoe and transport vehicle. To direct excavation activities, WSP screened soil for volatile aromatic hydrocarbons and chloride



utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Photographic documentation is included in Attachment 3.

Following removal of impacted soil to the extent possible, WSP collected 5-point composite soil samples every 200 square feet from the sidewalls and floors of the excavations. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples SW01 through SW03 were collected from the sidewalls of the excavations from depths ranging from the ground surface to 3 feet bgs. Composite soil samples FS01 through FS05 were collected from the floor of the excavations from depths ranging from 2 feet to 3 feet bgs. The excavation soil samples were collected, handled, and analyzed following the same procedures as described above. The excavation extents and excavation soil sample locations are presented on Figure 3.

Laboratory analytical results for excavation samples SW01, SW02, and FS01 through FS05, collected from the final excavation extents, indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results for sidewall sample SW03 indicated that chloride concentrations exceeded the Closure Criteria. Sidewall sample SW03 was collected adjacent to an anchor point that supports the flare stack. Further excavation of impacted soil beyond the excavation sidewall sample SW03 was limited by the anchor point. XTO safety policy restricts soil disturbing activities to a 2-foot radius of any on-site production equipment, pipelines, or flare anchors and a 10-foot radius of active flare stacks. This XTO safety policy is established to protect workers and reduce the likelihood of compromising the foundation of the production equipment, pipelines, or flare stacks. This policy was enforced where impacted soil was identified within 2 feet of the flare anchor point and 10 feet of the active flare stack.

The combined excavation extents measured approximately 1,115 square feet. A total of approximately 110 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Facility in Hobbs, New Mexico.

Delineation and Final Excavation Activities

Between March 12, 2021 and April 22, 2021, WSP personnel were at the Site to oversee delineation activities. The delineation activities were completed in coordination with excavation activities to define the lateral and vertical extent of impacted soil left in-place within 2 feet of the flare anchor point and 10 feet of the active flare stack.

Four potholes (PH01 through PH04) were advanced via backhoe within and around the release extent to assess the lateral and vertical extent of impacted soil. Potholes PH01 through PH04 were advanced to a depth of 3 feet bgs. Delineation soil samples were collected from each



pothole from depths of 1 foot and 3 feet bgs. A concrete barrier was located north of the flare stacks, which prevented off pad impacts from the fires and provided additional delineation to the north (reference photos 4 and 6 in Attachment 3).

Soil from the potholes was field screened for volatile aromatic hydrocarbons and chloride utilizing PID and Hach® chloride QuanTab® test strips, respectively. The delineation soil samples were collected, handled, and analyzed as described above. Field screening results and observations for the potholes were logged on lithologic/soil sampling logs, which are included in Attachment 2. The delineation pothole soil sample locations are depicted on Figure 4.

Laboratory analytical results for delineation soil samples PH02/PH02A, PH03/PH03A, and PH04/PH04A, collected from depths ranging from 1-foot to 3 feet bgs, indicated benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria and defined the lateral and vertical extent of the impacted soil left in-place.

Laboratory analytical results for delineation soil sample PH01A, collected from pothole PH01 at 3 feet bgs, indicated that chloride concentrations exceeded the Closure Criteria. Based on the elevated chloride result in pothole PH01, the excavation was extended. Additional soil was removed from the area around pothole PH01 and subsequent excavation sidewall sample SW04 and floor sample FS06 were collected from the final excavation extent. Laboratory analytical results for excavation samples SW04 and FS06 were compliant with the Closure Criteria. The final excavation extents and excavation soil sample locations are presented on Figure 3. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included as Attachment 4. After completion of confirmation sampling, the excavation areas were backfilled.

DEFERRAL REQUEST

Approximately 110 cubic yards of impacted soil were excavated from the Site; however, residual impacted soil was left in place immediately surrounding an active flare stack and flare anchors for compliance with XTO safety policy. Laboratory analytical results for excavation sidewall sample SW03 indicated that soil with chloride concentrations exceeding the Closure Criteria was left in place. Additional excavation was limited by active flares stacks, flare anchors, and overhead anchor lines (reference photos 3 through 6 in Attachment 3).

The impacted soil remaining in place is delineated vertically and laterally by excavation soil samples SW01, SW02, and FS01 through FS06, collected from the sidewalls and floor of the final excavation extents, delineation soil samples PH02/PH02A through PH04/PH04A, and the concrete barrier north of the flare stack. An estimated 67 cubic yards of impacted soil remains in place, assuming a maximum 3-foot depth based on the excavation and delineation soil samples listed above, that were compliant with the Closure Criteria. The deferral area and associated delineation samples are identified on Figure 5.

District II
Page 6

XTO requests to complete final remediation during any future major construction/alteration or final plugging and abandonment, whichever occurs first. WSP and XTO do not believe deferment will result in imminent risk to human health, the environment, or groundwater. The majority of the released fluids from the four release events were consumed by fire or removed during excavation activities. The impacted soil remaining in place is limited to the area immediately adjacent to the active flare stack and anchor points and no saturated soil remains in-place. XTO requests deferral of final remediation for Incident Numbers nAPP2035256230, nAPP2101331137, nAPP2101335437, and nAPP2102237559.

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

Sincerely,

WSP USA Inc.

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

Kalei Jennings
Associate Consultant

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

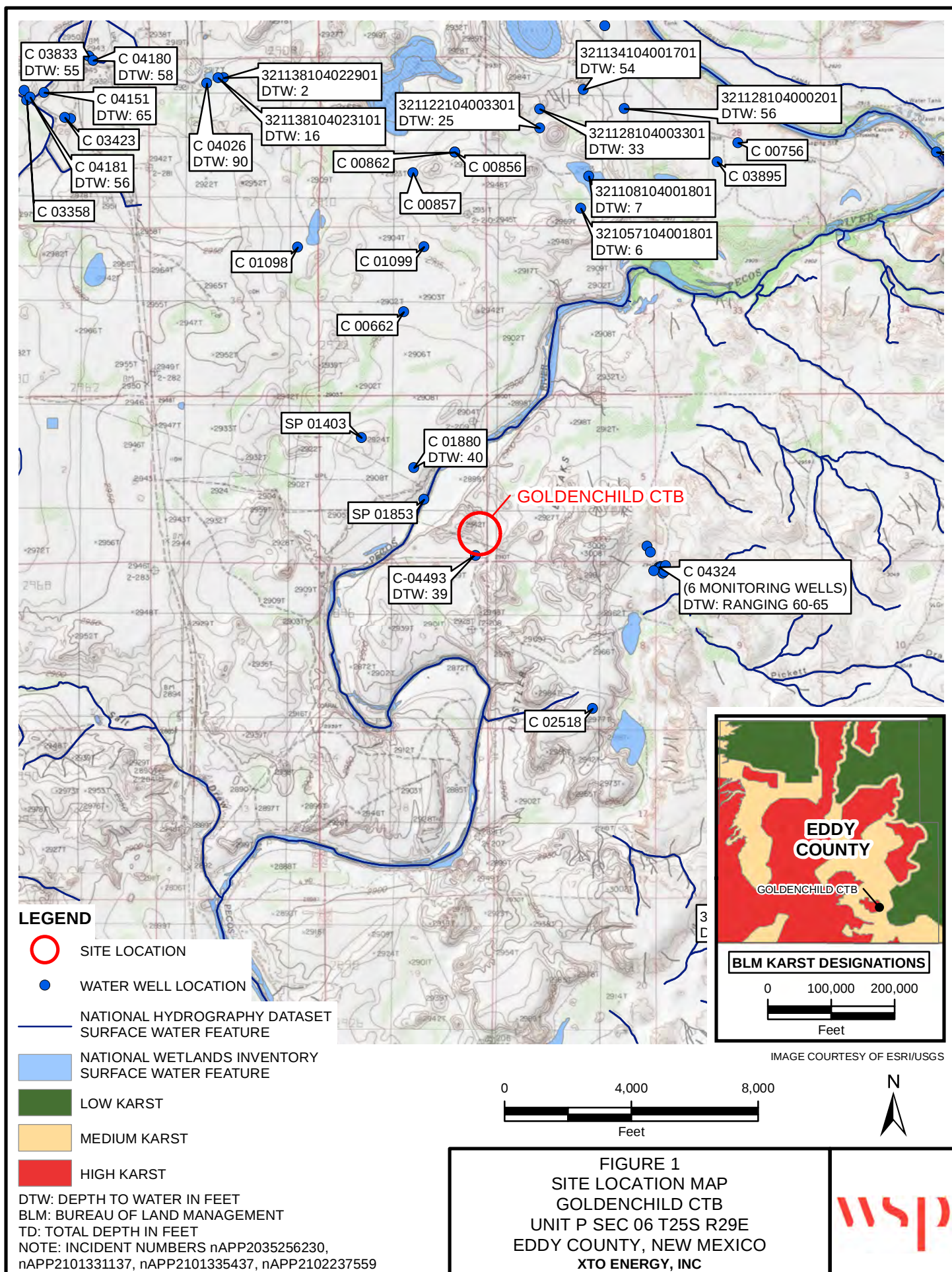
Ashley L. Ager, P.G.
Managing Director, Geologist

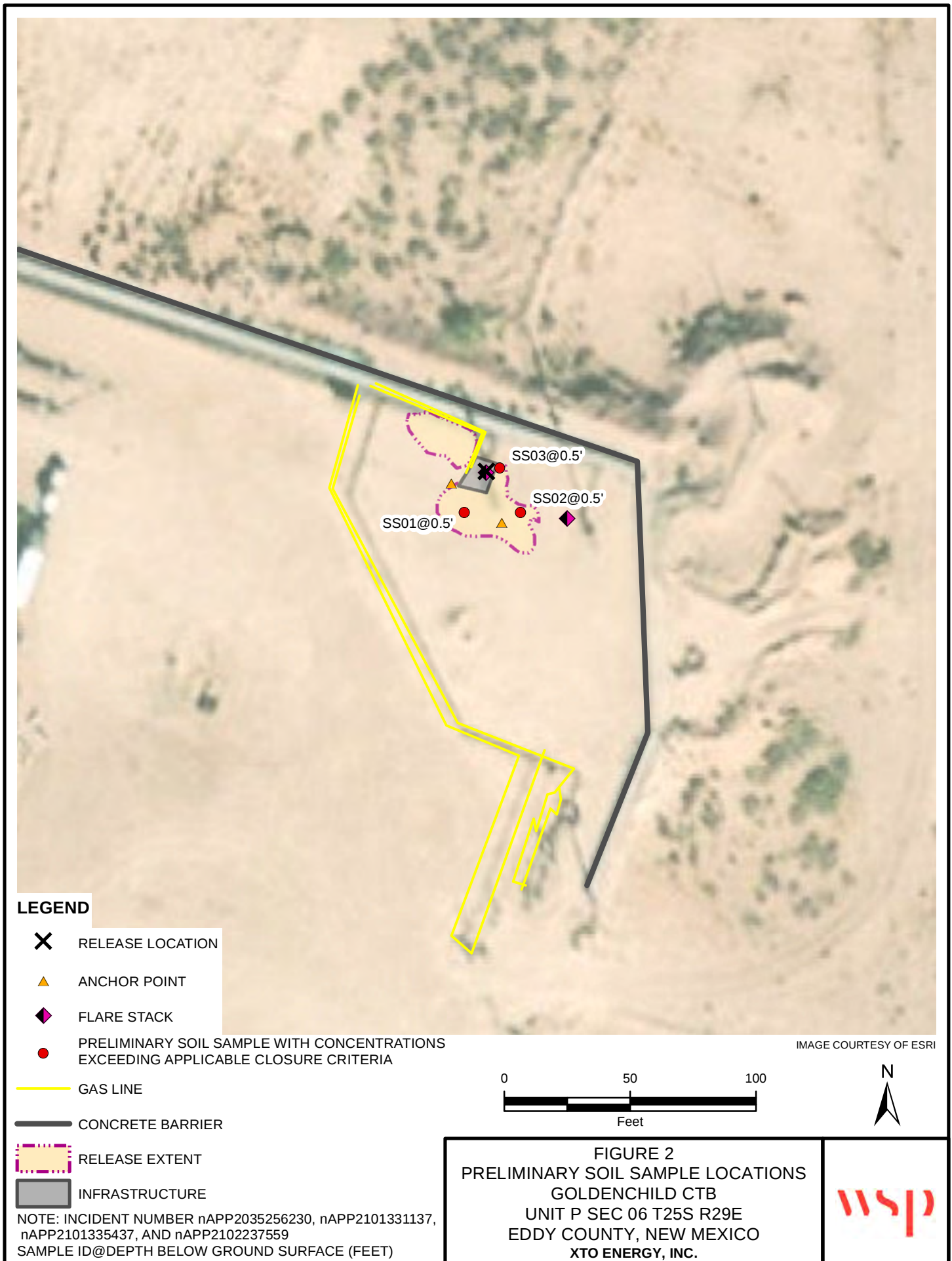
cc: Kyle Littrell, XTO
Ryan Mann, New Mexico State Land Office

Attachments:

Figure 1 Site Location Map
Figure 2 Preliminary Soil Sample Locations
Figure 3 Excavation Soil Sample Locations
Figure 4 Delineation Soil Sample Locations
Figure 5 Deferral Area
Table 1 Soil Analytical Results
Attachment 1 Referenced Well Records
Attachment 2 Lithologic/Sampling Log
Attachment 3 Photographic Log
Attachment 4 Laboratory Analytical Reports

FIGURES





P:\XTO Energy\GIS\MXD\012921018_GOLDENCHILD CTB\012921018_FIG02_PRELIMINARY_2021.mxd

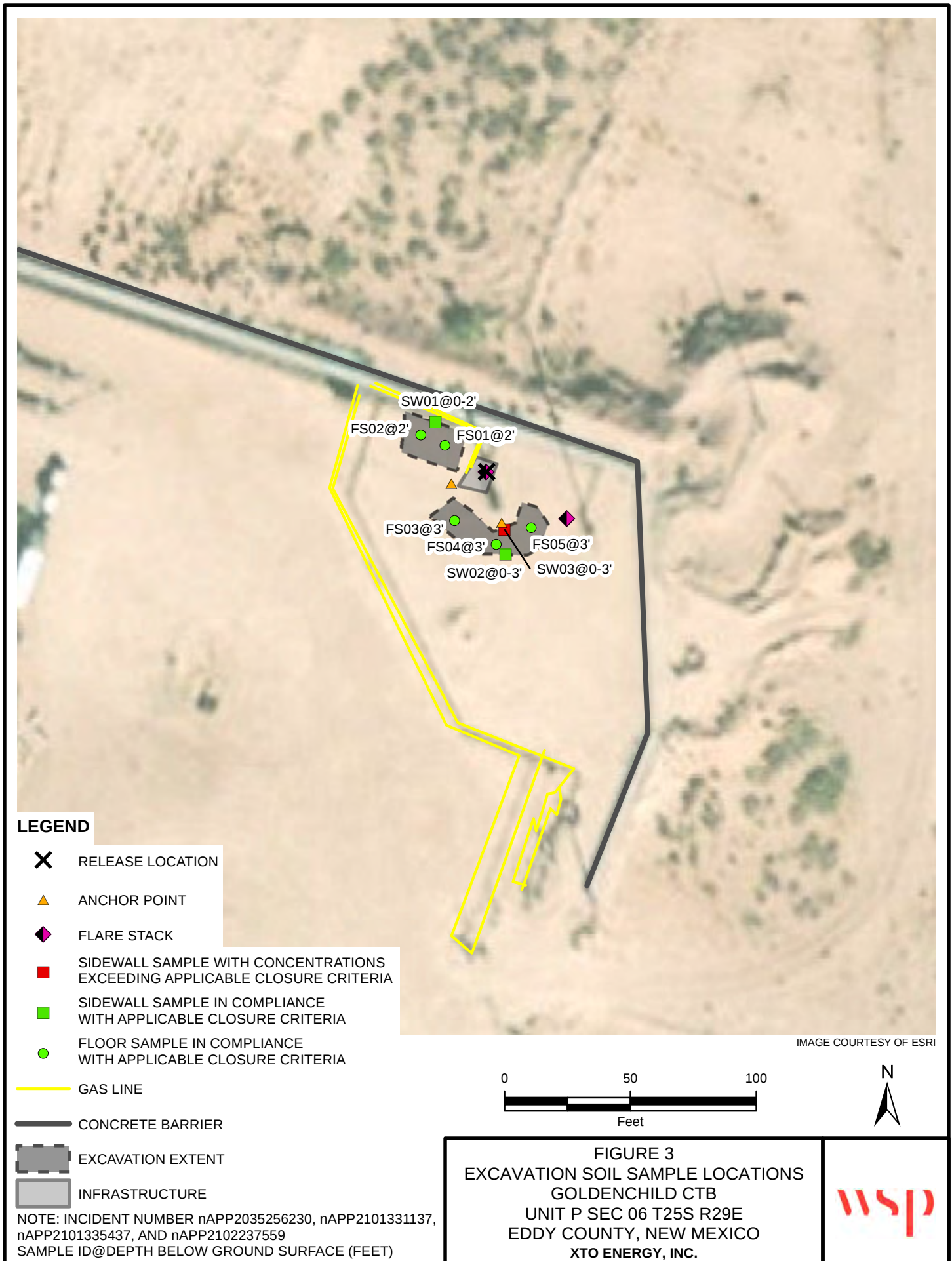




IMAGE COURTESY OF ESRI

LEGEND

RELEASE LOCATION



ANCHOR POINT



FLARE STACK



DELINEATION SOIL SAMPLE WITH CONCENTRATIONS PREVIOUSLY EXCEEDING APPLICABLE CLOSURE CRITERIA AND HAS BEEN EXCAVATED



DELINEATION SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA

GAS LINE

CONCRETE BARRIER



EXCAVATION EXTENT



INFRASTRUCTURE

NOTE: INCIDENT NUMBER nAPP2035256230, nAPP2101331137, nAPP2101335437, AND nAPP2102237559
 SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
 TEXT: INDICATES SOIL REPRESENTED BY SAMPLE THAT WAS REMOVED

