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	NAPP2107747725
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

Latitude 32.53377 Longitude -103.68349
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Chistera Battery	Site Type Battery
Date Release Discovered 03/08/2021	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
B	32	20S	33E	Lea

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 18.65	Volume Recovered (bbls) 14.00
	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: The ½" bleeder connection threads separated from the 6" Victaulic tapped blind, causing fluids to release into containment and onto the ground. A vaccum truck recovered standing fluids. A third-party contractor has been retained for remediation activities.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2107747725
District RP	
Facility ID	
Application ID	

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

Initial Response

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

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

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

NA

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

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

Printed Name: Adrian Baker Title: SSHE Coordinator

Signature: Adrian Baker Date: 3/18/21

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

OCD Only

Received by: Ramona Marcus Date: 5/4/2021

Location:	Chistera Battery	
Spill Date:	3/8/2021	
Area 1		
Approximate Area =	78.60	cu.ft.
VOLUME OF LEAK		
Total Produced Water =	14.00	bbls
Area 2		
Approximate Area =	2088.00	sq. ft.
Average Saturation (or depth) of spill =	1.00	inches

Average Porosity Factor =	0.15	

VOLUME OF LEAK		
Total Produced Water =	4.65	bbls

TOTAL VOLUME OF LEAK		
Total Produced Water =	**18.65**	**bbls**
TOTAL VOLUME RECOVERED		
Total Produced Water =	**14.00**	**bbls**

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

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

CONDITIONS

Action 23751

CONDITIONS OF APPROVAL

Operator:	OGRID:	Action Number:	Action Type:
XTO ENERGY, INC 6401 Holiday Hill Road Building #5 Midland, TX79707	5380	23751	C-141

OCD Reviewer	Condition
rmarcus	None

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2107747725
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<50 ft(bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

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

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

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Page 4

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2107747725
District RP	
Facility ID	
Application ID	

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

Printed Name: Kyle Littrell Title: Environmental Manager

Signature: Date: 06/03/2021

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

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2107747725
District RP	
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: Environmental Manager

Signature: Date: 06/03/2021

email: Kyle.Littrell@exxonmobil.com Telephone: 432-221-7331

OCD Only

Received by: Chad Hensley Date: 08/10/2021

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

Closure Approved by: Chad Hensley Date: 08/10/2021

Printed Name: Chad Hensley Title: Environmental Specialist Advanced

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

June 3, 2021

District I
New Mexico Oil Conservation Division
1625 N. French Drive
Hobbs, New Mexico 88240

RE: Closure Request
Chistera Battery
Incident Number nAPP2107747725
Lea County, New Mexico

To Whom It May Concern:

WSP USA Inc. (WSP), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing site assessment, excavation, and soil sampling activities at the Chistera Battery (Site) in Unit B, Section 32, Township 20 South, Range 33 East, in Lea County, New Mexico (Figure 1). The purpose of the site assessment, excavation, and soil sampling activities was to address impacts to soil following a release of produced water at the Site. Based on the excavation activities and soil sample laboratory analytical results, XTO is submitting this Closure Request and requesting no further action (NFA) for Incident Number nAPP2107747725.

RELEASE BACKGROUND

On March 8, 2021, a half-inch bleeder connection separated from the 6-inch Victaulic tapped blind, resulting in the release of approximately 18.65 barrels (bbls) of produced water onto the surface of the well pad. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; approximately 14 bbls of produced water were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on March 18, 2021. The release was assigned Incident Number nAPP2107747725.

SITE CHARACTERIZATION

WSP characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be less than 50 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is United States Geological Survey (USGS) well 323150103425401, located approximately 1.87 miles southwest of the Site. The groundwater well was most recently measured in February 1976 with a reported depth to groundwater of 41 feet bgs and an unknown total depth. Ground surface elevation at the groundwater well location

is 3,587 feet above mean sea level (amsl), which is approximately 38 feet lower in elevation than the Site. All wells used for depth to groundwater determination are depicted on Figure 1. The referenced well records are included in Attachment 1.

The closest continuously flowing or significant watercourse to the Site is an intermittent palustrine, located approximately 0.5 miles northwest 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 (low 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 April 5, 2021, WSP personnel visited the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. WSP personnel collected four preliminary assessment soil samples (SS01 through SS04) within and around the release extent from a depth of approximately 0.5 feet bgs to assess the lateral extent of impacted soil. The preliminary soil samples were field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. The release extent 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-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results for preliminary soil samples SS01 through SS03 indicated that chloride concentrations exceeded the Closure Criteria; benzene, BTEX, and TPH concentrations were compliant with the Closure Criteria. Laboratory analytical results for preliminary soil sample SS04, indicated benzene, BTEX, TPH, and chloride concentrations were compliant with 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 SOIL SAMPLING ACTIVITIES AND ANALYTICAL RESULTS

On April 15, 2021, WSP personnel were at the Site to oversee excavation activities as indicated by visible staining in the release area, field screening activities, and laboratory analytical results for the preliminary soil samples. Excavation activities were completed to remove the surficial staining in the release footprint and excavate the impacted soil in the areas surrounding preliminary soil samples SS01 through SS03. Excavation activities were performed using track-mounted track hoe 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 2.

Following removal of impacted soil, WSP collected 5-point composite soil samples every 200 square feet from the sidewalls and floor of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples SW01 and SW02 were collected from the sidewalls of the excavation from depths ranging from the ground surface to 3 feet bgs. Composite soil samples FS01 through FS04 were collected from the floor of the excavation from a depth of 3 feet bgs. A second smaller excavation was completed within the release extent between the concrete runners to a depth of 1.5 feet bgs. Composite floor sample FS05 was collected from the excavation. Due to the small size of this excavation, soil sample FS05 represented the floor and sidewalls of the excavation. The excavation soil samples were collected, handled, and analyzed following the same procedures as described above.

Laboratory analytical results for excavation sidewall samples SW01 and SW02, and floor samples FS01 through FS05, indicated benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria. The final excavation extent and excavation soil sample locations are presented on Figure 3.

The excavation areas totaled approximately 730 square feet. A total of approximately 79 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. After completion of confirmation sampling, the excavation areas were backfilled.

DELINEATION SOIL SAMPLING ACTIVITIES AND ANALYTICAL RESULTS

WSP personnel were at the Site on May 28, 2021 to oversee delineation activities to confirm the lateral and vertical extent of the release. Five potholes (PH01 through PH05) were advanced around the release extent via backhoe to depths ranging from 2.5 feet to 3 feet bgs. Delineation soil samples were collected from the potholes from depths ranging from 1 foot to 3 feet bgs. 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 3. The delineation soil sample locations are depicted on Figure 4.

Laboratory analytical results for delineation samples PH01/PH01A through PH05/PH05A, collected from depths ranging from 1-foot to 3 feet bgs, indicated benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria. Based on the delineation soil sample analytical results, the lateral and vertical extent of the release was successfully defined.

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the March 8, 2021 release of produced water. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria. Based on the soil sample analytical results, no further remediation was required. The excavations were backfilled with material purchased locally and recontoured to match pre-existing site conditions.

Initial response efforts which included removal of freestanding fluids via hydrovac and excavation of impacted soil have mitigated impacts at this Site. WSP and XTO believe these remedial actions are protective of human health, the environment, and groundwater. As such, XTO respectfully requests no further action for Incident Number nAPP2107747725.

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

Sincerely,

WSP USA Inc.

Kalei Jennings
Associate Consultant

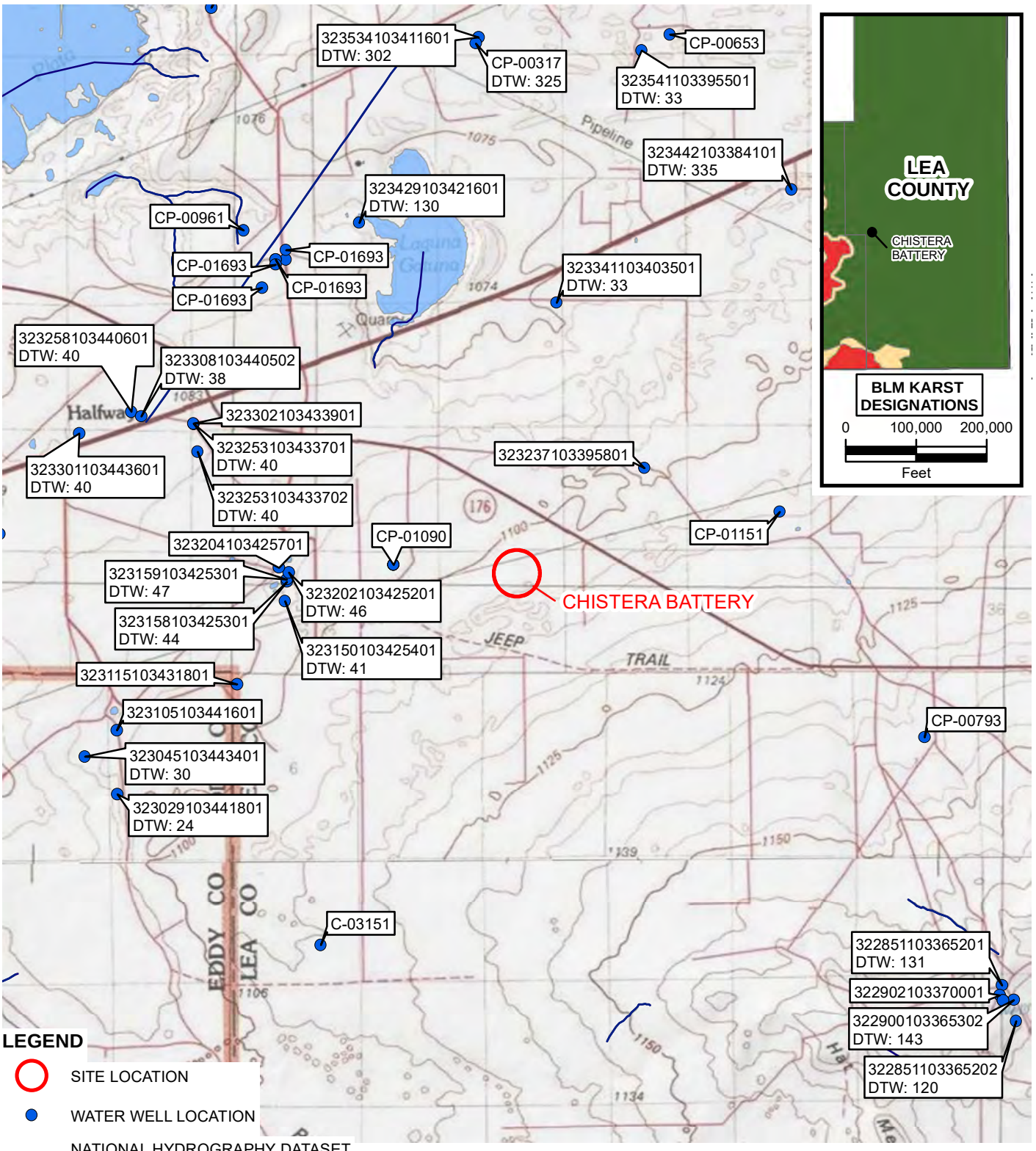
Ashley L. Ager, P.G.
Managing Director, Geologist

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

Attachments:

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

FIGURES



LEGEND

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

NOTE: INCIDENT NUMBER NAPP2107747725
DTW: DEPTH TO WATER IN FEET
BLM: BUREAU OF LAND MANAGEMENT

IMAGE COURTESY OF ESRI/USGS

0 6,000 12,000
Feet

N

FIGURE 1
SITE LOCATION MAP
CHISTERA BATTERY
UNIT B SEC 32 T20S R33E
LEA COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012921036_CHISTERA BATTERY\012921036_FIG01_SL_RECEPTOR_2021.mxd

IMAGE COURTESY OF ESRI

LEGEND

- PRELIMINARY SOIL SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE CLOSURE CRITERIA
- PRELIMINARY SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- RELEASE EXTENT
- INFRASTRUCTURE

NOTE: INCIDENT NUMBER NAPP2107747725
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

0 50 100
Feet

N

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
CHISTERA BATTERY
UNIT B SEC 32 T20S R33E
LEA COUNTY, NEW MEXICO
XTO ENERGY, INC.

wsp

P:\XTO Energy\GIS\MXD\012921036_CHISTERA BATTERY\012921036_FIG02_PRELIMINARY_2021.mxd

IMAGE COURTESY OF ESRI

LEGEND

- FLOOR SAMPLE IN COMAPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- SIDEWALL SAMPLE IN COMAPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- EXCAVATION EXTENT
- INFRASTRUCTURE

NOTE: INCIDENT NUMBER NAPP2107747725
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

0 50 100
Feet

N

FIGURE 3
EXCAVATION SOIL SAMPLE LOCATIONS
CHISTERA BATTERY
UNIT B SEC 32 T20S R33E
LEA COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012921036_CHISTERA BATTERY\012921036_FIG03_EXCAVATION_2021.mxd

IMAGE COURTESY OF ESRI

LEGEND

- DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- EXCAVATION EXTENT
- INFRASTRUCTURE

0 50 100

Feet

N

NOTE: INCIDENT NUMBER NAPP2107747725
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

FIGURE 4
DELINEATION SOIL SAMPLE LOCATIONS
CHISTERA BATTERY
UNIT B SEC 32 T20S R33E
LEA COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012921036_CHISTERA BATTERY\012921036_FIG04_DELINEATION_2021.mxd

TABLES

Table 1

Soil Analytical Results
Christera Battery
Incident Number nAPP2107747725
Lea County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			**10**	**50**	NE	NE	NE	NE	**100**	**600**
Surface Samples										
SS01	04/05/2021	0.5	<0.00198	<0.00198	<49.9	60.6	<49.9	60.6	60.6	**9,790**
SS02	04/05/2021	0.5	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	**11,000**
SS03	04/05/2021	0.5	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	**19,200**
SS04	05/28/2021	0.5	<0.00200	<0.00399	<50.0	55.6	<50.0	55.6	55.6	67.7
Excavation Floor Samples										
FS01	04/15/2021	3	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	311
FS02	04/15/2021	3	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	32.8
FS03	04/15/2021	3	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	30.3
FS04	04/15/2021	3	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	285
FS05	04/15/2021	1.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	311
Excavation Sidewall Samples										
SW01	04/15/2021	0 - 3	<0.00200	<0.00401	<50.0	54.6	<50.0	<50.0	54.6	165
SW02	04/15/2021	0 - 3	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	141
Delineation Samples										
PH01	05/28/2021	1	<0.00198	<0.00396	<49.8	<49.8	<49.8	<49.8	<49.8	27.2
PH01A	05/28/2021	3	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	<4.97
PH02	05/28/2021	1	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	6.03
PH02A	05/28/2021	2.5	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	39.1
PH03	05/28/2021	1	<0.00198	<0.00397	<49.9	<49.9	<49.9	<49.9	<49.9	<4.95

Table 1

Soil Analytical Results
Christera Battery
Incident Number nAPP2107747725
Lea County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			**10**	**50**	NE	NE	NE	NE	**100**	**600**
PH03A	05/28/2021	2.5	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	7.61
PH04	05/28/2021	1	<0.00200	<0.00400	<49.7	<49.7	<49.7	<49.7	<49.7	<5.05
PH04A	05/28/2021	3	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	<5.02
PH05	05/28/2021	1	<0.00198	<0.00396	<49.7	<49.7	<49.7	<49.7	<49.7	<4.97
PH05A	05/28/2021	3	<0.00198	<0.00397	<49.8	<49.8	<49.8	<49.8	<49.8	<4.98

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

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater | Geographic Area: United States | GO

Click to hideNews Bulletins

- Explore the **NEW** USGS National Water Dashboard to access real-time data from over 13,500 stations nationwide.
- Full News

Groundwater levels for the Nation

* IMPORTANT: Next Generation Station Page

Search Results -- 1 sites found

site_no list =

- 323150103425401

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

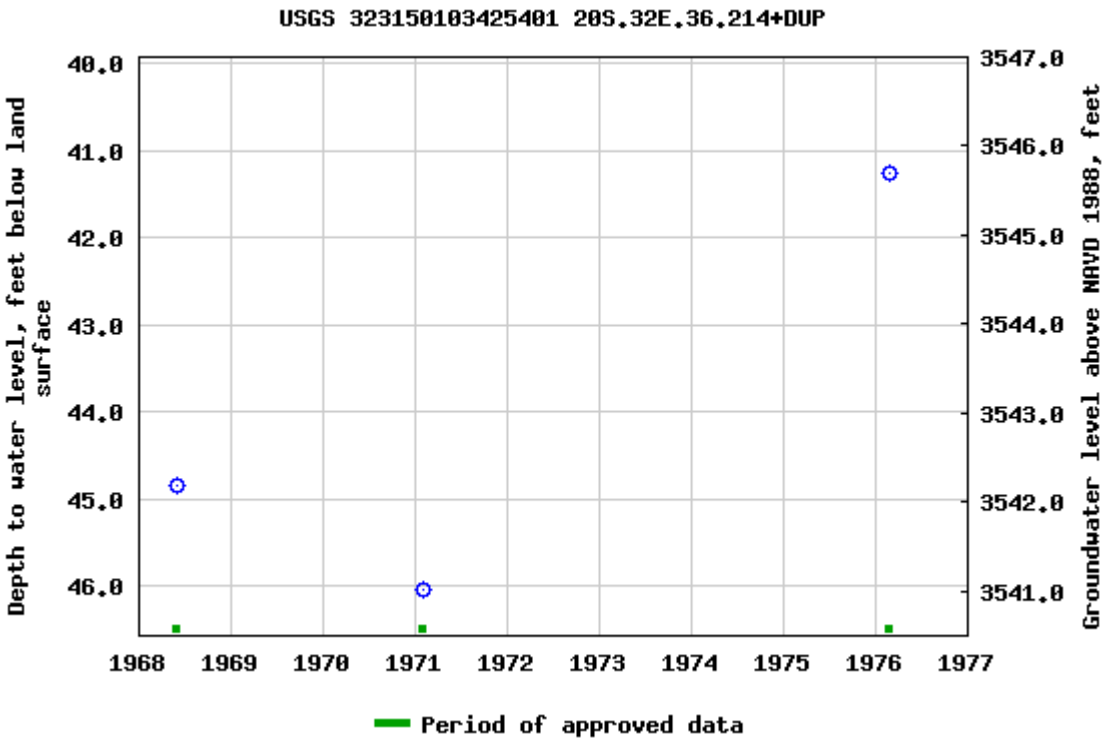
USGS 323150103425401 20S.32E.36.214+DUP

Available data for this site | Groundwater: Field measurements | GO

Lea County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°31'50", Longitude 103°42'54" NAD27
Land-surface elevation 3,587 feet above NAVD88
This well is completed in the Other aquifers (N9999OTHER) national aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period



