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

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

NM OIL CONSERVATION
ARTESIA DISTRICT
DEC 19 2016
RECEIVED

Form C-141
Revised August 8, 2011
Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

nAB1635650725 260737

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P.	Contact: Amy Ruth
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: JRU 29 SWD Battery at JRU well #29	Facility Type: Exploration and Production

Surface Owner: State of New Mexico	Mineral Owner: State of New Mexico	API No. 30-015-27735

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	36	22S	30E	1845	South	2160	West	Eddy

Latitude 32.346427° **Longitude** -103.835871°

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: 3324 bbls	Volume Recovered: 2990 bbls
Source of Release: Water transfer pump	Date and Hour of Occurrence: Unknown	Date and Hour of Discovery: 12/1/2016 approx. 9 am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher and Heather Patterson (NMOCD)	
By Whom? Amy Ruth	Date and Hour 12/1/2016 4:52 pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.*
Release was due to a water transfer pump failure resulting in damage to pump fiberglass line. Fluids overflowed containment. Pump was isolated for repair.

Describe Area Affected and Cleanup Action Taken.*
The leak affected 56,043 square feet (33,938 square feet of this is in pasture). Standing fluids were recovered from the ground. Saturated surface soils were scraped and stockpiled on bermed plastic located on the caliche pad.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature:	OIL CONSERVATION DIVISION
Printed Name: Amy C. Ruth	Approved by Environmental Specialist: Crystal Weaver
Title: ~~EHS~~ Environmental Supervisor	Approval Date: / Expiration Date:
E-mail Address: ACRuth@basspet.com	Conditions of Approval: see attached / Attached ☒
Date: 12/16/2016 Phone: 432-661-0571	

* Attach Additional Sheets If Necessary

2RP-4040

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	NAB1635656725
District RP	2RP-4040
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: XTO Energy, Inc	OGRID: 5380
Contact Name: Kyle Littrell	Contact Telephone: (432)-221-7331
Contact email: Kyle_Littrell@xtoenergy.com	Incident #: 2RP-4040
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude 32.346427 Longitude -103.835871
(NAD 83 in decimal degrees to 5 decimal places)

Site Name JRU 29 SWD Battery at JRU well #29	Site Type Exploration and Production
Date Release Discovered 12/1/2016	API# *(if applicable)* 30-015-27735

Unit Letter	Section	Township	Range	County
K	36	22S	30E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 3,324 bbls	Volume Recovered (bbls) 2,990 bbls
	Is the concentration of dissolved chloride 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

Release was due to a water transfer pump failure resulting in damage to pump fiberglass line. Fluids overflowed containment. Pump was isolated for repair.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAB1635656725
District RP	2RP-4040
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? Release volume was greater than 25 bbls.
If YES, was immediate notice given to the OCD? Yes, immediate notice was given to Mike Bratcher and Heather Patterson of NMOCD by Amy Ruth on 12/01/2016 at 4:52pm.	

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:

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: _____ Date: 4-28-2020

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

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NAB1635656725
District RP	2RP-4040
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?	> 100 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☒ Yes ☐ No

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NAB1635656725
District RP	2RP-4040
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: Garrett Green Title: SH&E Coordinator

Signature: Date: 8/22/2022

email: Garrett.Green@exxonmobil.com Telephone: 575-200-0729

OCD Only

Received by: Date:

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	NAB1635656725
District RP	2RP-4040
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: Garrett Green Title: SH&E Coordinator

Signature:  Date: 8/22/2022

email: Garrett.Green@exxonmobil.com Telephone: 575-200-0729

OCD Only

Received by: Date:

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: Date:

Printed Name: Title:

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LT Environmental, Inc.
3300 North "A" Street
Building 1, Unit 103
Midland, Texas 79705
432.704.5178

April 30, 2020

Mr. Bradford Billings
New Mexico Oil Conservation Division
1220 South St. Francis Drive, #3
Santa Fe, New Mexico 87505

RE: Closure Request
James Ranch Unit 29 SWD Tank Battery
Remediation Permit Number 2RP-3082, 2RP-3302, 2RP-3726, and 2RP-4040
Eddy County, New Mexico

Dear Mr. Billings:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request report detailing site assessment, soil sampling, and excavation activities at the James Ranch Unit (JRU) 29 SWD Tank Battery (Site) in Unit K, Section 36, Township 22 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment, soil sampling, and excavation activities was to address impacts to soil after multiple historical releases of produced water at the Site.

The releases are included in the Compliance Agreement for Remediation for Historical Releases (Compliance Agreement) between XTO and the New Mexico Oil Conservation Division (NMOCD) effective November 13, 2018. The purpose of the Compliance Agreement is to ensure reportable releases that occurred prior to August 14, 2018, where XTO is responsible for the corrective action, comply with Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC) as amended on August 14, 2018. The releases are categorized as Tier IV sites in the Compliance Agreement, meaning the releases occurred prior to August 14, 2018, the effective date of 19.15.29 NMAC; however, remediation was ongoing. Based on the site assessment activities and results of the soil sampling events, XTO is requesting no further action for these release events.

RELEASE BACKGROUND

Between June 22, 2015 and December 1, 2016, four separate events resulted in the release of 4,499 barrels (bbls) of produced water at the Site. A total of approximately 4,030 bbls of free-standing fluids were recovered using a vacuum truck. The produced water releases impacted the caliche pad and pasture areas to the south and west of the pad. The previous operator reported each release to the NMOCD on a Release Notification and Corrective Action Form C-141. Remediation Permit (RP) Numbers 2RP-3082, 2RP-3302, 2RP-3726, and 2RP-4040 were assigned to the releases. Additional details regarding each release event are provided on the Form C-141s which are included in Attachment 1.

A Closure Request for the on-pad impacts was submitted in April 2019 under RP Numbers 2RP-2726 and 2RP-4833. This Closure Request is addressing the release areas in the pasture south and west of the pad associated with RP Numbers 2RP-3082, 2RP-3302, 2RP-3726, and 2RP-4040.

SITE CHARACTERIZATION

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of 19.15.29.12 of the NMAC. Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted water well with depth to water data is United States Geological Survey (USGS) Well 321946103492001, located approximately 6,641 feet southeast of the Site. The water well has a depth to groundwater of 144 feet and a total depth of 180 feet. Ground surface elevation at the water well location is 3,305 feet above mean sea level (AMSL), which is approximately 8 feet lower in elevation than the Site. The closest continuously flowing water or significant watercourse to the Site is an intermittent stream located approximately 5,300 feet southwest 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 located in a medium-potential karst area.

During January 2020, a soil boring was advanced at the Site to a depth of 110 feet bgs via truck-mounted sonic drill rig to confirm depth to water in the area. An LTE geologist logged and described soils continuously. The borehole lithologic/soil sampling log is included in Attachment 4. The borehole was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed that groundwater beneath the Site is greater than 110 feet. The borehole was properly abandoned with hydrated bentonite chips.

CLOSURE CRITERIA

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

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

A closure criteria of 600 mg/kg chloride was applied to the top 4 feet the pasture area that was impacted by the release, per NMAC 19.15.29.13.D (1) for the top 4 feet of areas that will be reclaimed following remediation.

HISTORICAL REMEDIATION ACTIVITIES

During September 2017, Basin Environmental Service Technologies (Basin), completed preliminary site assessment activities at the Site. Test trenches were advanced via trackhoe at seven locations (SP-1 through SP-7) within the release areas to delineate impacted soil resulting from the historical produced water releases. On December 17, 2017, Basin submitted a Corrective Action Plan (CAP) to the NMOCD to propose remediation actions based on the results of the preliminary assessment activities. The CAP proposed the following remediation actions:

- Continued vertical delineation of chloride to below 600 mg/kg at test trench locations SP-4 and SP-7 (vertical delineation of chloride to below 600 mg/kg was achieved at all other test trench locations).
- Excavation of impacted pasture soils to a depth of four feet bgs and installation of a 20-mil impermeable liner over the in-situ soil.
- A liner from a prior remediation effort was identified at test trench SP-4. The existing liner in this area will be removed and replaced with a new liner.
- Excavation of impacted soil on the pad to a depth of approximately one-foot bgs.
    - As indicated above, the on-pad release areas were addressed in a separate Closure Request submitted in April 2019 under RP Numbers 2RP-2726 and 2RP-4833 (test trenches SP-1, SP-2, and SP-3 were completed on-pad and are not discussed further in this report).

NMOCD approved the CAP via email on March 9, 2018 with the following conditions:

- The vertical delineation sampling at SP-4 and SP7 must be completed at 1-foot intervals and analyzed for BTEX, TPH, and chloride.
- Complete an additional sampling point between existing test trench SP-5 and SP-7 and if practicable, directly south of the battery.

Basin completed the following remediation activities during March and April 2018:

- Removed the existing liner at test trench SP-4 and completed vertical delineation of chlorides to below 600 mg/kg at test trench SP-4.
- Attempted vertical delineation of chlorides at test trench SP-7. Chloride concentrations exceeded 600 mg/kg at 23 feet bgs (maximum reach of the trackhoe).
- Completed additional test trenches SP-8 and SP-9 and achieved vertical delineation of chlorides to below 600 mg/kg.

- Replaced the liner in the area around test trench SP-4.
- Excavated pasture soils to a depth of 4 feet bgs.
- Collected confirmation soil samples from the sidewalls of the excavation from a depth of 2 feet bgs.

Excavation of the impacted soil was conducted prior to the Compliance Agreement and prior to the implementation of the August 14, 2018, NMOCD modification to 19.15.29. Excavation confirmation samples were collected as discrete samples instead of composite samples. The sampling protocol complied with Guidance on Choosing a Sampling Design for Environmental Data Collection for Use in Developing a Quality Assurance Project Plan, EPA QA/G-5S, December 2002. The excavation extent and excavation soil sample locations are depicted on Figure 2.

Basin is no longer in operation and the remaining remediation activities were not completed. The available documentation from Basin is provided in Attachment 2. Documentation includes the CAP, correspondence with NMOCD, site maps, and soil sample laboratory analytical results.

ADDITIONAL SITE ASSESSMENT AND EXCAVATION ACTIVITIES

During January 2020, LTE personnel was at the Site to complete the remaining remediation activities. A truck-mounted sonic drill rig was used to complete the NMOCD required vertical delineation at test trench SP-7. Soil samples SP-11/SP-11A/SP-11B/SP-11C were collected at 1-foot intervals from 23 feet to 26 feet bgs at the SP-7 test trench location. Additionally, per NMOCD request, an additional sampling point (SP-12) was selected between test trench SP-5 and SP-7. Soil samples were collected at 1-foot intervals from SP-12 from depths ranging from 4 feet to 14 feet bgs. The NMOCD request to add a sampling point south of the tank battery could not be completed to due multiple pipelines in this area. Soil from the boreholes was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations for the boreholes were logged on lithologic/soil sampling logs, which are included in Attachment 4. The delineation soil sample locations are depicted on Figure 3.

The CAP and initial remediation activities were completed prior to the August 14, 2018 modification to 19.15.29 of the NMAC. LTE evaluated the remaining remediation activities required, based on the implementation of the modification and associated NMOCD Table 1 Closure Criteria.

Two test trench delineation soil samples exceeded the Closure Criteria for GRO/DRO:

- The sample collected from 3 feet bgs from test trench SP-4 exceeded the Closure Criteria for GRO/DRO. The 3-foot sample was collected from above the liner and was subsequently excavated.

- The sample collected from 5 feet bgs from test trench SP-7 exceeded the Closure Criteria for GRO/DRO; the subsequent 6-foot bgs from test trench SP-7 was compliant. Soil was excavated in the area around SP-7 to a depth of 5.5 feet bgs. Following removal of impacted soil, LTE collected a 5-point composite soil sample (FS01) from the floor of the excavation from a depth of 5.5 feet bgs. The excavation extent and excavation soil sample location are depicted on Figure 2.

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

Based on depth to groundwater greater than 100 feet bgs and laboratory analytical results below the Closure Criteria in all remaining delineation and excavation soil samples, liner installation was not warranted in the excavation area south of the pad. Impacted soil was excavated to a depth of four feet bgs from the entire pasture release area and vertical delineation of chlorides to below 600 mg/kg was completed at every test trench/delineation sample point.

The excavation measured approximately 33,300 square feet in area and was completed to a depth of 4 feet bgs. A total of approximately 5,000 cubic yards of impacted soil were removed from the excavation. Photographic documentation was conducted during the Site visits. Photographs are included in Attachment 4.

ANALYTICAL RESULTS

Laboratory analytical results for the delineation soil samples, collected from sample points SP-4 through SP-12 indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria except for two samples (SP-4 at 3 feet bgs and SP-7 at 5 feet bgs) that exceeded for GRO/DRO, and were subsequently excavated. Laboratory analytical results for the delineation soil samples are summarized in Table 1.

Laboratory analytical results for the excavation soil samples indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria and chloride concentrations were below 600 mg/kg in sidewall samples collected from the pasture excavation from the top 4 feet of the subsurface. Laboratory analytical results for the excavation soil samples are summarized in Table 2. The complete laboratory analytical reports are included as Attachment 5.

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CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the historical releases of produced water in the pasture areas south and west of the well pad. Delineation soil sampling was completed in and around the release extents to define the lateral and vertical extent of impacted soil. Impacted soil was excavated from the pasture release areas to a depth of 4 feet bgs. Laboratory analytical results for excavation soil samples, collected from the final excavation extent, indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Additionally, chloride concentrations were below 600 mg/kg in excavation soil samples collected in the pasture from the top four feet of the subsurface. Laboratory analytical results for the final delineation soil samples, collected from sample points SP-4 through SP-12 indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria at depths below 4 feet bgs and no further excavation was required. A historical liner was identified in the area around sample point SP-4. The liner in this area was replaced per the CAP to be protective of historical remediation activities at the Site.