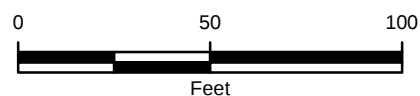
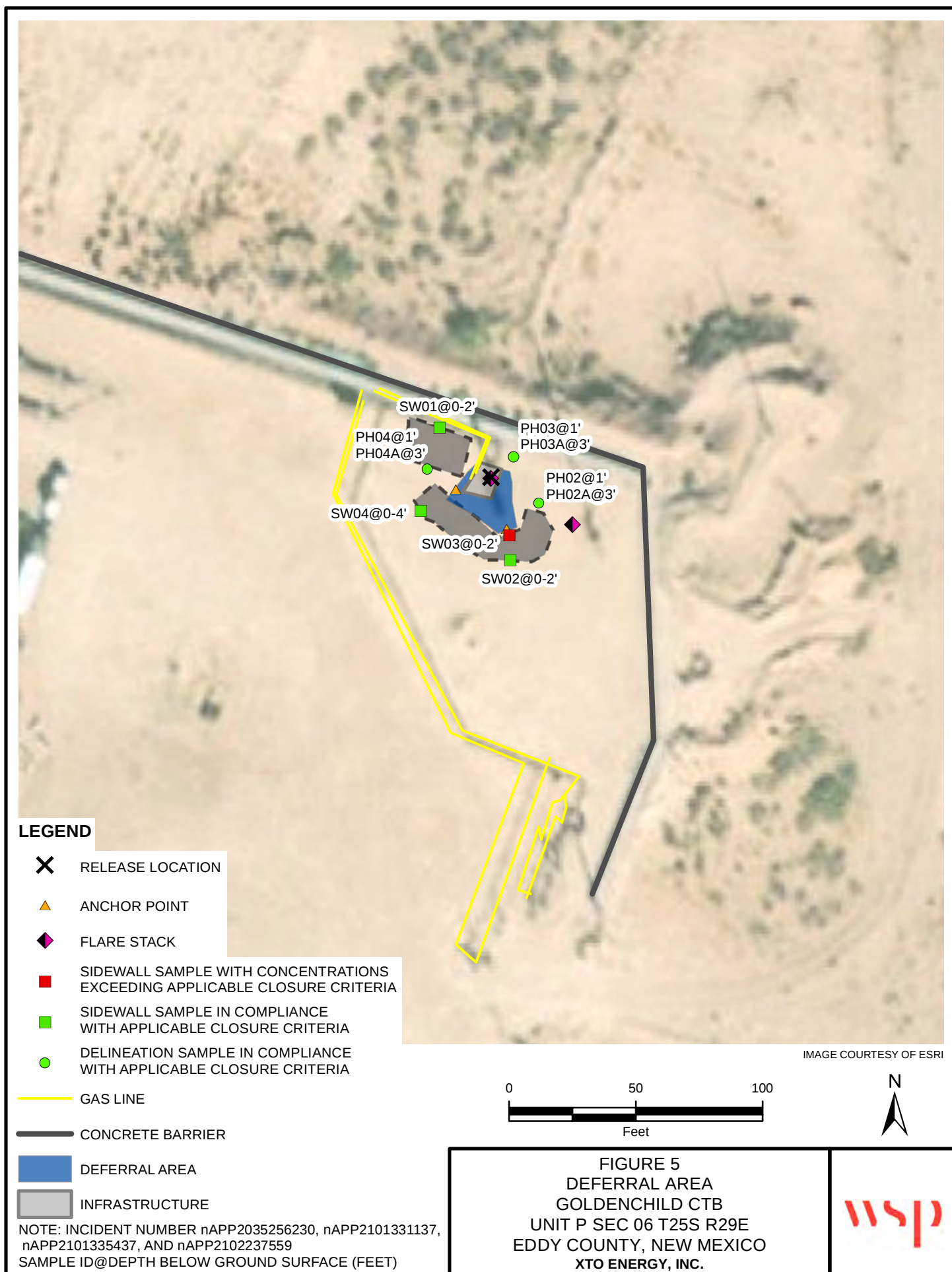


FIGURE 4
DELINEATION SOIL SAMPLE LOCATIONS
GOLDENCHILD CTB
UNIT P SEC 06 T25S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.





TABLES

Table 1

Soil Analytical Results
Goldenchild CTB
Incident Numbers nAPP2035256230, nAPP2101331137, nAPP2101335437, and nAPP2102237559
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
Surface Samples										
SS01	02/01/2021	0.5	<0.00202	0.0139	<50.0	336	105	441	441	3,830
SS02	02/01/2021	0.5	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	2,010
SS03	02/01/2021	0.5	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	2,580
Delineation Samples										
PH01	03/30/2021	1	<0.00202	<0.00202	67.8	<50.0	<50.0	67.8	67.8	595
PH01A	03/30/2021	3	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	685
PH02	03/30/2021	1	<0.00202	<0.00202	<49.8	<49.8	<49.8	<49.8	<49.8	554
PH02A	03/30/2021	3	<0.00200	<0.00200	<49.7	<49.7	<49.7	<49.7	<49.7	600
PH03	03/30/2021	1	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	485
PH03A	03/30/2021	3	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	234
PH04	04/22/2021	1	<0.00198	<0.00397	<50.0	<50.0	<50.0	<50.0	<50.0	16.7
PH04A	04/22/2021	3	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	14.2
Excavation Floor Samples										
FS01	03/12/2021	2	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	202
FS02	03/12/2021	2	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	432
FS03	03/12/2021	3	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	45.2
FS04	03/12/2021	3	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	45.1
FS05	03/12/2021	3	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	31.9
FS06	04/22/2021	4	<0.00199	0.0221	<50.0	<50.0	<50.0	<50.0	<50.0	21.5

Table 1

Soil Analytical Results
 Goldenchild CTB
 Incident Numbers nAPP2035256230, nAPP2101331137, nAPP2101335437, and nAPP2102237559
 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
Excavation Sidewall Samples										
SW01	03/12/2021	0 - 2	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	390
SW02	03/12/2021	0 - 3	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	236
SW03	03/12/2021	0 - 3	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	1,430
SW04	04/22/2021	0 - 4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	21.0

ft - feet/foot

mg/kg - milligrams per kilograms

BTEX - benzene, toluene, ethylbenzene, and total xylenes

TPH - total petroleum hydrocarbons

DRO - diesel range organics

GRO - gasoline range organics

ORO - motor oil range organics

NMOCD - New Mexico Oil Conservation Division

NMAC - New Mexico Administrative Code

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

NE - Not Established

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

Text

impacted soil was excavated

ATTACHMENT 1: REFERENCED WELL RECORD



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

12/16/2020

DII-NMOSE
1900 W 2nd Street
Roswell, NM 88201

Hand Delivered to the DII Office of the State Engineer

Re: Well Record C-4493 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-4493 Pod1.

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

Sincerely,

A handwritten signature in black ink that reads "Lucas Middleton". The signature is written in a cursive, flowing style.

Lucas Middleton

Enclosures: as noted above



OSE DII DEC 17 2020 PM1:54

DSE DIT DEC 17 2020 PM 1:54



PLUGGING RECORD



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

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: C-4493-POD1

Well owner: XTO ENERGY (Kyle Littrell)

Phone No.: 432.682.8873

Mailing address: 6401 Holiday Hill Dr.

City: Midland State: Texas Zip code: 79707

II. WELL PLUGGING INFORMATION:

- 1) Name of well drilling company that plugged well: Jackie D. Atkins (Atkins Engineering Associates Inc.)
- 2) New Mexico Well Driller License No.: 1249 Expiration Date: 04/30/21
- 3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Shane Eldridge
- 4) Date well plugging began: 11/23/2020 Date well plugging concluded: 11/23/2020
- 5) GPS Well Location: Latitude: 32 deg, 9 min, 9.09 sec
Longitude: -104 deg, 0 min, 58.81 sec, WGS 84
- 6) Depth of well confirmed at initiation of plugging as: 40 ft below ground level (bgl),
by the following manner: weighted tape
- 7) Static water level measured at initiation of plugging: 37.05 ft bgl
- 8) Date well plugging plan of operations was approved by the State Engineer: 11/12/2020
- 9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

Released to Imaging: 6/18/2021 4:06:28 PM

2020-12-15_C-4493_POD1_OSE_Well Record and Log_Cattle-forsign

Final Audit Report

2020-12-15

APPLICANT
COPY

Created:	2020-12-15
By:	Lucas Middleton (lucas@atkinseng.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAAnq4xUbZe1ADExmp8BGfUeuw8WVrl_oBj

OSE DIT DEC 17 2020 PM 1:54

"2020-12-15_C-4493_POD1_OSE_Well Record and Log_Cattle-forsign" History

-  Document created by Lucas Middleton (lucas@atkinseng.com)
2020-12-15 - 8:38:23 PM GMT- IP address: 69.21.248.123
-  Document emailed to Jack Atkins (jack@atkinseng.com) for signature
2020-12-15 - 8:39:02 PM GMT
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WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

OSE DTI DEC 17 2020 PM 1:54

APPROPRIATE
CANNOT

1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) POD1 (BH-01)		WELL TAG ID NO. n/a		OSE FILE NO(S). C-4493		
	WELL OWNER NAME(S) XTO Energy (Kyle Littrell)				PHONE (OPTIONAL)		
	WELL OWNER MAILING ADDRESS 6401 Holiday Hill Dr.				CITY Midland	STATE TX	ZIP 79707
	WELL LOCATION (FROM GPS)	LATITUDE	DEGREES 32°	MINUTES 9'	SECONDS 9.09"	N	
		LONGITUDE	-104°	0'	58.81"	W	
* ACCURACY REQUIRED: ONE TENTH OF A SECOND * DATUM REQUIRED: WGS 84							
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE SE NE SE Sec. 6 T25S R29E							
2. DRILLING & CASING INFORMATION	LICENSE NO. 1249		NAME OF LICENSED DRILLER Jackie D. Atkins			NAME OF WELL DRILLING COMPANY Atkins Engineering Associates, Inc.	
	DRILLING STARTED 11/18/2020		DRILLING ENDED 11/18/2020		DEPTH OF COMPLETED WELL (FT) temporary well material	BORE HOLE DEPTH (FT) 57	DEPTH WATER FIRST ENCOUNTERED (FT) ±39
	COMPLETED WELL IS: ☐ ARTESIAN ☐ DRY HOLE ☒ SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT) 37.05	
	DRILLING FLUID: ☒ AIR ☐ MUD ADDITIVES - SPECIFY:						
	DRILLING METHOD: ☐ ROTARY ☐ HAMMER ☐ CABLE TOOL ☒ OTHER - SPECIFY: Hollow Stem Auger						
	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)
	FROM	TO					
	0	57	±8.5	Boring- HSA	--	--	--
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT	
	FROM	TO					

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO.

POD NO.

TRN NO.

LOCATION

WELL TAG ID NO.

PAGE 1 OF 2

DSE DTI DEC 17 2020 PM1:54

[illegible]

FOR OSE INTERNAL USE		WR-20 WELL RECORD & LOG (Version 06/30/2017)	
FILE NO.	POD NO.	TRN NO.	
LOCATION	WELL TAG ID NO		PAGE 2 OF 2

ATTACHMENT 2: LITHOLOGIC/SAMPLING LOG

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220					BH or PH Name: PH01		Date: 3/30/2021	
					Site Name: Goldenchild			
					RP or Incident Number: nAPP2035256230, nAPP2101331137,			
					WSP Job Number: TE012921018			
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long:			Field Screening: Chloride, PID		Logged By WM		Method: Backhoe	
					Hole Diameter:		Total Depth: 3'	
Comments:								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
	442	0.3	N	PH01	1'	0		Caliche, no stain, no odor
						1		
						2		
	582	0.3	N	PH01A	3'	3		
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220					BH or PH Name:		Date:	
					PH02		3/30/2021	
					Site Name:		Goldenchild	
					RP or Incident Number: nAPP2035256230, nAPP2101331137,			
WSP Job Number: TE012921018					Logged By WM		Method: Backhoe	
LITHOLOGIC / SOIL SAMPLING LOG					Hole Diameter:		Total Depth:	
Lat/Long:			Field Screening:		Chloride, PID		3'	
Comments:								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
	442	0.7	N	PH02	1'	0		Caliche, no stain, no odor
	464	0.7	N	PH02A	3'	3		Caliche, no stain, no odor
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220					BH or PH Name:		Date:			
					PH03		3/30/2021			
					Site Name:		Goldenchild			
					RP or Incident Number: nAPP2035256230, nAPP2101331137,					
WSP Job Number: TE012921018										
LITHOLOGIC / SOIL SAMPLING LOG						Logged By WM		Method: Backhoe		
Lat/Long:				Field Screening:		Hole Diameter:		Total Depth:		
				Chloride, PID				3'		
Comments:										
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks		
	364	1.9	N	PH03	1'	0		Caliche, no stain, no odor		
						1				
						2				
	296	1.9	N	PH03A	3'	3				Caliche, no stain, no odor
						4				
						5				
						6				
						7				
						8				
						9				
						10				
						11				
						12				

 WSP USA 508 West Stevens Street Carlsbad, New Mexico 88220					BH or PH Name: PH04		Date: 4/22/2021		
					Site Name: Goldenchild				
					RP or Incident Number: nAPP2035256230, nAPP2101331137,				
					WSP Job Number: TE012921018				
LITHOLOGIC / SOIL SAMPLING LOG									
Lat/Long:			Field Screening: Chloride, PID			Logged By EN		Method: Backhoe	
						Hole Diameter:		Total Depth: 3'	
Comments:									
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks	
	296	0.0	N	PH04	1'	0		Caliche, no stain, no odor	
						1			
						2		Caliche, no stain, no odor	
						3			
	<180	0.0	N	PH04A	3'	3			
						4			
						5			
						6			
						7			
						8			
						9			
						10			
						11			
						12			

ATTACHMENT 3: PHOTOGRAPHIC LOG

**PHOTOGRAPHIC LOG****XTO Energy, Inc.****Goldenchild CTB****Eddy County, New Mexico**

nAPP2035256230, nAPP2101331137, nAPP2101335437, nAPP2102237559

Photo No.**Date**

1

February 2, 2021

View of staining on pad facing
northeast near low pressure flare**Photo No.****Date**

2

March 10, 2021

View of excavation activities at
FS01 and FS02 location.