Breaks in the plot represent a gap of at least one year between field measurements.
Download a presentation-quality graph

Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

Title: Groundwater for USA: Water Levels
URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2021-04-15 15:00:57 EDT
0.77 0.62 nadww01

ATTACHMENT 2: PHOTOGRAPHIC LOG

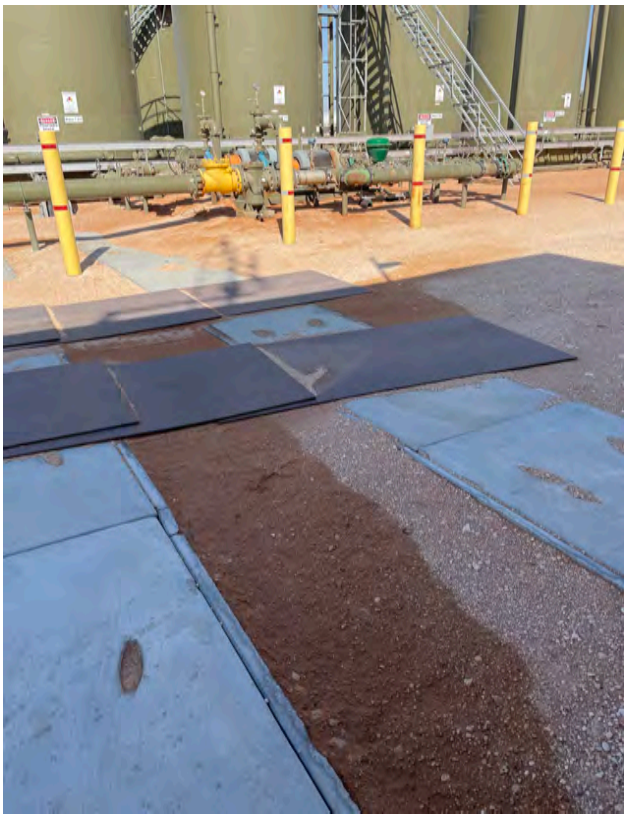
PHOTOGRAPHIC LOG		
XTO ENERGY, INC.	Chistera Battery Lea County, New Mexico	nAPP2107747725

Photo No.	Date
1	April 5, 2021

View of release on pad facing south.

Photo No.	Date
2	April 5, 2021

View of release near concrete runners.



PHOTOGRAPHIC LOG		
XTO ENERGY, INC.	Chistera Battery Lea County, New Mexico	nAPP2107747725

Photo No.	Date
3	April 15, 2021

View of completed excavation, facing north.

Photo No.	Date
4	April 14, 2021

View of excavation between concrete runners facing west.

PHOTOGRAPHIC LOG		
XTO ENERGY, INC.	Chistera Battery Lea County, New Mexico	nAPP2107747725

Photo No.	Date
5	May 28, 2021

View of delineation pothole PH03, facing north.

Photo No.	Date
6	May 28, 2021

View delineation pothole PH04 facing west.

ATTACHMENT 3: LITHOLOGIC / SOIL SAMPLING LOG

WSP USA
508 West Stevens Street
Carlsbad, New Mexico 88220

BH or PH Name: PH01	Date: 5/28/2021
Site Name:	Chistera Battery
RP or Incident Number:	nAPP2107747725
LTE Job Number:	TE012921036
Logged By WM	Method: Backhoe
Lat/Long: 32.5338627, -103.6836818	Field Screening: Chloride, PID
Hole Diameter: 1.25'	Total Depth: 3'

LITHOLOGIC / SOIL SAMPLING LOG

Comments:
40% Correction factor included in Chloride concentrations

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	<179	0.1	N	PH01		1		0' - 3': Caliche, moderate consolidation, some sand, tan/white
						2	CCHE	
D	<179	0	N	PH01A		3		3' : Increase consolidation to high
						4		TD @ 3'
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		
						13		
						14		
						15		
						16		
						17		
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						19		
						20		
						21		
						22		
						23		
						24		
						25		

WSP USA
508 West Stevens Street
Carlsbad, New Mexico 88220

BH or PH Name: PH02	Date: 5/28/2021
Site Name:	Chistera Battery
RP or Incident Number:	nAPP2107747725
LTE Job Number:	TE012921036
Logged By WM	Method: Backhoe
Lat/Long: 32.5337146, -103.6833439	Field Screening: Chloride, PID
Hole Diameter: 1.25'	Total Depth: 2.5'

LITHOLOGIC / SOIL SAMPLING LOG

Comments:
40% Correction factor included in Chloride concentrations

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	<179	0.1	N	PH02		1	CCHE	0' - 3': Caliche, moderate consolidation, some sand, tan/white
D	<179	0.1	N	PH02A		2		3' : Increase consolidation to high
						3		TD @ 2.5' Refusal at 2.5'
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		
						13		
						14		
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						21		
						22		
						23		
						24		
						25		

WSP USA
508 West Stevens Street
Carlsbad, New Mexico 88220

BH or PH Name: PH03	Date: 5/28/2021
Site Name:	Chistera Battery
RP or Incident Number:	nAPP2107747725
LTE Job Number:	TE012921036
Logged By WM	Method: Backhoe
Lat/Long: 32.5336219, -103.6833345	Field Screening: Chloride, PID
Hole Diameter: 1.25'	Total Depth: 3'

LITHOLOGIC / SOIL SAMPLING LOG

Comments:
40% Correction factor included in Chloride concentrations

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	<179	0.2	N	PH03		1		0' - 3': Caliche, moderate consolidation, some sand, tan/white
						2	CCHE	
D	<179	0	N	PH03A		3		3' : Increase consolidation to high
						4		TD @ 3'
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		
						13		
						14		
						15		
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						20		
						21		
						22		
						23		
						24		
						25		

WSP USA

508 West Stevens Street
Carlsbad, New Mexico 88220

BH or PH Name: PH04	Date: 5/28/2021
Site Name:	Chistera Battery
RP or Incident Number:	nAPP2107747725
LTE Job Number:	TE012921036
Logged By WM	Method: Backhoe
Lat/Long: 32.5336294, -103.6837543	Field Screening: Chloride, PID
Hole Diameter: 1.25'	Total Depth: 3'

LITHOLOGIC / SOIL SAMPLING LOG

Comments:
40% Correction factor included in Chloride concentrations

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	<179	0	N	PH04		1	CCHE	0' - 0.5': Caliche, moderate consolidation, some sand, tan/white
						2	SM	0.5' - 3': SAND, large grain, well graded, some silt, tan/brown
D	<179	0	N	PH04A		3		3': Caliche gravel present (1mm - 5mm)
						4		TD @ 3'
						5		
						6		
						7		
						8		
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						11		
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						25		

WSP USA
508 West Stevens Street
Carlsbad, New Mexico 88220

BH or PH Name: PH05	Date: 5/28/2021
Site Name:	Chistera Battery
RP or Incident Number:	nAPP2107747725
LTE Job Number:	TE012921036

LITHOLOGIC / SOIL SAMPLING LOG

Logged By WM	Method: Backhoe		
Lat/Long: 32.5337866, -103.6837482	Field Screening: Chloride, PID	Hole Diameter: 1.25'	Total Depth: 3'

Comments:
40% Correction factor included in Chloride concentrations

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	<179	0.2	N	PH05		1	CCHE	0' - 0.5': Caliche, moderate consolidation, some sand, tan/white
						2	SM	0.5' - 3': SAND, large grain, well graded, some silt, tan/brown
D	<179	0	N	PH05A		3		3': Caliche gravel present (1mm - 5mm)
						4		TD @ 3'
						5		
						6		
						7		
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ATTACHMENT 4: LABORATORY ANALYTICAL RESULTS

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-486-1
Laboratory Sample Delivery Group: Lea County NM
Client Project/Site: Chistera Battery

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

Attn: Dan Moir

JKramer

Authorized for release by:
4/19/2021 11:25:20 AM

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

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

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

Client: WSP USA Inc.
Project/Site: Chistera Battery

Laboratory Job ID: 890-486-1
SDG: Lea County NM

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-486-1
Project/Site: Chistera Battery SDG: Lea County NM

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc.
Project/Site: Chistera Battery

Job ID: 890-486-1
SDG: Lea County NM

Job ID: 890-486-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-486-1

Comments
No additional comments.

Receipt
The samples were received on 4/5/2021 1:33 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 1.4º C.

Receipt Exceptions

The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: SS01 (890-486-1), SS02 (890-486-2) and SS03 (890-486-3).

GC VOA
Method 8021B: The matrix spike duplicate (MSD) recoveries for preparation batch 880-1477 and analytical batch 880-1603 were outside control limits. Non-homogeneity is 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.

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

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

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

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

Client Sample Results

Client: WSP USA Inc. Job ID: 890-486-1
Project/Site: Chistera Battery SDG: Lea County NM

Client Sample ID: SS01 Lab Sample ID: 890-486-1

Date Collected: 04/05/21 10:00 **Matrix: Solid**
Date Received: 04/05/21 13:33
Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		04/07/21 16:15	04/09/21 21:35	1
Toluene	<0.00198	U	0.00198		mg/Kg		04/07/21 16:15	04/09/21 21:35	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		04/07/21 16:15	04/09/21 21:35	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		04/07/21 16:15	04/09/21 21:35	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		04/07/21 16:15	04/09/21 21:35	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		04/07/21 16:15	04/09/21 21:35	1
Total BTEX	<0.00198	U	0.00198		mg/Kg		04/07/21 16:15	04/09/21 21:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*	*04/07/21 16:15*	*04/09/21 21:35*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*04/07/21 16:15*	*04/09/21 21:35*	*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	**60.6**		49.9		mg/Kg		04/06/21 15:30	04/07/21 16:40	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		04/06/21 15:30	04/07/21 16:40	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/06/21 15:30	04/07/21 16:40	1
Total TPH	**60.6**		49.9		mg/Kg		04/06/21 15:30	04/07/21 16:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*04/06/21 15:30*	*04/07/21 16:40*	*1*
o-Terphenyl	*90*		*70 - 130*	*04/06/21 15:30*	*04/07/21 16:40*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9790**		50.0		mg/Kg			04/17/21 18:40	10

Client Sample ID: SS02 Lab Sample ID: 890-486-2

Date Collected: 04/05/21 10:05 **Matrix: Solid**
Date Received: 04/05/21 13:33
Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		04/07/21 16:15	04/09/21 22:00	1
Toluene	<0.00198	U	0.00198		mg/Kg		04/07/21 16:15	04/09/21 22:00	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		04/07/21 16:15	04/09/21 22:00	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		04/07/21 16:15	04/09/21 22:00	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		04/07/21 16:15	04/09/21 22:00	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		04/07/21 16:15	04/09/21 22:00	1
Total BTEX	<0.00198	U	0.00198		mg/Kg		04/07/21 16:15	04/09/21 22:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*129*		*70 - 130*	*04/07/21 16:15*	*04/09/21 22:00*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*04/07/21 16:15*	*04/09/21 22:00*	*1*

Client Sample Results

Client: WSP USA Inc. Job ID: 890-486-1
Project/Site: Chistera Battery SDG: Lea County NM

Client Sample ID: SS02 Lab Sample ID: 890-486-2

Date Collected: 04/05/21 10:05 **Matrix: Solid**
Date Received: 04/05/21 13:33
Sample Depth: - 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		04/06/21 15:30	04/07/21 17:01	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		04/06/21 15:30	04/07/21 17:01	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		04/06/21 15:30	04/07/21 17:01	1
Total TPH	<49.8	U	49.8		mg/Kg		04/06/21 15:30	04/07/21 17:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*04/06/21 15:30*	*04/07/21 17:01*	*1*
o-Terphenyl	*103*		*70 - 130*	*04/06/21 15:30*	*04/07/21 17:01*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**11000**		99.4		mg/Kg			04/17/21 18:45	20

Client Sample ID: SS03 Lab Sample ID: 890-486-3

Date Collected: 04/05/21 10:10 **Matrix: Solid**
Date Received: 04/05/21 13:33
Sample Depth: - 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		04/07/21 16:15	04/09/21 22:26	1
Toluene	<0.00198	U	0.00198		mg/Kg		04/07/21 16:15	04/09/21 22:26	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		04/07/21 16:15	04/09/21 22:26	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		04/07/21 16:15	04/09/21 22:26	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		04/07/21 16:15	04/09/21 22:26	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		04/07/21 16:15	04/09/21 22:26	1
Total BTEX	<0.00198	U	0.00198		mg/Kg		04/07/21 16:15	04/09/21 22:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*04/07/21 16:15*	*04/09/21 22:26*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*04/07/21 16:15*	*04/09/21 22:26*	*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		04/06/21 15:30	04/07/21 17:22	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		04/06/21 15:30	04/07/21 17:22	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/06/21 15:30	04/07/21 17:22	1
Total TPH	<49.9	U	49.9		mg/Kg		04/06/21 15:30	04/07/21 17:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*04/06/21 15:30*	*04/07/21 17:22*	*1*
o-Terphenyl	*93*		*70 - 130*	*04/06/21 15:30*	*04/07/21 17:22*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**19200**		250		mg/Kg			04/17/21 18:50	50

Surrogate Summary

Client: WSP USA Inc.
Project/Site: Chistera Battery

Job ID: 890-486-1
SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-486-1	SS01	121	103
890-486-2	SS02	129	105
890-486-3	SS03	119	105
LCS 880-1477/1-A	Lab Control Sample	105	103
LCSD 880-1477/2-A	Lab Control Sample Dup	116	117
MB 880-1477/5-A	Method Blank	70	88

Surrogate Legend

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

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-486-1	SS01	93	90
890-486-2	SS02	109	103
890-486-3	SS03	96	93
LCS 880-1389/2-A	Lab Control Sample	99	89
LCSD 880-1389/3-A	Lab Control Sample Dup	100	87
MB 880-1389/1-A	Method Blank	104	101

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: Chistera Battery

Job ID: 890-486-1
SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-1477/5-A
Matrix: Solid
Analysis Batch: 1603

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 1477

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/07/21 16:15	04/09/21 19:53	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/07/21 16:15	04/09/21 19:53	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/07/21 16:15	04/09/21 19:53	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/07/21 16:15	04/09/21 19:53	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/07/21 16:15	04/09/21 19:53	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/07/21 16:15	04/09/21 19:53	1
Total BTEX	<0.00200	U	0.00200		mg/Kg		04/07/21 16:15	04/09/21 19:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*70*		*70 - 130*	*04/07/21 16:15*	*04/09/21 19:53*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*04/07/21 16:15*	*04/09/21 19:53*	*1*

Lab Sample ID: LCS 880-1477/1-A
Matrix: Solid
Analysis Batch: 1603

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 1477

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.1007		mg/Kg		101	70 - 130		
Toluene			0.100	0.1078		mg/Kg		108	70 - 130		
Ethylbenzene			0.100	0.09955		mg/Kg		100	70 - 130		
m-Xylene & p-Xylene			0.200	0.2038		mg/Kg		102	70 - 130		
o-Xylene			0.100	0.1115		mg/Kg		111	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 880-1477/2-A
Matrix: Solid
Analysis Batch: 1603

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 1477

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1110		mg/Kg		111	70 - 130	10	35
Toluene			0.100	0.1145		mg/Kg		114	70 - 130	6	35
Ethylbenzene			0.100	0.1091		mg/Kg		109	70 - 130	9	35
m-Xylene & p-Xylene			0.200	0.2236		mg/Kg		112	70 - 130	9	35
o-Xylene			0.100	0.1223		mg/Kg		122	70 - 130	9	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*
1,4-Difluorobenzene (Surr)	*117*		*70 - 130*

QC Sample Results

Client: WSP USA Inc.
Project/Site: Chistera Battery

Job ID: 890-486-1
SDG: Lea County NM

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

Lab Sample ID: MB 880-1389/1-A
Matrix: Solid
Analysis Batch: 1419

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 1389

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		04/06/21 15:30	04/07/21 10:39	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/06/21 15:30	04/07/21 10:39	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/06/21 15:30	04/07/21 10:39	1
Total TPH	<50.0	U	50.0		mg/Kg		04/06/21 15:30	04/07/21 10:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*04/06/21 15:30*	*04/07/21 10:39*	*1*
o-Terphenyl	*101*		*70 - 130*	*04/06/21 15:30*	*04/07/21 10:39*	*1*

Lab Sample ID: LCS 880-1389/2-A
Matrix: Solid
Analysis Batch: 1419

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 1389

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1113		mg/Kg		111	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	929.9		mg/Kg		93	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*99*		*70 - 130*
o-Terphenyl	*89*		*70 - 130*

Lab Sample ID: LCSD 880-1389/3-A
Matrix: Solid
Analysis Batch: 1419

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 1389

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1178		mg/Kg		118	70 - 130	6	20
Diesel Range Organics (Over C10-C28)			1000	939.7		mg/Kg		94	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*100*		*70 - 130*
o-Terphenyl	*87*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-1764/1-A
Matrix: Solid
Analysis Batch: 1932

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			04/17/21 16:28	1

QC Sample Results

Client: WSP USA Inc.
Project/Site: Chistera Battery

Job ID: 890-486-1
SDG: Lea County NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-1764/2-A
Matrix: Solid
Analysis Batch: 1932

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	242.2		mg/Kg		97	90 - 110

Lab Sample ID: LCSD 880-1764/3-A
Matrix: Solid
Analysis Batch: 1932

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	244.8		mg/Kg		98	90 - 110	1	20

QC Association Summary

Client: WSP USA Inc. Job ID: 890-486-1
Project/Site: Chistera Battery SDG: Lea County NM