Initial response efforts, natural attenuation, and excavation of impacted soil have mitigated impacts at this Site. XTO requests no further action for RP Numbers 2RP-3082, 2RP-3302, 2RP-3726, and 2RP-4040. XTO backfilled the excavation with material purchased locally and recontoured the Site to match pre-existing site conditions. An updated NMOCD Form C-141 for each release event is included in Attachment 1.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Aimee Cole
Project Environmental Scientist

Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Ryan Mann, State Land Office
Mike Bratcher, NMOCD

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Attachments:

Figure 1	Site Location Map
Figure 2	Excavation Soil Sample Locations
Figure 3	Delineation Soil Sample Locations
Table 1	Delineation Soil Sample Analytical Results
Table 2	Excavation Soil Sample Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-3082, 2RP-3302, 2RP-3726, and 2RP-4040)
Attachment 2	Historical Documentation
Attachment 3	Lithologic / Soil Sample Logs
Attachment 4	Photographic Log
Attachment 5	Laboratory Analytical Reports

FIGURES

LEGEND

SITE LOCATION

IMAGE COURTESY OF ESRI/USGS

0 2,000 4,000

Feet

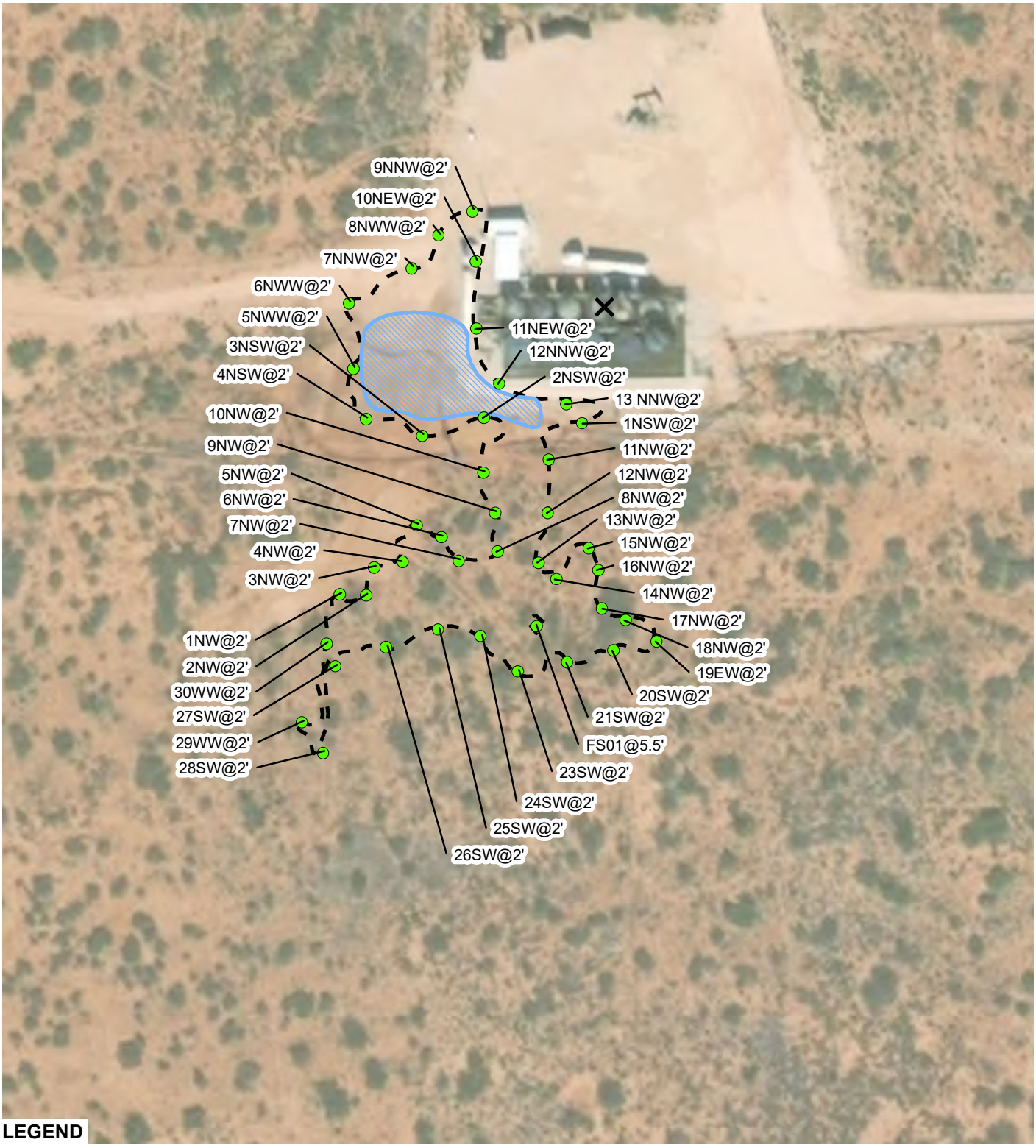
N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBERS 2RP-2726, 2RP-3082, 2RP-3302, 2RP-3726, 2RP-4040, & 2RP-4833

FIGURE 1
SITE LOCATION MAP
JAMES RANCH UNIT 29 SWD
UNIT K SEC 36 T22S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918135_JAMES RANCH UNIT 29 SWD BATTERY_4833\012918135_FIG01_SL_2019.mxd



LEGEND

- RELEASE LOCATION
- EXCAVATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- EXCAVATION EXTENT (4 FEET)
- APPROXIMATE LINER EXTENT

NOTE: REMEDIATION PERMIT NUMBERS
2RP-2726, 2RP-3082, 2RP-3302, 2RP-3726,
2RP-4040, & 2RP-4833
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

IMAGE COURTESY OF ESRI

0 100 200
Feet

N

FIGURE 2
EXCAVATION SOIL SAMPLE LOCATIONS
JAMES RANCH UNIT 29 SWD
UNIT K SEC 36 T22S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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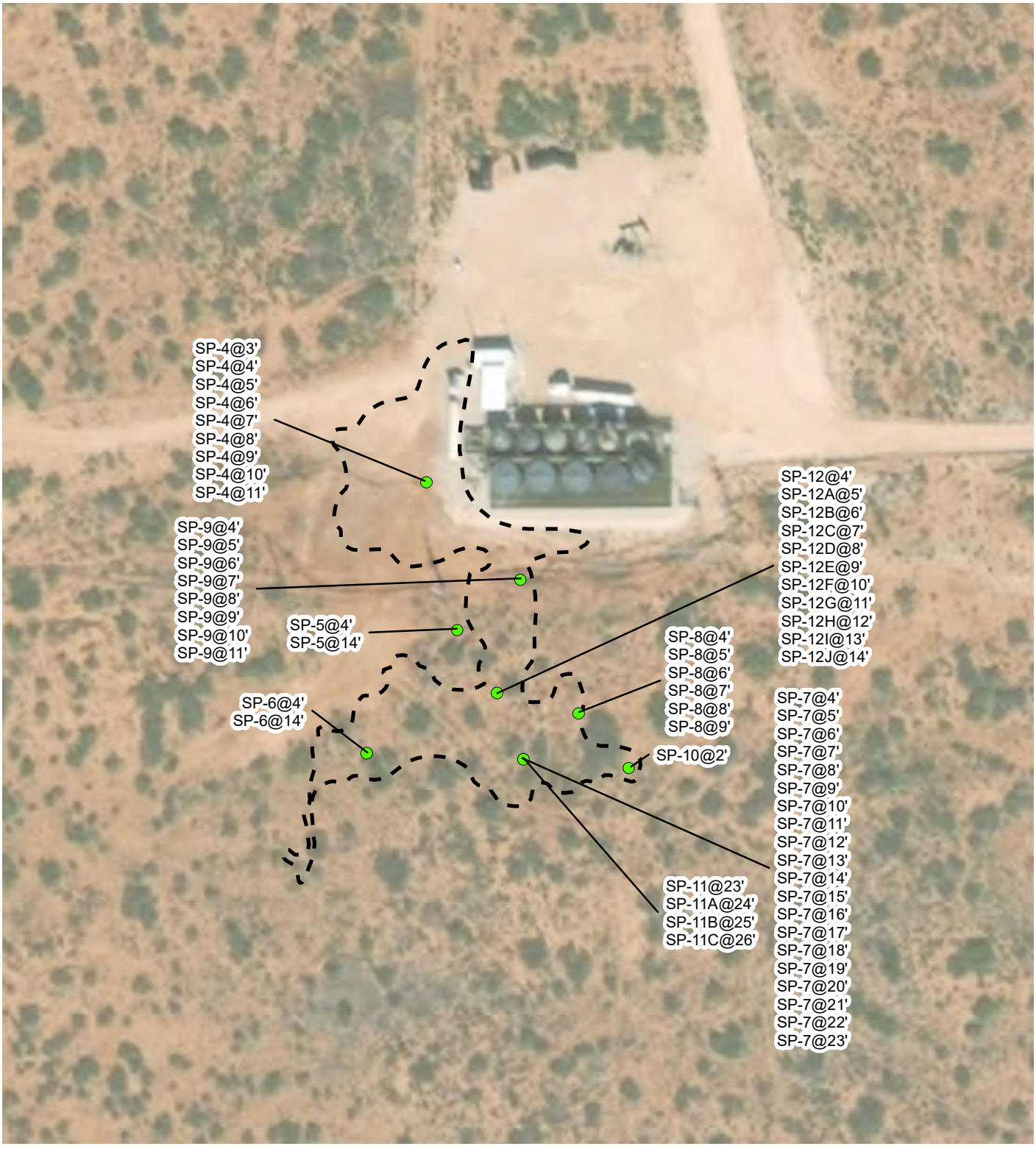

LEGEND

DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA

EXCAVATION EXTENT (4 FEET)

IMAGE COURTESY OF ESRI

0 100 200

Feet

N

NOTE: REMEDIATION PERMIT NUMBERS
2RP-2726, 2RP-3082, 2RP-3302, 2RP-3726,
2RP-4040, & 2RP-4833
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

FIGURE 3
DELINEATION SOIL SAMPLE LOCATIONS
JAMES RANCH UNIT 29 SWD
UNIT K SEC 36 T22S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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TABLES

TABLE 1
SOIL ANALYTICAL RESULTS
JRU 29 SWD TANK BATTERY
REMEDIATION PERMIT NUMBER 2RP-3082, 2RP-3302, 2RP-3726, 2RP-4040
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SP-4	3	09/11/2017	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	2,130	489	**2,130**	2,130	**2,720**
SP-4	4	04/16/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	13.3	<10.0	13.3	4,800
SP-4	5	04/16/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,600
SP-4	6	04/16/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,410
SP-4	7	04/16/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,440
SP-4	8	04/16/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,040
SP-4	9	04/16/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,800
SP-4	10	04/16/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	608
SP-4	11	04/16/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	528
SP-5	4	04/06/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	288
SP-5	14	09/11/2017	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	240
SP-6	4	04/06/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	529
SP-6	14	09/11/2017	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	64.0
SP-7	4	03/29/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	469	130	469	599	10,400
SP-7	5	03/29/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	1,140	248	**1,140**	1,388	10,800
SP-7	6	03/29/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	8,130
SP-7	7	03/29/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	14,400
SP-7	8	03/29/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	15,600
SP-7	9	03/29/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	10,700
SP-7	10	03/29/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	3,440
SP-7	11	03/29/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	3,520
SP-7	12	03/29/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	656
SP-7	13	03/29/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	1,200
SP-7	14	03/29/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	1,120
SP-7	14	03/29/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	1,760
SP-7	15	03/29/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	304
SP-7	16	03/29/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	880
SP-7	17	03/29/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	816
SP-7	18	03/29/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	1,360
SP-7	19	03/29/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	2,360
SP-7	20	03/29/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	1,600
SP-7	21	03/29/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	1,440
SP-7	22	03/29/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	4,880
SP-7	23	03/29/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	2,360
SP-11	23	01/21/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	32.9
SP-11A	24	01/21/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	157
SP-11B	25	01/21/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	289
SP-11C	26	01/21/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	216
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**

TABLE 1
SOIL ANALYTICAL RESULTS
JRU 29 SWD TANK BATTERY
REMEDIATION PERMIT NUMBER 2RP-3082, 2RP-3302, 2RP-3726, 2RP-4040
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SP-8	4	04/02/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	3,760
SP-8	5	04/02/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	9,060
SP-8	6	04/02/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	1,520
SP-8	7	04/02/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	11,800
SP-8	8	04/02/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	1,010
SP-8	9	04/02/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	272
SP-9	4	04/02/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	6,400
SP-9	5	04/02/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	6,800
SP-9	6	04/02/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	5,040
SP-9	7	04/02/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	3,360
SP-9	8	04/02/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	14,400
SP-9	9	04/02/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	384
SP-9	10	04/02/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	560
SP-9	11	04/02/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	480
SP-10	2	04/02/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	144
SP-12	4	01/21/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	1940
SP-12A	5	01/21/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.8	<49.8	<49.8	<49.8	<49.8	2010
SP-12B	6	01/21/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	1760
SP-12C	7	01/21/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	1580
SP-12D	8	01/21/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	1110
SP-12E	9	01/21/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	383
SP-12F	10	01/21/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	537
SP-12G	11	01/21/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	418
SP-12H	12	01/21/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	698
SP-12I	13	01/21/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	947
SP-12J	14	01/21/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	<49.9	561
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**

Notes:

bgs - below ground surface
BTEX - benzene, toluene, ethylbenzene, and total xylene
DRO - diesel range organics
GRO - gasoline range organics
mg/kg - milligrams per kilogram
ORO - motor oil range organics
NMAC - New Mexico Administrative Code
NMOCD - New Mexico Oil Conservation Division
NE - not established
TPH - total petroleum hydrocarbons

Bold - indicates result exceeds the applicable regulatory standard
< - indicates result is below laboratory reporting limits
Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018
Greyed data represents samples that were excavated