**PHOTOGRAPHIC LOG****XTO Energy, Inc.****Goldenchild CTB****Eddy County, New Mexico**

nAPP2035256230, nAPP2101331137, nAPP2101335437, nAPP2102237559

Photo No.	Date	
3	March 12, 2021	
View of excavation facing east		 A photograph showing a large, deep excavation pit in a desert environment. The pit is filled with reddish-brown soil. In the background, a yellow excavator is visible, and a large black structure, possibly a flare stack, stands on the left. The sky is overcast.

Photo No.	Date	
4	March 30, 2021	
View of delineation pothole sample PH02 between flare stacks		 A photograph showing a close-up view of a delineation pothole sample PH02. The pothole is located between two large, dark, cylindrical flare stacks. The ground is sandy and uneven. In the background, a yellow excavator and a large black structure are visible under a clear blue sky.



PHOTOGRAPHIC LOG

XTO Energy, Inc.	Goldenchild CTB nAPP2035256230, nAPP2101331137, nAPP2101335437, nAPP2102237559	Eddy County, New Mexico
-------------------------	--	--------------------------------

Photo No.	Date	
5	March 30, 2021	
View of delineation pothole sample PH03		

Photo No.	Date	
6	March 30, 2021	
View of area near excavation floor samples FS01 and FS02		



PHOTOGRAPHIC LOG

XTO Energy, Inc.	Goldenchild CTB nAPP2035256230, nAPP2101331137, nAPP2101335437, nAPP2102237559	Eddy County, New Mexico
-------------------------	--	--------------------------------

Photo No.	Date	
7	March 30, 2021	
View of deferral area around the flare stack and adjacent to the anchor points.		

Photo No.	Date	
8	April 22, 2021	
Backfill activities completed at the Site		

ATTACHMENT 4: LABORATORY ANALYTICAL RESULTS



Environment Testing
America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-110-1
Client Project/Site: Goldenchlid CTB

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

Attn: Dan Moir

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

Authorized for release by:
2/8/2021 6:56:14 PM

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

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:

www.eurofinsus.com/Env

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

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

Client: WSP USA Inc.
Project/Site: Goldenchlid CTB

Laboratory Job ID: 890-110-1

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	6
Surrogate Summary	8
QC Sample Results	9
QC Association Summary	12
Lab Chronicle	14
Certification Summary	15
Method Summary	16
Sample Summary	17
Chain of Custody	18
Receipt Checklists	19

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

Definitions/Glossary

Client: WSP USA Inc.
Project/Site: Goldenchlid CTB

Job ID: 890-110-1

Qualifiers

GC VOA

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

HPLC/IC

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

Glossary

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

Eurofins Xenco, Carlsbad

Case Narrative

Client: WSP USA Inc.
Project/Site: Goldenchlid CTB

Job ID: 890-110-1

Job ID: 890-110-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-110-1

Receipt

The samples were received on 2/1/2021 12:11 PM; the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.8°C

GC VOA

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

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 890-99 and analytical batch 890-107 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

Detection Summary

Client: WSP USA Inc.
Project/Site: Goldenchlid CTB

Job ID: 890-110-1

Client Sample ID: SS01 @ 0.3'

Lab Sample ID: 890-110-1

Sample Analysis Not Complete.

Client Sample ID: SS02 @ 0.3'

Lab Sample ID: 890-110-2

Sample Analysis Not Complete.

Client Sample ID: SS03 @ 0.3'

Lab Sample ID: 890-110-3

Sample Analysis Not Complete.

This Detection Summary does not include radiochemical test results.

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Goldenchlid CTB

Job ID: 890-110-1

Client Sample ID: SS01 @ 0.3'

Lab Sample ID: 890-110-1

Date Collected: 02/01/21 00:00

Matrix: Solid

Date Received: 02/01/21 12:11

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		02/01/21 16:19	02/03/21 02:36	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		02/01/21 16:19	02/03/21 02:36	1
Toluene	0.00504		0.00202	mg/Kg		02/01/21 16:19	02/03/21 02:36	1
Total BTEX	0.0139		0.00202	mg/Kg		02/01/21 16:19	02/03/21 02:36	1
Xylenes, Total	0.00881		0.00202	mg/Kg		02/01/21 16:19	02/03/21 02:36	1
m,p-Xylenes	0.00616		0.00403	mg/Kg		02/01/21 16:19	02/03/21 02:36	1
o-Xylene	0.00265		0.00202	mg/Kg		02/01/21 16:19	02/03/21 02:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene	97		70 - 130	02/01/21 16:19	02/03/21 02:36	1
4-Bromofluorobenzene (Surr)	97		70 - 130	02/01/21 16:19	02/03/21 02:36	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3830		49.5	mg/Kg			02/02/21 12:10	5

Method: SW8015-MOD - SW846 8015B TPH ORO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	336		50.0		mg/kg		02/03/21 12:00	02/03/21 18:59	1
Gasoline Range Hydrocarbons (GRO)	<50.0		50.0		mg/kg		02/03/21 12:00	02/03/21 18:59	1
Motor Oil Range Hydrocarbons (MRO)	105		50.0		mg/kg		02/03/21 12:00	02/03/21 18:59	1
Total TPH	441		50.0		mg/kg		02/03/21 12:00	02/03/21 18:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 135	02/03/21 12:00	02/03/21 18:59	1
o-Terphenyl	111		70 - 135	02/03/21 12:00	02/03/21 18:59	1

Client Sample ID: SS02 @ 0.3'

Lab Sample ID: 890-110-2

Date Collected: 02/01/21 00:00

Matrix: Solid

Date Received: 02/01/21 12:11

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		02/01/21 16:19	02/03/21 02:59	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		02/01/21 16:19	02/03/21 02:59	1
Toluene	<0.00202	U	0.00202	mg/Kg		02/01/21 16:19	02/03/21 02:59	1
Total BTEX	<0.00202	U	0.00202	mg/Kg		02/01/21 16:19	02/03/21 02:59	1
Xylenes, Total	<0.00202	U	0.00202	mg/Kg		02/01/21 16:19	02/03/21 02:59	1
m,p-Xylenes	<0.00403	U	0.00403	mg/Kg		02/01/21 16:19	02/03/21 02:59	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		02/01/21 16:19	02/03/21 02:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene	99		70 - 130	02/01/21 16:19	02/03/21 02:59	1
4-Bromofluorobenzene (Surr)	100		70 - 130	02/01/21 16:19	02/03/21 02:59	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2010		49.5	mg/Kg			02/02/21 12:16	5

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Goldenchlid CTB

Job ID: 890-110-1

Client Sample ID: SS02 @ 0.3'

Lab Sample ID: 890-110-2

Date Collected: 02/01/21 00:00

Matrix: Solid

Date Received: 02/01/21 12:11

Method: SW8015-MOD - SW846 8015B TPH ORO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<50.0		50.0		mg/kg		02/03/21 12:00	02/03/21 19:20	1
Gasoline Range Hydrocarbons (GRO)	<50.0		50.0		mg/kg		02/03/21 12:00	02/03/21 19:20	1
Motor Oil Range Hydrocarbons (MRO)	<50.0		50.0		mg/kg		02/03/21 12:00	02/03/21 19:20	1
Total TPH	<50.0		50.0		mg/kg		02/03/21 12:00	02/03/21 19:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 135	02/03/21 12:00	02/03/21 19:20	1
o-Terphenyl	109		70 - 135	02/03/21 12:00	02/03/21 19:20	1

Client Sample ID: SS03 @ 0.3'

Lab Sample ID: 890-110-3

Date Collected: 02/01/21 00:00

Matrix: Solid

Date Received: 02/01/21 12:11

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		02/01/21 16:19	02/03/21 03:21	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		02/01/21 16:19	02/03/21 03:21	1
Toluene	<0.00202	U	0.00202	mg/Kg		02/01/21 16:19	02/03/21 03:21	1
Total BTEX	<0.00202	U	0.00202	mg/Kg		02/01/21 16:19	02/03/21 03:21	1
Xylenes, Total	<0.00202	U	0.00202	mg/Kg		02/01/21 16:19	02/03/21 03:21	1
m,p-Xylenes	<0.00404	U	0.00404	mg/Kg		02/01/21 16:19	02/03/21 03:21	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		02/01/21 16:19	02/03/21 03:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene	99		70 - 130	02/01/21 16:19	02/03/21 03:21	1
4-Bromofluorobenzene (Surr)	103		70 - 130	02/01/21 16:19	02/03/21 03:21	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2580		49.6	mg/Kg			02/02/21 12:21	5

Method: SW8015-MOD - SW846 8015B TPH ORO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<50.0		50.0		mg/kg		02/03/21 12:00	02/03/21 19:42	1
Gasoline Range Hydrocarbons (GRO)	<50.0		50.0		mg/kg		02/03/21 12:00	02/03/21 19:42	1
Motor Oil Range Hydrocarbons (MRO)	<50.0		50.0		mg/kg		02/03/21 12:00	02/03/21 19:42	1
Total TPH	<50.0		50.0		mg/kg		02/03/21 12:00	02/03/21 19:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	98		70 - 135	02/03/21 12:00	02/03/21 19:42	1
o-Terphenyl	108		70 - 135	02/03/21 12:00	02/03/21 19:42	1

Eurofins Xenco, Carlsbad

Surrogate Summary

Client: WSP USA Inc.
Project/Site: Goldenchlid CTB

Job ID: 890-110-1

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DFBZ1 (70-130)	BFB1 (70-130)
890-110-1	SS01 @ 0.3'	97	97
890-110-2	SS02 @ 0.3'	99	100
890-110-3	SS03 @ 0.3'	99	103
LCS 890-89/2-A	Lab Control Sample	93	98
LCSD 890-89/3-A	Lab Control Sample Dup	96	94
MB 890-89/1-A	Method Blank	99	99
Surrogate Legend			
DFBZ = 1,4-Difluorobenzene			
BFB = 4-Bromofluorobenzene (Surr)			

Method: SW8015-MOD - SW846 8015B TPH ORO

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO (70-135)	OTPH (70-135)
890-110-1	SS01 @ 0.3'	103	111
890-110-2	SS02 @ 0.3'	102	109
890-110-3	SS03 @ 0.3'	98	108
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Goldenchlid CTB

Job ID: 890-110-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 890-89/1-A

Matrix: Solid

Analysis Batch: 113

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 89

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/01/21 16:19	02/02/21 19:48	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/01/21 16:19	02/02/21 19:48	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/01/21 16:19	02/02/21 19:48	1
Total BTEX	<0.00200	U	0.00200	mg/Kg		02/01/21 16:19	02/02/21 19:48	1
Xylenes, Total	<0.00200	U	0.00200	mg/Kg		02/01/21 16:19	02/02/21 19:48	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		02/01/21 16:19	02/02/21 19:48	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/01/21 16:19	02/02/21 19:48	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene	99		70 - 130	02/01/21 16:19	02/02/21 19:48	1
4-Bromofluorobenzene (Surr)	99		70 - 130	02/01/21 16:19	02/02/21 19:48	1

Lab Sample ID: LCS 890-89/2-A

Matrix: Solid

Analysis Batch: 113

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 89

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.09618		mg/Kg		96	70 - 130
Ethylbenzene	0.100	0.09901		mg/Kg		99	71 - 129
Toluene	0.100	0.09831		mg/Kg		98	70 - 130
m,p-Xylenes	0.200	0.2015		mg/Kg		101	70 - 135
o-Xylene	0.100	0.1002		mg/Kg		100	71 - 133

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,4-Difluorobenzene	93		70 - 130
4-Bromofluorobenzene (Surr)	98		70 - 130

Lab Sample ID: LCSD 890-89/3-A

Matrix: Solid

Analysis Batch: 113

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 89

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.09257		mg/Kg		93	70 - 130	4	35
Ethylbenzene	0.100	0.09159		mg/Kg		92	71 - 129	8	35
Toluene	0.100	0.09376		mg/Kg		94	70 - 130	5	35
m,p-Xylenes	0.200	0.1857		mg/Kg		93	70 - 135	8	35
o-Xylene	0.100	0.09487		mg/Kg		95	71 - 133	5	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,4-Difluorobenzene	96		70 - 130
4-Bromofluorobenzene (Surr)	94		70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Goldenchlid CTB

Job ID: 890-110-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 890-99/11-A

Matrix: Solid

Analysis Batch: 107

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<9.96	U	9.96	mg/Kg			02/02/21 10:11	1

Lab Sample ID: LCS 890-99/12-A

Matrix: Solid

Analysis Batch: 107

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	202	202.4		mg/Kg		100	90 - 110

Lab Sample ID: LCSD 890-99/13-A

Matrix: Solid

Analysis Batch: 107

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	199	194.1		mg/Kg		98	90 - 110	4	20

Lab Sample ID: 890-110-3 MS

Matrix: Solid

Analysis Batch: 107

Client Sample ID: SS03 @ 0.3'

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2580		101	2811	4	mg/Kg		230	90 - 110

Lab Sample ID: 890-110-3 MSD

Matrix: Solid

Analysis Batch: 107

Client Sample ID: SS03 @ 0.3'

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	2580		101	2752	4	mg/Kg		171	90 - 110	2	20

Lab Sample ID: MB 890-138/1-A

Matrix: Solid

Analysis Batch: 130

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<9.96	U	9.96	mg/Kg			02/03/21 11:27	1

Lab Sample ID: LCS 890-138/2-A

Matrix: Solid

Analysis Batch: 130

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	505	494.6		mg/Kg		98	90 - 110

Lab Sample ID: LCSD 890-138/3-A

Matrix: Solid

Analysis Batch: 130

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	497	481.7		mg/Kg		97	90 - 110	3	20

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Goldenchlid CTB

Job ID: 890-110-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 890-110-3 MS

Matrix: Solid

Analysis Batch: 130

Client Sample ID: SS03 @ 0.3'

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2610		503	2979	4	mg/Kg		74	90 - 110

Lab Sample ID: 890-110-3 MSD

Matrix: Solid

Analysis Batch: 130

Client Sample ID: SS03 @ 0.3'

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	2610		504	2957	4	mg/Kg		69	90 - 110	1	20

Method: SW8015-MOD - SW846 8015B TPH ORO

Lab Sample ID: 7720753-1-BLK

Matrix: SOIL

Analysis Batch: 3149994

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 3149994_P

Analyte	BLANK Result	BLANK Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	U		50		mg/kg		02/03/21 12:00	02/03/21 11:40	1
Gasoline Range Hydrocarbons (GRO)	U		50		mg/kg		02/03/21 12:00	02/03/21 11:40	1
Motor Oil Range Hydrocarbons (MRO)	U		50		mg/kg		02/03/21 12:00	02/03/21 11:40	1

Lab Sample ID: 7720753-1-BKS

Matrix: SOIL

Analysis Batch: 3149994

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 3149994_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics (DRO)	1000	871		mg/kg		87	70 - 135
Gasoline Range Hydrocarbons (GRO)	1000	866		mg/kg		87	70 - 135

Lab Sample ID: 7720753-1-BSD

Matrix: SOIL

Analysis Batch: 3149994

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 3149994_P

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics (DRO)	1000	1070		mg/kg		107	70 - 135	21	20
Gasoline Range Hydrocarbons (GRO)	1000	1080		mg/kg		108	70 - 135	22	20

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: Goldenchlid CTB

Job ID: 890-110-1

GC VOA

Prep Batch: 89

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-110-1	SS01 @ 0.3'	Total/NA	Solid	5030C	
890-110-2	SS02 @ 0.3'	Total/NA	Solid	5030C	
890-110-3	SS03 @ 0.3'	Total/NA	Solid	5030C	
MB 890-89/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 890-89/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCSD 890-89/3-A	Lab Control Sample Dup	Total/NA	Solid	5030C	