GC VOA

Prep Batch: 1477

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-486-1	SS01	Total/NA	Solid	5035	
890-486-2	SS02	Total/NA	Solid	5035	
890-486-3	SS03	Total/NA	Solid	5035	
MB 880-1477/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-1477/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-1477/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 1603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-486-1	SS01	Total/NA	Solid	8021B	1477
890-486-2	SS02	Total/NA	Solid	8021B	1477
890-486-3	SS03	Total/NA	Solid	8021B	1477
MB 880-1477/5-A	Method Blank	Total/NA	Solid	8021B	1477
LCS 880-1477/1-A	Lab Control Sample	Total/NA	Solid	8021B	1477
LCSD 880-1477/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	1477

GC Semi VOA

Prep Batch: 1389

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-486-1	SS01	Total/NA	Solid	8015NM Prep	
890-486-2	SS02	Total/NA	Solid	8015NM Prep	
890-486-3	SS03	Total/NA	Solid	8015NM Prep	
MB 880-1389/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-1389/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-1389/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 1419

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-486-1	SS01	Total/NA	Solid	8015B NM	1389
890-486-2	SS02	Total/NA	Solid	8015B NM	1389
890-486-3	SS03	Total/NA	Solid	8015B NM	1389
MB 880-1389/1-A	Method Blank	Total/NA	Solid	8015B NM	1389
LCS 880-1389/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	1389
LCSD 880-1389/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	1389

HPLC/IC

Leach Batch: 1764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-486-1	SS01	Soluble	Solid	DI Leach	
890-486-2	SS02	Soluble	Solid	DI Leach	
890-486-3	SS03	Soluble	Solid	DI Leach	
MB 880-1764/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-1764/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-1764/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 1932

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-486-1	SS01	Soluble	Solid	300.0	1764
890-486-2	SS02	Soluble	Solid	300.0	1764
890-486-3	SS03	Soluble	Solid	300.0	1764

QC Association Summary

Client: WSP USA Inc. Job ID: 890-486-1
Project/Site: Chistera Battery SDG: Lea County NM

HPLC/IC (Continued)

Analysis Batch: 1932 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-1764/1-A	Method Blank	Soluble	Solid	300.0	1764
LCS 880-1764/2-A	Lab Control Sample	Soluble	Solid	300.0	1764
LCSD 880-1764/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	1764

Lab Chronicle

Client: WSP USA Inc. Job ID: 890-486-1
Project/Site: Chistera Battery SDG: Lea County NM

Client Sample ID: SS01 Lab Sample ID: 890-486-1

Date Collected: 04/05/21 10:00 **Matrix: Solid**
Date Received: 04/05/21 13:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1477	04/07/21 16:15	KL	XM
Total/NA	Analysis	8021B		1	1603	04/09/21 21:35	MR	XM
Total/NA	Prep	8015NM Prep			1389	04/06/21 15:30	DM	XM
Total/NA	Analysis	8015B NM		1	1419	04/07/21 16:40	AJ	XM
Soluble	Leach	DI Leach			1764	04/14/21 08:53	CH	XM
Soluble	Analysis	300.0		10	1932	04/17/21 18:40	WP	XM

Client Sample ID: SS02 Lab Sample ID: 890-486-2

Date Collected: 04/05/21 10:05 **Matrix: Solid**
Date Received: 04/05/21 13:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1477	04/07/21 16:15	KL	XM
Total/NA	Analysis	8021B		1	1603	04/09/21 22:00	MR	XM
Total/NA	Prep	8015NM Prep			1389	04/06/21 15:30	DM	XM
Total/NA	Analysis	8015B NM		1	1419	04/07/21 17:01	AJ	XM
Soluble	Leach	DI Leach			1764	04/14/21 08:53	CH	XM
Soluble	Analysis	300.0		20	1932	04/17/21 18:45	WP	XM

Client Sample ID: SS03 Lab Sample ID: 890-486-3

Date Collected: 04/05/21 10:10 **Matrix: Solid**
Date Received: 04/05/21 13:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1477	04/07/21 16:15	KL	XM
Total/NA	Analysis	8021B		1	1603	04/09/21 22:26	MR	XM
Total/NA	Prep	8015NM Prep			1389	04/06/21 15:30	DM	XM
Total/NA	Analysis	8015B NM		1	1419	04/07/21 17:22	AJ	XM
Soluble	Leach	DI Leach			1764	04/14/21 08:53	CH	XM
Soluble	Analysis	300.0		50	1932	04/17/21 18:50	WP	XM

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: Chistera Battery

Job ID: 890-486-1
SDG: Lea 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. Job ID: 890-486-1
Project/Site: Chistera Battery SDG: Lea 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.
Project/Site: Chistera Battery

Job ID: 890-486-1
SDG: Lea County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-486-1	SS01	Solid	04/05/21 10:00	04/05/21 13:33	- 0.5
890-486-2	SS02	Solid	04/05/21 10:05	04/05/21 13:33	- 0.5
890-486-3	SS03	Solid	04/05/21 10:10	04/05/21 13:33	- 0.5

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	WSP USA Inc. Permian	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	522 West Mermod
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

Work Order Comments

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

Project Name:	Chistera Battery	Turn Around	
Project Number:	TE012921036	☒ Routine ☐ Rush	
Project Location:	Lea County	Due Date:	
Sampler's Name:	Elizabeth Naka	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	WM-009	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	1.6/1.4	
Sample Custody Seals:	Yes No N/A	Temperature Reading:		
Total Containers:		Corrected Temperature:		

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
SS01	S	4/5/21	1000	0.5'		1	X	X	X	discard
SS02	S	4/5/21	1005	0.5'		1	X	X	X	↓
SS03	S	4/5/21	1010	0.5'		1	X	X	X	CC: 20943610 01

890-486 Chain of Custody

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2SO_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

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 SiO_2 Na Sr Tl Sn U V Zn

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			4.5.21 1333			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	WSP USA Inc. Permian	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	522 West Mermod
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

Work Order Comments

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

Project Name:	Chisfera Battery	Turn Around	
Project Number:	TE012921036	☒ Routine ☐ Rush	
Project Location:	Lea County	Due Date:	
Sampler's Name:	Elizabeth Naka	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	2-WSM-004	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	1.6/1.4	
Sample Custody Seals:	Yes No N/A	Temperature Reading:		
Total Containers:		Corrected Temperature:		

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
SS01	S	4/5/21	1000	0.5'		1		X	X	X
SS02	S	4/5/21	1005	0.5'		1		X	X	X
SS03	S	4/5/21	1010	0.5'		1		X	X	X

890-486 Chain of Custody

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2SO_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Comments

discard
↓
CC: 2094361001

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 SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		4-5-21 1333	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

CHAIN OF CUSTODY

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Lakeland, Florida (863-646-8526)
Tampa, Florida (813-620-2000)
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Xenco Quote # | Xenco Job #

Client / Reporting Information

Company Name / Branch: GHD/Midland
Company Address: 2135 S . Loop 250 West Midland TX
Email: becky.haskell@ghd.com, glenn.quinney@ghd.com, Zach.comino@ghd.com, tom.larson@ghd.com
Phone No: (432)250-7917
Project Contact: Becky Haskell / Glenn Quinney
Samplers's Name Zach Comino

Project Information

Project Name/Number: Perdomo BMO State #1 / 11224126
Project Location: Eddy County, New Mexico
Invoice To: EOG / James Kennedy
PO Number: NA

890-485 Chain of Custody

Matrix Codes: S = Soil/Sed/Solid; GW =Ground Water; DW = Drinking Water; P = Product; SW = Surface water; SL = Sludge; OW =Ocean/Sea Water; W = Wipe; O = Oil; WW= Waste Water; A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Analytical Information: TPH By 8015 Mod (GRO, DRO & MRO)	BTEX 8021 B	Chloride 600	Field Comments
1	BH1-1		04/02/21	0930	S									x	x	x	x	
2	SW-1			0935														
3	SW-2			0940														
4	SW-3			0955														
5																		
6																		
7																		
8																		
9																		
10																		

Turnaround Time (Business days)

- [X] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Report MDLs and J values.

No SSOW / Direct Bill to EOG

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	Zach Comino	04022021 1500	Gabby Cardone 4/2/21 14:56	2	4.5.21 800	2
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
			3	4		4
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice: X
			5			Cooler Temp. 2.2 | 2.0 Thermo. Corr. Factor -0.2

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to XENCO Laboratories and its affiliates, subcontractors and assigns XENCO's standard terms and conditions of service unless previously negotiated under a fully executed client contract.

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 890-149 1
Client Contact: Shipping/Receiving	Phone	E-Mail: jessica kramer@eurofinset com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-486-1
Address: 1211 W Florida Ave	Due Date Requested: 4/9/2021			
City: Midland	TAT Requested (days):			
State Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: Chistera Battery	Project #: 89000004			
Site	SSOW#:			

Analysis Requested

Preservation Codes

A	HCL	M	Hexane
B	NaOH	N	None
C	Zn Acetate	O	AsNaO2
D	Nitric Acid	P	Na2O4S
E	NaHSO4	Q	Na2SO3
F	MeOH	R	Na2S2O3
G	Amchlor	S	H2SO4
H	Ascorbic Acid	T	TSP Dodecahydrate
I	Ice	U	Acetone
J	DI Water	V	MCAA
K	EDTA	W	pH 4-5
L	EDA	Z	other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total Number of containers	Special Instructions/Note.
			Preservation Code:								
SS01 (890-486-1)	4/5/21	10 00 Mountain		Solid			X	X	X	1	
SS02 (890-486-2)	4/5/21	10 05 Mountain		Solid			X	X	X	1	
SS03 (890-486-3)	4/5/21	10 10 Mountain		Solid			X	X	X	1	

Note Since laboratory accreditations are subject to change Eurofins Xenco LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Xenco LLC

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested I II III IV Other (specify) Primary Deliverable Rank 2	Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment:

Relinquished by: Chee Cuff 4.5.21	Date/Time:	Company	Received by:	Date/Time: 4-6-21 11 30am	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver 11/01/2020

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-486-1
SDG Number: Lea County NM

Login Number: 486
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: 890-486-1
SDG Number: Lea County NM

Login Number: 486
List Number: 2
Creator: Copeland, Tatiana

List Source: Eurofins Midland
List Creation: 04/06/21 12:08 PM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-526-1
Laboratory Sample Delivery Group: Lea County
Client Project/Site: Chistera Battery -TE012921036

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

Attn: Dan Moir

JKramer

Authorized for release by:
4/20/2021 6:58:41 PM

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

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

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

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-526-1
Project/Site: Chistera Battery -TE012921036 SDG: Lea County

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc.
Project/Site: Chistera Battery -TE012921036

Job ID: 890-526-1
SDG: Lea County

Job ID: 890-526-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-526-1

Receipt
The samples were received on 4/15/2021 11:54 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.0°C

Receipt Exceptions
The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: FS01 (890-526-1), FS02 (890-526-2), FS03 (890-526-3), FS04 (890-526-4), SW01 (890-526-5) and SW02 (890-526-6).

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

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

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

Client Sample Results

Client: WSP USA Inc. Job ID: 890-526-1
Project/Site: Chistera Battery -TE012921036 SDG: Lea County

Client Sample ID: FS01 Lab Sample ID: 890-526-1

Date Collected: 04/15/21 09:30 **Matrix: Solid**
Date Received: 04/15/21 11:54
Sample Depth: - 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/16/21 15:25	04/19/21 13:56	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/16/21 15:25	04/19/21 13:56	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/16/21 15:25	04/19/21 13:56	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		04/16/21 15:25	04/19/21 13:56	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/16/21 15:25	04/19/21 13:56	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		04/16/21 15:25	04/19/21 13:56	1
Total BTEX	<0.00401	U	0.00401		mg/Kg		04/16/21 15:25	04/19/21 13:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*04/16/21 15:25*	*04/19/21 13:56*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*04/16/21 15:25*	*04/19/21 13:56*	*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		04/16/21 12:09	04/17/21 15:59	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		04/16/21 12:09	04/17/21 15:59	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/16/21 12:09	04/17/21 15:59	1
Total TPH	<49.9	U	49.9		mg/Kg		04/16/21 12:09	04/17/21 15:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*110*		*70 - 130*	*04/16/21 12:09*	*04/17/21 15:59*	*1*
o-Terphenyl	*102*		*70 - 130*	*04/16/21 12:09*	*04/17/21 15:59*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**311**		4.95		mg/Kg			04/19/21 19:14	1

Client Sample ID: FS02 Lab Sample ID: 890-526-2

Date Collected: 04/15/21 10:10 **Matrix: Solid**
Date Received: 04/15/21 11:54
Sample Depth: - 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		04/16/21 15:25	04/19/21 14:17	1
Toluene	<0.00201	U	0.00201		mg/Kg		04/16/21 15:25	04/19/21 14:17	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		04/16/21 15:25	04/19/21 14:17	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		04/16/21 15:25	04/19/21 14:17	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		04/16/21 15:25	04/19/21 14:17	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		04/16/21 15:25	04/19/21 14:17	1
Total BTEX	<0.00402	U	0.00402		mg/Kg		04/16/21 15:25	04/19/21 14:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*04/16/21 15:25*	*04/19/21 14:17*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*04/16/21 15:25*	*04/19/21 14:17*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: Chistera Battery -TE012921036

Job ID: 890-526-1
SDG: Lea County

Client Sample ID: FS02

Lab Sample ID: 890-526-2
Matrix: Solid
Date Collected: 04/15/21 10:10
Date Received: 04/15/21 11:54
Sample Depth: - 3

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		04/16/21 12:09	04/17/21 17:04	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		04/16/21 12:09	04/17/21 17:04	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/16/21 12:09	04/17/21 17:04	1
Total TPH	<49.9	U	49.9		mg/Kg		04/16/21 12:09	04/17/21 17:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*108*		*70 - 130*	*04/16/21 12:09*	*04/17/21 17:04*	*1*
o-Terphenyl	*102*		*70 - 130*	*04/16/21 12:09*	*04/17/21 17:04*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**32.8**		4.98		mg/Kg			04/19/21 19:19	1

Client Sample ID: FS03

Lab Sample ID: 890-526-3
Matrix: Solid
Date Collected: 04/15/21 10:15
Date Received: 04/15/21 11:54
Sample Depth: - 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/16/21 15:25	04/19/21 14:38	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/16/21 15:25	04/19/21 14:38	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/16/21 15:25	04/19/21 14:38	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		04/16/21 15:25	04/19/21 14:38	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/16/21 15:25	04/19/21 14:38	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		04/16/21 15:25	04/19/21 14:38	1
Total BTEX	<0.00399	U	0.00399		mg/Kg		04/16/21 15:25	04/19/21 14:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*04/16/21 15:25*	*04/19/21 14:38*	*1*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*04/16/21 15:25*	*04/19/21 14:38*	*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	<49.8	U	49.8		mg/Kg		04/16/21 12:09	04/17/21 17:26	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		04/16/21 12:09	04/17/21 17:26	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		04/16/21 12:09	04/17/21 17:26	1
Total TPH	<49.8	U	49.8		mg/Kg		04/16/21 12:09	04/17/21 17:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*04/16/21 12:09*	*04/17/21 17:26*	*1*
o-Terphenyl	*89*		*70 - 130*	*04/16/21 12:09*	*04/17/21 17:26*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**30.3**		5.05		mg/Kg			04/19/21 19:34	1

Client Sample Results

Client: WSP USA Inc.
Project/Site: Chistera Battery -TE012921036

Job ID: 890-526-1
SDG: Lea County

Client Sample ID: FS04

Lab Sample ID: 890-526-4
Matrix: Solid
Date Collected: 04/15/21 10:20
Date Received: 04/15/21 11:54
Sample Depth: - 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		04/16/21 15:25	04/19/21 14:59	1
Toluene	<0.00199	U	0.00199		mg/Kg		04/16/21 15:25	04/19/21 14:59	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		04/16/21 15:25	04/19/21 14:59	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		04/16/21 15:25	04/19/21 14:59	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		04/16/21 15:25	04/19/21 14:59	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		04/16/21 15:25	04/19/21 14:59	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		04/16/21 15:25	04/19/21 14:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*04/16/21 15:25*	*04/19/21 14:59*	*1*
1,4-Difluorobenzene (Surr)	*117*		*70 - 130*	*04/16/21 15:25*	*04/19/21 14:59*	*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		04/16/21 12:09	04/17/21 17:47	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		04/16/21 12:09	04/17/21 17:47	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/16/21 12:09	04/17/21 17:47	1
Total TPH	<49.9	U	49.9		mg/Kg		04/16/21 12:09	04/17/21 17:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*117*		*70 - 130*	*04/16/21 12:09*	*04/17/21 17:47*	*1*
o-Terphenyl	*106*		*70 - 130*	*04/16/21 12:09*	*04/17/21 17:47*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**285**		4.99		mg/Kg			04/19/21 19:39	1

Client Sample ID: SW01

Lab Sample ID: 890-526-5
Matrix: Solid
Date Collected: 04/15/21 09:50
Date Received: 04/15/21 11:54
Sample Depth: 0 - 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/16/21 15:25	04/19/21 15:20	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/16/21 15:25	04/19/21 15:20	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/16/21 15:25	04/19/21 15:20	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		04/16/21 15:25	04/19/21 15:20	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/16/21 15:25	04/19/21 15:20	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		04/16/21 15:25	04/19/21 15:20	1
Total BTEX	<0.00401	U	0.00401		mg/Kg		04/16/21 15:25	04/19/21 15:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*04/16/21 15:25*	*04/19/21 15:20*	*1*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*	*04/16/21 15:25*	*04/19/21 15:20*	*1*

Client Sample Results

Client: WSP USA Inc. Job ID: 890-526-1
Project/Site: Chistera Battery -TE012921036 SDG: Lea County

Client Sample ID: SW01 Lab Sample ID: 890-526-5

Date Collected: 04/15/21 09:50 **Matrix: Solid**
Date Received: 04/15/21 11:54
Sample Depth: 0 - 3

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**54.6**		50.0		mg/Kg		04/16/21 12:09	04/17/21 18:08	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/16/21 12:09	04/17/21 18:08	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/16/21 12:09	04/17/21 18:08	1
Total TPH	**54.6**		50.0		mg/Kg		04/16/21 12:09	04/17/21 18:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*04/16/21 12:09*	*04/17/21 18:08*	*1*
o-Terphenyl	*92*		*70 - 130*	*04/16/21 12:09*	*04/17/21 18:08*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**165**		4.98		mg/Kg			04/19/21 19:44	1