TABLE 2
SOIL ANALYTICAL RESULTS
JRU 29 SWD TANK BATTERY
REMEDIATION PERMIT NUMBER 2RP-3082, 2RP-3302, 2RP-3726, 2RP-4040
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
1 NW	2	04/06/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	112*
2 NW	2	04/06/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	64*
3 NW	2	04/06/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	80*
4 NW	2	04/06/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	48*
5 NW	2	04/06/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	80*
6 NW	2	04/06/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	32*
7 NW	2	04/06/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	256*
8 NW	2	04/06/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	64*
9 NW	2	04/06/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	<16.0*
10 NW	2	04/06/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	<16.0*
11 NW	2	04/06/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	<16.0*
12 NW	2	04/06/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	272*
13 NW	2	04/06/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	96*
14 NW	2	04/06/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	64*
15 NW	2	04/06/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	48*
16 NW	2	04/06/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	128*
17 NW	2	04/06/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	48*
18 NW	2	04/06/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	32*
19 EW	2	04/06/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	16*
20 SW	2	04/06/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	32*
21 SW	2	04/06/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	51.3	18.2	51.3	69.5	<16.0*
23 SW	2	04/06/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	48*
24 SW	2	04/06/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	16*
25 SW	2	04/06/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	32*
26 SW	2	04/06/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	80*
27 SW	2	04/06/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	64*
28 SW	2	04/06/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	16*
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**

TABLE 2
SOIL ANALYTICAL RESULTS
JRU 29 SWD TANK BATTERY
REMEDIATION PERMIT NUMBER 2RP-3082, 2RP-3302, 2RP-3726, 2RP-4040
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
29 WW	2	04/06/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	112*
30 WW	2	04/06/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	272*
1 NSW	2	05/25/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	160*
2 NSW	2	05/25/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	112*
3 NSW	2	05/25/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	80*
4 NSW	2	05/25/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	592*
5 NWW	2	05/25/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	528*
6 NWW	2	05/25/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	96*
7 NNW	2	05/25/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	32*
8 NWW	2	05/25/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	176*
9 NNW	2	05/25/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	144*
10 NEW	2	05/25/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	2,080
11 NEW	2	05/25/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	6,000
12 NNW	2	05/25/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	672
13 NNW	2	05/25/2018	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<30.0	1,380
FS01	5.5	03/09/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	2,200
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**

Notes:

bgs - below ground surface
BTEX - benzene, toluene, ethylbenzene, and total xylenes
DRO - diesel range organics
GRO - gasoline range organics
mg/kg - milligrams per kilogram
ORO - motor oil range organics
NMAC - New Mexico Administrative Code
NMOCD - New Mexico Oil Conservation Division
NE - not established
TPH - total petroleum hydrocarbons
Bold - indicates result exceeds the applicable regulatory standard
< - indicates result is below laboratory reporting limits
Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018
* - indicates sample was collected in the top 4 feet of an area to be reclaimed after remediation is complete; closure criteria for chloride concentration in the top 4 feet of soil is 600 mg/kg

ATTACHMENT 1: HISTORICAL DOCUMENTATION

PO Box 301 | Lovington , NM 88260 | Phone 575.396.2378

December 15, 2017

Attn. Mike Bratcher
NMOCD, District 2
811 South First Street
Artesia, NM 88210

RE: **Corrective Action Plan**
XTO Energy
JRU 29 SWD
UL/K SEC. 36 T22S R30E
32.346432, -103.835934
2RP-2726; 2RP-3082; 2RP-3302; 2RP-3726 and 2RP-4040

Mr. Bratcher:

XTO Energy (XTO) has retained Basin Environmental Service Technologies (Basin) to address potential environmental concerns at the above-referenced site.

Background and Previous Work

The JRU 29 SWD site is located approximately 1980 feet from the North/South Line South and 2310 feet from the East/West Line West 2310 at Unit Letter K of Section 36, Township 22 South, Range 30 East in Eddy County, New Mexico. This site is located in an area where groundwater is anticipated to be greater than 200 +/- feet below ground surface (bgs) as determined by consulting a Regional Groundwater Trend map. A liner from a previous remediation effort is buried beneath a portion of the currently impacted soil. The community of Loving, New Mexico is approximately 13 miles west-southwest of the site.

Five leak events have occurred at the JRU 29 SWD and are summarized below.

The initial spill occurred on December 25, 2014. XTO discovered a release of approximately ninety-seven (97) barrels (bbls) of produced water. It is suspected that an unknown truck dumped the fluid or left the “truck load valve” open, causing the spill. Time of the release is unknown. The spill was discovered on December 25, 2014 at 5:30 AM. An estimated three (3) bbls of fluids were recovered. Approximately fourteen thousand five hundred (14,500) square feet (ft^2) of tank battery/well pad were impacted. New Mexico Oil Conservation Division (NMOCD) was notified of the release on December 25, 2014, and an initial C-141 was submitted to NMOCD on January 6, 2015 for approval. The NMOCD granted approval of the C-141 on January 12, 2015. Tracking number 2RP 2726 was assigned to the spill.

A second spill event occurred on June 22, 2015. XTO discovered a release of approximately one-hundred ten (110) bbls of produced water when a pipe fitting on the 4 inch saltwater disposal (SWD) discharge line failed. Time of the release is unknown. The spill was discovered on June 22, 2015 at 6:36 PM. An estimated forty (40) bbls of fluids were recovered [twenty (20) bbl from the zero permeability containment and twenty (20) bbl from the ground]. The spill impacted approximately five thousand (5,000) ft^2 of pasture area. NMOCD was notified on June 26, 2015. The NMOCD granted approval of the C-141 on June 30, 2015. Tracking number 2RP 3082 was assigned to the spill.

The third spill event occurred September 18, 2015. XTO discovered a release of approximately two-hundred ninety (290) bbls of produced water when flange bolts on the south water transfer pump failed. The spill was discovered September 18, 2015 at approximately 7:00 PM. Most of the fluids were released to the zero permeability containment. Approximately two-hundred forty bbls of fluids were recovered. Produced water released to the ground impacted approximately four thousand two-hundred thirty five (4235) ft^2 of pasture area. NMOCD was notified September 24, 2015. NMOCD granted approval of the C-141 report on September 24, 2015. Tracking number RP-3302 was assigned to the spill.

The forth spill event occurred in May of 2016. XTO discovered a release of approximately seven hundred seventy five (775) bbls of produced water when a VSAT (satellite) antenna was damaged and caused the SCADA communication device to fail. This failure triggered an alarm that was not properly responded to. The produced water tanks overflowed into the zero permeability containment. The containment filled and overflowed onto the well pad. The date and time of the spill is unknown. The spill was discovered approximately 10:00 AM on May 27, 2016. About seven-hundred sixty (760) bbls of fluids were recovered. The spill affected two thousand two-hundred twelve 2212 ft^2 of well pad and six-hundred eighty eight (688) ft^2 of pasture. NMOCD was notified June 7, 2016. NMOCD granted approval of the C-141 report on June 8, 2016. Tracking number 2RP-3726 was assigned to the spill.

The fifth spill event occurred in December of 2016. XTO discovered a release of approximately three thousand three-hundred thirty two (3324) bbls of produced water due to a transfer pump failure. The pump failure caused damage to a fiberglass line. Fluids overflowed the containment. The date and time of the spill is unknown. The spill was discovered approximately 9:00 AM on December 1, 2016. Approximately two thousand nine-hundred ninety (2,990) bbls of fluids were recovered. The spill affected about twenty two thousand one-hundred five (22,105) ft^2 of well pad and thirty three thousand nine-hundred thirty eight (33,938) ft^2 of pasture for a total of 56,043 ft^2 impacted. NMOCD was notified December 1, 2016 at 4:52 PM. NMOCD granted approval of the C-141 report on December 16, 2016. Tracking number 2RP 4040 was assigned to the spill.

On September 11, 2017, Basin Environmental personnel arrived on the JRU 29 SWD site to perform initial test trench (tt or tts) sampling for delineation of the subject spills. A back hoe was utilized to excavate seven tts within the release area for collection of delineation samples. The tts were labeled SP-1, SP-2, SP-3, SP-4, SP-5, SP-6, and SP-7. Each sample was field tested for chlorides using HACH Chloride test strips. Confirmatory samples were submitted to a

NMOCD approved and certified laboratory. Results of field and laboratory testing are provided in Table 1. Select laboratory data is provided on the sample points location map (Figure 2).

To summarize lab results for trench SP-1, the laboratory test for chlorides yielded 272 mg/kg at 4 feet below ground surface (bgs). Benzene, toluene, ethyl benzene and xylene (BTEX) concentrations are below the method detection limit for the laboratory. Gas range organics (GRO), diesel range organics (DRO), and extended diesel range organics (EXT DRO) are well below the Recommended Remediation Action Level (RRAL) guideline of 100 mg/kg.

For trench SP-2, the laboratory test for chlorides yielded 64 mg/kg at 5 feet bgs. BTEX showed concentrations are below the method detection limit for the laboratory. GRO, DRO, and EXT DRO are well below the RRAL guideline of 100 mg/kg.

For trench SP-3, the laboratory test for chlorides yielded 432 mg/kg at 6 feet below ground surface. Laboratory tests for BTEX showed concentrations are below the method detection limit for the laboratory. GRO, DRO, and EXT DRO are well below the RRAL guideline of 100 mg/kg.

For trench SP-4, the laboratory test for chlorides yielded 2720 mg/kg at 3 feet bgs. Preservation of a previously installed liner prevented attempts to sample deeper at this location. This liner will be removed as part of the CAP and confirmation sampling will be performed to delineate the extent of chlorides beneath the liner using remediation excavation equipment. If the depth to cleanup of chlorides cannot be reached using the remediation equipment, a PVC conduit pipe will be set through the liner and an environmental test drill will be brought to the site to complete the delineation for chlorides. Laboratory tests for BTEX showed concentrations are below the method detection limit for the laboratory. GRO is well below the RRAL guideline of 100 mg/kg. DRO and EXT DRO are 2130 mg/kg and 489 mg/kg respectively and are above the RRAL guideline of 100 mg/kg.

For trench SP-5, the laboratory test for chlorides yielded 240 mg/kg at 14 feet bgs. BTEX showed concentrations are below the method detection limit for the laboratory. GRO, DRO, and EXT DRO are well below the RRAL guideline of 100 mg/kg.

At trench SP-6, the laboratory test for chlorides yielded 64 mg/kg at 14 feet bgs. BTEX showed concentrations are below the method detection limit for the laboratory. GRO, DRO, and EXT DRO were well below the RRAL guideline of 100 mg/kg.

For trench SP-7, the laboratory test for chlorides yielded 1760 mg/kg at 14 feet. Further delineation for chlorides at this site will be performed during execution of the CAP using excavation equipment. If the depth to cleanup of chlorides cannot be reached using the remediation excavation equipment, a PVC conduit pipe will be set through the liner and an environmental test drill will be brought to the site to complete the delineation for chlorides. However, laboratory tests for BTEX showed concentrations are below the method detection limit for the laboratory. GRO, DRO, and EXT DRO are well below the RRAL guideline of 100 mg/kg.

Corrective Action Plan (CAP)

Approximately 72,870 ft^2 of caliche pad and pasture are impacted at the JRU 29 SWD site. Of that total, approximately 32,300 ft^2 is caliche pad and approximately 40,570 is pasture land. Remediation of the impacted pasture soils and pad materials will be accomplished per the methods described below. A New Mexico State Land Office permit will be necessary to access the site.

A liner from a prior remediation effort will be removed. Location of the previously existing liner is shown in Figure 2. At sample tt locations SP-4 and SP-7 (reference Figure 2) excavation equipment will be utilized to collect deeper delineation samples for testing with field methods. Excavation and sampling will continue until results of field testing show chlorides are at or below the NMOCD target of 600 mg/kg. If a satisfactory delineation at or below the NMOCD target is obtained, the sample trenches will be backfilled and the soil material will be compacted.

The impacted pasture soils will then be excavated to a depth of four feet bgs. This excavated soil will be transported to Lea Land (NMOCD Permit # WM01) for disposal. If required, a six-inch cushion layer of sand may be installed over the entire excavation site. A 20 mil impermeable liner will then be installed over in-situ soil (or a backfill of 6 to 12-inch layer of cushioning sand, if required) to the limits of the excavation. A 6 to 12-inch sand layer will placed on top of the liner over the entire excavation in order to protect the integrity of the liner during backfilling operations. Locally procured soil materials will be used to backfill the excavated area in one to two foot lifts. The lifts will be compacted with excavation equipment. The fill area will be graded to blend with the contours of the surrounding topography. At the completion of backfilling and at a time conductive for germination, Basin will loosen the suface of the backfilled soils with a disc, rake or harrow. Basin will then seed the extent of the remediated pasture area at JRU 29 SWD with a blend of native, non-noxious vegetation approved by the New Mexico State Land Office. The seed will be applied with either a drill or a broadcast method to ensure complete coverage of the affected area.

In the event that delineation of chlorides at locations SP-4 and SP-7 cannot be achieved to levels below the NMODC target of 600 mg/kg when using remediation excavation equipment to facilitate sampling, PVC conduit (referenced above) will be set and sealed to the liner material prior to backfilling to grade. An environmental test drilling rig will be brought to the site and the strata at depth will be sampled until delineation at or below 600 mg/kg chlorides is achieved. The resultant soil boring will be backfilled with bentonite chips in lifts and hydrated per manufacturer's recommendations. Each borehole will be filled to the surface of the ground.

In addition to the pasture area, approximately 32,300 ft^2 of caliche pad at JRU 29 SWD is impacted. The impacted pad area will be excavated to an area approximately one foot in depth. This excavated caliche will be transported to Lea Land (NMOCD Permit # WM01) for disposal. The excavated area will then be backfilled with clean, non-impacted caliche. The clean caliche will be spread in thin layers (three to six-inches thick). Each layer will be watered and roll compacted to dryness and watered again. Another layer of caliche will be added on top of the previous layer until the fill area is brought up to grade.

The supporting documentation for this Corrective Action Plan is attached.

Basin appreciates the opportunity to work with you on this project. Please contact me if you have any questions or wish to discuss the site.