Analysis Batch: 113

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-110-1	SS01 @ 0.3'	Total/NA	Solid	8021B	89
890-110-2	SS02 @ 0.3'	Total/NA	Solid	8021B	89
890-110-3	SS03 @ 0.3'	Total/NA	Solid	8021B	89
MB 890-89/1-A	Method Blank	Total/NA	Solid	8021B	89
LCS 890-89/2-A	Lab Control Sample	Total/NA	Solid	8021B	89
LCSD 890-89/3-A	Lab Control Sample Dup	Total/NA	Solid	8021B	89

HPLC/IC

Leach Batch: 99

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-110-1	SS01 @ 0.3'	Soluble	Solid	DI Leach	
890-110-2	SS02 @ 0.3'	Soluble	Solid	DI Leach	
890-110-3	SS03 @ 0.3'	Soluble	Solid	DI Leach	
MB 890-99/11-A	Method Blank	Soluble	Solid	DI Leach	
LCS 890-99/12-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 890-99/13-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-110-3 MS	SS03 @ 0.3'	Soluble	Solid	DI Leach	
890-110-3 MSD	SS03 @ 0.3'	Soluble	Solid	DI Leach	

Analysis Batch: 107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-110-1	SS01 @ 0.3'	Soluble	Solid	300.0	99
890-110-2	SS02 @ 0.3'	Soluble	Solid	300.0	99
890-110-3	SS03 @ 0.3'	Soluble	Solid	300.0	99
MB 890-99/11-A	Method Blank	Soluble	Solid	300.0	99
LCS 890-99/12-A	Lab Control Sample	Soluble	Solid	300.0	99
LCSD 890-99/13-A	Lab Control Sample Dup	Soluble	Solid	300.0	99
890-110-3 MS	SS03 @ 0.3'	Soluble	Solid	300.0	99
890-110-3 MSD	SS03 @ 0.3'	Soluble	Solid	300.0	99

Analysis Batch: 130

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 890-138/1-A	Method Blank	Soluble	Solid	300.0	138
LCS 890-138/2-A	Lab Control Sample	Soluble	Solid	300.0	138
LCSD 890-138/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	138
890-110-3 MS	SS03 @ 0.3'	Soluble	Solid	300.0	138
890-110-3 MSD	SS03 @ 0.3'	Soluble	Solid	300.0	138

Leach Batch: 138

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 890-138/1-A	Method Blank	Soluble	Solid	DI Leach	

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.
Project/Site: Goldenchlid CTB

Job ID: 890-110-1

HPLC/IC (Continued)

Leach Batch: 138 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 890-138/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 890-138/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-110-3 MS	SS03 @ 0.3'	Soluble	Solid	DI Leach	
890-110-3 MSD	SS03 @ 0.3'	Soluble	Solid	DI Leach	

Subcontract

Analysis Batch: 3149994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-110-1	SS01 @ 0.3'	Total/NA	Solid	SW8015-MOD	3149994_P
890-110-2	SS02 @ 0.3'	Total/NA	Solid	SW8015-MOD	3149994_P
890-110-3	SS03 @ 0.3'	Total/NA	Solid	SW8015-MOD	3149994_P
7720753-1-BLK	Method Blank	Total/NA	SOIL	SW8015-MOD	3149994_P
7720753-1-BKS	Lab Control Sample	Total/NA	SOIL	SW8015-MOD	3149994_P
7720753-1-BSD	Lab Control Sample Dup	Total/NA	SOIL	SW8015-MOD	3149994_P

Prep Batch: 3149994_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-110-1	SS01 @ 0.3'	Total/NA	Solid	SW8015P	
890-110-2	SS02 @ 0.3'	Total/NA	Solid	SW8015P	
890-110-3	SS03 @ 0.3'	Total/NA	Solid	SW8015P	
7720753-1-BLK	Method Blank	Total/NA	SOIL	***DEFAULT PREP***	
7720753-1-BKS	Lab Control Sample	Total/NA	SOIL	***DEFAULT PREP***	
7720753-1-BSD	Lab Control Sample Dup	Total/NA	SOIL	***DEFAULT PREP***	

Eurofins Xenco, Carlsbad

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Goldenchlid CTB

Job ID: 890-110-1

Client Sample ID: SS01 @ 0.3'

Lab Sample ID: 890-110-1

Date Collected: 02/01/21 00:00

Matrix: Solid

Date Received: 02/01/21 12:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			89	02/01/21 16:19	MC	XC
Total/NA	Analysis	8021B		1	113	02/03/21 02:36	MC	XC
Soluble	Leach	DI Leach			99	02/01/21 17:00	MC	XC
Soluble	Analysis	300.0		5	107	02/02/21 12:10	MC	XC
Total/NA	Prep	SW8015P		1	3149994_P	02/03/21 12:00		XM
Total/NA	Analysis	SW8015-MOD		1	3149994	02/03/21 18:59	ARM	XM

Client Sample ID: SS02 @ 0.3'

Lab Sample ID: 890-110-2

Date Collected: 02/01/21 00:00

Matrix: Solid

Date Received: 02/01/21 12:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			89	02/01/21 16:19	MC	XC
Total/NA	Analysis	8021B		1	113	02/03/21 02:59	MC	XC
Soluble	Leach	DI Leach			99	02/01/21 17:00	MC	XC
Soluble	Analysis	300.0		5	107	02/02/21 12:16	MC	XC
Total/NA	Prep	SW8015P		1	3149994_P	02/03/21 12:00		XM
Total/NA	Analysis	SW8015-MOD		1	3149994	02/03/21 19:20	ARM	XM

Client Sample ID: SS03 @ 0.3'

Lab Sample ID: 890-110-3

Date Collected: 02/01/21 00:00

Matrix: Solid

Date Received: 02/01/21 12:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			89	02/01/21 16:19	MC	XC
Total/NA	Analysis	8021B		1	113	02/03/21 03:21	MC	XC
Soluble	Leach	DI Leach			99	02/01/21 17:00	MC	XC
Soluble	Analysis	300.0		5	107	02/02/21 12:21	MC	XC
Total/NA	Prep	SW8015P		1	3149994_P	02/03/21 12:00		XM
Total/NA	Analysis	SW8015-MOD		1	3149994	02/03/21 19:42	ARM	XM

Laboratory References:

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

Eurofins Xenco, Carlsbad

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: Goldenchlid CTB

Job ID: 890-110-1

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
8021B	5030C	Solid	Total BTEX

Laboratory: Eurofins Midland

The accreditations/certifications listed below are applicable to this report.

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

Eurofins Xenco, Carlsbad

Method Summary

Client: WSP USA Inc.
Project/Site: Goldenchlid CTB

Job ID: 890-110-1

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XC
300.0	Anions, Ion Chromatography	MCAWW	XC
5030C	Purge and Trap	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

Eurofins Xenco, Carlsbad

Sample Summary

Client: WSP USA Inc.
Project/Site: Goldenchlid CTB

Job ID: 890-110-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
890-110-1	SS01 @ 0.3'	Solid	02/01/21 00:00	02/01/21 12:11	
890-110-2	SS02 @ 0.3'	Solid	02/01/21 00:00	02/01/21 12:11	
890-110-3	SS03 @ 0.3'	Solid	02/01/21 00:00	02/01/21 12:11	

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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) 794-1295
 Hobbs, NM (575) 392-7550 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000

Chain of Custody

Work Order No: _____

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Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	WSP USA	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	522 W. Mermod St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88320
Phone:	(432) 236-3849	Email:	jeremy.hill@wsp.com, Dan.Moir@wsp.com

Program: ☒ UST/PST ☐ RP ☐ Growfields ☐ RC ☐ Superfund
State of Project:
Reporting Level: ☐ Level I ☐ Level II ☐ Level III ☐ Level IV ☐ Other:
Deliverables: EDD ☐ ADAPT ☐

Project Name:	Collected C76 End	Turn Around	
Project Number:	TE012421018	Routine	☒
P.O. Number:	5011111111111111	Rush:	
Sampler's Name:	Jeremy Hill	Due Date:	

SAMPLE RECEIPT	Temp Blank:	Yes ☒ No ☐	Wet Ice:	Yes ☒ No ☐
Temperature (°C):	6.0 / 6.8	Thermometer ID	C-NM-007	
Received Intact:	Yes ☒ No ☐	Correction Factor:	-0.2	
Cooler Custody Seals:	Yes ☒ No ☐ N/A	Total Containers:	3	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth
-----------------------	--------	--------------	--------------	-------

SS01	S	2/1/21		0.3'
SS02	↓	↓		↓
SS03	↓	↓		↓

Number of Containers
TPH (EPA 8015)
BTEX (EPA 0-8021)
Chloride (EPA 300.0)

ANALYSIS REQUEST

Work Order Notes

CC# 1055751601
 Spill debris:
 1/24/20
 1/7/21
 1/8/21
 1/15/21

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

Sample Comments

discrete
 ↓



890-110 Chain of Custody

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 <i>[Signature]</i>	<i>[Signature]</i>	2.1.21 1211	2		
3			4		
5			6		

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-110-1

Login Number: 110

List Number: 1

Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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



Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-335-1

Laboratory Sample Delivery Group: TE012921018

Client Project/Site: Golden Child CTB

For:

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

Attn: Dan Moir

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

Authorized for release by:
3/18/2021 4:14:27 PM

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

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

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

Client: WSP USA Inc.
Project/Site: Golden Child CTB

Laboratory Job ID: 890-335-1
SDG: TE012921018

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Client Sample Results	5
Surrogate Summary	10
QC Sample Results	11
QC Association Summary	16
Lab Chronicle	19
Certification Summary	21
Method Summary	22
Sample Summary	23
Chain of Custody	24

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

Definitions/Glossary

Client: WSP USA Inc.
Project/Site: Golden Child CTB

Job ID: 890-335-1
SDG: TE012921018

Qualifiers

Subcontract

Qualifier	Qualifier Description
F	RPD exceeded lab control limits.
U	Analyte was not detected.
X	MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference

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: Golden Child CTB

Job ID: 890-335-1
SDG: TE012921018

Job ID: 890-335-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-335-1

Receipt

The samples were received on 3/12/2021 2:20 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.4° C.

Receipt Exceptions

The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: SW01 (890-335-1), SW02 (890-335-2), SW03 (890-335-3), FS01 (890-335-4), FS02 (890-335-5), FS03 (890-335-6), FS04 (890-335-7) and FS05 (890-335-8).

Client Sample Results

Client: WSP USA Inc.
Project/Site: Golden Child CTB

Job ID: 890-335-1
SDG: TE012921018

Client Sample ID: SW01

Lab Sample ID: 890-335-1

Date Collected: 03/12/21 08:25

Matrix: Solid

Date Received: 03/12/21 14:20

Method: BTEX 8021 - General Subcontract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U X F	0.00199		mg/kg		03/15/21 09:00	03/15/21 14:50	1
Ethylbenzene	<0.00199	U	0.00199		mg/kg		03/15/21 09:00	03/15/21 14:50	1
m,p-Xylenes	<0.00398	U	0.00398		mg/kg		03/15/21 09:00	03/15/21 14:50	1
o-Xylene	<0.00199	U	0.00199		mg/kg		03/15/21 09:00	03/15/21 14:50	1
Toluene	<0.00199	U	0.00199		mg/kg		03/15/21 09:00	03/15/21 14:50	1
Total BTEX	<0.00199	U	0.00199		mg/kg		03/15/21 09:00	03/15/21 14:50	1
Total Xylenes	<0.00199	U	0.00199		mg/kg		03/15/21 09:00	03/15/21 14:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene	101		70 - 130	03/15/21 09:00	03/15/21 14:50	1
4-Bromofluorobenzene	114		70 - 130	03/15/21 09:00	03/15/21 14:50	1

Method: CHLORIDE E300 - General Subcontract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	390		5.00		mg/kg		03/15/21 14:45	03/15/21 21:46	1

Method: TPH 8015_NM_MOD - General Subcontract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<50.0	U	50.0		mg/kg		03/16/21 12:00	03/16/21 11:49	1
Gasoline Range Hydrocarbons (GRO)	<50.0	U	50.0		mg/kg		03/16/21 12:00	03/16/21 11:49	1
Motor Oil Range Hydrocarbons (MRO)	<50.0	U	50.0		mg/kg		03/16/21 12:00	03/16/21 11:49	1
Total TPH	<50.0	U	50.0		mg/kg		03/16/21 12:00	03/16/21 11:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 135	03/16/21 12:00	03/16/21 11:49	1
o-Terphenyl	96		70 - 135	03/16/21 12:00	03/16/21 11:49	1

Client Sample ID: SW02

Lab Sample ID: 890-335-2

Date Collected: 03/12/21 11:20

Matrix: Solid

Date Received: 03/12/21 14:20

Method: BTEX 8021 - General Subcontract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/kg		03/15/21 09:00	03/15/21 15:11	1
Ethylbenzene	<0.00199	U	0.00199		mg/kg		03/15/21 09:00	03/15/21 15:11	1
m,p-Xylenes	<0.00398	U	0.00398		mg/kg		03/15/21 09:00	03/15/21 15:11	1
o-Xylene	<0.00199	U	0.00199		mg/kg		03/15/21 09:00	03/15/21 15:11	1
Toluene	<0.00199	U	0.00199		mg/kg		03/15/21 09:00	03/15/21 15:11	1
Total BTEX	<0.00199	U	0.00199		mg/kg		03/15/21 09:00	03/15/21 15:11	1
Total Xylenes	<0.00199	U	0.00199		mg/kg		03/15/21 09:00	03/15/21 15:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene	103		70 - 130	03/15/21 09:00	03/15/21 15:11	1
4-Bromofluorobenzene	111		70 - 130	03/15/21 09:00	03/15/21 15:11	1

Method: CHLORIDE E300 - General Subcontract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	236		5.02		mg/kg		03/15/21 14:45	03/15/21 21:51	1

Method: TPH 8015_NM_MOD - General Subcontract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<50.0	U	50.0		mg/kg		03/16/21 12:00	03/16/21 12:53	1

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Client Sample Results

Client: WSP USA Inc.
Project/Site: Golden Child CTB

Job ID: 890-335-1
SDG: TE012921018

Client Sample ID: SW02

Lab Sample ID: 890-335-2

Date Collected: 03/12/21 11:20

Matrix: Solid

Date Received: 03/12/21 14:20

Method: TPH 8015_NM_MOD - General Subcontract Method (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Hydrocarbons (GRO)	<50.0	U	50.0		mg/kg		03/16/21 12:00	03/16/21 12:53	1
Motor Oil Range Hydrocarbons (MRO)	<50.0	U	50.0		mg/kg		03/16/21 12:00	03/16/21 12:53	1
Total TPH	<50.0	U	50.0		mg/kg		03/16/21 12:00	03/16/21 12:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	90		70 - 135				03/16/21 12:00	03/16/21 12:53	1
o-Terphenyl	88		70 - 135				03/16/21 12:00	03/16/21 12:53	1

Client Sample ID: SW03

Lab Sample ID: 890-335-3

Date Collected: 03/12/21 11:25

Matrix: Solid

Date Received: 03/12/21 14:20

Method: BTEX 8021 - General Subcontract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/kg		03/15/21 09:00	03/15/21 15:31	1
Ethylbenzene	<0.00200	U	0.00200		mg/kg		03/15/21 09:00	03/15/21 15:31	1
m,p-Xylenes	<0.00399	U	0.00399		mg/kg		03/15/21 09:00	03/15/21 15:31	1
o-Xylene	<0.00200	U	0.00200		mg/kg		03/15/21 09:00	03/15/21 15:31	1
Toluene	<0.00200	U	0.00200		mg/kg		03/15/21 09:00	03/15/21 15:31	1
Total BTEX	<0.00200	U	0.00200		mg/kg		03/15/21 09:00	03/15/21 15:31	1
Total Xylenes	<0.00200	U	0.00200		mg/kg		03/15/21 09:00	03/15/21 15:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene	105		70 - 130				03/15/21 09:00	03/15/21 15:31	1
4-Bromofluorobenzene	117		70 - 130				03/15/21 09:00	03/15/21 15:31	1