Client Sample ID: SW02 Lab Sample ID: 890-526-6

Date Collected: 04/15/21 10:05 **Matrix: Solid**
Date Received: 04/15/21 11:54
Sample Depth: 0 - 3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		04/16/21 15:25	04/19/21 15:40	1
Toluene	<0.00201	U	0.00201		mg/Kg		04/16/21 15:25	04/19/21 15:40	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		04/16/21 15:25	04/19/21 15:40	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		04/16/21 15:25	04/19/21 15:40	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		04/16/21 15:25	04/19/21 15:40	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		04/16/21 15:25	04/19/21 15:40	1
Total BTEX	<0.00402	U	0.00402		mg/Kg		04/16/21 15:25	04/19/21 15:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*04/16/21 15:25*	*04/19/21 15:40*	*1*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*04/16/21 15:25*	*04/19/21 15:40*	*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		04/16/21 12:09	04/17/21 18:30	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/16/21 12:09	04/17/21 18:30	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/16/21 12:09	04/17/21 18:30	1
Total TPH	<50.0	U	50.0		mg/Kg		04/16/21 12:09	04/17/21 18:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*103*		*70 - 130*	*04/16/21 12:09*	*04/17/21 18:30*	*1*
o-Terphenyl	*92*		*70 - 130*	*04/16/21 12:09*	*04/17/21 18:30*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**141**		4.96		mg/Kg			04/19/21 19:49	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: Chistera Battery -TE012921036

Job ID: 890-526-1
SDG: Lea County

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-526-1	FS01	93	110
890-526-1 MS	FS01	93	109
890-526-1 MSD	FS01	91	116
890-526-2	FS02	96	112
890-526-3	FS03	95	113
890-526-4	FS04	97	117
890-526-5	SW01	89	114
890-526-6	SW02	94	113
LCS 880-1901/1-A	Lab Control Sample	89	108
LCSD 880-1901/2-A	Lab Control Sample Dup	88	108
MB 880-1901/5-A	Method Blank	109	89

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-526-1	FS01	110	102
890-526-1 MS	FS01	106	88
890-526-1 MSD	FS01	121	96
890-526-2	FS02	108	102
890-526-3	FS03	95	89
890-526-4	FS04	117	106
890-526-5	SW01	102	92
890-526-6	SW02	103	92
LCS 880-1894/2-A	Lab Control Sample	95	78
LCSD 880-1894/3-A	Lab Control Sample Dup	117	101
MB 880-1894/1-A	Method Blank	93	91

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: Chistera Battery -TE012921036

Job ID: 890-526-1
SDG: Lea County

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-1901/5-A
Matrix: Solid
Analysis Batch: 1966

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 1901

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/16/21 15:25	04/19/21 13:34	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/16/21 15:25	04/19/21 13:34	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/16/21 15:25	04/19/21 13:34	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/16/21 15:25	04/19/21 13:34	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/16/21 15:25	04/19/21 13:34	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/16/21 15:25	04/19/21 13:34	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		04/16/21 15:25	04/19/21 13:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*04/16/21 15:25*	*04/19/21 13:34*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*04/16/21 15:25*	*04/19/21 13:34*	*1*

Lab Sample ID: LCS 880-1901/1-A
Matrix: Solid
Analysis Batch: 1966

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 1901

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.09330		mg/Kg		93	70 - 130		
Toluene			0.100	0.09946		mg/Kg		99	70 - 130		
Ethylbenzene			0.100	0.09902		mg/Kg		99	70 - 130		
m-Xylene & p-Xylene			0.200	0.1966		mg/Kg		98	70 - 130		
o-Xylene			0.100	0.09692		mg/Kg		97	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: LCSD 880-1901/2-A
Matrix: Solid
Analysis Batch: 1966

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 1901

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.09251		mg/Kg		93	70 - 130	1	35
Toluene			0.100	0.09484		mg/Kg		95	70 - 130	5	35
Ethylbenzene			0.100	0.09385		mg/Kg		94	70 - 130	5	35
m-Xylene & p-Xylene			0.200	0.1858		mg/Kg		93	70 - 130	6	35
o-Xylene			0.100	0.09071		mg/Kg		91	70 - 130	7	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: 890-526-1 MS
Matrix: Solid
Analysis Batch: 1966

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 1901

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00200	U	0.0998	0.08147		mg/Kg		82	70 - 130		

QC Sample Results

Client: WSP USA Inc.
Project/Site: Chistera Battery -TE012921036

Job ID: 890-526-1
SDG: Lea County

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

Lab Sample ID: 890-526-1 MS
Matrix: Solid
Analysis Batch: 1966

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 1901

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	<0.00200	U	0.0998	0.08380		mg/Kg		84	70 - 130
Ethylbenzene	<0.00200	U	0.0998	0.08210		mg/Kg		82	70 - 130
m-Xylene & p-Xylene	<0.00401	U	0.200	0.1617		mg/Kg		81	70 - 130
o-Xylene	<0.00200	U	0.0998	0.07945		mg/Kg		80	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: 890-526-1 MSD
Matrix: Solid
Analysis Batch: 1966

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 1901

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0994	0.07631		mg/Kg		77	70 - 130	7	35
Toluene	<0.00200	U	0.0994	0.08493		mg/Kg		85	70 - 130	1	35
Ethylbenzene	<0.00200	U	0.0994	0.08037		mg/Kg		81	70 - 130	2	35
m-Xylene & p-Xylene	<0.00401	U	0.199	0.1591		mg/Kg		80	70 - 130	2	35
o-Xylene	<0.00200	U	0.0994	0.07872		mg/Kg		79	70 - 130	1	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*

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

Lab Sample ID: MB 880-1894/1-A
Matrix: Solid
Analysis Batch: 1923

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 1894

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		04/16/21 12:09	04/17/21 14:55	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		04/16/21 12:09	04/17/21 14:55	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		04/16/21 12:09	04/17/21 14:55	1
Total TPH	<50.0	U	50.0	mg/Kg		04/16/21 12:09	04/17/21 14:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*04/16/21 12:09*	*04/17/21 14:55*	*1*
o-Terphenyl	*91*		*70 - 130*	*04/16/21 12:09*	*04/17/21 14:55*	*1*

Lab Sample ID: LCS 880-1894/2-A
Matrix: Solid
Analysis Batch: 1923

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 1894

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1058		mg/Kg		106	70 - 130

Eurofins Xenco, Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Chistera Battery -TE012921036

Job ID: 890-526-1
SDG: Lea County

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

Lab Sample ID: LCS 880-1894/2-A
Matrix: Solid
Analysis Batch: 1923

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 1894

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics (Over C10-C28)			1000	838.4		mg/Kg		84	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*95*		*70 - 130*
o-Terphenyl	*78*		*70 - 130*

Lab Sample ID: LCSD 880-1894/3-A
Matrix: Solid
Analysis Batch: 1923

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 1894

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1107		mg/Kg		111	70 - 130	5	20
Diesel Range Organics (Over C10-C28)			1000	961.7		mg/Kg		96	70 - 130	14	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*117*		*70 - 130*
o-Terphenyl	*101*		*70 - 130*

Lab Sample ID: 890-526-1 MS
Matrix: Solid
Analysis Batch: 1923

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 1894

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	1070		mg/Kg		105	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	998	852.1		mg/Kg		85	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*106*		*70 - 130*
o-Terphenyl	*88*		*70 - 130*

Lab Sample ID: 890-526-1 MSD
Matrix: Solid
Analysis Batch: 1923

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 1894

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	1199		mg/Kg		118	70 - 130	11	20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	949.8		mg/Kg		95	70 - 130	11	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*121*		*70 - 130*
o-Terphenyl	*96*		*70 - 130*

QC Sample Results

Client: WSP USA Inc.
Project/Site: Chistera Battery -TE012921036

Job ID: 890-526-1
SDG: Lea County

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-1942/1-A
Matrix: Solid
Analysis Batch: 2014

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			04/19/21 17:32	1

Lab Sample ID: LCS 880-1942/2-A
Matrix: Solid
Analysis Batch: 2014

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	254.3		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-1942/3-A
Matrix: Solid
Analysis Batch: 2014

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	258.1		mg/Kg		103	90 - 110	1	20

QC Association Summary

Client: WSP USA Inc. Job ID: 890-526-1
Project/Site: Chistera Battery -TE012921036 SDG: Lea County

GC VOA

Prep Batch: 1901

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-526-1	FS01	Total/NA	Solid	5035	
890-526-2	FS02	Total/NA	Solid	5035	
890-526-3	FS03	Total/NA	Solid	5035	
890-526-4	FS04	Total/NA	Solid	5035	
890-526-5	SW01	Total/NA	Solid	5035	
890-526-6	SW02	Total/NA	Solid	5035	
MB 880-1901/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-1901/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-1901/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-526-1 MS	FS01	Total/NA	Solid	5035	
890-526-1 MSD	FS01	Total/NA	Solid	5035	

Analysis Batch: 1966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-526-1	FS01	Total/NA	Solid	8021B	1901
890-526-2	FS02	Total/NA	Solid	8021B	1901
890-526-3	FS03	Total/NA	Solid	8021B	1901
890-526-4	FS04	Total/NA	Solid	8021B	1901
890-526-5	SW01	Total/NA	Solid	8021B	1901
890-526-6	SW02	Total/NA	Solid	8021B	1901
MB 880-1901/5-A	Method Blank	Total/NA	Solid	8021B	1901
LCS 880-1901/1-A	Lab Control Sample	Total/NA	Solid	8021B	1901
LCSD 880-1901/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	1901
890-526-1 MS	FS01	Total/NA	Solid	8021B	1901
890-526-1 MSD	FS01	Total/NA	Solid	8021B	1901

GC Semi VOA

Prep Batch: 1894

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-526-1	FS01	Total/NA	Solid	8015NM Prep	
890-526-2	FS02	Total/NA	Solid	8015NM Prep	
890-526-3	FS03	Total/NA	Solid	8015NM Prep	
890-526-4	FS04	Total/NA	Solid	8015NM Prep	
890-526-5	SW01	Total/NA	Solid	8015NM Prep	
890-526-6	SW02	Total/NA	Solid	8015NM Prep	
MB 880-1894/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-1894/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-1894/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-526-1 MS	FS01	Total/NA	Solid	8015NM Prep	
890-526-1 MSD	FS01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 1923

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-526-1	FS01	Total/NA	Solid	8015B NM	1894
890-526-2	FS02	Total/NA	Solid	8015B NM	1894
890-526-3	FS03	Total/NA	Solid	8015B NM	1894
890-526-4	FS04	Total/NA	Solid	8015B NM	1894
890-526-5	SW01	Total/NA	Solid	8015B NM	1894
890-526-6	SW02	Total/NA	Solid	8015B NM	1894
MB 880-1894/1-A	Method Blank	Total/NA	Solid	8015B NM	1894

QC Association Summary

Client: WSP USA Inc. Job ID: 890-526-1
Project/Site: Chistera Battery -TE012921036 SDG: Lea County

GC Semi VOA (Continued)

Analysis Batch: 1923 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-1894/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	1894
LCSD 880-1894/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	1894
890-526-1 MS	FS01	Total/NA	Solid	8015B NM	1894
890-526-1 MSD	FS01	Total/NA	Solid	8015B NM	1894

HPLC/IC

Leach Batch: 1942

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-526-1	FS01	Soluble	Solid	DI Leach	
890-526-2	FS02	Soluble	Solid	DI Leach	
890-526-3	FS03	Soluble	Solid	DI Leach	
890-526-4	FS04	Soluble	Solid	DI Leach	
890-526-5	SW01	Soluble	Solid	DI Leach	
890-526-6	SW02	Soluble	Solid	DI Leach	
MB 880-1942/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-1942/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-1942/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 2014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-526-1	FS01	Soluble	Solid	300.0	1942
890-526-2	FS02	Soluble	Solid	300.0	1942
890-526-3	FS03	Soluble	Solid	300.0	1942
890-526-4	FS04	Soluble	Solid	300.0	1942
890-526-5	SW01	Soluble	Solid	300.0	1942
890-526-6	SW02	Soluble	Solid	300.0	1942
MB 880-1942/1-A	Method Blank	Soluble	Solid	300.0	1942
LCS 880-1942/2-A	Lab Control Sample	Soluble	Solid	300.0	1942
LCSD 880-1942/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	1942

Lab Chronicle

Client: WSP USA Inc. Job ID: 890-526-1
Project/Site: Chistera Battery -TE012921036 SDG: Lea County

Client Sample ID: FS01 Lab Sample ID: 890-526-1

Date Collected: 04/15/21 09:30 **Matrix: Solid**
Date Received: 04/15/21 11:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1901	04/16/21 15:25	MR	XM
Total/NA	Analysis	8021B		1	1966	04/19/21 13:56	KL	XM
Total/NA	Prep	8015NM Prep			1894	04/16/21 12:09	DM	XM
Total/NA	Analysis	8015B NM		1	1923	04/17/21 15:59	AJ	XM
Soluble	Leach	DI Leach			1942	04/17/21 18:36	CH	XM
Soluble	Analysis	300.0		1	2014	04/19/21 19:14	WP	XM

Client Sample ID: FS02 Lab Sample ID: 890-526-2

Date Collected: 04/15/21 10:10 **Matrix: Solid**
Date Received: 04/15/21 11:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1901	04/16/21 15:25	MR	XM
Total/NA	Analysis	8021B		1	1966	04/19/21 14:17	KL	XM
Total/NA	Prep	8015NM Prep			1894	04/16/21 12:09	DM	XM
Total/NA	Analysis	8015B NM		1	1923	04/17/21 17:04	AJ	XM
Soluble	Leach	DI Leach			1942	04/17/21 18:36	CH	XM
Soluble	Analysis	300.0		1	2014	04/19/21 19:19	WP	XM

Client Sample ID: FS03 Lab Sample ID: 890-526-3

Date Collected: 04/15/21 10:15 **Matrix: Solid**
Date Received: 04/15/21 11:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1901	04/16/21 15:25	MR	XM
Total/NA	Analysis	8021B		1	1966	04/19/21 14:38	KL	XM
Total/NA	Prep	8015NM Prep			1894	04/16/21 12:09	DM	XM
Total/NA	Analysis	8015B NM		1	1923	04/17/21 17:26	AJ	XM
Soluble	Leach	DI Leach			1942	04/17/21 18:36	CH	XM
Soluble	Analysis	300.0		1	2014	04/19/21 19:34	WP	XM

Client Sample ID: FS04 Lab Sample ID: 890-526-4

Date Collected: 04/15/21 10:20 **Matrix: Solid**
Date Received: 04/15/21 11:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1901	04/16/21 15:25	MR	XM
Total/NA	Analysis	8021B		1	1966	04/19/21 14:59	KL	XM
Total/NA	Prep	8015NM Prep			1894	04/16/21 12:09	DM	XM
Total/NA	Analysis	8015B NM		1	1923	04/17/21 17:47	AJ	XM
Soluble	Leach	DI Leach			1942	04/17/21 18:36	CH	XM
Soluble	Analysis	300.0		1	2014	04/19/21 19:39	WP	XM

Lab Chronicle

Client: WSP USA Inc. Job ID: 890-526-1
Project/Site: Chistera Battery -TE012921036 SDG: Lea County

Client Sample ID: SW01 Lab Sample ID: 890-526-5

Date Collected: 04/15/21 09:50 **Matrix: Solid**
Date Received: 04/15/21 11:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1901	04/16/21 15:25	MR	XM
Total/NA	Analysis	8021B		1	1966	04/19/21 15:20	KL	XM
Total/NA	Prep	8015NM Prep			1894	04/16/21 12:09	DM	XM
Total/NA	Analysis	8015B NM		1	1923	04/17/21 18:08	AJ	XM
Soluble	Leach	DI Leach			1942	04/17/21 18:36	CH	XM
Soluble	Analysis	300.0		1	2014	04/19/21 19:44	WP	XM

Client Sample ID: SW02 Lab Sample ID: 890-526-6

Date Collected: 04/15/21 10:05 **Matrix: Solid**
Date Received: 04/15/21 11:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1901	04/16/21 15:25	MR	XM
Total/NA	Analysis	8021B		1	1966	04/19/21 15:40	KL	XM
Total/NA	Prep	8015NM Prep			1894	04/16/21 12:09	DM	XM
Total/NA	Analysis	8015B NM		1	1923	04/17/21 18:30	AJ	XM
Soluble	Leach	DI Leach			1942	04/17/21 18:36	CH	XM
Soluble	Analysis	300.0		1	2014	04/19/21 19:49	WP	XM

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: Chistera Battery -TE012921036

Job ID: 890-526-1
SDG: Lea County

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. Job ID: 890-526-1
Project/Site: Chistera Battery -TE012921036 SDG: Lea County

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.
Project/Site: Chistera Battery -TE012921036

Job ID: 890-526-1
SDG: Lea County

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-526-1	FS01	Solid	04/15/21 09:30	04/15/21 11:54	- 3
890-526-2	FS02	Solid	04/15/21 10:10	04/15/21 11:54	- 3
890-526-3	FS03	Solid	04/15/21 10:15	04/15/21 11:54	- 3
890-526-4	FS04	Solid	04/15/21 10:20	04/15/21 11:54	- 3
890-526-5	SW01	Solid	04/15/21 09:50	04/15/21 11:54	0 - 3
890-526-6	SW02	Solid	04/15/21 10:05	04/15/21 11:54	0 - 3

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Chain of Custody

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

Work Order No: _____

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

Work Order Comments

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

Project Name:	Chistera Battery	Turn Around	
Project Number:	TE012921036	☒ Routine ☐ Rush	
Project Location:	Lea County	Due Date:	
Sampler's Name:	Elizabeth Naka	TAT starts the day received by the lab, if received by 4:30pm	
PO #:	2094361001		

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	TNM007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.2
Total Containers:		Corrected Temperature:	1.0

Preservative Codes

None: NO | DI Water: H_2O
Cool: Cool | MeOH: Me
HCL: HC | HNO_3: HN
H_2SO_4: H_2 | NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: NaSO$_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
FS01	S	4/15/21	0930	3'		1		X	X	X	Composite
FS02			1010								
FS03			1015								
FS04			1020	↓							
SW01			0950	0'-3'							
SW02	↓	↓	1005	0'-3'		↓		↓	↓	↓	↓

890-526 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 SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Anthony Ordonez	4/15/21 11:54	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-526-1
SDG Number: Lea County

Login Number: 526
List Number: 1
Creator: Ordonez, Gabby

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: 890-526-1
SDG Number: Lea County

Login Number: 526
List Number: 2
Creator: Copeland, Tatiana

List Source: Eurofins Midland
List Creation: 04/16/21 11:41 AM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-527-1
Laboratory Sample Delivery Group: TE012921036
Client Project/Site: Chistera Battery

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

Attn: Dan Moir

JKramer

Authorized for release by:
4/20/2021 7:01:23 PM

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

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

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

Client: WSP USA Inc.
Project/Site: Chistera Battery

Laboratory Job ID: 890-527-1
SDG: TE012921036

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-527-1
Project/Site: Chistera Battery SDG: TE012921036

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc.
Project/Site: Chistera Battery

Job ID: 890-527-1
SDG: TE012921036

Job ID: 890-527-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-527-1

Comments
No additional comments.