Sincerely,

John P. Farrell P.G.
Project Manager
Basin Environmental Service Technologies
(575) 393-2378

Attachments:

Figure 1 – Site Location Map
Figure 2 – Sample Locations and Select Analytical Sampling Data
Table 1 – 2017 Sample Concentrations of BTEX, TPH and Chloride
Appendix A – Laboratory Analysis
Appendix B – C-141 Forms

ATTACHMENTS

TABLE

TABLE 1
2017 CONCENTRATIONS OF FIELD CHLORIDE
XTO
JRU 29 SWD
EDDY COUNTY, NEW MEXICO
NMOCD REFERENCE #'S: 2RP-2726, 2RP-3082, 2RP-3302, 2RP-3726 and 2RP-4040

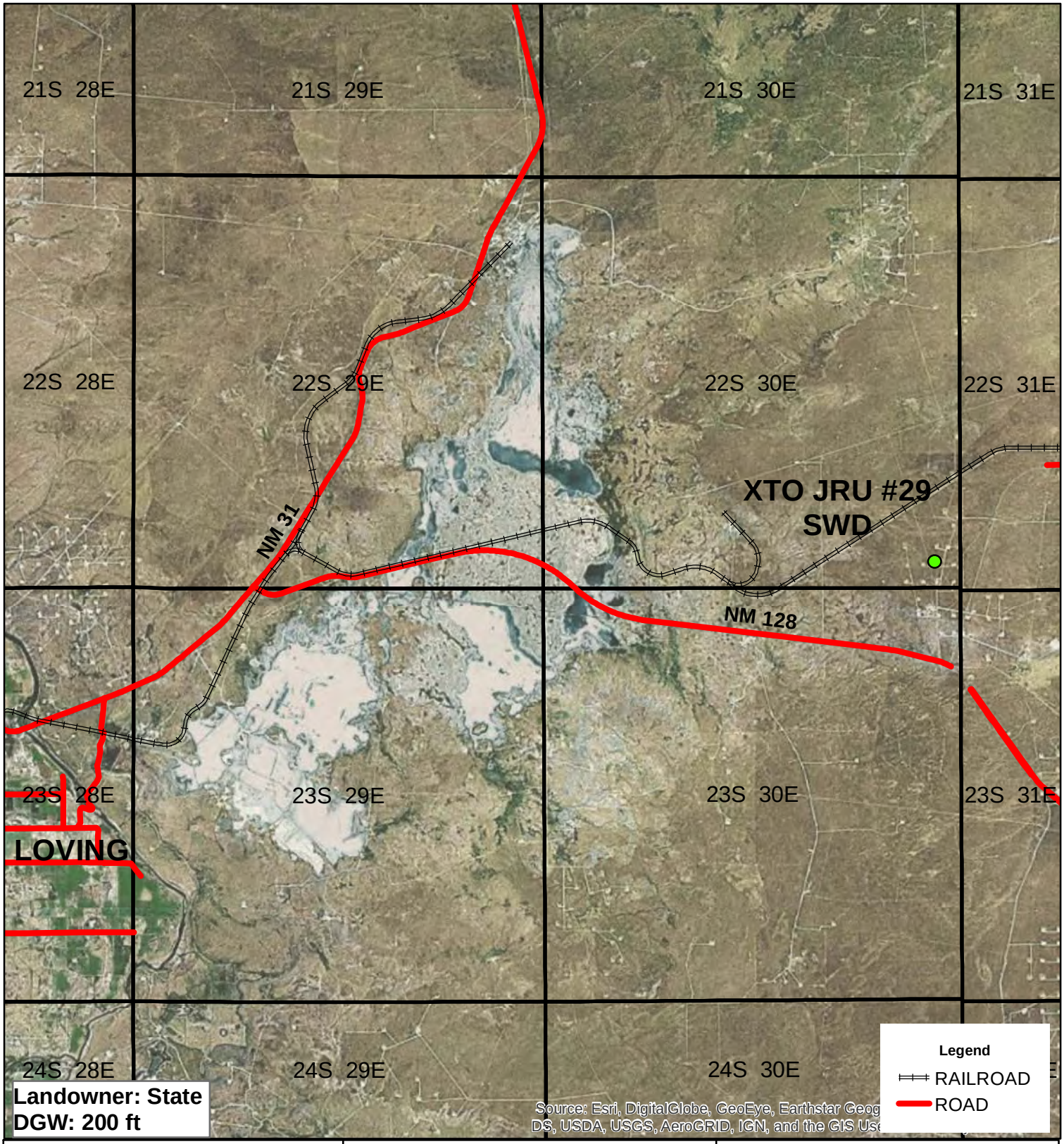
SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	METHOD: 8015B			TPH C_6-C_{35} (mg/Kg)	FIELD	4500 CL-B
				GRO C_6-C_{12} (mg/Kg)	DRO C_{12}-C_{28} (mg/Kg)	EXT DRO C_{28}-C_{36} (mg/Kg)		CHLORIDE (mg/Kg)	CHLORIDE (mg/Kg)
TT-1	SUR	9/11/2017	In-Situ	NA	NA	NA	NA	>2456	NA
TT-1	1'	9/11/2017	In-Situ	NA	NA	NA	NA	560	NA
TT-1	2'	9/11/2017	In-Situ	NA	NA	NA	NA	344	NA
TT-1	3'	9/11/2017	In-Situ	NA	NA	NA	NA	272	NA
TT-1	4'	9/11/2017	In-Situ	<10.0	<10.0	<10.0	<30.0	180	272
TT-2	SUR	9/11/2017	In-Situ	NA	NA	NA	NA	> 2604	NA
TT-2	1'	9/11/2017	In-Situ	NA	NA	NA	NA	2060	NA
TT-2	2'	9/11/2017	In-Situ	NA	NA	NA	NA	1528	NA
TT-2	3'	9/11/2017	In-Situ	NA	NA	NA	NA	1136	NA
TT-2	4'	9/11/2017	In-Situ	NA	NA	NA	NA	264	NA
TT-2	5'	9/11/2017	In-Situ	<10.0	<10.0	<10.0	<30.0	< 112	64
TT-3	SUR	9/11/2017	In-Situ	NA	NA	NA	NA	> 2604	NA
TT-3	1'	9/11/2017	In-Situ	NA	NA	NA	NA	476	NA
TT-3	2'	9/11/2017	In-Situ	NA	NA	NA	NA	360	NA
TT-3	3'	9/11/2017	In-Situ	NA	NA	NA	NA	476	NA
TT-3	4'	9/11/2017	In-Situ	NA	NA	NA	NA	520	NA
TT-3	5'	9/11/2017	In-Situ	NA	NA	NA	NA	328	NA
TT-3	6'	9/11/2017	In-Situ	<10.0	<10.0	<10.0	<30.0	236	432
TT-4	SUR	9/11/2017	In-Situ	NA	NA	NA	NA	> 2604	NA
TT-4	1'	9/11/2017	In-Situ	NA	NA	NA	NA	> 2604	NA
TT-4	2'	9/11/2017	In-Situ	NA	NA	NA	NA	1,974	NA
TT-4	3'	9/11/2017	In-Situ	<10.0	2130	489	2619	1,224	2720

TABLE 1
2017 CONCENTRATIONS OF FIELD CHLORIDE
XTO
JRU 29 SWD
EDDY COUNTY, NEW MEXICO
NMOCD REFERENCE #'S: 2RP-2726, 2RP-3082, 2RP-3302, 2RP-3726 and 2RP-4040

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	METHOD: 8015B			TPH C_6-C_{35} (mg/Kg)	FIELD	4500 CL-B
				GRO C_6-C_{12} (mg/Kg)	DRO C_{12}-C_{28} (mg/Kg)	EXT DRO C_{28}-C_{36} (mg/Kg)		CHLORIDE (mg/Kg)	CHLORIDE (mg/Kg)
TT-5	SUR	9/11/2017	In-Situ	NA	NA	NA	NA	> 2604	NA
TT-5	1'	9/11/2017	In-Situ	NA	NA	NA	NA	360	NA
TT-5	2'	9/11/2017	In-Situ	NA	NA	NA	NA	564	NA
TT-5	3'	9/11/2017	In-Situ	NA	NA	NA	NA	328	NA
TT-5	4'	9/11/2017	In-Situ	NA	NA	NA	NA	< 112	NA
TT-5	5'	9/11/2017	In-Situ	NA	NA	NA	NA	564	NA
TT-5	6'	9/11/2017	In-Situ	NA	NA	NA	NA	564	NA
TT-5	7'	9/11/2017	In-Situ	NA	NA	NA	NA	476	NA
TT-5	8'	9/11/2017	In-Situ	NA	NA	NA	NA	564	NA
TT-5	9'	9/11/2017	In-Situ	NA	NA	NA	NA	440	NA
TT-5	14'	9/11/2017	In-Situ	<10.0	<10.0	<10.0	<30.0	160	240
TT-6	SUR	9/11/2017	In-Situ	NA	NA	NA	NA	< 112	NA
TT-6	1'	9/11/2017	In-Situ	NA	NA	NA	NA	< 112	NA
TT-6	2'	9/11/2017	In-Situ	NA	NA	NA	NA	328	NA
TT-6	3'	9/11/2017	In-Situ	NA	NA	NA	NA	> 2604	NA
TT-6	4'	9/11/2017	In-Situ	NA	NA	NA	NA	2,408	NA
TT-6	6'	9/11/2017	In-Situ	NA	NA	NA	NA	296	NA
TT-6	8'	9/11/2017	In-Situ	NA	NA	NA	NA	< 112	NA
TT-6	14'	9/11/2017	In-Situ	<10.0	<10.0	<10.0	<30.0	< 112	64
TT-7	SUR	9/11/2017	In-Situ	NA	NA	NA	NA	< 112	NA
TT-7	1'	9/11/2017	In-Situ	NA	NA	NA	NA	328	NA
TT-7	2'	9/11/2017	In-Situ	NA	NA	NA	NA	> 2604	NA
TT-7	3'	9/11/2017	In-Situ	NA	NA	NA	NA	1644	NA
TT-7	4'	9/11/2017	In-Situ	NA	NA	NA	NA	1644	NA
TT-7	6'	9/11/2017	In-Situ	NA	NA	NA	NA	908	NA
TT-7	8'	9/11/2017	In-Situ	NA	NA	NA	NA	664	NA
TT-7	14'	9/11/2017	In-Situ	<10.0	<10.0	<10.0	<30.0	976	1760
NMOCD Regulatory Standard				**10**			**5000**	**600**	**600**

FIGURES

Geographic Location



Basin Environmental Effective Solutions Service Technologies

XTO
JRU 29 SWD

2RP-2766, 2RP-3082, 2RP-3302, 2RP-3726 & 2RP-4040

UL K SECTION 36
T-22-S R-30-E
EDDY COUNTY, NM

GPS: 32.319360 -103.931548

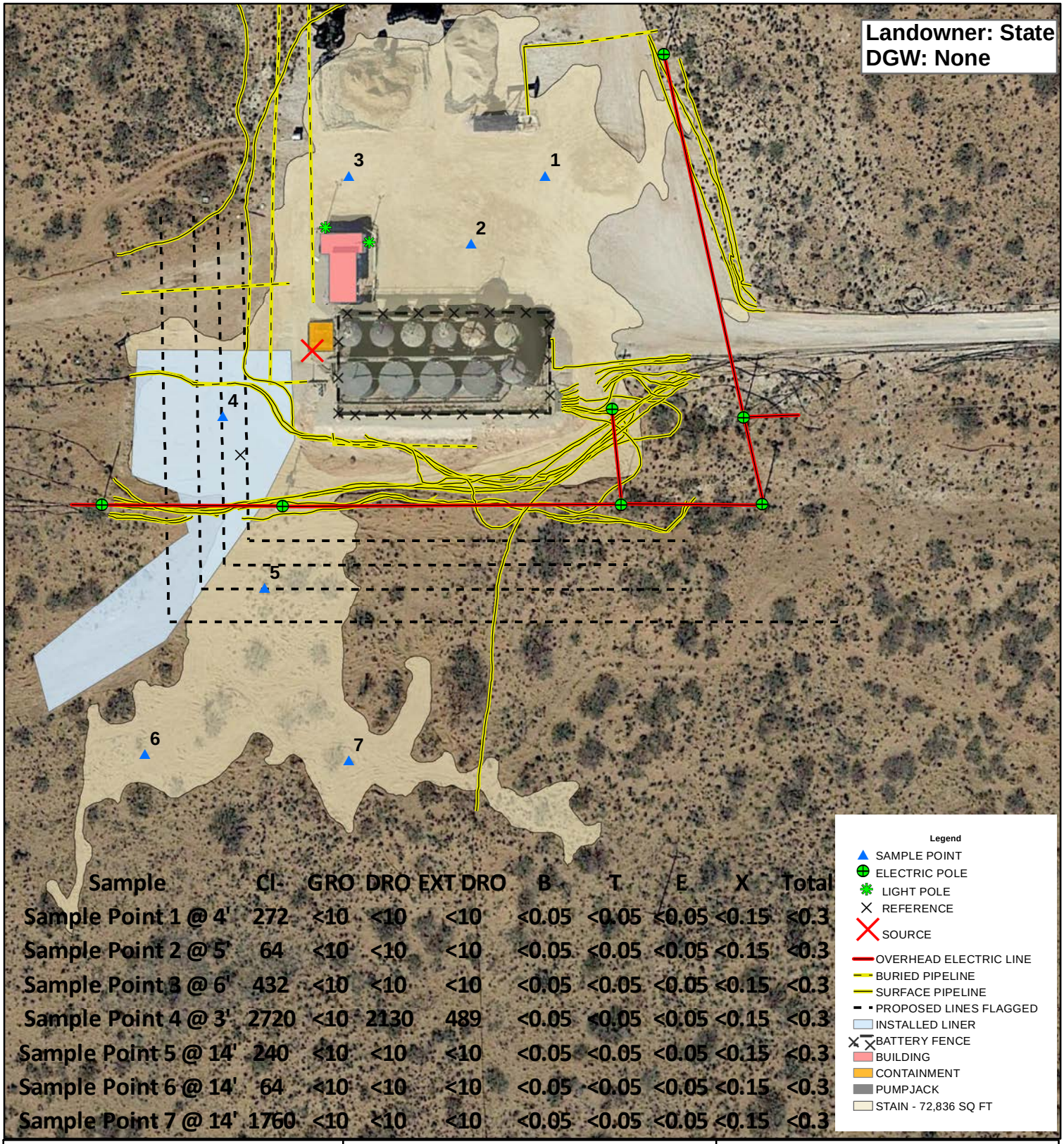
Figure 1

0 1 2 Miles

N W E S

Drawing date: 10/10/17
Drafted by: T. Grieco

Initial Sampling



Sample	Cl-	GRO	DRO	EXT DRO	B	T	E	X	Total
Sample Point 1 @ 4'	272	<10	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3
Sample Point 2 @ 5'	64	<10	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3
Sample Point 3 @ 6'	432	<10	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3
Sample Point 4 @ 3'	2720	<10	2130	489	<0.05	<0.05	<0.05	<0.15	<0.3
Sample Point 5 @ 14'	240	<10	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3
Sample Point 6 @ 14'	64	<10	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3
Sample Point 7 @ 14'	1760	<10	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3

Basin Environmental Service Technologies
Effective Solutions

XTO
JRU 29

UL K SECTION 36
T-22-S R-30-E
EDDY COUNTY, NM

Underground facilities are spatially projected and need to be field verified.