Method: CHLORIDE E300 - General Subcontract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1430		24.9		mg/kg		03/15/21 14:45	03/15/21 22:08	5

Method: TPH 8015_NM_MOD - General Subcontract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<50.0	U	50.0		mg/kg		03/16/21 12:00	03/16/21 13:14	1
Gasoline Range Hydrocarbons (GRO)	<50.0	U	50.0		mg/kg		03/16/21 12:00	03/16/21 13:14	1
Motor Oil Range Hydrocarbons (MRO)	<50.0	U	50.0		mg/kg		03/16/21 12:00	03/16/21 13:14	1
Total TPH	<50.0	U	50.0		mg/kg		03/16/21 12:00	03/16/21 13:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	92		70 - 135				03/16/21 12:00	03/16/21 13:14	1
o-Terphenyl	91		70 - 135				03/16/21 12:00	03/16/21 13:14	1

Client Sample ID: FS01

Lab Sample ID: 890-335-4

Date Collected: 03/12/21 08:30

Matrix: Solid

Date Received: 03/12/21 14:20

Method: BTEX 8021 - General Subcontract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/kg		03/15/21 09:00	03/15/21 15:51	1
Ethylbenzene	<0.00198	U	0.00198		mg/kg		03/15/21 09:00	03/15/21 15:51	1
m,p-Xylenes	<0.00397	U	0.00397		mg/kg		03/15/21 09:00	03/15/21 15:51	1
o-Xylene	<0.00198	U	0.00198		mg/kg		03/15/21 09:00	03/15/21 15:51	1
Toluene	<0.00198	U	0.00198		mg/kg		03/15/21 09:00	03/15/21 15:51	1

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Client Sample Results

Client: WSP USA Inc.
Project/Site: Golden Child CTB

Job ID: 890-335-1
SDG: TE012921018

Client Sample ID: FS01

Lab Sample ID: 890-335-4

Date Collected: 03/12/21 08:30

Matrix: Solid

Date Received: 03/12/21 14:20

Method: BTEX 8021 - General Subcontract Method (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00198	U	0.00198		mg/kg		03/15/21 09:00	03/15/21 15:51	1
Total Xylenes	<0.00198	U	0.00198		mg/kg		03/15/21 09:00	03/15/21 15:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene	105		70 - 130				03/15/21 09:00	03/15/21 15:51	1
4-Bromofluorobenzene	116		70 - 130				03/15/21 09:00	03/15/21 15:51	1

Method: CHLORIDE E300 - General Subcontract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	202		4.95		mg/kg		03/15/21 14:45	03/15/21 22:14	1

Method: TPH 8015_NM_MOD - General Subcontract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<50.0	U	50.0		mg/kg		03/16/21 12:00	03/16/21 13:35	1
Gasoline Range Hydrocarbons (GRO)	<50.0	U	50.0		mg/kg		03/16/21 12:00	03/16/21 13:35	1
Motor Oil Range Hydrocarbons (MRO)	<50.0	U	50.0		mg/kg		03/16/21 12:00	03/16/21 13:35	1
Total TPH	<50.0	U	50.0		mg/kg		03/16/21 12:00	03/16/21 13:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 135				03/16/21 12:00	03/16/21 13:35	1
o-Terphenyl	87		70 - 135				03/16/21 12:00	03/16/21 13:35	1

Client Sample ID: FS02

Lab Sample ID: 890-335-5

Date Collected: 03/12/21 11:15

Matrix: Solid

Date Received: 03/12/21 14:20

Method: BTEX 8021 - General Subcontract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/kg		03/15/21 09:00	03/15/21 16:12	1
Ethylbenzene	<0.00200	U	0.00200		mg/kg		03/15/21 09:00	03/15/21 16:12	1
m,p-Xylenes	<0.00400	U	0.00400		mg/kg		03/15/21 09:00	03/15/21 16:12	1
o-Xylene	<0.00200	U	0.00200		mg/kg		03/15/21 09:00	03/15/21 16:12	1
Toluene	<0.00200	U	0.00200		mg/kg		03/15/21 09:00	03/15/21 16:12	1
Total BTEX	<0.00200	U	0.00200		mg/kg		03/15/21 09:00	03/15/21 16:12	1
Total Xylenes	<0.00200	U	0.00200		mg/kg		03/15/21 09:00	03/15/21 16:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene	100		70 - 130				03/15/21 09:00	03/15/21 16:12	1
4-Bromofluorobenzene	119		70 - 130				03/15/21 09:00	03/15/21 16:12	1

Method: CHLORIDE E300 - General Subcontract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	432		5.03		mg/kg		03/15/21 14:45	03/15/21 22:30	1

Method: TPH 8015_NM_MOD - General Subcontract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<49.8	U	49.8		mg/kg		03/16/21 12:00	03/16/21 13:56	1
Gasoline Range Hydrocarbons (GRO)	<49.8	U	49.8		mg/kg		03/16/21 12:00	03/16/21 13:56	1
Motor Oil Range Hydrocarbons (MRO)	<49.8	U	49.8		mg/kg		03/16/21 12:00	03/16/21 13:56	1
Total TPH	<49.8	U	49.8		mg/kg		03/16/21 12:00	03/16/21 13:56	1

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Client Sample Results

Client: WSP USA Inc.
Project/Site: Golden Child CTB

Job ID: 890-335-1
SDG: TE012921018

Client Sample ID: FS02

Lab Sample ID: 890-335-5

Date Collected: 03/12/21 11:15

Matrix: Solid

Date Received: 03/12/21 14:20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	83		70 - 135	03/16/21 12:00	03/16/21 13:56	1
o-Terphenyl	80		70 - 135	03/16/21 12:00	03/16/21 13:56	1

Client Sample ID: FS03

Lab Sample ID: 890-335-6

Date Collected: 03/12/21 10:50

Matrix: Solid

Date Received: 03/12/21 14:20

Method: BTEX 8021 - General Subcontract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/kg		03/15/21 09:00	03/15/21 16:32	1
Ethylbenzene	<0.00200	U	0.00200		mg/kg		03/15/21 09:00	03/15/21 16:32	1
m,p-Xylenes	<0.00400	U	0.00400		mg/kg		03/15/21 09:00	03/15/21 16:32	1
o-Xylene	<0.00200	U	0.00200		mg/kg		03/15/21 09:00	03/15/21 16:32	1
Toluene	<0.00200	U	0.00200		mg/kg		03/15/21 09:00	03/15/21 16:32	1
Total BTEX	<0.00200	U	0.00200		mg/kg		03/15/21 09:00	03/15/21 16:32	1
Total Xylenes	<0.00200	U	0.00200		mg/kg		03/15/21 09:00	03/15/21 16:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene	102		70 - 130				03/15/21 09:00	03/15/21 16:32	1
4-Bromofluorobenzene	113		70 - 130				03/15/21 09:00	03/15/21 16:32	1

Method: CHLORIDE E300 - General Subcontract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	45.2		5.02		mg/kg		03/16/21 10:45	03/16/21 11:07	1

Method: TPH 8015_NM_MOD - General Subcontract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<50.0	U	50.0		mg/kg		03/16/21 12:00	03/16/21 14:17	1
Gasoline Range Hydrocarbons (GRO)	<50.0	U	50.0		mg/kg		03/16/21 12:00	03/16/21 14:17	1
Motor Oil Range Hydrocarbons (MRO)	<50.0	U	50.0		mg/kg		03/16/21 12:00	03/16/21 14:17	1
Total TPH	<50.0	U	50.0		mg/kg		03/16/21 12:00	03/16/21 14:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	108		70 - 135				03/16/21 12:00	03/16/21 14:17	1
o-Terphenyl	102		70 - 135				03/16/21 12:00	03/16/21 14:17	1

Client Sample ID: FS04

Lab Sample ID: 890-335-7

Date Collected: 03/12/21 10:55

Matrix: Solid

Date Received: 03/12/21 14:20

Method: BTEX 8021 - General Subcontract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/kg		03/15/21 09:00	03/15/21 16:53	1
Ethylbenzene	<0.00198	U	0.00198		mg/kg		03/15/21 09:00	03/15/21 16:53	1
m,p-Xylenes	<0.00397	U	0.00397		mg/kg		03/15/21 09:00	03/15/21 16:53	1
o-Xylene	<0.00198	U	0.00198		mg/kg		03/15/21 09:00	03/15/21 16:53	1
Toluene	<0.00198	U	0.00198		mg/kg		03/15/21 09:00	03/15/21 16:53	1
Total BTEX	<0.00198	U	0.00198		mg/kg		03/15/21 09:00	03/15/21 16:53	1
Total Xylenes	<0.00198	U	0.00198		mg/kg		03/15/21 09:00	03/15/21 16:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene	99		70 - 130				03/15/21 09:00	03/15/21 16:53	

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Client Sample Results

Client: WSP USA Inc.
Project/Site: Golden Child CTB

Job ID: 890-335-1
SDG: TE012921018

Client Sample ID: FS04

Lab Sample ID: 890-335-7

Date Collected: 03/12/21 10:55

Matrix: Solid

Date Received: 03/12/21 14:20

Method: BTEX 8021 - General Subcontract Method (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	118		70 - 130	03/15/21 09:00	03/15/21 16:53	1

Method: CHLORIDE E300 - General Subcontract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	45.1		4.99		mg/kg		03/16/21 10:45	03/16/21 11:23	1

Method: TPH 8015_NM_MOD - General Subcontract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<49.9	U	49.9		mg/kg		03/16/21 12:00	03/16/21 14:38	1
Gasoline Range Hydrocarbons (GRO)	<49.9	U	49.9		mg/kg		03/16/21 12:00	03/16/21 14:38	1
Motor Oil Range Hydrocarbons (MRO)	<49.9	U	49.9		mg/kg		03/16/21 12:00	03/16/21 14:38	1
Total TPH	<49.9	U	49.9		mg/kg		03/16/21 12:00	03/16/21 14:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	81		70 - 135	03/16/21 12:00	03/16/21 14:38	1
o-Terphenyl	75		70 - 135	03/16/21 12:00	03/16/21 14:38	1

Client Sample ID: FS05

Lab Sample ID: 890-335-8

Date Collected: 03/12/21 11:00

Matrix: Solid

Date Received: 03/12/21 14:20

Method: BTEX 8021 - General Subcontract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/kg		03/15/21 09:00	03/15/21 17:13	1
Ethylbenzene	<0.00198	U	0.00198		mg/kg		03/15/21 09:00	03/15/21 17:13	1
m,p-Xylenes	<0.00396	U	0.00396		mg/kg		03/15/21 09:00	03/15/21 17:13	1
o-Xylene	<0.00198	U	0.00198		mg/kg		03/15/21 09:00	03/15/21 17:13	1
Toluene	<0.00198	U	0.00198		mg/kg		03/15/21 09:00	03/15/21 17:13	1
Total BTEX	<0.00198	U	0.00198		mg/kg		03/15/21 09:00	03/15/21 17:13	1
Total Xylenes	<0.00198	U	0.00198		mg/kg		03/15/21 09:00	03/15/21 17:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene	100		70 - 130	03/15/21 09:00	03/15/21 17:13	1
4-Bromofluorobenzene	106		70 - 130	03/15/21 09:00	03/15/21 17:13	1

Method: CHLORIDE E300 - General Subcontract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	31.9		5.02		mg/kg		03/18/21 10:30	03/18/21 10:57	1

Method: TPH 8015_NM_MOD - General Subcontract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<49.9	U	49.9		mg/kg		03/16/21 12:00	03/16/21 15:00	1
Gasoline Range Hydrocarbons (GRO)	<49.9	U	49.9		mg/kg		03/16/21 12:00	03/16/21 15:00	1
Motor Oil Range Hydrocarbons (MRO)	<49.9	U	49.9		mg/kg		03/16/21 12:00	03/16/21 15:00	1
Total TPH	<49.9	U	49.9		mg/kg		03/16/21 12:00	03/16/21 15:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	86		70 - 135	03/16/21 12:00	03/16/21 15:00	1
o-Terphenyl	86		70 - 135	03/16/21 12:00	03/16/21 15:00	1

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Surrogate Summary

Client: WSP USA Inc.
Project/Site: Golden Child CTB

Job ID: 890-335-1
SDG: TE012921018

Method: BTEX 8021 - General Subcontract Method

Matrix: SOIL

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (70-130)
691748-001 S	Matrix Spike	119
691748-001 SD	Matrix Spike Duplicate	111
7723410-1-BKS	Lab Control Sample	102
7723410-1-BLK	Method Blank	102
7723410-1-BSD	Lab Control Sample Dup	104

Surrogate Legend

BFB = 4-Bromofluorobenzene

Method: BTEX 8021 - General Subcontract Method

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (70-130)	DFBZ (70-130)
890-335-1	SW01	114	101
890-335-2	SW02	111	103
890-335-3	SW03	117	105
890-335-4	FS01	116	105
890-335-5	FS02	119	100
890-335-6	FS03	113	102
890-335-7	FS04	118	99
890-335-8	FS05	106	100

Surrogate Legend

BFB = 4-Bromofluorobenzene

DFBZ = 1,4-Difluorobenzene

Method: TPH 8015_NM_MOD - General Subcontract Method

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO (70-135)	OTPH (70-135)
890-335-1	SW01	97	96
890-335-2	SW02	90	88
890-335-3	SW03	92	91
890-335-4	FS01	89	87
890-335-5	FS02	83	80
890-335-6	FS03	108	102
890-335-7	FS04	81	75
890-335-8	FS05	86	86

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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QC Sample Results

Client: WSP USA Inc.
Project/Site: Golden Child CTB

Job ID: 890-335-1
SDG: TE012921018

Method: BTEX 8021 - General Subcontract Method

Lab Sample ID: 7723410-1-BLK

Matrix: SOIL

Analysis Batch: 3153756

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 3153756_P

Analyte	BLANK Result	BLANK Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<.002	U	.002		mg/kg		03/15/21 09:00	03/15/21 14:21	1
Ethylbenzene	<.002	U	.002		mg/kg		03/15/21 09:00	03/15/21 14:21	1
m,p-Xylenes	<.004	U	.004		mg/kg		03/15/21 09:00	03/15/21 14:21	1
o-Xylene	<.002	U	.002		mg/kg		03/15/21 09:00	03/15/21 14:21	1
Toluene	<.002	U	.002		mg/kg		03/15/21 09:00	03/15/21 14:21	1

Surrogate	BLANK %Recovery	BLANK Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	102		70 - 130	03/15/21 09:00	03/15/21 14:21	1

Lab Sample ID: 7723410-1-BKS

Matrix: SOIL

Analysis Batch: 3153756

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 3153756_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	.1	0.105		mg/kg		105	70 - 130
Ethylbenzene	.1	0.109		mg/kg		109	71 - 129
m,p-Xylenes	.2	0.223		mg/kg		112	70 - 135
o-Xylene	.1	0.114		mg/kg		114	71 - 133
Toluene	.1	0.110		mg/kg		110	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	102		70 - 130

Lab Sample ID: 7723410-1-BSD

Matrix: SOIL

Analysis Batch: 3153756

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 3153756_P

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	.1	0.111		mg/kg		111	70 - 130	6	35
Ethylbenzene	.1	0.113		mg/kg		113	71 - 129	4	35
m,p-Xylenes	.2	0.229		mg/kg		115	70 - 135	3	35
o-Xylene	.1	0.116		mg/kg		116	71 - 133	2	35
Toluene	.1	0.113		mg/kg		113	70 - 130	3	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	104		70 - 130

Lab Sample ID: 691748-001 S

Matrix: SOIL

Analysis Batch: 3153756

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 3153756_P

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<.002		.1	0.0470	X	mg/kg		47	70 - 130
Ethylbenzene	<.002		.1	0.0883		mg/kg		88	71 - 129
m,p-Xylenes	<.00401		.2	0.183		mg/kg		92	70 - 135
o-Xylene	<.002		.1	0.0929		mg/kg		93	71 - 133
Toluene	<.002		.1	0.0860		mg/kg		86	70 - 130