Receipt
The sample was received on 4/15/2021 11:54 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.0º C.

Receipt Exceptions

The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: FS05 (890-527-1).

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

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

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

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

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

Client Sample Results

Client: WSP USA Inc.
Project/Site: Chistera Battery

Job ID: 890-527-1
SDG: TE012921036

Client Sample ID: FS05

Date Collected: 04/15/21 10:25
Date Received: 04/15/21 11:54
Sample Depth: - 1.5

Lab Sample ID: 890-527-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		04/16/21 12:15	04/16/21 20:39	1
Toluene	<0.00199	U	0.00199		mg/Kg		04/16/21 12:15	04/16/21 20:39	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		04/16/21 12:15	04/16/21 20:39	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		04/16/21 12:15	04/16/21 20:39	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		04/16/21 12:15	04/16/21 20:39	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		04/16/21 12:15	04/16/21 20:39	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		04/16/21 12:15	04/16/21 20:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*04/16/21 12:15*	*04/16/21 20:39*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*04/16/21 12:15*	*04/16/21 20:39*	*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		04/16/21 12:09	04/17/21 18:51	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/16/21 12:09	04/17/21 18:51	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/16/21 12:09	04/17/21 18:51	1
Total TPH	<50.0	U	50.0		mg/Kg		04/16/21 12:09	04/17/21 18:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*123*		*70 - 130*	*04/16/21 12:09*	*04/17/21 18:51*	*1*
o-Terphenyl	*107*		*70 - 130*	*04/16/21 12:09*	*04/17/21 18:51*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**311**		4.97		mg/Kg			04/19/21 19:54	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: Chistera Battery

Job ID: 890-527-1
SDG: TE012921036

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)											
		BFB1	DFBZ1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
890-527-1	FS05	112	104										
LCS 880-1895/1-A	Lab Control Sample	100	106										
LCSD 880-1895/2-A	Lab Control Sample Dup	101	105										
MB 880-1895/5-A	Method Blank	99	103										

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
890-527-1	FS05	123	107										
LCS 880-1894/2-A	Lab Control Sample	95	78										
LCSD 880-1894/3-A	Lab Control Sample Dup	117	101										
MB 880-1894/1-A	Method Blank	93	91										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: Chistera Battery

Job ID: 890-527-1
SDG: TE012921036

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-1895/5-A
Matrix: Solid
Analysis Batch: 1905

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 1895

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/16/21 12:15	04/16/21 19:50	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/16/21 12:15	04/16/21 19:50	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/16/21 12:15	04/16/21 19:50	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/16/21 12:15	04/16/21 19:50	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/16/21 12:15	04/16/21 19:50	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/16/21 12:15	04/16/21 19:50	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		04/16/21 12:15	04/16/21 19:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*04/16/21 12:15*	*04/16/21 19:50*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*04/16/21 12:15*	*04/16/21 19:50*	*1*

Lab Sample ID: LCS 880-1895/1-A
Matrix: Solid
Analysis Batch: 1905

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 1895

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.08670		mg/Kg		87	70 - 130		
Toluene			0.100	0.09622		mg/Kg		96	70 - 130		
Ethylbenzene			0.100	0.1019		mg/Kg		102	70 - 130		
m-Xylene & p-Xylene			0.200	0.2078		mg/Kg		104	70 - 130		
o-Xylene			0.100	0.1015		mg/Kg		102	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: LCSD 880-1895/2-A
Matrix: Solid
Analysis Batch: 1905

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 1895

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.08446		mg/Kg		84	70 - 130	3	35
Toluene			0.100	0.09074		mg/Kg		91	70 - 130	6	35
Ethylbenzene			0.100	0.09413		mg/Kg		94	70 - 130	8	35
m-Xylene & p-Xylene			0.200	0.1926		mg/Kg		96	70 - 130	8	35
o-Xylene			0.100	0.09473		mg/Kg		95	70 - 130	7	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

QC Sample Results

Client: WSP USA Inc.
Project/Site: Chistera Battery

Job ID: 890-527-1
SDG: TE012921036

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

Lab Sample ID: MB 880-1894/1-A
Matrix: Solid
Analysis Batch: 1923

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 1894

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		04/16/21 12:09	04/17/21 14:55	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/16/21 12:09	04/17/21 14:55	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/16/21 12:09	04/17/21 14:55	1
Total TPH	<50.0	U	50.0		mg/Kg		04/16/21 12:09	04/17/21 14:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*04/16/21 12:09*	*04/17/21 14:55*	*1*
o-Terphenyl	*91*		*70 - 130*	*04/16/21 12:09*	*04/17/21 14:55*	*1*

Lab Sample ID: LCS 880-1894/2-A
Matrix: Solid
Analysis Batch: 1923

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 1894

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1058		mg/Kg		106	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	838.4		mg/Kg		84	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*95*		*70 - 130*
o-Terphenyl	*78*		*70 - 130*

Lab Sample ID: LCSD 880-1894/3-A
Matrix: Solid
Analysis Batch: 1923

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 1894

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1107		mg/Kg		111	70 - 130	5	20
Diesel Range Organics (Over C10-C28)			1000	961.7		mg/Kg		96	70 - 130	14	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*117*		*70 - 130*
o-Terphenyl	*101*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-1942/1-A
Matrix: Solid
Analysis Batch: 2014

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			04/19/21 17:32	1

QC Sample Results

Client: WSP USA Inc.
Project/Site: Chistera Battery

Job ID: 890-527-1
SDG: TE012921036

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-1942/2-A
Matrix: Solid
Analysis Batch: 2014

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	254.3		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-1942/3-A
Matrix: Solid
Analysis Batch: 2014

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	258.1		mg/Kg		103	90 - 110	1	20

QC Association Summary

Client: WSP USA Inc.
Project/Site: Chistera Battery

Job ID: 890-527-1
SDG: TE012921036

GC VOA

Prep Batch: 1895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-527-1	FS05	Total/NA	Solid	5035	
MB 880-1895/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-1895/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-1895/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 1905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-527-1	FS05	Total/NA	Solid	8021B	1895
MB 880-1895/5-A	Method Blank	Total/NA	Solid	8021B	1895
LCS 880-1895/1-A	Lab Control Sample	Total/NA	Solid	8021B	1895
LCSD 880-1895/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	1895

GC Semi VOA

Prep Batch: 1894

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-527-1	FS05	Total/NA	Solid	8015NM Prep	
MB 880-1894/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-1894/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-1894/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 1923

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-527-1	FS05	Total/NA	Solid	8015B NM	1894
MB 880-1894/1-A	Method Blank	Total/NA	Solid	8015B NM	1894
LCS 880-1894/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	1894
LCSD 880-1894/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	1894

HPLC/IC

Leach Batch: 1942

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-527-1	FS05	Soluble	Solid	DI Leach	
MB 880-1942/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-1942/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-1942/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 2014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-527-1	FS05	Soluble	Solid	300.0	1942
MB 880-1942/1-A	Method Blank	Soluble	Solid	300.0	1942
LCS 880-1942/2-A	Lab Control Sample	Soluble	Solid	300.0	1942
LCSD 880-1942/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	1942

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Chistera Battery

Job ID: 890-527-1
SDG: TE012921036

Client Sample ID: FS05

Date Collected: 04/15/21 10:25
Date Received: 04/15/21 11:54

Lab Sample ID: 890-527-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1895	04/16/21 12:15	MR	XM
Total/NA	Analysis	8021B		1	1905	04/16/21 20:39	MR	XM
Total/NA	Prep	8015NM Prep			1894	04/16/21 12:09	DM	XM
Total/NA	Analysis	8015B NM		1	1923	04/17/21 18:51	AJ	XM
Soluble	Leach	DI Leach			1942	04/17/21 18:36	CH	XM
Soluble	Analysis	300.0		1	2014	04/19/21 19:54	WP	XM

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc.
Project/Site: Chistera Battery

Job ID: 890-527-1
SDG: TE012921036

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. Job ID: 890-527-1
Project/Site: Chistera Battery SDG: TE012921036

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.
Project/Site: Chistera Battery

Job ID: 890-527-1
SDG: TE012921036

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-527-1	FS05	Solid	04/15/21 10:25	04/15/21 11:54	- 1.5

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Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	WSP USA 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:	432-286-3849	Email:	dan.moir@wsp.com

Work Order Comments

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

Project Name:	Chistera Battery	Turn Around	
Project Number:	TG012921036	☒ Routine ☐ Rush	
Project Location:	Lea County	Due Date:	
Sampler's Name:	Elizabeth Nalls	TAT starts the day received by the lab, if received by 4:30pm	
PO #:	209436100		

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Samples Received Intact:	(Yes) No	Thermometer ID:	TNM007	
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:		
Sample Custody Seals:	Yes (No) N/A	Temperature Reading:	1.2	
Total Containers:		Corrected Temperature:	1.6	

Preservative Codes

None: NO | DI Water: H_2O
Cool: Cool | MeOH: Me
HCL: HC | HNO_3: HN
H_2SO_4: H_2 | NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: NaSO$_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
FS05	S	4/15/21	1025	1.5'		1	X	X	X	composite

890-527 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 SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Gaston Ordonez	4/15/21 11:54	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-527-1
SDG Number: TE012921036

Login Number: 527
List Number: 1
Creator: Ordonez, Gabby

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: 890-527-1
SDG Number: TE012921036

Login Number: 527
List Number: 2
Creator: Copeland, Tatiana

List Source: Eurofins Midland
List Creation: 04/16/21 11:41 AM

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-742-1
Laboratory Sample Delivery Group: TE012921036
Client Project/Site: Christera CTB
Revision: 1

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

Attn: Dan Moir

JKramer

Authorized for release by:
5/31/2021 8:37:35 PM

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

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

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

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

Laboratory Job ID: 890-742-1
SDG: TE012921036

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-742-1
Project/Site: Christera CTB SDG: TE012921036

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

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

Job ID: 890-742-1
SDG: TE012921036

Job ID: 890-742-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-742-1

Comments
No additional comments.

Revision
The report being provided is a revision of the original report sent on 5/31/2021. The report (revision 1) is being revised due to: Incorrect version originally sent, revison (1) us up to date

Receipt
The sample was received on 5/28/2021 1:30 PM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 5.0º C.

Receipt Exceptions

Incorrect version originally sent, revison (1) us up to date

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

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

General Chemistry
Method 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-3654 and analytical batch 880-3660 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. The associated samples are: SS04 (890-742-1) and (880-2587-A-1-A).

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

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

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

Client Sample Results

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

Job ID: 890-742-1
SDG: TE012921036

Client Sample ID: SS04

Date Collected: 05/28/21 09:59
Date Received: 05/28/21 13:30
Sample Depth: - 0.5

Lab Sample ID: 890-742-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/29/21 11:13	05/29/21 14:46	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/29/21 11:13	05/29/21 14:46	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/29/21 11:13	05/29/21 14:46	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/29/21 11:13	05/29/21 14:46	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/29/21 11:13	05/29/21 14:46	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/29/21 11:13	05/29/21 14:46	1
Total BTEX	<0.00399	U	0.00399		mg/Kg		05/29/21 11:13	05/29/21 14:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*05/29/21 11:13*	*05/29/21 14:46*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*05/29/21 11:13*	*05/29/21 14:46*	*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	**55.6**		50.0		mg/Kg		05/29/21 12:49	05/29/21 17:57	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/29/21 12:49	05/29/21 17:57	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/29/21 12:49	05/29/21 17:57	1
Total TPH	**55.6**		50.0		mg/Kg		05/29/21 12:49	05/29/21 17:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*87*		*70 - 130*	*05/29/21 12:49*	*05/29/21 17:57*	*1*
o-Terphenyl	*74*		*70 - 130*	*05/29/21 12:49*	*05/29/21 17:57*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**67.7**		5.02		mg/Kg			05/29/21 14:55	1

Surrogate Summary

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

Job ID: 890-742-1
SDG: TE012921036

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-742-1	SS04	102	97
890-742-1 MS	SS04	112	106
890-742-1 MSD	SS04	118	105
LCS 880-3652/1-A	Lab Control Sample	106	106
LCSD 880-3652/2-A	Lab Control Sample Dup	114	105
MB 880-3652/5-A	Method Blank	90	91

Surrogate Legend

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

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-742-1	SS04	87	74
LCS 880-3659/2-A	Lab Control Sample	93	76
LCSD 880-3659/3-A	Lab Control Sample Dup	92	74
MB 880-3659/1-A	Method Blank	96	84

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

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

Job ID: 890-742-1
SDG: TE012921036

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-3652/5-A
Matrix: Solid
Analysis Batch: 3653

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3652

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/29/21 11:13	05/29/21 14:25	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/29/21 11:13	05/29/21 14:25	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/29/21 11:13	05/29/21 14:25	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/29/21 11:13	05/29/21 14:25	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/29/21 11:13	05/29/21 14:25	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/29/21 11:13	05/29/21 14:25	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		05/29/21 11:13	05/29/21 14:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*05/29/21 11:13*	*05/29/21 14:25*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*05/29/21 11:13*	*05/29/21 14:25*	*1*

Lab Sample ID: LCS 880-3652/1-A
Matrix: Solid
Analysis Batch: 3653

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3652

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.1125		mg/Kg		112	70 - 130		
Toluene			0.100	0.1053		mg/Kg		105	70 - 130		
Ethylbenzene			0.100	0.1056		mg/Kg		106	70 - 130		
m-Xylene & p-Xylene			0.200	0.2268		mg/Kg		113	70 - 130		
o-Xylene			0.100	0.1142		mg/Kg		114	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: LCSD 880-3652/2-A
Matrix: Solid
Analysis Batch: 3653

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3652

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1095		mg/Kg		109	70 - 130	3	35
Toluene			0.100	0.1048		mg/Kg		105	70 - 130	1	35
Ethylbenzene			0.100	0.1064		mg/Kg		106	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.2317		mg/Kg		116	70 - 130	2	35
o-Xylene			0.100	0.1170		mg/Kg		117	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: 890-742-1 MS
Matrix: Solid
Analysis Batch: 3653

Client Sample ID: SS04
Prep Type: Total/NA
Prep Batch: 3652

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00200	U	0.0996	0.1091		mg/Kg		109	70 - 130		

Eurofins Xenco, Carlsbad

QC Sample Results

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

Job ID: 890-742-1
SDG: TE012921036

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

Lab Sample ID: 890-742-1 MS
Matrix: Solid
Analysis Batch: 3653

Client Sample ID: SS04
Prep Type: Total/NA
Prep Batch: 3652

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	<0.00200	U	0.0996	0.1033		mg/Kg		104	70 - 130
Ethylbenzene	<0.00200	U	0.0996	0.1059		mg/Kg		106	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.199	0.2298		mg/Kg		115	70 - 130
o-Xylene	<0.00200	U	0.0996	0.1151		mg/Kg		116	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: 890-742-1 MSD
Matrix: Solid
Analysis Batch: 3653

Client Sample ID: SS04
Prep Type: Total/NA
Prep Batch: 3652

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0990	0.1007		mg/Kg		102	70 - 130	8	35
Toluene	<0.00200	U	0.0990	0.09592		mg/Kg		97	70 - 130	7	35
Ethylbenzene	<0.00200	U	0.0990	0.09997		mg/Kg		101	70 - 130	6	35
m-Xylene & p-Xylene	<0.00399	U	0.198	0.2172		mg/Kg		110	70 - 130	6	35
o-Xylene	<0.00200	U	0.0990	0.1091		mg/Kg		110	70 - 130	5	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

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

Lab Sample ID: MB 880-3659/1-A
Matrix: Solid
Analysis Batch: 3662

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3659

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/29/21 12:49	05/29/21 14:42	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/29/21 12:49	05/29/21 14:42	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/29/21 12:49	05/29/21 14:42	1
Total TPH	<50.0	U	50.0	mg/Kg		05/29/21 12:49	05/29/21 14:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*05/29/21 12:49*	*05/29/21 14:42*	*1*
o-Terphenyl	*84*		*70 - 130*	*05/29/21 12:49*	*05/29/21 14:42*	*1*

Lab Sample ID: LCS 880-3659/2-A
Matrix: Solid
Analysis Batch: 3662

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3659

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	813.2		mg/Kg		81	70 - 130

QC Sample Results

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

Job ID: 890-742-1
SDG: TE012921036

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

Lab Sample ID: LCS 880-3659/2-A
Matrix: Solid
Analysis Batch: 3662

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3659

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics (Over C10-C28)			1000	895.2		mg/Kg		90	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*93*		*70 - 130*
o-Terphenyl	*76*		*70 - 130*

Lab Sample ID: LCSD 880-3659/3-A
Matrix: Solid
Analysis Batch: 3662

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3659

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	799.2		mg/Kg		80	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	872.7		mg/Kg		87	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*92*		*70 - 130*
o-Terphenyl	*74*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-3654/1-A
Matrix: Solid
Analysis Batch: 3660

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/29/21 14:09	1

Lab Sample ID: LCS 880-3654/2-A
Matrix: Solid
Analysis Batch: 3660

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	238.6		mg/Kg		95	90 - 110		

Lab Sample ID: LCSD 880-3654/3-A
Matrix: Solid
Analysis Batch: 3660

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	238.4		mg/Kg		95	90 - 110	0	20