GPS: 32.346386 -103.835900

0 50 100 Feet

GPS date: 9/5/17, 10/2/17 TG
Drawing date: 10/2/17
Drafted by: T. Grieco

N W E S

APPENDIX A

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

September 25, 2017

ROBBIE RUNNELS

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: JRU 29 SWD

Enclosed are the results of analyses for samples received by the laboratory on 09/18/17 15:26.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Basin Environmental Service
ROBBIE RUNNELS
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

Received:	09/18/2017	Sampling Date:	09/11/2017
Reported:	09/25/2017	Sampling Type:	Soil
Project Name:	JRU 29 SWD	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NM		

Sample ID: SP1 @ 4' (H702515-01)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/22/2017	ND	1.90	95.2	2.00	0.810	
Toluene*	<0.050	0.050	09/22/2017	ND	1.77	88.6	2.00	1.97	
Ethylbenzene*	<0.050	0.050	09/22/2017	ND	1.85	92.4	2.00	1.18	
Total Xylenes*	<0.150	0.150	09/22/2017	ND	5.59	93.2	6.00	1.42	
Total BTEX	<0.300	0.300	09/22/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID *111 %* *72-148*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**272**	16.0	09/20/2017	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/20/2017	ND	183	91.7	200	0.349	
DRO >C10-C28	<10.0	10.0	09/20/2017	ND	196	98.0	200	0.105	
EXT DRO >C28-C36	<10.0	10.0	09/20/2017	ND					

Surrogate: 1-Chlorooctane *82.3 %* *28.3-164*

Surrogate: 1-Chlorooctadecane *85.0 %* *34.7-157*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Basin Environmental Service
ROBBIE RUNNELS
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

Received:	09/18/2017	Sampling Date:	09/11/2017
Reported:	09/25/2017	Sampling Type:	Soil
Project Name:	JRU 29 SWD	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NM		

Sample ID: SP 2 @ 5' (H702515-02)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/22/2017	ND	1.90	95.2	2.00	0.810	
Toluene*	<0.050	0.050	09/22/2017	ND	1.77	88.6	2.00	1.97	
Ethylbenzene*	<0.050	0.050	09/22/2017	ND	1.85	92.4	2.00	1.18	
Total Xylenes*	<0.150	0.150	09/22/2017	ND	5.59	93.2	6.00	1.42	
Total BTEX	<0.300	0.300	09/22/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID *112 %* *72-148*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	09/20/2017	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/21/2017	ND	183	91.7	200	0.349	
DRO >C10-C28	<10.0	10.0	09/21/2017	ND	196	98.0	200	0.105	
EXT DRO >C28-C36	<10.0	10.0	09/21/2017	ND					

Surrogate: 1-Chlorooctane *84.4 %* *28.3-164*

Surrogate: 1-Chlorooctadecane *86.3 %* *34.7-157*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Basin Environmental Service
ROBBIE RUNNELS
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

Received:	09/18/2017	Sampling Date:	09/11/2017
Reported:	09/25/2017	Sampling Type:	Soil
Project Name:	JRU 29 SWD	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NM		

Sample ID: SP 3 @ 6' (H702515-03)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/22/2017	ND	1.90	95.2	2.00	0.810	
Toluene*	<0.050	0.050	09/22/2017	ND	1.77	88.6	2.00	1.97	
Ethylbenzene*	<0.050	0.050	09/22/2017	ND	1.85	92.4	2.00	1.18	
Total Xylenes*	<0.150	0.150	09/22/2017	ND	5.59	93.2	6.00	1.42	
Total BTEX	<0.300	0.300	09/22/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID *111 %* *72-148*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**432**	16.0	09/20/2017	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/21/2017	ND	183	91.7	200	0.349	
DRO >C10-C28	<10.0	10.0	09/21/2017	ND	196	98.0	200	0.105	
EXT DRO >C28-C36	<10.0	10.0	09/21/2017	ND					

Surrogate: 1-Chlorooctane *82.6 %* *28.3-164*

Surrogate: 1-Chlorooctadecane *89.7 %* *34.7-157*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Basin Environmental Service
ROBBIE RUNNELS
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

Received:	09/18/2017	Sampling Date:	09/11/2017
Reported:	09/25/2017	Sampling Type:	Soil
Project Name:	JRU 29 SWD	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NM		

Sample ID: SP 4 @ 3' (H702515-04)

BTEX 8021B mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/22/2017	ND	1.90	95.2	2.00	0.810	
Toluene*	<0.050	0.050	09/22/2017	ND	1.77	88.6	2.00	1.97	
Ethylbenzene*	<0.050	0.050	09/22/2017	ND	1.85	92.4	2.00	1.18	
Total Xylenes*	<0.150	0.150	09/22/2017	ND	5.59	93.2	6.00	1.42	
Total BTEX	<0.300	0.300	09/22/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID *116 %* *72-148*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2720**	16.0	09/20/2017	ND	432	108	400	0.00	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/21/2017	ND	183	91.7	200	0.349	
DRO >C10-C28	**2130**	10.0	09/21/2017	ND	196	98.0	200	0.105	
EXT DRO >C28-C36	**489**	10.0	09/21/2017	ND					

Surrogate: 1-Chlorooctane *80.9 %* *28.3-164*

Surrogate: 1-Chlorooctadecane *123 %* *34.7-157*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Basin Environmental Service
ROBBIE RUNNELS
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

Received:	09/18/2017	Sampling Date:	09/11/2017
Reported:	09/25/2017	Sampling Type:	Soil
Project Name:	JRU 29 SWD	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NM		

Sample ID: SP 5 @ 14' (H702515-05)

BTEX 8021B mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/22/2017	ND	1.97	98.3	2.00	0.292	
Toluene*	<0.050	0.050	09/22/2017	ND	1.82	91.1	2.00	0.577	
Ethylbenzene*	<0.050	0.050	09/22/2017	ND	1.91	95.4	2.00	0.0216	
Total Xylenes*	<0.150	0.150	09/22/2017	ND	5.73	95.4	6.00	0.0613	
Total BTEX	<0.300	0.300	09/22/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID *108 %* *72-148*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**240**	16.0	09/20/2017	ND	432	108	400	0.00	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/25/2017	ND	183	91.7	200	0.349	
DRO >C10-C28	<10.0	10.0	09/25/2017	ND	196	98.0	200	0.105	
EXT DRO >C28-C36	<10.0	10.0	09/25/2017	ND					

Surrogate: 1-Chlorooctane *79.5 %* *28.3-164*

Surrogate: 1-Chlorooctadecane *86.9 %* *34.7-157*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Basin Environmental Service
ROBBIE RUNNELS
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

Received:	09/18/2017	Sampling Date:	09/11/2017
Reported:	09/25/2017	Sampling Type:	Soil
Project Name:	JRU 29 SWD	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NM		

Sample ID: SP 6 @ 14' (H702515-06)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/22/2017	ND	1.97	98.3	2.00	0.292	
Toluene*	<0.050	0.050	09/22/2017	ND	1.82	91.1	2.00	0.577	
Ethylbenzene*	<0.050	0.050	09/22/2017	ND	1.91	95.4	2.00	0.0216	
Total Xylenes*	<0.150	0.150	09/22/2017	ND	5.73	95.4	6.00	0.0613	
Total BTEX	<0.300	0.300	09/22/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID *110 %* *72-148*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	09/20/2017	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/21/2017	ND	183	91.7	200	0.349	
DRO >C10-C28	<10.0	10.0	09/21/2017	ND	196	98.0	200	0.105	
EXT DRO >C28-C36	<10.0	10.0	09/21/2017	ND					

Surrogate: 1-Chlorooctane *99.9 %* *28.3-164*

Surrogate: 1-Chlorooctadecane *105 %* *34.7-157*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Basin Environmental Service
ROBBIE RUNNELS
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

Received:	09/18/2017	Sampling Date:	09/12/2017
Reported:	09/25/2017	Sampling Type:	Soil
Project Name:	JRU 29 SWD	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NM		

Sample ID: SP 7 @ 14' (H702515-07)

BTEX 8021B mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/22/2017	ND	1.97	98.3	2.00	0.292	
Toluene*	<0.050	0.050	09/22/2017	ND	1.82	91.1	2.00	0.577	
Ethylbenzene*	<0.050	0.050	09/22/2017	ND	1.91	95.4	2.00	0.0216	
Total Xylenes*	<0.150	0.150	09/22/2017	ND	5.73	95.4	6.00	0.0613	
Total BTEX	<0.300	0.300	09/22/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID *110 %* *72-148*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1760**	16.0	09/20/2017	ND	432	108	400	0.00	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/21/2017	ND	183	91.7	200	0.349	
DRO >C10-C28	<10.0	10.0	09/21/2017	ND	196	98.0	200	0.105	
EXT DRO >C28-C36	<10.0	10.0	09/21/2017	ND					

Surrogate: 1-Chlorooctane *96.0 %* *28.3-164*

Surrogate: 1-Chlorooctadecane *104 %* *34.7-157*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES
101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Basin Environmental Service Technologies, LLC	**BILL TO**	
Project Manager:	Robbie Runnels	**P.O. #:**	
Address:	P.O. Box 301	**Company:**	XTO Energy
City:	Lovington **State:** NM **Zip:** 88260	**Attn:**	Amy Ruth
Phone #:	(575)396-2378 **Fax #:** (575)396-1429	**Address:**	
Project #:	**Project Owner:** XTO Energy	**City:**	
Project Name:	JRU 29 SWD	**State:** NM **Zip:** 88260	
Project Location:	Eddy	**Phone #:**	
Sampler Name:	Robbie Runnels	**Fax #:**	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST											
Lab I.D.	**Sample I.D.**	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	**DATE**	**TIME**	Chloride	TPH (8015M)	BTEX (8021B)									
H702515																									
1	SP 1 @ 4'	g	1			X					X		9/11/17	9:35	X	x	x								
2	SP 2 @ 5'	g	1			x					x		9/11/17	10:05	x	x	x								
3	SP 3 @ 6'	g	1			x					x		9/11/17	10:40	x	x	x								
4	SP 4 @ 3'	g	1			x					x		9/11/17	11:21	x	x	x								
5	SP 5 @ 14'	g	1			x					x		9/11/17	13:30	x	x	x								
6	SP 6 @ 14'	g	1			x					x		9/11/17	14:20	x	x	x								
7	SP 7 @ 14'	g	1			x					x		9/12/17	7:55	x	x	x								

Relinquished By:	**Date:** 9/12/17	**Received By:** Haley Cuerbow	**Phone Result:** ☐ Yes ☐ No **Add'l Phone #:**
	Time: 3:26		**Fax Result:** ☐ Yes ☐ No **Add'l Fax #:**
Relinquished By:	**Date:**	**Received By:**	**REMARKS:**
	Time:		Please email results to pm@basinenv.com, amy_Ruth@xtoenergy.com

Delivered By: (Circle One) Sampler - UPS - Bus - Other: 12.3°C / 12.55°C

Sample Condition Cool: ☐ Yes ☑ No Intact: ☑ Yes ☐ No

CHECKED BY: (Initials) HC

FORM-006
Revision 1.0

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476

Corrected +.25°C

Littrell, Kyle

From: Ruth, Amy
Sent: Friday, March 9, 2018 3:00 PM
To: Littrell, Kyle
Cc: Foust, Bryan
Subject: FW: Corrective Action Plan for JRU 29 SWD

Importance: High

FYI, we are approved by OCD to begin the JRU 29 SWD. We already submitted an AFE proposal for this one. The OCD is just asking for some extra sampling. Not bad, though.

From: Weaver, Crystal, EMNRD [mailto:Crystal.Weaver@state.nm.us]
Sent: Friday, March 09, 2018 12:26 PM
To: John Farrell; Bratcher, Mike, EMNRD
Cc: Ruth, Amy; agroves@slo.state.nm.us; 'Jody Walters'; 'Robbie Runnels'
Subject: RE: Corrective Action Plan for JRU 29 SWD

RE: XTO (BOPCO OGRID 260737) * James Ranch Unit 29 SWD Battery (API utilized is for JRU #29 well 30-015-27735) * 2RP-2726, 2RP-3082, 2RP-3302, 2RP-3726 , and 2RP-4040

Hello all,

I believe I also attended the meeting that John mentioned that occurred on 10/4/17 and upon review of the existing files OCD has for these case numbers mentioned above I feel I am as equipped as anyone else to provide a review of this project, unless there are any emails going back and forth on it that I do not know about because they were only with Mike Bratcher. So if no emails of that nature exist then we should be good.

First off I wanted to say this is a well written work plan. Thank you for that. Explanations and history that is provided in the plan helps out a lot. Also the email body of the email that this work plan was sent with helps out cause it summarizes what XTO interpreted from what was discussed during the meeting we had with you all.