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QC Sample Results

Client: WSP USA Inc.
Project/Site: Golden Child CTB

Job ID: 890-335-1
SDG: TE012921018

Method: BTEX 8021 - General Subcontract Method (Continued)

Lab Sample ID: 691748-001 S
Matrix: SOIL
Analysis Batch: 3153756

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 3153756_P

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene	119		70 - 130

Lab Sample ID: 691748-001 SD
Matrix: SOIL
Analysis Batch: 3153756

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 3153756_P

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Benzene	<.002		.1	0.0931	F	mg/kg		93	70 - 130	66	35
Ethylbenzene	<.002		.1	0.0943		mg/kg		94	71 - 129	7	35
m,p-Xylenes	<.00401		.2	0.189		mg/kg		95	70 - 135	3	35
o-Xylene	<.002		.1	0.0995		mg/kg		100	71 - 133	7	35
Toluene	<.002		.1	0.0956		mg/kg		96	70 - 130	11	35

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene	111		70 - 130

Method: CHLORIDE E300 - General Subcontract Method

Lab Sample ID: 7723355-1-BLK
Matrix: SOIL
Analysis Batch: 3153746

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3153746_P

Analyte	BLANK Result	BLANK Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.66		5		mg/kg		03/15/21 14:45	03/15/21 14:47	1

Lab Sample ID: 7723355-1-BKS
Matrix: SOIL
Analysis Batch: 3153746

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3153746_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	237		mg/kg		95	80 - 120

Lab Sample ID: 7723355-1-BSD
Matrix: SOIL
Analysis Batch: 3153746

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3153746_P

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Chloride	250	236		mg/kg		94	80 - 120	0	20

Lab Sample ID: 691748-002 S
Matrix: SOIL
Analysis Batch: 3153746

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 3153746_P

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	236		251	474		mg/kg		95	80 - 120

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QC Sample Results

Client: WSP USA Inc.
Project/Site: Golden Child CTB

Job ID: 890-335-1
SDG: TE012921018

Method: CHLORIDE E300 - General Subcontract Method (Continued)

Lab Sample ID: 691748-002 SD

Matrix: SOIL

Analysis Batch: 3153746

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 3153746_P

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	236		251	474		mg/kg		95	80 - 120	0	20

Lab Sample ID: 7723415-1-BLK

Matrix: SOIL

Analysis Batch: 3153836

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 3153836_P

Analyte	BLANK Result	BLANK Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5	U	5		mg/kg		03/16/21 10:45	03/16/21 10:50	1

Lab Sample ID: 7723415-1-BKS

Matrix: SOIL

Analysis Batch: 3153836

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 3153836_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	243		mg/kg		97	80 - 120

Lab Sample ID: 7723415-1-BSD

Matrix: SOIL

Analysis Batch: 3153836

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 3153836_P

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	244		mg/kg		98	80 - 120	0	20

Lab Sample ID: 691748-006 S

Matrix: SOIL

Analysis Batch: 3153836

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 3153836_P

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	45.2		251	310		mg/kg		105	80 - 120

Lab Sample ID: 691748-006 SD

Matrix: SOIL

Analysis Batch: 3153836

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 3153836_P

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	45.2		251	305		mg/kg		104	80 - 120	2	20

Lab Sample ID: 7723593-1-BLK

Matrix: SOIL

Analysis Batch: 3154078

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 3154078_P

Analyte	BLANK Result	BLANK Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5	U	5		mg/kg		03/18/21 10:30	03/18/21 10:42	1

Lab Sample ID: 7723593-1-BKS

Matrix: SOIL

Analysis Batch: 3154078

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 3154078_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	261		mg/kg		104	80 - 120

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QC Sample Results

Client: WSP USA Inc.
Project/Site: Golden Child CTB

Job ID: 890-335-1
SDG: TE012921018

Method: CHLORIDE E300 - General Subcontract Method

Lab Sample ID: 7723593-1-BSD

Matrix: SOIL

Analysis Batch: 3154078

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 3154078_P

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	262		mg/kg		105	80 - 120	0	20

Lab Sample ID: 691748-008 S

Matrix: SOIL

Analysis Batch: 3154078

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 3154078_P

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	31.9		251	290		mg/kg		103	80 - 120		

Lab Sample ID: 691748-008 SD

Matrix: SOIL

Analysis Batch: 3154078

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 3154078_P

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	31.9		251	288		mg/kg		102	80 - 120	1	20

Method: TPH 8015_NM_MOD - General Subcontract Method

Lab Sample ID: 7723503-1-BLK

Matrix: SOIL

Analysis Batch: 3153941

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 3153941_P

Analyte	BLANK Result	BLANK Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO)	<50	U	50		mg/kg		03/16/21 12:00	03/16/21 10:47	1
Gasoline Range Hydrocarbons (GRO)	<50	U	50		mg/kg		03/16/21 12:00	03/16/21 10:47	1
Motor Oil Range Hydrocarbons (MRO)	<50	U	50		mg/kg		03/16/21 12:00	03/16/21 10:47	1

Lab Sample ID: 7723503-1-BKS

Matrix: SOIL

Analysis Batch: 3153941

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 3153941_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics (DRO)	1000	921		mg/kg		92	70 - 135		
Gasoline Range Hydrocarbons (GRO)	1000	909		mg/kg		91	70 - 135		

Lab Sample ID: 7723503-1-BSD

Matrix: SOIL

Analysis Batch: 3153941

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 3153941_P

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics (DRO)	1000	921		mg/kg		92	70 - 135	0	20
Gasoline Range Hydrocarbons (GRO)	1000	912		mg/kg		91	70 - 135	0	20

Lab Sample ID: 691748-001 S

Matrix: SOIL

Analysis Batch: 3153941

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 3153941_P

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics (DRO)	<49.8		997	871		mg/kg		87	70 - 135		

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QC Sample Results

Client: WSP USA Inc.
Project/Site: Golden Child CTB

Job ID: 890-335-1
SDG: TE012921018

Method: TPH 8015_NM_MOD - General Subcontract Method (Continued)

Lab Sample ID: 691748-001 S

Matrix: SOIL

Analysis Batch: 3153941

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 3153941_P

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Hydrocarbons (GRO)	<49.8		997	847		mg/kg		85	70 - 135

Lab Sample ID: 691748-001 SD

Matrix: SOIL

Analysis Batch: 3153941

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 3153941_P

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics (DRO)	<49.8		996	842		mg/kg		85	70 - 135	3	20
Gasoline Range Hydrocarbons (GRO)	<49.8		996	822		mg/kg		83	70 - 135	3	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: Golden Child CTB

Job ID: 890-335-1
SDG: TE012921018

Subcontract

Analysis Batch: 3153746

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-335-1	SW01	Total/NA	Solid	CHLORIDE E30C	3153746_P
890-335-2	SW02	Total/NA	Solid	CHLORIDE E30C	3153746_P
890-335-3	SW03	Total/NA	Solid	CHLORIDE E30C	3153746_P
890-335-4	FS01	Total/NA	Solid	CHLORIDE E30C	3153746_P
890-335-5	FS02	Total/NA	Solid	CHLORIDE E30C	3153746_P
7723355-1-BLK	Method Blank	Total/NA	SOIL	CHLORIDE E30C	3153746_P
7723355-1-BKS	Lab Control Sample	Total/NA	SOIL	CHLORIDE E30C	3153746_P
7723355-1-BSD	Lab Control Sample Dup	Total/NA	SOIL	CHLORIDE E30C	3153746_P
691748-002 S	Matrix Spike	Total/NA	SOIL	CHLORIDE E30C	3153746_P
691748-002 SD	Matrix Spike Duplicate	Total/NA	SOIL	CHLORIDE E30C	3153746_P

Analysis Batch: 3153756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-335-1	SW01	Total/NA	Solid	BTEX 8021	3153756_P
890-335-2	SW02	Total/NA	Solid	BTEX 8021	3153756_P
890-335-3	SW03	Total/NA	Solid	BTEX 8021	3153756_P
890-335-4	FS01	Total/NA	Solid	BTEX 8021	3153756_P
890-335-5	FS02	Total/NA	Solid	BTEX 8021	3153756_P
890-335-6	FS03	Total/NA	Solid	BTEX 8021	3153756_P
890-335-7	FS04	Total/NA	Solid	BTEX 8021	3153756_P
890-335-8	FS05	Total/NA	Solid	BTEX 8021	3153756_P
7723410-1-BLK	Method Blank	Total/NA	SOIL	BTEX 8021	3153756_P
7723410-1-BKS	Lab Control Sample	Total/NA	SOIL	BTEX 8021	3153756_P
7723410-1-BSD	Lab Control Sample Dup	Total/NA	SOIL	BTEX 8021	3153756_P
691748-001 S	Matrix Spike	Total/NA	SOIL	BTEX 8021	3153756_P
691748-001 SD	Matrix Spike Duplicate	Total/NA	SOIL	BTEX 8021	3153756_P

Analysis Batch: 3153836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-335-6	FS03	Total/NA	Solid	CHLORIDE E30C	3153836_P
890-335-7	FS04	Total/NA	Solid	CHLORIDE E30C	3153836_P
7723415-1-BLK	Method Blank	Total/NA	SOIL	CHLORIDE E30C	3153836_P
7723415-1-BKS	Lab Control Sample	Total/NA	SOIL	CHLORIDE E30C	3153836_P
7723415-1-BSD	Lab Control Sample Dup	Total/NA	SOIL	CHLORIDE E30C	3153836_P
691748-006 S	Matrix Spike	Total/NA	SOIL	CHLORIDE E30C	3153836_P
691748-006 SD	Matrix Spike Duplicate	Total/NA	SOIL	CHLORIDE E30C	3153836_P

Analysis Batch: 3153941

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-335-1	SW01	Total/NA	Solid	TPH	3153941_P
890-335-2	SW02	Total/NA	Solid	8015_NM_MOD TPH	3153941_P
890-335-3	SW03	Total/NA	Solid	8015_NM_MOD TPH	3153941_P
890-335-4	FS01	Total/NA	Solid	8015_NM_MOD TPH	3153941_P
890-335-5	FS02	Total/NA	Solid	8015_NM_MOD TPH	3153941_P
890-335-6	FS03	Total/NA	Solid	8015_NM_MOD TPH	3153941_P
890-335-7	FS04	Total/NA	Solid	8015_NM_MOD TPH	3153941_P

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QC Association Summary

Client: WSP USA Inc.
Project/Site: Golden Child CTB

Job ID: 890-335-1
SDG: TE012921018

Subcontract (Continued)

Analysis Batch: 3153941 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-335-8	FS05	Total/NA	Solid	TPH	3153941_P
7723503-1-BLK	Method Blank	Total/NA	SOIL	8015_NM_MOD TPH	3153941_P
7723503-1-BKS	Lab Control Sample	Total/NA	SOIL	8015_NM_MOD TPH	3153941_P
7723503-1-BSD	Lab Control Sample Dup	Total/NA	SOIL	8015_NM_MOD TPH	3153941_P
691748-001 S	Matrix Spike	Total/NA	SOIL	8015_NM_MOD TPH	3153941_P
691748-001 SD	Matrix Spike Duplicate	Total/NA	SOIL	8015_NM_MOD TPH	3153941_P

Analysis Batch: 3154078

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-335-8	FS05	Total/NA	Solid	CHLORIDE E300	3154078_P
7723593-1-BLK	Method Blank	Total/NA	SOIL	CHLORIDE E300	3154078_P
7723593-1-BKS	Lab Control Sample	Total/NA	SOIL	CHLORIDE E300	3154078_P
7723593-1-BSD	Lab Control Sample Dup	Total/NA	SOIL	CHLORIDE E300	3154078_P
691748-008 S	Matrix Spike	Total/NA	SOIL	CHLORIDE E300	3154078_P
691748-008 SD	Matrix Spike Duplicate	Total/NA	SOIL	CHLORIDE E300	3154078_P

Prep Batch: 3153746_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-335-1	SW01	Total/NA	Solid	E300P	
890-335-2	SW02	Total/NA	Solid	E300P	
890-335-3	SW03	Total/NA	Solid	E300P	
890-335-4	FS01	Total/NA	Solid	E300P	
890-335-5	FS02	Total/NA	Solid	E300P	
7723355-1-BLK	Method Blank	Total/NA	SOIL	***DEFAULT PREP***	
7723355-1-BKS	Lab Control Sample	Total/NA	SOIL	***DEFAULT PREP***	
7723355-1-BSD	Lab Control Sample Dup	Total/NA	SOIL	***DEFAULT PREP***	
691748-002 S	Matrix Spike	Total/NA	SOIL	***DEFAULT PREP***	
691748-002 SD	Matrix Spike Duplicate	Total/NA	SOIL	***DEFAULT PREP***	

Prep Batch: 3153756_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-335-1	SW01	Total/NA	Solid	SW5035A	
890-335-2	SW02	Total/NA	Solid	SW5035A	
890-335-3	SW03	Total/NA	Solid	SW5035A	
890-335-4	FS01	Total/NA	Solid	SW5035A	
890-335-5	FS02	Total/NA	Solid	SW5035A	
890-335-6	FS03	Total/NA	Solid	SW5035A	
890-335-7	FS04	Total/NA	Solid	SW5035A	
890-335-8	FS05	Total/NA	Solid	SW5035A	
7723410-1-BLK	Method Blank	Total/NA	SOIL	SW5035A	
7723410-1-BKS	Lab Control Sample	Total/NA	SOIL	SW5035A	
7723410-1-BSD	Lab Control Sample Dup	Total/NA	SOIL	SW5035A	
691748-001 S	Matrix Spike	Total/NA	SOIL	SW5035A	

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QC Association Summary

Client: WSP USA Inc.
Project/Site: Golden Child CTB

Job ID: 890-335-1
SDG: TE012921018

Subcontract (Continued)

Prep Batch: 3153756_P (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
691748-001 SD	Matrix Spike Duplicate	Total/NA	SOIL	SW5035A	

Prep Batch: 3153836_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-335-6	FS03	Total/NA	Solid	E300P	
890-335-7	FS04	Total/NA	Solid	E300P	
7723415-1-BLK	Method Blank	Total/NA	SOIL	***DEFAULT PREP***	
7723415-1-BKS	Lab Control Sample	Total/NA	SOIL	***DEFAULT PREP***	
7723415-1-BSD	Lab Control Sample Dup	Total/NA	SOIL	***DEFAULT PREP***	
691748-006 S	Matrix Spike	Total/NA	SOIL	***DEFAULT PREP***	
691748-006 SD	Matrix Spike Duplicate	Total/NA	SOIL	***DEFAULT PREP***	

Prep Batch: 3153941_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-335-1	SW01	Total/NA	Solid	SW8015P	
890-335-2	SW02	Total/NA	Solid	SW8015P	
890-335-3	SW03	Total/NA	Solid	SW8015P	
890-335-4	FS01	Total/NA	Solid	SW8015P	
890-335-5	FS02	Total/NA	Solid	SW8015P	
890-335-6	FS03	Total/NA	Solid	SW8015P	
890-335-7	FS04	Total/NA	Solid	SW8015P	
890-335-8	FS05	Total/NA	Solid	SW8015P	
7723503-1-BLK	Method Blank	Total/NA	SOIL	***DEFAULT PREP***	
7723503-1-BKS	Lab Control Sample	Total/NA	SOIL	***DEFAULT PREP***	
7723503-1-BSD	Lab Control Sample Dup	Total/NA	SOIL	***DEFAULT PREP***	
691748-001 S	Matrix Spike	Total/NA	SOIL	***DEFAULT PREP***	
691748-001 SD	Matrix Spike Duplicate	Total/NA	SOIL	***DEFAULT PREP***	