QC Association Summary

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

Job ID: 890-742-1
SDG: TE012921036

GC VOA

Prep Batch: 3652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-742-1	SS04	Total/NA	Solid	5035	
MB 880-3652/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3652/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3652/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-742-1 MS	SS04	Total/NA	Solid	5035	
890-742-1 MSD	SS04	Total/NA	Solid	5035	

Analysis Batch: 3653

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-742-1	SS04	Total/NA	Solid	8021B	3652
MB 880-3652/5-A	Method Blank	Total/NA	Solid	8021B	3652
LCS 880-3652/1-A	Lab Control Sample	Total/NA	Solid	8021B	3652
LCSD 880-3652/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3652
890-742-1 MS	SS04	Total/NA	Solid	8021B	3652
890-742-1 MSD	SS04	Total/NA	Solid	8021B	3652

GC Semi VOA

Prep Batch: 3659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-742-1	SS04	Total/NA	Solid	8015NM Prep	
MB 880-3659/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3659/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3659/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 3662

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-742-1	SS04	Total/NA	Solid	8015B NM	3659
MB 880-3659/1-A	Method Blank	Total/NA	Solid	8015B NM	3659
LCS 880-3659/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3659
LCSD 880-3659/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3659

HPLC/IC

Leach Batch: 3654

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-742-1	SS04	Soluble	Solid	DI Leach	
MB 880-3654/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3654/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3654/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 3660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-742-1	SS04	Soluble	Solid	300.0	3654
MB 880-3654/1-A	Method Blank	Soluble	Solid	300.0	3654
LCS 880-3654/2-A	Lab Control Sample	Soluble	Solid	300.0	3654
LCSD 880-3654/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3654

Lab Chronicle

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

Job ID: 890-742-1
SDG: TE012921036

Client Sample ID: SS04
Date Collected: 05/28/21 09:59
Date Received: 05/28/21 13:30

Lab Sample ID: 890-742-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3652	05/29/21 11:13	KL	XEN MID
Total/NA	Analysis	8021B		1	3653	05/29/21 14:46	KL	XEN MID
Total/NA	Prep	8015NM Prep			3659	05/29/21 12:49	AM	XEN MID
Total/NA	Analysis	8015B NM		1	3662	05/29/21 17:57	AM	XEN MID
Soluble	Leach	DI Leach			3654	05/29/21 11:20	SC	XEN MID
Soluble	Analysis	300.0		1	3660	05/29/21 14:55	SC	XEN MID

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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-742-1
Project/Site: Christera CTB SDG: TE012921036

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: Christera CTB

Job ID: 890-742-1
SDG: TE012921036

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

Protocol References:

ASTM = ASTM International

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

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

Laboratory References:

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

Sample Summary

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

Job ID: 890-742-1
SDG: TE012921036

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-742-1	SS04	Solid	05/28/21 09:59	05/28/21 13:30	- 0.5

Chain of Custody

XENCO LABORATORIES

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

Work Order No: _____

www.xenco.com Page 1 of 2

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	WSP USA Inc., Permian office	Company Name:	XTO Energy, Inc.
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, Tx 79705	City, State ZIP:	
Phone:	(432) 236-3849	Email:	will.mather@wsp.com, dan.moir@wsp.com

Work Order Comments

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

Project Name:	Chistera CTB	Turn Around	
Project Number:	TE012921036	Routine ☐	
P.O. Number:	Lea	Rush: 24hr	
Sampler's Name:	William Mather	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	5.2/5.0	Thermometer ID	2NM-004
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
SS04	s	5/28/2021	9:59	0.5'	1	x	x	x	Discrete

890-742 Chain of Custody

Work Order Notes

Incident #: nAPP2107747725
Cost Center: 2094361001

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

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		5-28-21 1324			
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-742-1
SDG Number: TE012921036

Login Number: 742
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Xenco, Carlsbad

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

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-742-1
SDG Number: TE012921036

Login Number: 742
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Xenco, Midland
List Creation: 05/29/21 11:01 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?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-744-1
Laboratory Sample Delivery Group: TE012921036
Client Project/Site: Christera CTB

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

Attn: Dan Moir

JKramer

Authorized for release by:
5/31/2021 8:25:10 PM

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

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

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

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

Laboratory Job ID: 890-744-1
SDG: TE012921036

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-744-1
Project/Site: Christera CTB SDG: TE012921036

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc. Job ID: 890-744-1
Project/Site: Christera CTB SDG: TE012921036

Job ID: 890-744-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-744-1

Receipt
The samples were received on 5/28/2021 1:26 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.0°C

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

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-3654 and analytical batch 880-3660 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. The associated samples are: PH02 (890-744-1), PH02 A (890-744-2) and (880-2587-A-1-A).

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: 890-744-1
Project/Site: Christera CTB SDG: TE012921036

Client Sample ID: PH02 Lab Sample ID: 890-744-1

Date Collected: 05/28/21 10:05 **Matrix: Solid**
Date Received: 05/28/21 13:26
Sample Depth: - 1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/29/21 11:13	05/29/21 15:47	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/29/21 11:13	05/29/21 15:47	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/29/21 11:13	05/29/21 15:47	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/29/21 11:13	05/29/21 15:47	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/29/21 11:13	05/29/21 15:47	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/29/21 11:13	05/29/21 15:47	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		05/29/21 11:13	05/29/21 15:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*05/29/21 11:13*	*05/29/21 15:47*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*05/29/21 11:13*	*05/29/21 15:47*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/29/21 12:49	05/29/21 19:00	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/29/21 12:49	05/29/21 19:00	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/29/21 12:49	05/29/21 19:00	1
Total TPH	<49.9	U	49.9		mg/Kg		05/29/21 12:49	05/29/21 19:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*87*		*70 - 130*	*05/29/21 12:49*	*05/29/21 19:00*	*1*
o-Terphenyl	*76*		*70 - 130*	*05/29/21 12:49*	*05/29/21 19:00*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6.03**		4.99		mg/Kg			05/29/21 15:25	1

Client Sample ID: PH02 A Lab Sample ID: 890-744-2

Date Collected: 05/28/21 10:15 **Matrix: Solid**
Date Received: 05/28/21 13:26
Sample Depth: - 2.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		05/29/21 11:13	05/29/21 16:08	1
Toluene	<0.00198	U	0.00198		mg/Kg		05/29/21 11:13	05/29/21 16:08	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		05/29/21 11:13	05/29/21 16:08	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		05/29/21 11:13	05/29/21 16:08	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		05/29/21 11:13	05/29/21 16:08	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		05/29/21 11:13	05/29/21 16:08	1
Total BTEX	<0.00396	U	0.00396		mg/Kg		05/29/21 11:13	05/29/21 16:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*05/29/21 11:13*	*05/29/21 16:08*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*05/29/21 11:13*	*05/29/21 16:08*	*1*

Client Sample Results

Client: WSP USA Inc. Job ID: 890-744-1
Project/Site: Christera CTB SDG: TE012921036

Client Sample ID: PH02 A
Lab Sample ID: 890-744-2
Date Collected: 05/28/21 10:15
Matrix: Solid
Date Received: 05/28/21 13:26
Sample Depth: - 2.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/29/21 12:49	05/29/21 19:21	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/29/21 12:49	05/29/21 19:21	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/29/21 12:49	05/29/21 19:21	1
Total TPH	<49.9	U	49.9		mg/Kg		05/29/21 12:49	05/29/21 19:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*05/29/21 12:49*	*05/29/21 19:21*	*1*
o-Terphenyl	*78*		*70 - 130*	*05/29/21 12:49*	*05/29/21 19:21*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**39.1**		4.96		mg/Kg			05/29/21 15:30	1

Surrogate Summary

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

Job ID: 890-744-1
SDG: TE012921036

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-744-1	PH02	106	94
890-744-2	PH02 A	97	95
LCS 880-3652/1-A	Lab Control Sample	106	106
LCSD 880-3652/2-A	Lab Control Sample Dup	114	105
MB 880-3652/5-A	Method Blank	90	91

Surrogate Legend

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

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-744-1	PH02	87	76
890-744-2	PH02 A	89	78
LCS 880-3659/2-A	Lab Control Sample	93	76
LCSD 880-3659/3-A	Lab Control Sample Dup	92	74
MB 880-3659/1-A	Method Blank	96	84

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

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

Job ID: 890-744-1
SDG: TE012921036

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-3652/5-A
Matrix: Solid
Analysis Batch: 3653

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3652

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/29/21 11:13	05/29/21 14:25	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/29/21 11:13	05/29/21 14:25	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/29/21 11:13	05/29/21 14:25	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/29/21 11:13	05/29/21 14:25	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/29/21 11:13	05/29/21 14:25	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/29/21 11:13	05/29/21 14:25	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		05/29/21 11:13	05/29/21 14:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*05/29/21 11:13*	*05/29/21 14:25*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*05/29/21 11:13*	*05/29/21 14:25*	*1*

Lab Sample ID: LCS 880-3652/1-A
Matrix: Solid
Analysis Batch: 3653

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3652

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.1125		mg/Kg		112	70 - 130		
Toluene			0.100	0.1053		mg/Kg		105	70 - 130		
Ethylbenzene			0.100	0.1056		mg/Kg		106	70 - 130		
m-Xylene & p-Xylene			0.200	0.2268		mg/Kg		113	70 - 130		
o-Xylene			0.100	0.1142		mg/Kg		114	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: LCSD 880-3652/2-A
Matrix: Solid
Analysis Batch: 3653

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3652

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1095		mg/Kg		109	70 - 130	3	35
Toluene			0.100	0.1048		mg/Kg		105	70 - 130	1	35
Ethylbenzene			0.100	0.1064		mg/Kg		106	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.2317		mg/Kg		116	70 - 130	2	35
o-Xylene			0.100	0.1170		mg/Kg		117	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

QC Sample Results

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

Job ID: 890-744-1
SDG: TE012921036

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

Lab Sample ID: MB 880-3659/1-A
Matrix: Solid
Analysis Batch: 3662

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3659

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/29/21 12:49	05/29/21 14:42	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/29/21 12:49	05/29/21 14:42	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/29/21 12:49	05/29/21 14:42	1
Total TPH	<50.0	U	50.0		mg/Kg		05/29/21 12:49	05/29/21 14:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*05/29/21 12:49*	*05/29/21 14:42*	*1*
o-Terphenyl	*84*		*70 - 130*	*05/29/21 12:49*	*05/29/21 14:42*	*1*

Lab Sample ID: LCS 880-3659/2-A
Matrix: Solid
Analysis Batch: 3662

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3659

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	813.2		mg/Kg		81	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	895.2		mg/Kg		90	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*93*		*70 - 130*
o-Terphenyl	*76*		*70 - 130*

Lab Sample ID: LCSD 880-3659/3-A
Matrix: Solid
Analysis Batch: 3662

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3659

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	799.2		mg/Kg		80	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	872.7		mg/Kg		87	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*92*		*70 - 130*
o-Terphenyl	*74*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-3654/1-A
Matrix: Solid
Analysis Batch: 3660

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/29/21 14:09	1

QC Sample Results

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

Job ID: 890-744-1
SDG: TE012921036

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-3654/2-A
Matrix: Solid
Analysis Batch: 3660

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	238.6		mg/Kg		95	90 - 110

Lab Sample ID: LCSD 880-3654/3-A
Matrix: Solid
Analysis Batch: 3660

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	238.4		mg/Kg		95	90 - 110	0	20

QC Association Summary

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

Job ID: 890-744-1
SDG: TE012921036

GC VOA

Prep Batch: 3652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-744-1	PH02	Total/NA	Solid	5035	
890-744-2	PH02 A	Total/NA	Solid	5035	
MB 880-3652/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3652/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3652/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 3653

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-744-1	PH02	Total/NA	Solid	8021B	3652
890-744-2	PH02 A	Total/NA	Solid	8021B	3652
MB 880-3652/5-A	Method Blank	Total/NA	Solid	8021B	3652
LCS 880-3652/1-A	Lab Control Sample	Total/NA	Solid	8021B	3652
LCSD 880-3652/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3652

GC Semi VOA

Prep Batch: 3659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-744-1	PH02	Total/NA	Solid	8015NM Prep	
890-744-2	PH02 A	Total/NA	Solid	8015NM Prep	
MB 880-3659/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3659/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3659/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 3662

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-744-1	PH02	Total/NA	Solid	8015B NM	3659
890-744-2	PH02 A	Total/NA	Solid	8015B NM	3659
MB 880-3659/1-A	Method Blank	Total/NA	Solid	8015B NM	3659
LCS 880-3659/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3659
LCSD 880-3659/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3659

HPLC/IC

Leach Batch: 3654

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-744-1	PH02	Soluble	Solid	DI Leach	
890-744-2	PH02 A	Soluble	Solid	DI Leach	
MB 880-3654/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3654/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3654/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 3660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-744-1	PH02	Soluble	Solid	300.0	3654
890-744-2	PH02 A	Soluble	Solid	300.0	3654
MB 880-3654/1-A	Method Blank	Soluble	Solid	300.0	3654
LCS 880-3654/2-A	Lab Control Sample	Soluble	Solid	300.0	3654
LCSD 880-3654/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3654

Lab Chronicle

Client: WSP USA Inc. Job ID: 890-744-1
Project/Site: Christera CTB SDG: TE012921036

Client Sample ID: PH02 Lab Sample ID: 890-744-1

Date Collected: 05/28/21 10:05 **Matrix: Solid**
Date Received: 05/28/21 13:26

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3652	05/29/21 11:13	KL	XEN MID
Total/NA	Analysis	8021B		1	3653	05/29/21 15:47	KL	XEN MID
Total/NA	Prep	8015NM Prep			3659	05/29/21 12:49	AM	XEN MID
Total/NA	Analysis	8015B NM		1	3662	05/29/21 19:00	AM	XEN MID
Soluble	Leach	DI Leach			3654	05/29/21 11:20	SC	XEN MID
Soluble	Analysis	300.0		1	3660	05/29/21 15:25	SC	XEN MID

Client Sample ID: PH02 A Lab Sample ID: 890-744-2

Date Collected: 05/28/21 10:15 **Matrix: Solid**
Date Received: 05/28/21 13:26

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3652	05/29/21 11:13	KL	XEN MID
Total/NA	Analysis	8021B		1	3653	05/29/21 16:08	KL	XEN MID
Total/NA	Prep	8015NM Prep			3659	05/29/21 12:49	AM	XEN MID
Total/NA	Analysis	8015B NM		1	3662	05/29/21 19:21	AM	XEN MID
Soluble	Leach	DI Leach			3654	05/29/21 11:20	SC	XEN MID
Soluble	Analysis	300.0		1	3660	05/29/21 15:30	SC	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

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

Job ID: 890-744-1
SDG: TE012921036

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. Job ID: 890-744-1
Project/Site: Christera CTB SDG: TE012921036

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

Protocol References:

ASTM = ASTM International

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

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

Laboratory References:

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

Sample Summary

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

Job ID: 890-744-1
SDG: TE012921036

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-744-1	PH02	Solid	05/28/21 10:05	05/28/21 13:26	- 1
890-744-2	PH02 A	Solid	05/28/21 10:15	05/28/21 13:26	- 2.5

Chain of Custody

Work Order No: _____

XENCO LABORATORIES

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

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5/31/2021

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	WSP USA Inc., Permian office	Company Name:	XTO Energy, Inc.
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, Tx 79705	City, State ZIP:	
Phone:	(432) 236-3849 Email:	will.mather@wsp.com, dan.moir@wsp.com	

Work Order Comments

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

Project Name:	Chistera CTB	Turn Around	
Project Number:	TE012921036	Routine	☑
P.O. Number:	Lea	Rush:	24hr
Sampler's Name:	William Mather	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	5-2/50	Thermometer ID	
Received Intact:	(Yes) No		IR-M-007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

ANALYSIS REQUEST

Work Order Notes

Incident #: nAPP2107747725
Cost Center: 2094361001

890-744 Chain of Custody

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
PH02	s	5/28/2021	10:05	1'	1	x	x	x	Discrete
PH02A	s	5/28/2021	10:15	2.5'	1	x	x	x	Discrete

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

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

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		5.28.21 1326	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-744-1
SDG Number: TE012921036

Login Number: 744
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Xenco, Carlsbad

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

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-744-1
SDG Number: TE012921036

Login Number: 744
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Xenco, Midland
List Creation: 05/29/21 11:01 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?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-745-1
Laboratory Sample Delivery Group: TE012921036
Client Project/Site: Christera CTB

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

Attn: Dan Moir

JKramer

Authorized for release by:
5/31/2021 8:26:14 PM

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

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

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

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

Laboratory Job ID: 890-745-1
SDG: TE012921036

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-745-1
Project/Site: Christera CTB SDG: TE012921036

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc. Job ID: 890-745-1
Project/Site: Christera CTB SDG: TE012921036

Job ID: 890-745-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-745-1

Receipt
The samples were received on 5/28/2021 1:26 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.0°C

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

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-3654 and 880-3654 and analytical batch 880-3660 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. The associated samples are: PH03 (890-745-1), PH03 A (890-745-2) and (880-2587-A-1-A).