<u>In review of the work plan and meeting summary notes OCD approves this work plan but needs to include/request the following additions/conditions:</u>

- It appears that data for each sample point in the Excel data table is all field data up until the last deepest depth sample taken for each sample point which each of those samples appears to have been sent in for laboratory testing confirmation. Since the remediation proposal for this location is to perform the 4ft removal with liner placement, OCD normally must acquire lab tested samples for the whole delineation of each sample point that show from start to finish what we have in the soil column until target clean delineation numbers are reached.
    - However, due to how long this work plan has sat and other factors OCD will accept confirmation samples produced during the excavation process instead of requesting that the delineation data be recollected. So starting of course below the 4ft depth OCD needs you all to have lab data tested for all RRAL and COA required constituents until they show clean based on site ranking score clean up levels and chloride delineation requirement. The sampling that gets submitted to the lab can start below the 4ft mark as I mentioned but the samples need to be in 1ft intervals and need to be tested for TPH for extended range (GRO+DRO+MRO; C_6 thru C_{36}) using method 8015, Benzene results of 10ppm or less and total BTEX of 50ppm or less tested via either Method 8260 or 8021, and chlorides are to be 600ppm or less using EPA Method 300.0 testing.

  - I understand that during the reporting phase via C-141s for all of these spills it was stated on the forms that produced water was the only production fluid lost each time. However, produced water is regularly known to have many contaminants in it and OCD asking for verification that BTEX and TPH are not an issue is standard procedure. I believe we discussed all of this during the meeting of 10/4/17. . . Correct me if I am wrong on that. If we didn't discuss then I may be getting another meeting mixed up with this one, but it is no matter cause it is still being requested now.

- Also when I do a ground water assessment study, on my end, I find the closest well (with depth to water data) to the location is actually one with documentation of shallower depth to water than a lot of the other ground water wells that are farther away from your location. OSE cites depth to ground water for well C-2492 at 85ft. So based on that assessment OCD will assess a site ranking score for this location of 10, which only changes the target levels for TPH, which will now need to be at 1000ppm or less.

- Furthermore, because the occurrence of spills at this location total 5 over the span of time from 2014- now, and are now all being dealt with in a group project OCD feels justified in saying that based on depth to ground water having the potential to be less than 100ft for this site, we will need some additional confirmation sample points to be collected during the excavation process for this spill plume area. Please generate an additional confirmation sample point somewhere between your existing SP-5 and SP-7 and if practicable somewhere directly south of the battery but still on the pad.

- Also as you all have offered full delineation for chlorides at your SP-4 and SP-7 still needs to proceed as you all have indicated you are prepared to do.

- Please provide OCD notification of when this project has been mobilized to begin remediation efforts.

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

If you have any questions or concerns, and for notification of moblization of equipment, please contact Mike Bratcher and/or myself in the District II Office.

Crystal Weaver
Environmental Specialist
OCD – Artesia District II
811 S. 1st Street
Artesia, NM 88210
Office: 575-748-1283 ext. 101
Cell: 575-840-5963
Fax: 575-748-9720

From: John Farrell [mailto:jfarrell@basinenv.com]
Sent: Friday, December 15, 2017 11:41 AM
To: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>
Cc: 'Ruth, Amy' <Amy_Ruth@xtoenergy.com>; Weaver, Crystal, EMNRD <Crystal.Weaver@state.nm.us>; agroves@slo.state.nm.us; 'Jody Walters' <sjwalters@basinenv.com>; 'Robbie Runnels' <rrunnels@basinenv.com>
Subject: Corrective Action Plan for JRU 29 SWD

Dear Mr. Bratcher:

Attached, please find the Corrective Action Plan (CAP) for the XTO JRU 29 SWD facility in Eddy County, New Mexico.

To review, during our meeting on October 4, 2017, Basin Environmental/XTO stated the JRU 29 SWD CAP was preliminary and that it would be updated; that a regional Groundwater Trend Map would be used to determine depth to groundwater at the site; that there will be further delineation of chlorides at Test Trenches 4 and 7 using excavation equipment; and, in pasture areas impacted by the spills, Basin will remove a previously existing liner and place a new liner using methods described in the CAP.

Per NMOCD request, as part of the CAP, Basin has placed data from field and laboratory testing into a Microsoft Xcel ® Spreadsheet to facilitate ease of review. Please note that Basin used the 600mg/kg chloride level discussed at the meeting as the benchmark indicating that cleanup has been achieved.

CAP SUMMARY: the CAP proposes some additional delineation of chlorides at two of the test trench points, soil removal to a depth of approximately 4 feet and placement of a liner over the area of contamination in pasture areas and grading to local contours. The plan also calls for removal of 1 foot of caliche on the chloride impacted pad area followed by replacement with un-impacted caliche and compaction to complete the remedial process. Currently, excavation of impacted soil and installation of liners is the best available technology to further prevent migration of contaminants downwards towards the water table.

Please review the attached CAP and provide any comments to Amy Ruth of XTO with copies to Jody Walters, Robbie Runnels and John Farrell of Basin Environmental Service Technologies.

Sincerely,

John P. Farrell P.G.
Project Manager
Basin Environmental Service Technologies, LLC
575 631 1278

ATTACHMENT 2: INITIAL/FINAL NMOCD FORM C-141 (2RP-3082, 2RP-3302, 2RP-3726, and 2RP-4040)

NM OIL CONSERVATION
ARTESIA DISTRICT
JUN 26 2015
RECEIVED

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

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

nAB1518142271 260737

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P.	Contact: Tony Savoie
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: JRU-29 SWD Tank Battery	Facility Type: SWD

Surface Owner: State of N.M.	Mineral Owner: State of N.M.	API No. 30-015-27735

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County:
K	36	22S	30E	1980	South	2310	West	Eddy

Latitude N 32.346432 Longitude W 103.835934

NATURE OF RELEASE

Type of Release: Produced water	Volume of Release: 110 bbls.	Volume Recovered: 40 bbls.
Source of Release: 4" SWD pump discharge line	Date and Hour of Occurrence: 6/22/15 Time unknown	Date and Hour of Discovery: 6/22/15 at about 5:45 p.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? NMOCD emergency #104	
By Whom? Tony Savoie	Date and Hour: 6/22/15 at 6:36 p.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
A 4" pipe fitting failed on the discharge of the SWD transfer pump. The pump was shut down and the fitting was replaced.

Describe Area Affected and Cleanup Action Taken.*
The spill impacted approximately 5,000 sq.ft. of pasture area. All of the free standing fluid was recovered with a vacuum truck. Twenty bbls of PW was recovered from the 0 Perm containment and 20bbls off the ground. A portion of the impacted area has a liner installed at about 3 ft. in depth. This liner was installed during a previous closed remediation at the location.
The spill area will be cleaned up in accordance to the NMOCD remediation guidelines.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: Tony Savoie	OIL CONSERVATION DIVISION
Printed Name: Tony Savoie	Signed By Mike Bratcher Approved by Environmental Specialist:
Title: Waste Management and Remediation Specialist	Approval Date: 6/30/15 Expiration Date: N/A
E-mail Address: tasavoie@basspet.com	Conditions of Approval: Attached ☐
Date: 6/26/15 Phone: 432-556-8730	Remediation per O.C.D. Rules & Guidelines SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 8/1/15

* Attach Additional Sheets If Necessary

2RP-3082

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	
District RP	2RP-3082
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: XTO Energy, Inc	OGRID: 5380
Contact Name: Kyle Littrell	Contact Telephone: (432)-221-7331
Contact email: Kyle_Littrell@xtoenergy.com	Incident #: 2RP-3082
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude 32.346432 Longitude -103.835934
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: JRU-29 SWD Tank Battery	Site Type: Exploration and Production
Date Release Discovered: 6/22/2015	API# *(if applicable)* 30-015-27735

Unit Letter	Section	Township	Range	County
K	36	22S	30E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 110 bbls	Volume Recovered (bbls) 40 bbls
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

A 4” pipe fitting failed on the discharge of the SWD transfer pump. The pump was shut down and the fitting was replaced.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3082
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? Release volume was greater than 25 bbls.
If YES, was immediate notice given to the OCD? Yes, immediate notice was given to NMOCD emergency #104 by Tony Savoie on 06/22/2015 at 6:36pm.	

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:

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: _____ Date: 4-28-2020

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

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3082
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?	> 100 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☒ Yes ☐ No

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3082
Facility ID	
Application ID	

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 4/28/2020

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

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3082
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: _____ Date: 4-28-2020

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

OCD Only

Received by: _____ Date: _____

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: _____ Date: _____

Printed Name: _____ Title: _____

NM OIL CONSERVATION
ARTESIA DISTRICT
SEP 24 2015
RECEIVED

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

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

NAB1526753593

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P. 260737	Contact: Amy Ruth
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: James Ranch Unit #29 SWD Tank Battery	Facility Type: SWD

Surface Owner: State of New Mexico	Mineral Owner: State of New Mexico	API No. 30-015-27735

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	36	22S	30E	1980	South	2310	West	Eddy

Latitude 32.346409° Longitude -103.835868°

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 290 bbls	Volume Recovered 240 bbls
Source of Release Water Transfer Pump	Date and Hour of Occurrence 9/18/2015 at 6:30 pm	Date and Hour of Discovery 9/18/2015 at 7 pm
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher and Heather Patterson	
By Whom? Tony Savoie	Date and Hour 9/19/2015 at 9:35 am	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.*
Flange bolts on the south water transfer pump failed. Most of the fluids were released to zero perm containment. Pump was repaired.

Describe Area Affected and Cleanup Action Taken.*
A total of 4235 square feet of pasture west of the containment was affected. The leak occurred within a previously remediated area containing a 20 mil plastic liner approximately 3 feet below ground surface. Vacuum truck recovered standing fluids.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature:
Printed Name: Amy Ruth
Title: Assistant Remediation Foreman
E-mail Address: ACRuth@basspet.com
Date: 9-24-15 Phone: 432-661-0571

OIL CONSERVATION DIVISION

Signed By Mike Bratcher
Approved by Environmental Specialist:

Approval Date: 9/24/15 Expiration Date: N/A

Conditions of Approval: Attached ☐
Remediation per O.C.D. Rules & Guidelines
~~SUBMIT REMEDIATION PROPOSAL NO~~
LATER THAN: 10/25/15

2RP-3302

* Attach Additional Sheets If Necessary

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	
District RP	2RP-3302
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: XTO Energy, Inc	OGRID: 5380
Contact Name: Kyle Littrell	Contact Telephone: (432)-221-7331
Contact email: Kyle_Littrell@xtoenergy.com	Incident #: 2RP-3302
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude 32.346409 Longitude -103.835868
(NAD 83 in decimal degrees to 5 decimal places)

Site Name James Ranch Unit #29 SWD Tank Battery	Site Type Exploration and Production
Date Release Discovered 9/18/2015	API# *(if applicable)* 30-015-27735

Unit Letter	Section	Township	Range	County
K	36	22S	30E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 290 bbls	Volume Recovered (bbls) 240 bbls
	Is the concentration of dissolved chloride 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

Flange bolts on the south water transfer pump failed. Most of the fluids were released to zero perm containment. Pump was repaired.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3302
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? Release volume was greater than 25 bbls.
If YES, was immediate notice given to the OCD? Yes, immediate notice was given to Mike Bratcher and Heather Patterson by Tony Savoie on 09/19/2015 at 9:35am	

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:

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: _____ Date: 4-28-2020

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

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3302
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?	> 100 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☒ Yes ☐ No

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3302
Facility ID	
Application ID	

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 4/28/2020

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

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3302
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: _____ Date: 4-28-2020

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

OCD Only

Received by: _____ Date: _____

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: _____ Date: _____

Printed Name: _____ Title: _____

NM OIL CONSERVATION
ARTESIA DISTRICT
JUN 07 2016
RECEIVED

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

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

nAB1616127076

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P. 260737	Contact: Amy Ruth
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: James Ranch Unit 29 SWD	Facility Type: Exploration and Production

Surface Owner: State	Mineral Owner: State	API No. 30-015-27735

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	36	22S	30E	1840	South	2184	West	Eddy

Latitude 32.346457° Longitude -103.835847°

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: 775 bbls	Volume Recovered: 760 bbls
Source of Release: Produced Water Tanks	Date and Hour of Occurrence: Unknown	Date and Hour of Discovery: 5/27/2016 10 am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher/Heather Patterson (NMOCD)	
By Whom? Amy Ruth	Date and Hour: 5/27/2016 2:58 pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.*
Location VSAT (satellite) was damaged and caused SCADA communication to fail. Failure triggered an alarm that was not responded to by the proper personnel. Produced water tanks overflowed into zero perm containment. After filling containment, fluids began overflowing onto location well pad. Satellite was repaired.