Prep Batch: 3154078_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-335-8	FS05	Total/NA	Solid	E300P	
7723593-1-BLK	Method Blank	Total/NA	SOIL	***DEFAULT PREP***	
7723593-1-BKS	Lab Control Sample	Total/NA	SOIL	***DEFAULT PREP***	
7723593-1-BSD	Lab Control Sample Dup	Total/NA	SOIL	***DEFAULT PREP***	
691748-008 S	Matrix Spike	Total/NA	SOIL	***DEFAULT PREP***	
691748-008 SD	Matrix Spike Duplicate	Total/NA	SOIL	***DEFAULT PREP***	

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Lab Chronicle

Client: WSP USA Inc.
Project/Site: Golden Child CTB

Job ID: 890-335-1
SDG: TE012921018

Client Sample ID: SW01

Lab Sample ID: 890-335-1

Date Collected: 03/12/21 08:25

Matrix: Solid

Date Received: 03/12/21 14:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SW5035A		1	3153756_P	03/15/21 09:00		XM
Total/NA	Analysis	BTEX 8021		1	3153756	03/15/21 14:50	KTL	XM
Total/NA	Prep	E300P		1	3153746_P	03/15/21 14:45		XM
Total/NA	Analysis	CHLORIDE E300		1	3153746	03/15/21 21:46	CHE	XM
Total/NA	Analysis	TPH 8015_NM_MOD		1	3153941	03/16/21 11:49	ARM	XM
Total/NA	Prep	SW8015P		1	3153941_P	03/16/21 12:00		XM

Client Sample ID: SW02

Lab Sample ID: 890-335-2

Date Collected: 03/12/21 11:20

Matrix: Solid

Date Received: 03/12/21 14:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SW5035A		1	3153756_P	03/15/21 09:00		XM
Total/NA	Analysis	BTEX 8021		1	3153756	03/15/21 15:11	KTL	XM
Total/NA	Prep	E300P		1	3153746_P	03/15/21 14:45		XM
Total/NA	Analysis	CHLORIDE E300		1	3153746	03/15/21 21:51	CHE	XM
Total/NA	Prep	SW8015P		1	3153941_P	03/16/21 12:00		XM
Total/NA	Analysis	TPH 8015_NM_MOD		1	3153941	03/16/21 12:53	ARM	XM

Client Sample ID: SW03

Lab Sample ID: 890-335-3

Date Collected: 03/12/21 11:25

Matrix: Solid

Date Received: 03/12/21 14:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SW5035A		1	3153756_P	03/15/21 09:00		XM
Total/NA	Analysis	BTEX 8021		1	3153756	03/15/21 15:31	KTL	XM
Total/NA	Prep	E300P		1	3153746_P	03/15/21 14:45		XM
Total/NA	Analysis	CHLORIDE E300		5	3153746	03/15/21 22:08	CHE	XM
Total/NA	Prep	SW8015P		1	3153941_P	03/16/21 12:00		XM
Total/NA	Analysis	TPH 8015_NM_MOD		1	3153941	03/16/21 13:14	ARM	XM

Client Sample ID: FS01

Lab Sample ID: 890-335-4

Date Collected: 03/12/21 08:30

Matrix: Solid

Date Received: 03/12/21 14:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SW5035A		1	3153756_P	03/15/21 09:00		XM
Total/NA	Analysis	BTEX 8021		1	3153756	03/15/21 15:51	KTL	XM
Total/NA	Prep	E300P		1	3153746_P	03/15/21 14:45		XM
Total/NA	Analysis	CHLORIDE E300		1	3153746	03/15/21 22:14	CHE	XM
Total/NA	Prep	SW8015P		1	3153941_P	03/16/21 12:00		XM
Total/NA	Analysis	TPH 8015_NM_MOD		1	3153941	03/16/21 13:35	ARM	XM

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Lab Chronicle

Client: WSP USA Inc.
Project/Site: Golden Child CTB

Job ID: 890-335-1
SDG: TE012921018

Client Sample ID: FS02

Lab Sample ID: 890-335-5

Date Collected: 03/12/21 11:15

Matrix: Solid

Date Received: 03/12/21 14:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SW5035A		1	3153756_P	03/15/21 09:00		XM
Total/NA	Analysis	BTEX 8021		1	3153756	03/15/21 16:12	KTL	XM
Total/NA	Prep	E300P		1	3153746_P	03/15/21 14:45		XM
Total/NA	Analysis	CHLORIDE E300		1	3153746	03/15/21 22:30	CHE	XM
Total/NA	Prep	SW8015P		1	3153941_P	03/16/21 12:00		XM
Total/NA	Analysis	TPH 8015_NM_MOD		1	3153941	03/16/21 13:56	ARM	XM

Client Sample ID: FS03

Lab Sample ID: 890-335-6

Date Collected: 03/12/21 10:50

Matrix: Solid

Date Received: 03/12/21 14:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SW5035A		1	3153756_P	03/15/21 09:00		XM
Total/NA	Analysis	BTEX 8021		1	3153756	03/15/21 16:32	KTL	XM
Total/NA	Prep	E300P		1	3153836_P	03/16/21 10:45		XM
Total/NA	Analysis	CHLORIDE E300		1	3153836	03/16/21 11:07	CHE	XM
Total/NA	Prep	SW8015P		1	3153941_P	03/16/21 12:00		XM
Total/NA	Analysis	TPH 8015_NM_MOD		1	3153941	03/16/21 14:17	ARM	XM

Client Sample ID: FS04

Lab Sample ID: 890-335-7

Date Collected: 03/12/21 10:55

Matrix: Solid

Date Received: 03/12/21 14:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SW5035A		1	3153756_P	03/15/21 09:00		XM
Total/NA	Analysis	BTEX 8021		1	3153756	03/15/21 16:53	KTL	XM
Total/NA	Prep	E300P		1	3153836_P	03/16/21 10:45		XM
Total/NA	Analysis	CHLORIDE E300		1	3153836	03/16/21 11:23	CHE	XM
Total/NA	Prep	SW8015P		1	3153941_P	03/16/21 12:00		XM
Total/NA	Analysis	TPH 8015_NM_MOD		1	3153941	03/16/21 14:38	ARM	XM

Client Sample ID: FS05

Lab Sample ID: 890-335-8

Date Collected: 03/12/21 11:00

Matrix: Solid

Date Received: 03/12/21 14:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SW5035A		1	3153756_P	03/15/21 09:00		XM
Total/NA	Analysis	BTEX 8021		1	3153756	03/15/21 17:13	KTL	XM
Total/NA	Prep	E300P		1	3154078_P	03/18/21 10:30		XM
Total/NA	Analysis	CHLORIDE E300		1	3154078	03/18/21 10:57	CHE	XM
Total/NA	Prep	SW8015P		1	3153941_P	03/16/21 12:00		XM
Total/NA	Analysis	TPH 8015_NM_MOD		1	3153941	03/16/21 15:00	ARM	XM

Laboratory References:

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

Eurofins Carlsbad

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: Golden Child CTB

Job ID: 890-335-1
SDG: TE012921018

Laboratory: Eurofins Midland

The accreditations/certifications listed below are applicable to this report.

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

- 1
- 2
- 3
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Method Summary

Client: WSP USA Inc.
Project/Site: Golden Child CTB

Job ID: 890-335-1
SDG: TE012921018

Method	Method Description	Protocol	Laboratory
Subcontract	BTEX 8021	None	XM
Subcontract	CHLORIDE E300	None	XM
Subcontract	TPH 8015_NM_MOD	None	XM

Protocol References:

None = None

Laboratory References:

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

Sample Summary

Client: WSP USA Inc.
Project/Site: Golden Child CTB

Job ID: 890-335-1
SDG: TE012921018

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
890-335-1	SW01	Solid	03/12/21 08:25	03/12/21 14:20	
890-335-2	SW02	Solid	03/12/21 11:20	03/12/21 14:20	
890-335-3	SW03	Solid	03/12/21 11:25	03/12/21 14:20	
890-335-4	FS01	Solid	03/12/21 08:30	03/12/21 14:20	
890-335-5	FS02	Solid	03/12/21 11:15	03/12/21 14:20	
890-335-6	FS03	Solid	03/12/21 10:50	03/12/21 14:20	
890-335-7	FS04	Solid	03/12/21 10:55	03/12/21 14:20	
890-335-8	FS05	Solid	03/12/21 11:00	03/12/21 14:20	



Environment Testing

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Chain of Custody

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Don Main	Bill to: (if different)	Mike Little
Company Name:	WSP USA Inc. Permian Office	Company Name:	XTO Energy
Address:	3300 North 4th Street	Address:	522 West McLeod
City, State ZIP:	Midland TX 79705	City, State ZIP:	Carlsbad NM 88220
Phone:	(432) 236-3849	Email:	clizabeth.mika@wsp.com dan.mika@xenco.com

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

Project Name:	Goldenchild CTB	Turn Around	Pres. Code
Project Number:	TE012921018	☐ Routine ☒ Rush ☐ Day	
Project Location:	Bddy County NM	Due Date:	
Sampler's Name:	Elizbeth Mika	TAT starts the day received by the lab, if received by 4:30pm	
P.O. #:			
SAMPLE RECEIPT	Temp Blank: ☒ Yes ☐ No	Wet Ice: ☒ Yes ☐ No	
Samples Received Intact:	☒ Yes ☐ No	Thermometer ID: LNM-007	
Cooler Custody Seals:	Yes ☐ No ☐ N/A	Correction Factor: -0.2	
Sample Custody Seals:	Yes ☐ No ☐ N/A	Temperature Reading: 0.1g	
Total Containers:		Corrected Temperature: 0.9	



890-335 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Parameters	Preservative Codes	Sample Comments
SW01	S	3/12/21	0825	0'-2'		1	TPH (EPA 8015)	None: NO Cool: Cool HCL: HC H ₂ SO ₄ : H ₂ H ₃ PO ₄ : HP NaHSO ₄ : NABIS Na ₂ S ₂ O ₅ : NaSO ₃ Zn Acetate+NaOH: Zn NaOH+Ascorbic Acid: SAPC	
SW02			1120	0'-2'			BTEX (EPA 0-8021)		
SW03			1125	0'-2'			Chloride (EPA 300.0)		
B01			0830	2'					
FS02			1115	2'					
FS03			1050	3'					
FS04			1055	3'					
FS05			1900	3'					

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

Note: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$35.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>Don Main</i>	<i>Cecilia</i>	3-12-21 1356			



Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-554-1

Laboratory Sample Delivery Group: Eddy County NM
Client Project/Site: Goldenchild Battery - TE012921018

For:

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

Attn: Dan Moir

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

Authorized for release by:
4/26/2021 7:37:19 PM

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

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

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

Client: WSP USA Inc.
Project/Site: Goldenchild Battery - TE012921018

Laboratory Job ID: 890-554-1
SDG: Eddy County NM

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Client Sample Results	5
Surrogate Summary	8
QC Sample Results	9
QC Association Summary	12
Lab Chronicle	14
Certification Summary	15
Method Summary	16
Sample Summary	17
Chain of Custody	18
Receipt Checklists	20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

Definitions/Glossary

Client: WSP USA Inc.

Project/Site: Goldenchild Battery - TE012921018

Job ID: 890-554-1

SDG: Eddy County NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc.
Project/Site: Goldenchild Battery - TE012921018

Job ID: 890-554-1
SDG: Eddy County NM

Job ID: 890-554-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-554-1

Receipt

The samples were received on 4/22/2021 12:35 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.4°C

Receipt Exceptions

The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: FS06 (890-554-1), SW04 (890-554-2), PH04 (890-554-3) and PH04 A (890-554-4).

GC VOA

Method 8021B: Surrogate recovery for the following samples were outside control limits: FS06 (890-554-1), SW04 (890-554-2), PH04 (890-554-3) and PH04 A (890-554-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA

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

HPLC/IC

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

Client Sample Results

Client: WSP USA Inc.

Job ID: 890-554-1

Project/Site: Goldenchild Battery - TE012921018

SDG: Eddy County NM

Client Sample ID: FS06

Lab Sample ID: 890-554-1

Date Collected: 04/22/21 09:25

Matrix: Solid

Date Received: 04/22/21 12:35

Sample Depth: - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/23/21 13:38	04/24/21 17:18	1
Toluene	0.00363		0.00199	mg/Kg		04/23/21 13:38	04/24/21 17:18	1
Ethylbenzene	0.00456		0.00199	mg/Kg		04/23/21 13:38	04/24/21 17:18	1
m-Xylene & p-Xylene	0.0103		0.00398	mg/Kg		04/23/21 13:38	04/24/21 17:18	1
o-Xylene	0.00362		0.00199	mg/Kg		04/23/21 13:38	04/24/21 17:18	1
Xylenes, Total	0.0139		0.00398	mg/Kg		04/23/21 13:38	04/24/21 17:18	1
Total BTEX	0.0221		0.00398	mg/Kg		04/23/21 13:38	04/24/21 17:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	219	S1+	70 - 130	04/23/21 13:38	04/24/21 17:18	1
1,4-Difluorobenzene (Surr)	78		70 - 130	04/23/21 13:38	04/24/21 17:18	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/23/21 13:47	04/26/21 14:52	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/23/21 13:47	04/26/21 14:52	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/23/21 13:47	04/26/21 14:52	1
Total TPH	<50.0	U	50.0	mg/Kg		04/23/21 13:47	04/26/21 14:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	79		70 - 130	04/23/21 13:47	04/26/21 14:52	1
o-Terphenyl	67	S1-	70 - 130	04/23/21 13:47	04/26/21 14:52	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	21.5		4.97	mg/Kg			04/25/21 09:19	1

Client Sample ID: SW04

Lab Sample ID: 890-554-2

Date Collected: 04/22/21 09:45

Matrix: Solid

Date Received: 04/22/21 12:35

Sample Depth: 0 - 4

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/23/21 13:38	04/24/21 17:39	1
Toluene	<0.00199	U	0.00199	mg/Kg		04/23/21 13:38	04/24/21 17:39	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/23/21 13:38	04/24/21 17:39	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/23/21 13:38	04/24/21 17:39	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/23/21 13:38	04/24/21 17:39	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/23/21 13:38	04/24/21 17:39	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		04/23/21 13:38	04/24/21 17:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	211	S1+	70 - 130	04/23/21 13:38	04/24/21 17:39	1
1,4-Difluorobenzene (Surr)	102		70 - 130	04/23/21 13:38	04/24/21 17:39	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.