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

Client Sample Results

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

Job ID: 890-745-1
SDG: TE012921036

Client Sample ID: PH03

Lab Sample ID: 890-745-1
Matrix: Solid
Date Collected: 05/28/21 10:27
Date Received: 05/28/21 13:26
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		05/29/21 11:13	05/29/21 16:28	1
Toluene	<0.00198	U	0.00198		mg/Kg		05/29/21 11:13	05/29/21 16:28	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		05/29/21 11:13	05/29/21 16:28	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		05/29/21 11:13	05/29/21 16:28	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		05/29/21 11:13	05/29/21 16:28	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		05/29/21 11:13	05/29/21 16:28	1
Total BTEX	<0.00397	U	0.00397		mg/Kg		05/29/21 11:13	05/29/21 16:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*05/29/21 11:13*	*05/29/21 16:28*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*05/29/21 11:13*	*05/29/21 16:28*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/29/21 12:49	05/29/21 19:42	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/29/21 12:49	05/29/21 19:42	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/29/21 12:49	05/29/21 19:42	1
Total TPH	<49.9	U	49.9		mg/Kg		05/29/21 12:49	05/29/21 19:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*85*		*70 - 130*	*05/29/21 12:49*	*05/29/21 19:42*	*1*
o-Terphenyl	*76*		*70 - 130*	*05/29/21 12:49*	*05/29/21 19:42*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.95	U	4.95		mg/Kg			05/29/21 15:35	1

Client Sample ID: PH03 A

Lab Sample ID: 890-745-2
Matrix: Solid
Date Collected: 05/28/21 10:37
Date Received: 05/28/21 13:26
Sample Depth: - 2.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		05/29/21 11:13	05/29/21 16:48	1
Toluene	<0.00198	U	0.00198		mg/Kg		05/29/21 11:13	05/29/21 16:48	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		05/29/21 11:13	05/29/21 16:48	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		05/29/21 11:13	05/29/21 16:48	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		05/29/21 11:13	05/29/21 16:48	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		05/29/21 11:13	05/29/21 16:48	1
Total BTEX	<0.00396	U	0.00396		mg/Kg		05/29/21 11:13	05/29/21 16:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*05/29/21 11:13*	*05/29/21 16:48*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*05/29/21 11:13*	*05/29/21 16:48*	*1*

Client Sample Results

Client: WSP USA Inc. Job ID: 890-745-1
Project/Site: Christera CTB SDG: TE012921036

Client Sample ID: PH03 A
Lab Sample ID: 890-745-2
Date Collected: 05/28/21 10:37
Matrix: Solid
Date Received: 05/28/21 13:26
Sample Depth: - 2.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/29/21 12:49	05/29/21 20:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/29/21 12:49	05/29/21 20:25	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/29/21 12:49	05/29/21 20:25	1
Total TPH	<50.0	U	50.0		mg/Kg		05/29/21 12:49	05/29/21 20:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*05/29/21 12:49*	*05/29/21 20:25*	*1*
o-Terphenyl	*72*		*70 - 130*	*05/29/21 12:49*	*05/29/21 20:25*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7.61**		4.95		mg/Kg			05/29/21 15:41	1

Surrogate Summary

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

Job ID: 890-745-1
SDG: TE012921036

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-745-1	PH03	105	94
890-745-2	PH03 A	104	92
LCS 880-3652/1-A	Lab Control Sample	106	106
LCSD 880-3652/2-A	Lab Control Sample Dup	114	105
MB 880-3652/5-A	Method Blank	90	91

Surrogate Legend

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

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-745-1	PH03	85	76
890-745-2	PH03 A	86	72
LCS 880-3659/2-A	Lab Control Sample	93	76
LCSD 880-3659/3-A	Lab Control Sample Dup	92	74
MB 880-3659/1-A	Method Blank	96	84

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

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

Job ID: 890-745-1
SDG: TE012921036

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-3652/5-A
Matrix: Solid
Analysis Batch: 3653

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3652

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/29/21 11:13	05/29/21 14:25	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/29/21 11:13	05/29/21 14:25	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/29/21 11:13	05/29/21 14:25	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/29/21 11:13	05/29/21 14:25	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/29/21 11:13	05/29/21 14:25	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/29/21 11:13	05/29/21 14:25	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		05/29/21 11:13	05/29/21 14:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*05/29/21 11:13*	*05/29/21 14:25*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*05/29/21 11:13*	*05/29/21 14:25*	*1*

Lab Sample ID: LCS 880-3652/1-A
Matrix: Solid
Analysis Batch: 3653

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3652

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.1125		mg/Kg		112	70 - 130		
Toluene			0.100	0.1053		mg/Kg		105	70 - 130		
Ethylbenzene			0.100	0.1056		mg/Kg		106	70 - 130		
m-Xylene & p-Xylene			0.200	0.2268		mg/Kg		113	70 - 130		
o-Xylene			0.100	0.1142		mg/Kg		114	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: LCSD 880-3652/2-A
Matrix: Solid
Analysis Batch: 3653

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3652

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1095		mg/Kg		109	70 - 130	3	35
Toluene			0.100	0.1048		mg/Kg		105	70 - 130	1	35
Ethylbenzene			0.100	0.1064		mg/Kg		106	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.2317		mg/Kg		116	70 - 130	2	35
o-Xylene			0.100	0.1170		mg/Kg		117	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

QC Sample Results

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

Job ID: 890-745-1
SDG: TE012921036

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

Lab Sample ID: MB 880-3659/1-A
Matrix: Solid
Analysis Batch: 3662

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3659

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/29/21 12:49	05/29/21 14:42	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/29/21 12:49	05/29/21 14:42	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/29/21 12:49	05/29/21 14:42	1
Total TPH	<50.0	U	50.0		mg/Kg		05/29/21 12:49	05/29/21 14:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*05/29/21 12:49*	*05/29/21 14:42*	*1*
o-Terphenyl	*84*		*70 - 130*	*05/29/21 12:49*	*05/29/21 14:42*	*1*

Lab Sample ID: LCS 880-3659/2-A
Matrix: Solid
Analysis Batch: 3662

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3659

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	813.2		mg/Kg		81	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	895.2		mg/Kg		90	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*93*		*70 - 130*
o-Terphenyl	*76*		*70 - 130*

Lab Sample ID: LCSD 880-3659/3-A
Matrix: Solid
Analysis Batch: 3662

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3659

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	799.2		mg/Kg		80	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	872.7		mg/Kg		87	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*92*		*70 - 130*
o-Terphenyl	*74*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-3654/1-A
Matrix: Solid
Analysis Batch: 3660

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/29/21 14:09	1

QC Sample Results

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

Job ID: 890-745-1
SDG: TE012921036

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-3654/2-A
Matrix: Solid
Analysis Batch: 3660

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	238.6		mg/Kg		95	90 - 110

Lab Sample ID: LCSD 880-3654/3-A
Matrix: Solid
Analysis Batch: 3660

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	238.4		mg/Kg		95	90 - 110	0	20

QC Association Summary

Client: WSP USA Inc. Job ID: 890-745-1
Project/Site: Christera CTB SDG: TE012921036

GC VOA

Prep Batch: 3652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-745-1	PH03	Total/NA	Solid	5035	
890-745-2	PH03 A	Total/NA	Solid	5035	
MB 880-3652/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3652/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3652/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 3653

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-745-1	PH03	Total/NA	Solid	8021B	3652
890-745-2	PH03 A	Total/NA	Solid	8021B	3652
MB 880-3652/5-A	Method Blank	Total/NA	Solid	8021B	3652
LCS 880-3652/1-A	Lab Control Sample	Total/NA	Solid	8021B	3652
LCSD 880-3652/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3652

GC Semi VOA

Prep Batch: 3659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-745-1	PH03	Total/NA	Solid	8015NM Prep	
890-745-2	PH03 A	Total/NA	Solid	8015NM Prep	
MB 880-3659/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3659/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3659/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 3662

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-745-1	PH03	Total/NA	Solid	8015B NM	3659
890-745-2	PH03 A	Total/NA	Solid	8015B NM	3659
MB 880-3659/1-A	Method Blank	Total/NA	Solid	8015B NM	3659
LCS 880-3659/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3659
LCSD 880-3659/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3659

HPLC/IC

Leach Batch: 3654

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-745-1	PH03	Soluble	Solid	DI Leach	
890-745-2	PH03 A	Soluble	Solid	DI Leach	
MB 880-3654/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3654/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3654/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 3660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-745-1	PH03	Soluble	Solid	300.0	3654
890-745-2	PH03 A	Soluble	Solid	300.0	3654
MB 880-3654/1-A	Method Blank	Soluble	Solid	300.0	3654
LCS 880-3654/2-A	Lab Control Sample	Soluble	Solid	300.0	3654
LCSD 880-3654/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3654

Lab Chronicle

Client: WSP USA Inc. Job ID: 890-745-1
Project/Site: Christera CTB SDG: TE012921036

Client Sample ID: PH03 Lab Sample ID: 890-745-1

Date Collected: 05/28/21 10:27 **Matrix: Solid**
Date Received: 05/28/21 13:26

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3652	05/29/21 11:13	KL	XEN MID
Total/NA	Analysis	8021B		1	3653	05/29/21 16:28	KL	XEN MID
Total/NA	Prep	8015NM Prep			3659	05/29/21 12:49	AM	XEN MID
Total/NA	Analysis	8015B NM		1	3662	05/29/21 19:42	AM	XEN MID
Soluble	Leach	DI Leach			3654	05/29/21 11:20	SC	XEN MID
Soluble	Analysis	300.0		1	3660	05/29/21 15:35	SC	XEN MID

Client Sample ID: PH03 A Lab Sample ID: 890-745-2

Date Collected: 05/28/21 10:37 **Matrix: Solid**
Date Received: 05/28/21 13:26

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3652	05/29/21 11:13	KL	XEN MID
Total/NA	Analysis	8021B		1	3653	05/29/21 16:48	KL	XEN MID
Total/NA	Prep	8015NM Prep			3659	05/29/21 12:49	AM	XEN MID
Total/NA	Analysis	8015B NM		1	3662	05/29/21 20:25	AM	XEN MID
Soluble	Leach	DI Leach			3654	05/29/21 11:20	SC	XEN MID
Soluble	Analysis	300.0		1	3660	05/29/21 15:41	SC	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-745-1
Project/Site: Christera CTB SDG: TE012921036

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: Christera CTB

Job ID: 890-745-1
SDG: TE012921036

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

Protocol References:

ASTM = ASTM International

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

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

Laboratory References:

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

Sample Summary

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

Job ID: 890-745-1
SDG: TE012921036

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-745-1	PH03	Solid	05/28/21 10:27	05/28/21 13:26	- 1
890-745-2	PH03 A	Solid	05/28/21 10:37	05/28/21 13:26	- 2.5

Chain of Custody

Work Order No: _____

XENCO LABORATORIES

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

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5/31/2021

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	WSP USA Inc., Permian office	Company Name:	XTO Energy, Inc.
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, Tx 79705	City, State ZIP:	
Phone:	(432) 236-3849	Email:	will.mather@wsp.com, dan.moir@wsp.com

Work Order Comments

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

Project Name:	Chistera CTB	Turn Around	
Project Number:	TE012921036	Routine ☐	
P.O. Number:	Lea	Rush: 24hr	
Sampler's Name:	William Mather	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	6.2/5.0	Thermometer ID	IR#007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
PH03	s	5/28/2021	10:27	1'	1	x	x	x	Discrete
PH03A	s	5/28/2021	10:37	2.5'	1	x	x	x	Discrete

890-745 Chain of Custody

Work Order Notes

Incident #: nAPP2107747725
Cost Center: 2094361001

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

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

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			5.28.21 1326			
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-745-1
SDG Number: TE012921036

Login Number: 745
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Xenco, Carlsbad

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

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-745-1
SDG Number: TE012921036

Login Number: 745
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Xenco, Midland
List Creation: 05/29/21 11:01 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?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-746-1
Laboratory Sample Delivery Group: TE012921036
Client Project/Site: Christera CTB

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

Attn: Dan Moir

JKramer

Authorized for release by:
5/31/2021 8:33:05 PM

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

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

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

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

Laboratory Job ID: 890-746-1
SDG: TE012921036

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-746-1
Project/Site: Christera CTB SDG: TE012921036

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

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

Job ID: 890-746-1
SDG: TE012921036

Job ID: 890-746-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-746-1

Receipt
The samples were received on 5/28/2021 1:26 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.0°C

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

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-3654 and analytical batch 880-3660 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. The associated sample is: PH04 (890-746-1).

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

Client Sample Results

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

Job ID: 890-746-1
SDG: TE012921036

Client Sample ID: PH04

Date Collected: 05/28/21 10:48
Date Received: 05/28/21 13:26
Sample Depth: - 1

Lab Sample ID: 890-746-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/29/21 11:13	05/29/21 17:09	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/29/21 11:13	05/29/21 17:09	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/29/21 11:13	05/29/21 17:09	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/29/21 11:13	05/29/21 17:09	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/29/21 11:13	05/29/21 17:09	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/29/21 11:13	05/29/21 17:09	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		05/29/21 11:13	05/29/21 17:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*05/29/21 11:13*	*05/29/21 17:09*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*05/29/21 11:13*	*05/29/21 17:09*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		05/29/21 12:49	05/29/21 20:46	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		05/29/21 12:49	05/29/21 20:46	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		05/29/21 12:49	05/29/21 20:46	1
Total TPH	<49.7	U	49.7		mg/Kg		05/29/21 12:49	05/29/21 20:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*05/29/21 12:49*	*05/29/21 20:46*	*1*
o-Terphenyl	*75*		*70 - 130*	*05/29/21 12:49*	*05/29/21 20:46*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.05	U	5.05		mg/Kg			05/29/21 15:46	1

Client Sample ID: PH04 A

Date Collected: 05/28/21 10:53
Date Received: 05/28/21 13:26
Sample Depth: - 3

Lab Sample ID: 890-746-2

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/29/21 11:13	05/29/21 17:29	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/29/21 11:13	05/29/21 17:29	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/29/21 11:13	05/29/21 17:29	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/29/21 11:13	05/29/21 17:29	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/29/21 11:13	05/29/21 17:29	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/29/21 11:13	05/29/21 17:29	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		05/29/21 11:13	05/29/21 17:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*05/29/21 11:13*	*05/29/21 17:29*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*05/29/21 11:13*	*05/29/21 17:29*	*1*

Client Sample Results

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

Job ID: 890-746-1
SDG: TE012921036

Client Sample ID: PH04 A

Date Collected: 05/28/21 10:53
Date Received: 05/28/21 13:26
Sample Depth: - 3

Lab Sample ID: 890-746-2

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		05/29/21 12:49	05/29/21 21:07	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/29/21 12:49	05/29/21 21:07	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/29/21 12:49	05/29/21 21:07	1
Total TPH	<49.8	U	49.8		mg/Kg		05/29/21 12:49	05/29/21 21:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*87*		*70 - 130*	*05/29/21 12:49*	*05/29/21 21:07*	*1*
o-Terphenyl	*75*		*70 - 130*	*05/29/21 12:49*	*05/29/21 21:07*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.02	U	5.02		mg/Kg			05/29/21 15:51	1

Surrogate Summary

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

Job ID: 890-746-1
SDG: TE012921036

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-746-1	PH04	99	94
890-746-2	PH04 A	88	98
LCS 880-3652/1-A	Lab Control Sample	106	106
LCSD 880-3652/2-A	Lab Control Sample Dup	114	105
MB 880-3652/5-A	Method Blank	90	91

Surrogate Legend

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

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-746-1	PH04	86	75
890-746-2	PH04 A	87	75
LCS 880-3659/2-A	Lab Control Sample	93	76
LCSD 880-3659/3-A	Lab Control Sample Dup	92	74
MB 880-3659/1-A	Method Blank	96	84

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

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

Job ID: 890-746-1
SDG: TE012921036

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-3652/5-A
Matrix: Solid
Analysis Batch: 3653

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3652

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/29/21 11:13	05/29/21 14:25	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/29/21 11:13	05/29/21 14:25	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/29/21 11:13	05/29/21 14:25	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/29/21 11:13	05/29/21 14:25	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/29/21 11:13	05/29/21 14:25	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/29/21 11:13	05/29/21 14:25	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		05/29/21 11:13	05/29/21 14:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*05/29/21 11:13*	*05/29/21 14:25*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*05/29/21 11:13*	*05/29/21 14:25*	*1*

Lab Sample ID: LCS 880-3652/1-A
Matrix: Solid
Analysis Batch: 3653

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3652

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.1125		mg/Kg		112	70 - 130		
Toluene			0.100	0.1053		mg/Kg		105	70 - 130		
Ethylbenzene			0.100	0.1056		mg/Kg		106	70 - 130		
m-Xylene & p-Xylene			0.200	0.2268		mg/Kg		113	70 - 130		
o-Xylene			0.100	0.1142		mg/Kg		114	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: LCSD 880-3652/2-A
Matrix: Solid
Analysis Batch: 3653

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3652

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1095		mg/Kg		109	70 - 130	3	35
Toluene			0.100	0.1048		mg/Kg		105	70 - 130	1	35
Ethylbenzene			0.100	0.1064		mg/Kg		106	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.2317		mg/Kg		116	70 - 130	2	35
o-Xylene			0.100	0.1170		mg/Kg		117	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

QC Sample Results

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

Job ID: 890-746-1
SDG: TE012921036

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

Lab Sample ID: MB 880-3659/1-A
Matrix: Solid
Analysis Batch: 3662

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3659

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/29/21 12:49	05/29/21 14:42	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/29/21 12:49	05/29/21 14:42	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/29/21 12:49	05/29/21 14:42	1
Total TPH	<50.0	U	50.0		mg/Kg		05/29/21 12:49	05/29/21 14:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*05/29/21 12:49*	*05/29/21 14:42*	*1*
o-Terphenyl	*84*		*70 - 130*	*05/29/21 12:49*	*05/29/21 14:42*	*1*

Lab Sample ID: LCS 880-3659/2-A
Matrix: Solid
Analysis Batch: 3662

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3659

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	813.2		mg/Kg		81	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	895.2		mg/Kg		90	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*93*		*70 - 130*
o-Terphenyl	*76*		*70 - 130*

Lab Sample ID: LCSD 880-3659/3-A
Matrix: Solid
Analysis Batch: 3662

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3659

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	799.2		mg/Kg		80	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	872.7		mg/Kg		87	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*92*		*70 - 130*
o-Terphenyl	*74*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-3654/1-A
Matrix: Solid
Analysis Batch: 3660

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/29/21 14:09	1

QC Sample Results

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

Job ID: 890-746-1
SDG: TE012921036

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-3654/2-A
Matrix: Solid
Analysis Batch: 3660

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	238.6		mg/Kg		95	90 - 110		

Lab Sample ID: LCSD 880-3654/3-A
Matrix: Solid
Analysis Batch: 3660

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	238.4		mg/Kg		95	90 - 110	0	20

Lab Sample ID: 890-746-2 MS
Matrix: Solid
Analysis Batch: 3660

Client Sample ID: PH04 A
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	<5.02	U	251	247.8		mg/Kg		98	90 - 110		

Lab Sample ID: 890-746-2 MSD
Matrix: Solid
Analysis Batch: 3660

Client Sample ID: PH04 A
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	<5.02	U	251	247.5		mg/Kg		98	90 - 110	0	20