Describe Area Affected and Cleanup Action Taken.*
The leak affected 2,212 sq. ft. of location well pad and 688 sq. ft. of pasture west of the caliche pad. Standing fluids were recovered by vacuum trucks.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature:
Printed Name: Amy C. Ruth
Title: EHS Remediation Specialist
E-mail Address: ACRuth@basspet.com
Date: 6/7/2016 Phone: 432-661-0571

OIL CONSERVATION DIVISION

Signed By Mike Bratcher
Approved by Environmental Specialist:

Approval Date: 6/8/16 Expiration Date: N/A

Conditions of Approval: Attached ☐

Remediation per O.C.D. Rules & Guidelines
SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 7/8/16

2RP-3726

* Attach Additional Sheets If Necessary

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	
District RP	2RP-3726
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: XTO Energy, Inc	OGRID: 5380
Contact Name: Kyle Littrell	Contact Telephone: (432)-221-7331
Contact email: Kyle_Littrell@xtoenergy.com	Incident #: 2RP-3726
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude 32.346609 Longitude -103.835868
(NAD 83 in decimal degrees to 5 decimal places)

Site Name James Ranch Unit 29 SWD	Site Type Exploration and Production
Date Release Discovered 5/27/2016	API# *(if applicable)* 30-015-27735

Unit Letter	Section	Township	Range	County
K	36	22S	30E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 775 bbls	Volume Recovered (bbls) 760 bbls
	Is the concentration of dissolved chloride 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

Location VSTA (satellite) was damaged and caused SCADA communication to fail. Failure triggered an alarm that was not responded to by the proper personnel. Produced water tanks overflowed into zero perm containment, fluids began overflowing onto location well pad. Satellite was repaired.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3726
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? Release volume was greater than 25 bbls.
If YES, was immediate notice given to the OCD? Yes, immediate notice was given to Mike Bratcher and Heather Patterson of NMOCD by Amy Ruth on 05/27/2016 at 2:58pm	

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:

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: _____ Date: 4-28-2020

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

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3726
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?	> 100 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☒ Yes ☐ No

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3726
Facility ID	
Application ID	

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 4/28/2020

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

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3726
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: _____ Date: 4-28-2020

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

OCD Only

Received by: _____ Date: _____

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: _____ Date: _____

Printed Name: _____ Title: _____

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

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

NM OIL CONSERVATION
ARTESIA DISTRICT
DEC 19 2016
RECEIVED

Form C-141
Revised August 8, 2011
Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

nAB1635656725 260737

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P.	Contact: Amy Ruth
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: JRU 29 SWD Battery at JRU well #29	Facility Type: Exploration and Production

Surface Owner: State of New Mexico	Mineral Owner: State of New Mexico	API No. 30-015-27735

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	36	22S	30E	1845	South	2160	West	Eddy

Latitude 32.346427° Longitude -103.835871°

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: 3324 bbls	Volume Recovered: 2990 bbls
Source of Release: Water transfer pump	Date and Hour of Occurrence: Unknown	Date and Hour of Discovery: 12/1/2016 approx. 9 am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher and Heather Patterson (NMOCD)	
By Whom? Amy Ruth	Date and Hour 12/1/2016 4:52 pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.*
Release was due to a water transfer pump failure resulting in damage to pump fiberglass line. Fluids overflowed containment. Pump was isolated for repair.

Describe Area Affected and Cleanup Action Taken.*
The leak affected 56,043 square feet (33,938 square feet of this is in pasture). Standing fluids were recovered from the ground. Saturated surface soils were scraped and stockpiled on bermed plastic located on the caliche pad.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature:	OIL CONSERVATION DIVISION
Printed Name: Amy C. Ruth	Approved by Environmental Specialist: Crystal Weaver
Title: ~~EHS~~ Environmental Supervisor	Approval Date: / Expiration Date:
E-mail Address: ACRuth@basspet.com	Conditions of Approval: see attached / Attached ☒
Date: 12/16/2016 Phone: 432-661-0571	

* Attach Additional Sheets If Necessary

2RP-4040

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	
District RP	2RP-4040
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: XTO Energy, Inc	OGRID: 5380
Contact Name: Kyle Littrell	Contact Telephone: (432)-221-7331
Contact email: Kyle_Littrell@xtoenergy.com	Incident #: 2RP-4040
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude 32.346427 Longitude -103.835871
(NAD 83 in decimal degrees to 5 decimal places)

Site Name JRU 29 SWD Battery at JRU well #29	Site Type Exploration and Production
Date Release Discovered 12/1/2016	API# *(if applicable)* 30-015-27735

Unit Letter	Section	Township	Range	County
K	36	22S	30E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 3,324 bbls	Volume Recovered (bbls) 2,990 bbls
	Is the concentration of dissolved chloride 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

Release was due to a water transfer pump failure resulting in damage to pump fiberglass line. Fluids overflowed containment. Pump was isolated for repair.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-4040
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? Release volume was greater than 25 bbls.
If YES, was immediate notice given to the OCD? Yes, immediate notice was given to Mike Bratcher and Heather Patterson of NMOCD by Amy Ruth on 12/01/2016 at 4:52pm.	

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:

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: _____ Date: 4-28-2020

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

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-4040
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?	> 100 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☒ Yes ☐ No

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-4040
Facility ID	
Application ID	

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 4/28/2020

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

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-4040
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: _____ Date: 4-28-2020

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

OCD Only

Received by: _____ Date: _____

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: _____ Date: _____

Printed Name: _____ Title: _____

ATTACHMENT 3: LITHOLOGIC / SOIL SAMPLE LOGS

LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation	Identifier: BH01	Date: 1/18-1/21/20
	Project Name: JRU 29	RP Number: 2RP-3302, 2RP-3726, 2RP-4040, 2RP-3082
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: BB, FS, WM	Method: Sonic Drill
Lat/Long:	Field Screening: NA	Hole Diameter: 6" / Total Depth: 110'

Comments:
No field screenings, lithology remarks only

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D			N		0	0'	CCHE	CALICHE, tan-off white, fill
						0.5'	SP	SAND, dry, reddish brown, poorly graded, fine-very fine, soft no odor, no stain
D			N			5'	CCHE	CALICHE, dry, tan-off white, few subangular gravel, trace fine sand, no odor, no stain
D			N		10'	12.5'	SP-SM	silty SAND, dry, reddish brown, poorly graded, fine grained, few tan-off white subangular gravel, no stain, no odor
D			N		20'	23'	ML-S	SILTSTONE, dry, reddish brown, moderatley consolidated, 2mm caliche inclusions, trace off-white subangular gravel, no stain, no odor
D			N		30'			
M			N			37'		moist
					40'			
D			N			45'		dry
					50'			
D			N					
						58'	CL-S	CLAYSTONE, dry, reddish brown, low plasticity, cohesive, well consolidated with some silty dolomite inclusions (1-2mm), no stain, no odor
D			N		60'			
D			N					
					70'			
D			N					
					80'			
D			N					
D			N		90'			
D			N					
					100'			
M			N			102'		moist
M			N		110'			Total Depth 110 feet bgs

LT Environmental, Inc.	Identifier: SP-11	Date: 1/21/2020
LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation	Project Name: JRU 29	RP Number: 2RP-3302, 2RP-3726, 2RP-4040, 2RP-3802
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: BB, FS	Method: Sonic Drill
Lat/Long:	Field Screening: Chloride, PID	Hole Diameter: 4" / Total Depth: 26'

Comments:
All chloride tests include a 40% correction factor

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			Open Excavation
D	475	0.0	N			3' 4'	CCHE	CALICHE, dry, tan-off white, few subangular gravel, trace fine sand, moderately consolidated, no syain, no odor
					6			
D	425	0.4	N			9'		
					12			
D	>3628	0.4	N			13'	SP	SAND, dry, reddish brown, poorly graded, fine grained, no odor no stain
M	5,958	0.2	N		18	18'	SM	SILTY sand, moist, reddish brown, poorly graded, no plasticity, non cohesive, no odor, no stain
M	<120	1.2	N	SP-11		23'		
M	<120	2.3	N	SP-11A	24	24'		
M	<120	0.5	N	SP-11B		25'		
M	168	1.2	N	SP-11C		26'		Total Depth 26 feet bgs
					30			
					36			

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier:	Date:
SP-12	1/21/2020
Project Name: JRU 29	RP Number: 2RP-3302, 2RP-3726, 2RP-4040, 2RP-3082

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: BB, FS	Method: Sonic Drill

Lat/Long:	Field Screening: Chloride, PID	Hole Diameter: 4"	Total Depth: 14'

Comments:
All chloride tests include a 40% correction factor

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
						3'	CCHE	CALICHE, dry tan-off white, moderately consolidated w/ trace fine grained sand, no stain, no odor
D	1,008	0.0	N	SP-12		4'		
D	1719	0.2	N	SP-12A		5'		
D	1,092	0.2	N	SP-12B	6	6'		
D	929	0.2	N	SP-12C		7'		
M	1,282	0.3	N	SP-12D		8'	SP	SAND, moist, brown-redish brown, poorly graded, fine grained w/ trace gravel, no stain, no odor
M	543	0.0	N	SP-12E		9'		
M	672	0.2	N	SP-12F	10	10'		
M	<120	2.8	N	SP-12G		11'		
M	<120	4.0	N	SP-12H		12'		
M	<120	4.0	N	SP-12I		13'		
M	<120	2.8	N	SP-12J	14	14'		Total Depth 14 feet bgs
					18			
					22			
					26			

ATTACHMENT 4: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG

Photograph 1: East facing view of open excavation.

Photograph 2: West facing view of open excavation.

Photograph 3: North facing view of open excavation

Photograph 4: Previously installed liner near SP-4 exposed.

JRU 29 SWD Tank Battery
Eddy County, New Mexico
Photographs Taken: July 2018 through March 2020

A proud member of WSP

PHOTOGRAPHIC LOG

Photograph 5: North facing view of previously installed liner exposed.

Photograph 6: West facing view of excavation area at SP-7.

Photograph 7: East facing view during backfilling activities.

Photograph 8: North facing view during backfilling activities

ATTACHMENT 5: LABORATORY ANALYTICAL REPORTS

Analytical Report 649845

for

LT Environmental, Inc.

Project Manager: Dan Moir

JRU 29

012918135

31-JAN-20

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

31-JAN-20

Project Manager: **Dan Moir**
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, CO 80003

Reference: XENCO Report No(s): **649845**
JRU 29
Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 649845. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 649845 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 649845

LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP-11	S	01-21-20 13:03	23 ft	649845-001
SP-11 A	S	01-21-20 13:05	24 ft	649845-002
SP-11 B	S	01-21-20 13:24	25 ft	649845-003
SP-11 C	S	01-21-20 13:26	26 ft	649845-004

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU 29

Project ID: *012918135*
Work Order Number(s): *649845*

Report Date: *31-JAN-20*
Date Received: *01/22/2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3115058 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 649845

LT Environmental, Inc., Arvada, CO

Project Name: JRU 29

Project Id: 012918135
Contact: Dan Moir
Project Location:

Date Received in Lab: Wed Jan-22-20 09:45 am
Report Date: 31-JAN-20
Project Manager: Jessica Kramer

Analysis Requested															
	Lab Id:	649845-001		649845-002		649845-003		649845-004							
	Field Id:	SP-11		SP-11 A		SP-11 B		SP-11 C							
	Depth:	23- ft		24- ft		25- ft		26- ft							
	Matrix:	SOIL		SOIL		SOIL		SOIL							
	Sampled:	Jan-21-20 13:03		Jan-21-20 13:05		Jan-21-20 13:24		Jan-21-20 13:26							
BTEX by EPA 8021B SUB: T104704400-19-19	***Extracted:***	Jan-30-20 10:00		Jan-30-20 10:00		Jan-30-20 10:00		Jan-30-20 10:00							
	Analyzed:	Jan-30-20 14:52		Jan-30-20 15:52		Jan-30-20 16:12		Jan-30-20 16:33							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Benzene		<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201						
Toluene		<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201						
Ethylbenzene		<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201						
m,p-Xylenes		<0.00398	0.00398	<0.00397	0.00397	<0.00399	0.00399	<0.00402	0.00402						
o-Xylene		<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201						
Total Xylenes		<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201						
Total BTEX		<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201						
Chloride by EPA 300 SUB: T104704400-19-19	***Extracted:***	Jan-23-20 17:45		Jan-23-20 17:45		Jan-23-20 17:45		Jan-23-20 17:45							
	Analyzed:	Jan-23-20 23:27		Jan-24-20 00:32		Jan-24-20 00:38		Jan-24-20 00:57							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Chloride		32.9	4.97	157	5.05	289	4.96	216	4.95						
TPH by SW8015 Mod SUB: T104704400-19-19	***Extracted:***	Jan-25-20 16:00		Jan-25-20 16:00		Jan-25-20 16:00		Jan-25-20 16:00							
	Analyzed:	Jan-26-20 19:01		Jan-26-20 19:22		Jan-26-20 19:43		Jan-26-20 20:04							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<49.8	49.8	<50.0	50.0	<50.0	50.0						
Diesel Range Organics (DRO)		<50.0	50.0	<49.8	49.8	<50.0	50.0	<50.0	50.0						
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<49.8	49.8	<50.0	50.0	<50.0	50.0						
Total GRO-DRO		<50.0	50.0	<49.8	49.8	<50.0	50.0	<50.0	50.0						
Total TPH		<50.0	50.0	<49.8	49.8	<50.0	50.0	<50.0	50.0						

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 649845

LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**SP-11**	Matrix:	Soil	Date Received:	01.22.20 09.45
Lab Sample Id:	649845-001	Date Collected:	01.21.20 13.03	Sample Depth:	23 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.23.20 17.45	Basis:	Wet Weight
Seq Number:	3114316			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**32.9**	4.97	mg/kg	01.23.20 23.27		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	01.25.20 16.00	Basis:	Wet Weight
Seq Number:	3114519			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	01.26.20 19.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	01.26.20 19.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.26.20 19.01	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	01.26.20 19.01	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.26.20 19.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	01.26.20 19.01	
o-Terphenyl	84-15-1	102	%	70-135	01.26.20 19.01	

Certificate of Analytical Results 649845

LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**SP-11**	Matrix:	Soil	Date Received:	01.22.20 09.45
Lab Sample Id:	649845-001	Date Collected:	01.21.20 13.03	Sample Depth:	23 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	01.30.20 10.00	Basis:	Wet Weight
Seq Number:	3115058			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.30.20 14.52	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.30.20 14.52	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.30.20 14.52	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.30.20 14.52	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.30.20 14.52	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.30.20 14.52	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.30.20 14.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	79	%	70-130	01.30.20 14.52	
1,4-Difluorobenzene	540-36-3	113	%	70-130	01.30.20 14.52	

Certificate of Analytical Results 649845

LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**SP-11 A**	Matrix:	Soil	Date Received:	01.22.20 09.45
Lab Sample Id:	649845-002	Date Collected:	01.21.20 13.05	Sample Depth:	24 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.23.20 17.45	Basis:	Wet Weight
Seq Number:	3114316			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**157**	5.05	mg/kg	01.24.20 00.32		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	01.25.20 16.00	Basis:	Wet Weight
Seq Number:	3114519			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	01.26.20 19.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	01.26.20 19.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	01.26.20 19.22	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	01.26.20 19.22	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	01.26.20 19.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	01.26.20 19.22	
o-Terphenyl	84-15-1	99	%	70-135	01.26.20 19.22	