Job ID: 890-554-1

Project/Site: Goldenchild Battery - TE012921018

SDG: Eddy County NM

Client Sample ID: SW04

Lab Sample ID: 890-554-2

Date Collected: 04/22/21 09:45

Matrix: Solid

Date Received: 04/22/21 12:35

Sample Depth: 0 - 4

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/23/21 13:47	04/26/21 15:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/23/21 13:47	04/26/21 15:13	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/23/21 13:47	04/26/21 15:13	1
Total TPH	<50.0	U	50.0	mg/Kg		04/23/21 13:47	04/26/21 15:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	60	S1-	70 - 130	04/23/21 13:47	04/26/21 15:13	1
o-Terphenyl	52	S1-	70 - 130	04/23/21 13:47	04/26/21 15:13	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	21.0		4.99	mg/Kg			04/25/21 09:24	1

Client Sample ID: PH04

Lab Sample ID: 890-554-3

Date Collected: 04/22/21 10:20

Matrix: Solid

Date Received: 04/22/21 12:35

Sample Depth: - 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		04/23/21 13:38	04/24/21 18:00	1
Toluene	<0.00198	U	0.00198	mg/Kg		04/23/21 13:38	04/24/21 18:00	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		04/23/21 13:38	04/24/21 18:00	1
m-Xylene & p-Xylene	<0.00397	U	0.00397	mg/Kg		04/23/21 13:38	04/24/21 18:00	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		04/23/21 13:38	04/24/21 18:00	1
Xylenes, Total	<0.00397	U	0.00397	mg/Kg		04/23/21 13:38	04/24/21 18:00	1
Total BTEX	<0.00397	U	0.00397	mg/Kg		04/23/21 13:38	04/24/21 18:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130	04/23/21 13:38	04/24/21 18:00	1
1,4-Difluorobenzene (Surr)	89		70 - 130	04/23/21 13:38	04/24/21 18:00	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/23/21 13:47	04/26/21 15:34	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/23/21 13:47	04/26/21 15:34	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/23/21 13:47	04/26/21 15:34	1
Total TPH	<50.0	U	50.0	mg/Kg		04/23/21 13:47	04/26/21 15:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	76		70 - 130	04/23/21 13:47	04/26/21 15:34	1
o-Terphenyl	69	S1-	70 - 130	04/23/21 13:47	04/26/21 15:34	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	16.7		4.95	mg/Kg			04/25/21 09:29	1

Eurofins Xenco, Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Goldenchild Battery - TE012921018

Job ID: 890-554-1
SDG: Eddy County NM

Client Sample ID: PH04 A

Lab Sample ID: 890-554-4

Date Collected: 04/22/21 10:25

Matrix: Solid

Date Received: 04/22/21 12:35

Sample Depth: - 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		04/23/21 13:38	04/24/21 18:20	1
Toluene	<0.00202	U	0.00202	mg/Kg		04/23/21 13:38	04/24/21 18:20	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		04/23/21 13:38	04/24/21 18:20	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		04/23/21 13:38	04/24/21 18:20	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		04/23/21 13:38	04/24/21 18:20	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		04/23/21 13:38	04/24/21 18:20	1
Total BTEX	<0.00403	U	0.00403	mg/Kg		04/23/21 13:38	04/24/21 18:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	117		70 - 130	04/23/21 13:38	04/24/21 18:20	1
1,4-Difluorobenzene (Surr)	109		70 - 130	04/23/21 13:38	04/24/21 18:20	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		04/23/21 13:47	04/26/21 15:56	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		04/23/21 13:47	04/26/21 15:56	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		04/23/21 13:47	04/26/21 15:56	1
Total TPH	<49.9	U	49.9	mg/Kg		04/23/21 13:47	04/26/21 15:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	80		70 - 130	04/23/21 13:47	04/26/21 15:56	1
o-Terphenyl	70		70 - 130	04/23/21 13:47	04/26/21 15:56	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14.2		5.00	mg/Kg			04/25/21 09:34	1

Eurofins Xenco, Carlsbad

Surrogate Summary

Client: WSP USA Inc.

Job ID: 890-554-1

Project/Site: Goldenchild Battery - TE012921018

SDG: Eddy County NM

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-554-1	FS06	219 S1+	78
890-554-2	SW04	211 S1+	102
890-554-3	PH04	111	89
890-554-4	PH04 A	117	109
LCS 880-2226/1-B	Lab Control Sample	90	103
LCSD 880-2226/2-B	Lab Control Sample Dup	97	107
MB 880-2226/5-B	Method Blank	109	98
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-554-1	FS06	79	67 S1-
890-554-2	SW04	60 S1-	52 S1-
890-554-3	PH04	76	69 S1-
890-554-4	PH04 A	80	70
LCS 880-2228/2-A	Lab Control Sample	111	102
LCSD 880-2228/3-A	Lab Control Sample Dup	103	98
MB 880-2228/1-A	Method Blank	111	115
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.

Job ID: 890-554-1

Project/Site: Goldenchild Battery - TE012921018

SDG: Eddy County NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-2226/5-B

Matrix: Solid

Analysis Batch: 2277

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 2226

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/23/21 13:38	04/24/21 16:15	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/23/21 13:38	04/24/21 16:15	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/23/21 13:38	04/24/21 16:15	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/23/21 13:38	04/24/21 16:15	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/23/21 13:38	04/24/21 16:15	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/23/21 13:38	04/24/21 16:15	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		04/23/21 13:38	04/24/21 16:15	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	04/23/21 13:38	04/24/21 16:15	1
1,4-Difluorobenzene (Surr)	98		70 - 130	04/23/21 13:38	04/24/21 16:15	1

Lab Sample ID: LCS 880-2226/1-B

Matrix: Solid

Analysis Batch: 2277

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 2226

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.08212		mg/Kg		82	70 - 130
Toluene	0.100	0.09331		mg/Kg		93	70 - 130
Ethylbenzene	0.100	0.09093		mg/Kg		91	70 - 130
m-Xylene & p-Xylene	0.200	0.1860		mg/Kg		93	70 - 130
o-Xylene	0.100	0.09092		mg/Kg		91	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	90		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

Lab Sample ID: LCSD 880-2226/2-B

Matrix: Solid

Analysis Batch: 2277

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 2226

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.08693		mg/Kg		87	70 - 130	6	35
Toluene	0.100	0.1020		mg/Kg		102	70 - 130	9	35
Ethylbenzene	0.100	0.09697		mg/Kg		97	70 - 130	6	35
m-Xylene & p-Xylene	0.200	0.1979		mg/Kg		99	70 - 130	6	35
o-Xylene	0.100	0.09656		mg/Kg		97	70 - 130	6	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.

Job ID: 890-554-1

Project/Site: Goldenchild Battery - TE012921018

SDG: Eddy County NM

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

Lab Sample ID: MB 880-2228/1-A

Matrix: Solid

Analysis Batch: 2306

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 2228

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		04/23/21 13:47	04/26/21 08:31	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/23/21 13:47	04/26/21 08:31	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/23/21 13:47	04/26/21 08:31	1
Total TPH	<50.0	U	50.0	mg/Kg		04/23/21 13:47	04/26/21 08:31	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	111		70 - 130	04/23/21 13:47	04/26/21 08:31	1
o-Terphenyl	115		70 - 130	04/23/21 13:47	04/26/21 08:31	1

Lab Sample ID: LCS 880-2228/2-A

Matrix: Solid

Analysis Batch: 2306

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 2228

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1174		mg/Kg		117	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1036		mg/Kg		104	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	111		70 - 130
o-Terphenyl	102		70 - 130

Lab Sample ID: LCSD 880-2228/3-A

Matrix: Solid

Analysis Batch: 2306

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 2228

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1125		mg/Kg		112	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	1000	1013		mg/Kg		101	70 - 130	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	103		70 - 130
o-Terphenyl	98		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-2211/1-A

Matrix: Solid

Analysis Batch: 2297

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			04/25/21 07:02	1

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Goldenchild Battery - TE012921018

Job ID: 890-554-1
SDG: Eddy County NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-2211/2-A					Client Sample ID: Lab Control Sample				
Matrix: Solid					Prep Type: Soluble				
Analysis Batch: 2297									
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	250	268.9		mg/Kg		108	90 - 110		

Lab Sample ID: LCSD 880-2211/3-A					Client Sample ID: Lab Control Sample Dup				
Matrix: Solid					Prep Type: Soluble				
Analysis Batch: 2297									
Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	267.5		mg/Kg		107	90 - 110	1	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: Goldenchild Battery - TE012921018

Job ID: 890-554-1
SDG: Eddy County NM

GC VOA

Prep Batch: 2226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-554-1	FS06	Total/NA	Solid	5035	
890-554-2	SW04	Total/NA	Solid	5035	
890-554-3	PH04	Total/NA	Solid	5035	
890-554-4	PH04 A	Total/NA	Solid	5035	
MB 880-2226/5-B	Method Blank	Total/NA	Solid	5035	
LCS 880-2226/1-B	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-2226/2-B	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 2277

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-554-1	FS06	Total/NA	Solid	8021B	2226
890-554-2	SW04	Total/NA	Solid	8021B	2226
890-554-3	PH04	Total/NA	Solid	8021B	2226
890-554-4	PH04 A	Total/NA	Solid	8021B	2226
MB 880-2226/5-B	Method Blank	Total/NA	Solid	8021B	2226
LCS 880-2226/1-B	Lab Control Sample	Total/NA	Solid	8021B	2226
LCSD 880-2226/2-B	Lab Control Sample Dup	Total/NA	Solid	8021B	2226

GC Semi VOA

Prep Batch: 2228

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-554-1	FS06	Total/NA	Solid	8015NM Prep	
890-554-2	SW04	Total/NA	Solid	8015NM Prep	
890-554-3	PH04	Total/NA	Solid	8015NM Prep	
890-554-4	PH04 A	Total/NA	Solid	8015NM Prep	
MB 880-2228/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-2228/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-2228/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 2306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-554-1	FS06	Total/NA	Solid	8015B NM	2228
890-554-2	SW04	Total/NA	Solid	8015B NM	2228
890-554-3	PH04	Total/NA	Solid	8015B NM	2228
890-554-4	PH04 A	Total/NA	Solid	8015B NM	2228
MB 880-2228/1-A	Method Blank	Total/NA	Solid	8015B NM	2228
LCS 880-2228/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	2228
LCSD 880-2228/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	2228

HPLC/IC

Leach Batch: 2211

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-554-1	FS06	Soluble	Solid	DI Leach	
890-554-2	SW04	Soluble	Solid	DI Leach	
890-554-3	PH04	Soluble	Solid	DI Leach	
890-554-4	PH04 A	Soluble	Solid	DI Leach	
MB 880-2211/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-2211/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-2211/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Eurofins Xenco, Carlsbad

QC Association Summary

Client: WSP USA Inc.

Job ID: 890-554-1

Project/Site: Goldenchild Battery - TE012921018

SDG: Eddy County NM

HPLC/IC

Analysis Batch: 2297

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-554-1	FS06	Soluble	Solid	300.0	2211
890-554-2	SW04	Soluble	Solid	300.0	2211
890-554-3	PH04	Soluble	Solid	300.0	2211
890-554-4	PH04 A	Soluble	Solid	300.0	2211
MB 880-2211/1-A	Method Blank	Soluble	Solid	300.0	2211
LCS 880-2211/2-A	Lab Control Sample	Soluble	Solid	300.0	2211
LCSD 880-2211/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	2211

Lab Chronicle

Client: WSP USA Inc.

Project/Site: Goldenchild Battery - TE012921018

Job ID: 890-554-1

SDG: Eddy County NM

Client Sample ID: FS06

Lab Sample ID: 890-554-1

Date Collected: 04/22/21 09:25

Matrix: Solid

Date Received: 04/22/21 12:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2226	04/23/21 13:38	KL	XM
Total/NA	Analysis	8021B		1	2277	04/24/21 17:18	KL	XM
Total/NA	Prep	8015NM Prep			2228	04/23/21 13:47	DM	XM
Total/NA	Analysis	8015B NM		1	2306	04/26/21 14:52	AJ	XM
Soluble	Leach	DI Leach			2211	04/23/21 12:16	CH	XM
Soluble	Analysis	300.0		1	2297	04/25/21 09:19	WP	XM

Client Sample ID: SW04

Lab Sample ID: 890-554-2

Date Collected: 04/22/21 09:45

Matrix: Solid

Date Received: 04/22/21 12:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2226	04/23/21 13:38	KL	XM
Total/NA	Analysis	8021B		1	2277	04/24/21 17:39	KL	XM
Total/NA	Prep	8015NM Prep			2228	04/23/21 13:47	DM	XM
Total/NA	Analysis	8015B NM		1	2306	04/26/21 15:13	AJ	XM
Soluble	Leach	DI Leach			2211	04/23/21 12:16	CH	XM
Soluble	Analysis	300.0		1	2297	04/25/21 09:24	WP	XM

Client Sample ID: PH04

Lab Sample ID: 890-554-3

Date Collected: 04/22/21 10:20

Matrix: Solid

Date Received: 04/22/21 12:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2226	04/23/21 13:38	KL	XM
Total/NA	Analysis	8021B		1	2277	04/24/21 18:00	KL	XM
Total/NA	Prep	8015NM Prep			2228	04/23/21 13:47	DM	XM
Total/NA	Analysis	8015B NM		1	2306	04/26/21 15:34	AJ	XM
Soluble	Leach	DI Leach			2211	04/23/21 12:16	CH	XM
Soluble	Analysis	300.0		1	2297	04/25/21 09:29	WP	XM

Client Sample ID: PH04 A

Lab Sample ID: 890-554-4

Date Collected: 04/22/21 10:25

Matrix: Solid

Date Received: 04/22/21 12:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2226	04/23/21 13:38	KL	XM
Total/NA	Analysis	8021B		1	2277	04/24/21 18:20	KL	XM
Total/NA	Prep	8015NM Prep			2228	04/23/21 13:47	DM	XM
Total/NA	Analysis	8015B NM		1	2306	04/26/21 15:56	AJ	XM
Soluble	Leach	DI Leach			2211	04/23/21 12:16	CH	XM
Soluble	Analysis	300.0		1	2297	04/25/21 09:34	WP	XM

Laboratory References:

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

Eurofins Xenco, Carlsbad

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: Goldenchild Battery - TE012921018

Job ID: 890-554-1
SDG: Eddy County NM

Laboratory: Eurofins Xenco, Midland

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

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

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

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

Method Summary

Client: WSP USA Inc.
Project/Site: Goldenchild Battery - TE012921018

Job ID: 890-554-1
SDG: Eddy County NM

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

Sample Summary

Client: WSP USA Inc.

Job ID: 890-554-1

Project/Site: Goldenchild Battery - TE012921018

SDG: Eddy County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-554-1	FS06	Solid	04/22/21 09:25	04/22/21 12:35	- 4
890-554-2	SW04	Solid	04/22/21 09:45	04/22/21 12:35	0 - 4
890-554-3	PH04	Solid	04/22/21 10:20	04/22/21 12:35	- 1
890-554-4	PH04 A	Solid	04/22/21 10:25	04/22/21 12:35	- 3

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14



5th Info: 15064414 C76
 NAAP2035256230
 NAAP201331137
 NAAP201335437

cust center: 1055751001
 APE: 3001541046

Chain of Custody

Work Order No: _____

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
 Midland, TX (432) 704-5440 El Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1295
 Hobbs, NM (575) 392-7550 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000

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Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littlell
Company Name:	WSP USA Inc. Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	522 West Mermond
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	elizabeth.naka@wsp.com, dan.moir@wsp.com

Program: UST/PST	☐ RP	☐ Brownfields	☐ RC	☐ Superfund
State of Project:				
Reporting Level II	☐ Level III	☐ P1/UST	☐ RP	☐ Level IV
Deliverables: EDD	☐ ADAPT	Other:		

Project Name:	Goldbach, BATTERY	Turn Around	
Project Number:	TE012921018	Routine	☐
P.O. Number:	Eddy County	Rush: 3 day	
Sampler's Name:	Elizabeth Naka	Due Date:	

SAMPLE RECEIPT	Temp Blank:	☒ Yes	☐ No	Well Ice:	☒ Yes	☐ No	
Temperature (°C):	1.6/1.4	Thermometer ID					
Received Intact:	☒ Yes	☐ No	Correction Factor: 27MM-567				
Cooler Custody Seals:	Yes	☐ No	Total Containers: -0.2				
Sample Custody Seals:	Yes	☐ No					

Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
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ANALYSIS REQUEST															
890-554 Chain of Custody															

Work Order Notes	TAT starts the day received by the lab, if received by 4:30pm
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Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
ES06	S	4/22/21	0925	4'	1	X	X	X	comp site
SW04			0945	0'-4'					comp site
PH04			1020	1'					discart
PH04X			1025	3'					discart

Total 200.7 / 6010	200.8 / 6020:	8RCRA 13PPM	Texas 11	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	SiO2	Na	Sr	Ti	Sn	U	V	Zn				
Circle Method(s) and Material(s) to be analyzed		ICLP/SLP 6010- 8RCRA		60-As	60-Ba	60-Be	60-Cd	60-Cr	60-Cu	60-Pb	60-Mn	60-Mo	60-Ni	60-Se	60-Ag	60-Ti	60-U	60-V	60-Zn																
		1637 / 245.1 / 7470 / 7471 : Hg																																	

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Elizabeth Naka	Joe Culp	4-22-21 1235			

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-554-1

SDG Number: Eddy County NM

Login Number: 554

List Number: 1

Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-554-1

SDG Number: Eddy County NM

Login Number: 554

List Number: 2

Creator: Copeland, Tatiana

List Source: Eurofins Midland

List Creation: 04/23/21 11:08 AM

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

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

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

CONDITIONS

Action 30100

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 30100
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
kcollins	Deferral approved with condition that further excavation is done when either construction in the area is done or when plugging of the well occurs.	6/18/2021