QC Association Summary

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

Job ID: 890-746-1
SDG: TE012921036

GC VOA

Prep Batch: 3652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-746-1	PH04	Total/NA	Solid	5035	
890-746-2	PH04 A	Total/NA	Solid	5035	
MB 880-3652/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3652/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3652/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 3653

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-746-1	PH04	Total/NA	Solid	8021B	3652
890-746-2	PH04 A	Total/NA	Solid	8021B	3652
MB 880-3652/5-A	Method Blank	Total/NA	Solid	8021B	3652
LCS 880-3652/1-A	Lab Control Sample	Total/NA	Solid	8021B	3652
LCSD 880-3652/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3652

GC Semi VOA

Prep Batch: 3659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-746-1	PH04	Total/NA	Solid	8015NM Prep	
890-746-2	PH04 A	Total/NA	Solid	8015NM Prep	
MB 880-3659/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3659/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3659/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 3662

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-746-1	PH04	Total/NA	Solid	8015B NM	3659
890-746-2	PH04 A	Total/NA	Solid	8015B NM	3659
MB 880-3659/1-A	Method Blank	Total/NA	Solid	8015B NM	3659
LCS 880-3659/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3659
LCSD 880-3659/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3659

HPLC/IC

Leach Batch: 3654

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-746-1	PH04	Soluble	Solid	DI Leach	
890-746-2	PH04 A	Soluble	Solid	DI Leach	
MB 880-3654/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3654/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3654/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-746-2 MS	PH04 A	Soluble	Solid	DI Leach	
890-746-2 MSD	PH04 A	Soluble	Solid	DI Leach	

Analysis Batch: 3660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-746-1	PH04	Soluble	Solid	300.0	3654
890-746-2	PH04 A	Soluble	Solid	300.0	3654
MB 880-3654/1-A	Method Blank	Soluble	Solid	300.0	3654
LCS 880-3654/2-A	Lab Control Sample	Soluble	Solid	300.0	3654
LCSD 880-3654/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3654
890-746-2 MS	PH04 A	Soluble	Solid	300.0	3654

QC Association Summary

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

Job ID: 890-746-1
SDG: TE012921036

HPLC/IC (Continued)

Analysis Batch: 3660 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-746-2 MSD	PH04 A	Soluble	Solid	300.0	3654

Lab Chronicle

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

Job ID: 890-746-1
SDG: TE012921036

Client Sample ID: PH04
Date Collected: 05/28/21 10:48
Date Received: 05/28/21 13:26

Lab Sample ID: 890-746-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3652	05/29/21 11:13	KL	XEN MID
Total/NA	Analysis	8021B		1	3653	05/29/21 17:09	KL	XEN MID
Total/NA	Prep	8015NM Prep			3659	05/29/21 12:49	AM	XEN MID
Total/NA	Analysis	8015B NM		1	3662	05/29/21 20:46	AM	XEN MID
Soluble	Leach	DI Leach			3654	05/29/21 11:20	SC	XEN MID
Soluble	Analysis	300.0		1	3660	05/29/21 15:46	SC	XEN MID

Client Sample ID: PH04 A
Date Collected: 05/28/21 10:53
Date Received: 05/28/21 13:26

Lab Sample ID: 890-746-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3652	05/29/21 11:13	KL	XEN MID
Total/NA	Analysis	8021B		1	3653	05/29/21 17:29	KL	XEN MID
Total/NA	Prep	8015NM Prep			3659	05/29/21 12:49	AM	XEN MID
Total/NA	Analysis	8015B NM		1	3662	05/29/21 21:07	AM	XEN MID
Soluble	Leach	DI Leach			3654	05/29/21 11:20	SC	XEN MID
Soluble	Analysis	300.0		1	3660	05/29/21 15:51	SC	XEN MID

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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-746-1
Project/Site: Christera CTB SDG: TE012921036

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: Christera CTB

Job ID: 890-746-1
SDG: TE012921036

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

Protocol References:

ASTM = ASTM International

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

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

Laboratory References:

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

Sample Summary

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

Job ID: 890-746-1
SDG: TE012921036

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-746-1	PH04	Solid	05/28/21 10:48	05/28/21 13:26	- 1
890-746-2	PH04 A	Solid	05/28/21 10:53	05/28/21 13:26	- 3

Chain of Custody

XENCO LABORATORIES

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

Work Order No: _____

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5/31/2021

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	WSP USA Inc., Permian office	Company Name:	XTO Energy, Inc.
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, Tx 79705	City, State ZIP:	
Phone:	(432) 236-3849	Email:	will.mather@wsp.com, dan.moir@wsp.com

Work Order Comments

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

Project Name:	Chistera CTB	Turn Around	
Project Number:	TE012921036	Routine ☐	
P.O. Number:	Lea	Rush: 24hr	
Sampler's Name:	William Mather	Due Date:	

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

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
PH04	s	5/28/2021	10:48	1'	1	x	x	x
PH04A	s	5/28/2021	10:53	3'	1	x	x	x

890-746 Chain of Custody

Work Order Notes

Incident #: nAPP2107747725
Cost Center: 2094361001

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

Sample Comments

Discrete
Discrete

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

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		5.28.21 1324			
3			4		
5			6		

Revised Date 051418 Rev 2018 1

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-746-1
SDG Number: TE012921036

Login Number: 746
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Xenco, Carlsbad

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

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-746-1
SDG Number: TE012921036

Login Number: 746
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Xenco, Midland
List Creation: 05/29/21 11:01 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?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

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ANALYTICAL REPORT

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

Laboratory Job ID: 890-747-1
Laboratory Sample Delivery Group: TE012921036
Client Project/Site: Christera CTB

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

Attn: Dan Moir

JKramer

Authorized for release by:
5/31/2021 8:34:33 PM

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

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

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

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

Laboratory Job ID: 890-747-1
SDG: TE012921036

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-747-1
Project/Site: Christera CTB SDG: TE012921036

Qualifiers

GC VOA

Qualifier	Qualifier Description
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. Job ID: 890-747-1
Project/Site: Christera CTB SDG: TE012921036

Job ID: 890-747-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative
890-747-1

Receipt
The samples were received on 5/28/2021 1:26 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.0°C

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

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

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

Client Sample Results

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

Job ID: 890-747-1
SDG: TE012921036

Client Sample ID: PH05

Date Collected: 05/28/21 11:04
Date Received: 05/28/21 13:26
Sample Depth: - 1

Lab Sample ID: 890-747-1
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		05/29/21 11:13	05/29/21 17:50	1
Toluene	<0.00198	U	0.00198		mg/Kg		05/29/21 11:13	05/29/21 17:50	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		05/29/21 11:13	05/29/21 17:50	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		05/29/21 11:13	05/29/21 17:50	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		05/29/21 11:13	05/29/21 17:50	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		05/29/21 11:13	05/29/21 17:50	1
Total BTEX	<0.00396	U	0.00396		mg/Kg		05/29/21 11:13	05/29/21 17:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*05/29/21 11:13*	*05/29/21 17:50*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*05/29/21 11:13*	*05/29/21 17:50*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		05/29/21 12:49	05/29/21 21:28	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		05/29/21 12:49	05/29/21 21:28	1
OII Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		05/29/21 12:49	05/29/21 21:28	1
Total TPH	<49.7	U	49.7		mg/Kg		05/29/21 12:49	05/29/21 21:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*84*		*70 - 130*	*05/29/21 12:49*	*05/29/21 21:28*	*1*
o-Terphenyl	*68*	*S1-*	*70 - 130*	*05/29/21 12:49*	*05/29/21 21:28*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.97	U	4.97		mg/Kg			05/29/21 16:06	1

Client Sample ID: PH05 A

Date Collected: 05/28/21 11:06
Date Received: 05/28/21 13:26
Sample Depth: - 3

Lab Sample ID: 890-747-2
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		05/29/21 11:13	05/29/21 19:12	1
Toluene	<0.00198	U	0.00198		mg/Kg		05/29/21 11:13	05/29/21 19:12	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		05/29/21 11:13	05/29/21 19:12	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		05/29/21 11:13	05/29/21 19:12	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		05/29/21 11:13	05/29/21 19:12	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		05/29/21 11:13	05/29/21 19:12	1
Total BTEX	<0.00397	U	0.00397		mg/Kg		05/29/21 11:13	05/29/21 19:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*05/29/21 11:13*	*05/29/21 19:12*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*05/29/21 11:13*	*05/29/21 19:12*	*1*

Client Sample Results

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

Job ID: 890-747-1
SDG: TE012921036

Client Sample ID: PH05 A

Date Collected: 05/28/21 11:06
Date Received: 05/28/21 13:26
Sample Depth: - 3

Lab Sample ID: 890-747-2

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		05/29/21 12:49	05/29/21 21:49	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/29/21 12:49	05/29/21 21:49	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/29/21 12:49	05/29/21 21:49	1
Total TPH	<49.8	U	49.8		mg/Kg		05/29/21 12:49	05/29/21 21:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*05/29/21 12:49*	*05/29/21 21:49*	*1*
o-Terphenyl	*74*		*70 - 130*	*05/29/21 12:49*	*05/29/21 21:49*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.98	U	4.98		mg/Kg			05/29/21 16:12	1

Surrogate Summary

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

Job ID: 890-747-1
SDG: TE012921036

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-747-1	PH05	100	92
890-747-2	PH05 A	98	99
LCS 880-3652/1-A	Lab Control Sample	106	106
LCSD 880-3652/2-A	Lab Control Sample Dup	114	105
MB 880-3652/5-A	Method Blank	90	91

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-747-1	PH05	84	68 S1-
890-747-2	PH05 A	86	74
LCS 880-3659/2-A	Lab Control Sample	93	76
LCSD 880-3659/3-A	Lab Control Sample Dup	92	74
MB 880-3659/1-A	Method Blank	96	84

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

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

Job ID: 890-747-1
SDG: TE012921036

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-3652/5-A
Matrix: Solid
Analysis Batch: 3653

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3652

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/29/21 11:13	05/29/21 14:25	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/29/21 11:13	05/29/21 14:25	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/29/21 11:13	05/29/21 14:25	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/29/21 11:13	05/29/21 14:25	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/29/21 11:13	05/29/21 14:25	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/29/21 11:13	05/29/21 14:25	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		05/29/21 11:13	05/29/21 14:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*05/29/21 11:13*	*05/29/21 14:25*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*05/29/21 11:13*	*05/29/21 14:25*	*1*

Lab Sample ID: LCS 880-3652/1-A
Matrix: Solid
Analysis Batch: 3653

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3652

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.1125		mg/Kg		112	70 - 130		
Toluene			0.100	0.1053		mg/Kg		105	70 - 130		
Ethylbenzene			0.100	0.1056		mg/Kg		106	70 - 130		
m-Xylene & p-Xylene			0.200	0.2268		mg/Kg		113	70 - 130		
o-Xylene			0.100	0.1142		mg/Kg		114	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: LCSD 880-3652/2-A
Matrix: Solid
Analysis Batch: 3653

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3652

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1095		mg/Kg		109	70 - 130	3	35
Toluene			0.100	0.1048		mg/Kg		105	70 - 130	1	35
Ethylbenzene			0.100	0.1064		mg/Kg		106	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.2317		mg/Kg		116	70 - 130	2	35
o-Xylene			0.100	0.1170		mg/Kg		117	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

QC Sample Results

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

Job ID: 890-747-1
SDG: TE012921036

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

Lab Sample ID: MB 880-3659/1-A
Matrix: Solid
Analysis Batch: 3662

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3659

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/29/21 12:49	05/29/21 14:42	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/29/21 12:49	05/29/21 14:42	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/29/21 12:49	05/29/21 14:42	1
Total TPH	<50.0	U	50.0		mg/Kg		05/29/21 12:49	05/29/21 14:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*05/29/21 12:49*	*05/29/21 14:42*	*1*
o-Terphenyl	*84*		*70 - 130*	*05/29/21 12:49*	*05/29/21 14:42*	*1*

Lab Sample ID: LCS 880-3659/2-A
Matrix: Solid
Analysis Batch: 3662

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3659

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	813.2		mg/Kg		81	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	895.2		mg/Kg		90	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*93*		*70 - 130*
o-Terphenyl	*76*		*70 - 130*

Lab Sample ID: LCSD 880-3659/3-A
Matrix: Solid
Analysis Batch: 3662

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3659

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	799.2		mg/Kg		80	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	872.7		mg/Kg		87	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*92*		*70 - 130*
o-Terphenyl	*74*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-3654/1-A
Matrix: Solid
Analysis Batch: 3660

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/29/21 14:09	1

QC Sample Results

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

Job ID: 890-747-1
SDG: TE012921036

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-3654/2-A
Matrix: Solid
Analysis Batch: 3660

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	238.6		mg/Kg		95	90 - 110

Lab Sample ID: LCSD 880-3654/3-A
Matrix: Solid
Analysis Batch: 3660

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	238.4		mg/Kg		95	90 - 110	0	20

QC Association Summary

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

Job ID: 890-747-1
SDG: TE012921036

GC VOA

Prep Batch: 3652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-747-1	PH05	Total/NA	Solid	5035	
890-747-2	PH05 A	Total/NA	Solid	5035	
MB 880-3652/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3652/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3652/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 3653

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-747-1	PH05	Total/NA	Solid	8021B	3652
890-747-2	PH05 A	Total/NA	Solid	8021B	3652
MB 880-3652/5-A	Method Blank	Total/NA	Solid	8021B	3652
LCS 880-3652/1-A	Lab Control Sample	Total/NA	Solid	8021B	3652
LCSD 880-3652/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3652

GC Semi VOA

Prep Batch: 3659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-747-1	PH05	Total/NA	Solid	8015NM Prep	
890-747-2	PH05 A	Total/NA	Solid	8015NM Prep	
MB 880-3659/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3659/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3659/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 3662

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-747-1	PH05	Total/NA	Solid	8015B NM	3659
890-747-2	PH05 A	Total/NA	Solid	8015B NM	3659
MB 880-3659/1-A	Method Blank	Total/NA	Solid	8015B NM	3659
LCS 880-3659/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3659
LCSD 880-3659/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3659

HPLC/IC

Leach Batch: 3654

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-747-1	PH05	Soluble	Solid	DI Leach	
890-747-2	PH05 A	Soluble	Solid	DI Leach	
MB 880-3654/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3654/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3654/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 3660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-747-1	PH05	Soluble	Solid	300.0	3654
890-747-2	PH05 A	Soluble	Solid	300.0	3654
MB 880-3654/1-A	Method Blank	Soluble	Solid	300.0	3654
LCS 880-3654/2-A	Lab Control Sample	Soluble	Solid	300.0	3654
LCSD 880-3654/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3654

Lab Chronicle

Client: WSP USA Inc. Job ID: 890-747-1
Project/Site: Christera CTB SDG: TE012921036

Client Sample ID: PH05 Lab Sample ID: 890-747-1

Date Collected: 05/28/21 11:04 **Matrix: Solid**
Date Received: 05/28/21 13:26

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3652	05/29/21 11:13	KL	XEN MID
Total/NA	Analysis	8021B		1	3653	05/29/21 17:50	KL	XEN MID
Total/NA	Prep	8015NM Prep			3659	05/29/21 12:49	AM	XEN MID
Total/NA	Analysis	8015B NM		1	3662	05/29/21 21:28	AM	XEN MID
Soluble	Leach	DI Leach			3654	05/29/21 11:20	SC	XEN MID
Soluble	Analysis	300.0		1	3660	05/29/21 16:06	SC	XEN MID

Client Sample ID: PH05 A Lab Sample ID: 890-747-2

Date Collected: 05/28/21 11:06 **Matrix: Solid**
Date Received: 05/28/21 13:26

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3652	05/29/21 11:13	KL	XEN MID
Total/NA	Analysis	8021B		1	3653	05/29/21 19:12	KL	XEN MID
Total/NA	Prep	8015NM Prep			3659	05/29/21 12:49	AM	XEN MID
Total/NA	Analysis	8015B NM		1	3662	05/29/21 21:49	AM	XEN MID
Soluble	Leach	DI Leach			3654	05/29/21 11:20	SC	XEN MID
Soluble	Analysis	300.0		1	3660	05/29/21 16:12	SC	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-747-1
Project/Site: Christera CTB SDG: TE012921036

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. Job ID: 890-747-1
Project/Site: Christera CTB SDG: TE012921036

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

Protocol References:

ASTM = ASTM International

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

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

Laboratory References:

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

Sample Summary

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

Job ID: 890-747-1
SDG: TE012921036

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-747-1	PH05	Solid	05/28/21 11:04	05/28/21 13:26	- 1
890-747-2	PH05 A	Solid	05/28/21 11:06	05/28/21 13:26	- 3

Chain of Custody

XENCO LABORATORIES

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

Work Order No: _____

www.xenco.com Page 1 of 1

5/31/2021

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	WSP USA Inc., Permian office	Company Name:	XTO Energy, Inc.
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, Tx 79705	City, State ZIP:	
Phone:	(432) 236-3849	Email:	will.mather@wsp.com, dan.moir@wsp.com

Work Order Comments

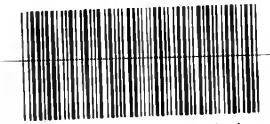
Program: UST/PST ☐ RP ☐ Brownfields ☐ RC ☐ Superfund ☐
State of Project:
Reporting:Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Chistera CTB	Turn Around	
Project Number:	TE012921036	Routine ☐	
P.O. Number:	Lea	Rush: 24hr	
Sampler's Name:	William Mather	Due Date:	

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
PH05	s	5/28/2021	11:04	1'	1	x	x	x
PH05A	s	5/28/2021	11:06	3'	1	x	x	x

ANALYSIS REQUEST



Work Order Notes

Incident #: nAPP2107747725
Cost Center: 2094361001

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

Sample Comments

PH05: Discrete
PH05A: Discrete

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			5.28.21 1329			
3				4		
5				6		

Revised Date 051418 Rev 2018.1

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-747-1
SDG Number: TE012921036

Login Number: 747
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Xenco, Carlsbad

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

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-747-1
SDG Number: TE012921036

Login Number: 747
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Xenco, Midland
List Creation: 05/29/21 11:01 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?	N/A	
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

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 30706
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
chensley	None	8/10/2021