Certificate of Analytical Results 649845

LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**SP-11 A**	Matrix:	Soil	Date Received:	01.22.20 09.45
Lab Sample Id:	649845-002	Date Collected:	01.21.20 13.05	Sample Depth:	24 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	01.30.20 10.00	Basis:	Wet Weight
Seq Number:	3115058			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.30.20 15.52	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	01.30.20 15.52	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	01.30.20 15.52	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	01.30.20 15.52	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	01.30.20 15.52	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	01.30.20 15.52	U	1
Total BTEX		<0.00198	0.00198	mg/kg	01.30.20 15.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	01.30.20 15.52	
1,4-Difluorobenzene	540-36-3	114	%	70-130	01.30.20 15.52	

Certificate of Analytical Results 649845

LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**SP-11 B**	Matrix:	Soil	Date Received:	01.22.20 09.45
Lab Sample Id:	649845-003	Date Collected:	01.21.20 13.24	Sample Depth:	25 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.23.20 17.45	Basis:	Wet Weight
Seq Number:	3114316			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**289**	4.96	mg/kg	01.24.20 00.38		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	01.25.20 16.00	Basis:	Wet Weight
Seq Number:	3114519			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	01.26.20 19.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	01.26.20 19.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.26.20 19.43	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	01.26.20 19.43	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.26.20 19.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	01.26.20 19.43	
o-Terphenyl	84-15-1	96	%	70-135	01.26.20 19.43	

Certificate of Analytical Results 649845

LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**SP-11 B**	Matrix:	Soil	Date Received:	01.22.20 09.45
Lab Sample Id:	649845-003	Date Collected:	01.21.20 13.24	Sample Depth:	25 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	01.30.20 10.00	Basis:	Wet Weight
Seq Number:	3115058			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.30.20 16.12	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.30.20 16.12	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.30.20 16.12	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.30.20 16.12	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.30.20 16.12	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.30.20 16.12	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.30.20 16.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	112	%	70-130	01.30.20 16.12	
4-Bromofluorobenzene	460-00-4	85	%	70-130	01.30.20 16.12	

Certificate of Analytical Results 649845

LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**SP-11 C**	Matrix:	Soil	Date Received:	01.22.20 09.45
Lab Sample Id:	649845-004	Date Collected:	01.21.20 13.26	Sample Depth:	26 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.23.20 17.45	Basis:	Wet Weight
Seq Number:	3114316			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**216**	4.95	mg/kg	01.24.20 00.57		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	01.25.20 16.00	Basis:	Wet Weight
Seq Number:	3114519			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	01.26.20 20.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	01.26.20 20.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.26.20 20.04	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	01.26.20 20.04	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.26.20 20.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	01.26.20 20.04	
o-Terphenyl	84-15-1	99	%	70-135	01.26.20 20.04	

Certificate of Analytical Results 649845

LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**SP-11 C**	Matrix:	Soil	Date Received:	01.22.20 09.45
Lab Sample Id:	649845-004	Date Collected:	01.21.20 13.26	Sample Depth:	26 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	01.30.20 10.00	Basis:	Wet Weight
Seq Number:	3115058			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.30.20 16.33	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.30.20 16.33	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.30.20 16.33	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.30.20 16.33	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.30.20 16.33	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.30.20 16.33	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.30.20 16.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	80	%	70-130	01.30.20 16.33	
1,4-Difluorobenzene	540-36-3	111	%	70-130	01.30.20 16.33	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 649845

LT Environmental, Inc.

JRU 29

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3114316 — Matrix: Solid — Date Prep: 01.23.20
MB Sample Id: 7695087-1-BLK — LCS Sample Id: 7695087-1-BKS — LCSD Sample Id: 7695087-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	256	102	257	103	90-110	0	20	mg/kg	01.23.20 23:14	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3114316 — Matrix: Soil — Date Prep: 01.23.20
Parent Sample Id: 649845-001 — MS Sample Id: 649845-001 S — MSD Sample Id: 649845-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	32.9	249	299	107	296	106	90-110	1	20	mg/kg	01.23.20 23:33	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3114316 — Matrix: Soil — Date Prep: 01.23.20
Parent Sample Id: 649845-004 — MS Sample Id: 649845-004 S — MSD Sample Id: 649845-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	216	248	459	98	460	98	90-110	0	20	mg/kg	01.24.20 01:04	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3114519 — Matrix: Solid — Date Prep: 01.25.20
MB Sample Id: 7695243-1-BLK — LCS Sample Id: 7695243-1-BKS — LCSD Sample Id: 7695243-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	808	81	917	92	70-135	13	20	mg/kg	01.26.20 11:59	
Diesel Range Organics (DRO)	<15.0	1000	814	81	926	93	70-135	13	20	mg/kg	01.26.20 11:59	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	110		105		119		70-135	%	01.26.20 11:59
o-Terphenyl	110		104		117		70-135	%	01.26.20 11:59

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3114519 — Matrix: Solid — Date Prep: 01.25.20
MB Sample Id: 7695243-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	01.26.20 11:38	

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 649845

LT Environmental, Inc.

JRU 29

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3114519 | Matrix: Soil | Date Prep: 01.25.20
Parent Sample Id: 649839-001 | MS Sample Id: 649839-001 S | MSD Sample Id: 649839-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	997	831	83	841	84	70-135	1	20	mg/kg	01.26.20 13:03	
Diesel Range Organics (DRO)	17.8	997	824	81	839	82	70-135	2	20	mg/kg	01.26.20 13:03	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	113		102		70-135	%	01.26.20 13:03
o-Terphenyl	93		97		70-135	%	01.26.20 13:03

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3115058 | Matrix: Solid | Date Prep: 01.30.20
MB Sample Id: 7695528-1-BLK | LCS Sample Id: 7695528-1-BKS | LCSD Sample Id: 7695528-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.107	107	0.110	110	70-130	3	35	mg/kg	01.30.20 12:32	
Toluene	<0.000456	0.100	0.101	101	0.106	106	70-130	5	35	mg/kg	01.30.20 12:32	
Ethylbenzene	<0.000565	0.100	0.0956	96	0.102	102	70-130	6	35	mg/kg	01.30.20 12:32	
m,p-Xylenes	<0.00101	0.200	0.186	93	0.200	100	70-130	7	35	mg/kg	01.30.20 12:32	
o-Xylene	<0.000344	0.100	0.0943	94	0.0980	98	70-130	4	35	mg/kg	01.30.20 12:32	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		110		112		70-130	%	01.30.20 12:32
4-Bromofluorobenzene	79		85		88		70-130	%	01.30.20 12:32

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3115058 | Matrix: Soil | Date Prep: 01.30.20
Parent Sample Id: 649845-001 | MS Sample Id: 649845-001 S | MSD Sample Id: 649845-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0994	0.112	113	0.102	102	70-130	9	35	mg/kg	01.30.20 13:13	
Toluene	0.000596	0.0994	0.107	107	0.0978	98	70-130	9	35	mg/kg	01.30.20 13:13	
Ethylbenzene	<0.000561	0.0994	0.103	104	0.0945	95	70-130	9	35	mg/kg	01.30.20 13:13	
m,p-Xylenes	<0.00101	0.199	0.202	102	0.184	92	70-130	9	35	mg/kg	01.30.20 13:13	
o-Xylene	0.000378	0.0994	0.0996	100	0.0925	92	70-130	7	35	mg/kg	01.30.20 13:13	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	115		107		70-130	%	01.30.20 13:13
4-Bromofluorobenzene	95		87		70-130	%	01.30.20 13:13

MS/MSD Percent Recovery | [D] = 100*(C-A) / B | LCS = Laboratory Control Sample | MS = Matrix Spike
Relative Percent Difference | RPD = 200* | (C-E) / (C+E) | | A = Parent Result | B = Spike Added
LCS/LCSD Recovery | [D] = 100 * (C) / [B] | C = MS/LCS Result | D = MSD/LCSD % Rec
Log Difference | Log Diff. = Log(Sample Duplicate) - Log(Original Sample) | E = MSD/LCSD Result

Chain of Custody

Work Order No: 649845

XENCO LABORATORIES

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

www.xenco.com Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.236.3849	Email:	bbelill@ltenv.com

Work Order Comments

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

Project Name:	JRU 29	Turn Around	
Project Number:	01291835	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):	0.4	Thermometer ID	
Received Intact:	Yes No	T-NM-007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Total Containers:	4

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SP-11	S	1/21/20	1303	23'	1	X	X	X
SP-11 A			1305	24'		X	X	X
SP-11 B			1324	25'		X	X	X
SP-11 C			1326	26'		X	X	X
						1/21/20		

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

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			1/22/20 9:00am	2		01/22/20 0945
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

Inter-Office Shipment

IOS Number **56546**

Date/Time: 01/22/20 11:42
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Elizabeth Mcclellan
Delivery Priority:
Air Bill No.: 777580852397

Please send report to: Jessica Kramer
Address: 1089 N Canal Street
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
649845-001	S	SP-11	01/21/20 13:03	SW8015MOD_NM	TPH by SW8015 Mod	01/28/20	02/04/20	JKR	GRO-DRO PHCC10C28 PI	
649845-001	S	SP-11	01/21/20 13:03	SW8021B	BTEX by EPA 8021B	01/28/20	02/04/20	JKR	BZ BZME EBZ XYLENES	
649845-001	S	SP-11	01/21/20 13:03	E300_CL	Chloride by EPA 300	01/28/20	02/18/20	JKR	CL	
649845-002	S	SP-11 A	01/21/20 13:05	SW8021B	BTEX by EPA 8021B	01/28/20	02/04/20	JKR	BZ BZME EBZ XYLENES	
649845-002	S	SP-11 A	01/21/20 13:05	SW8015MOD_NM	TPH by SW8015 Mod	01/28/20	02/04/20	JKR	GRO-DRO PHCC10C28 PI	
649845-002	S	SP-11 A	01/21/20 13:05	E300_CL	Chloride by EPA 300	01/28/20	02/18/20	JKR	CL	
649845-003	S	SP-11 B	01/21/20 13:24	SW8021B	BTEX by EPA 8021B	01/28/20	02/04/20	JKR	BZ BZME EBZ XYLENES	
649845-003	S	SP-11 B	01/21/20 13:24	SW8015MOD_NM	TPH by SW8015 Mod	01/28/20	02/04/20	JKR	GRO-DRO PHCC10C28 PI	
649845-003	S	SP-11 B	01/21/20 13:24	E300_CL	Chloride by EPA 300	01/28/20	02/18/20	JKR	CL	
649845-004	S	SP-11 C	01/21/20 13:26	SW8021B	BTEX by EPA 8021B	01/28/20	02/04/20	JKR	BZ BZME EBZ XYLENES	
649845-004	S	SP-11 C	01/21/20 13:26	E300_CL	Chloride by EPA 300	01/28/20	02/18/20	JKR	CL	
649845-004	S	SP-11 C	01/21/20 13:26	SW8015MOD_NM	TPH by SW8015 Mod	01/28/20	02/04/20	JKR	GRO-DRO PHCC10C28 PI	

Inter Office Shipment or Sample Comments:

Relinquished By: Elizabeth McClellan

Date Relinquished: 01/22/2020

Received By: Brianna Teel

Date Received: 01/23/2020 11:19

Cooler Temperature: 0.3

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 56546

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : R8

Sent By: Elizabeth McClellan **Date Sent:** 01/22/2020 11:42 AM

Received By: Brianna Teel **Date Received:** 01/23/2020 11:19 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	.3	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 *Custody Seals Signed and dated for Containers/coolers	**Yes**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: Brianna Teel Date: 01/23/2020

Brianna Teel

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 01.22.2020 09.45.00 AM

Work Order #: 649845

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	.4	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 Custody Seals intact on sample bottles?	**Yes**	
#6*Custody Seals Signed and dated?	**Yes**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**Yes**	Subbed to Midland.
#18 Water VOC samples have zero headspace?	**N/A**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 01.22.2020

Checklist reviewed by: Jessica Kramer Date: 01.22.2020

Jessica Kramer

Analytical Report 649846

for

LT Environmental, Inc.

Project Manager: Dan Moir

JRU 29

012918135

03-FEB-20

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

03-FEB-20

Project Manager: **Dan Moir**
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, CO 80003

Reference: XENCO Report No(s): **649846**
JRU 29
Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 649846. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 649846 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 649846

LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP-12	S	01-21-20 10:42	4 ft	649846-001
SP-12 A	S	01-21-20 10:41	5 ft	649846-002
SP-12 B	S	01-21-20 10:44	6 ft	649846-003
SP-12 C	S	01-21-20 10:45	7 ft	649846-004
SP-12 D	S	01-21-20 10:46	8 ft	649846-005
SP-12 E	S	01-21-20 10:48	9 ft	649846-006
SP-12 F	S	01-21-20 10:49	10 ft	649846-007
SP-12 G	S	01-21-20 10:50	11 ft	649846-008
SP-12 H	S	01-21-20 10:51	12 ft	649846-009
SP-12 I	S	01-21-20 10:53	13 ft	649846-010
SP-12 J	S	01-21-20 10:54	14 ft	649846-011

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU 29

Project ID: *012918135*
Work Order Number(s): *649846*

Report Date: *03-FEB-20*
Date Received: *01/22/2020*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3115184 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 649846

LT Environmental, Inc., Arvada, CO

Project Name: JRU 29

Project Id: 012918135
Contact: Dan Moir
Project Location:

Date Received in Lab: Wed Jan-22-20 09:45 am
Report Date: 03-FEB-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	649846-001		649846-002		649846-003		649846-004		649846-005		649846-006	
	Field Id:	SP-12		SP-12 A		SP-12 B		SP-12 C		SP-12 D		SP-12 E	
	Depth:	4- ft		5- ft		6- ft		7- ft		8- ft		9- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-21-20 10:42		Jan-21-20 10:41		Jan-21-20 10:44		Jan-21-20 10:45		Jan-21-20 10:46		Jan-21-20 10:48	
BTEX by EPA 8021B SUB: T104704400-19-19	***Extracted:***	Jan-31-20 10:30		Jan-31-20 10:30		Jan-31-20 10:30		Jan-31-20 10:30		Jan-31-20 10:30		Jan-31-20 10:30	
	Analyzed:	Jan-31-20 18:33		Jan-31-20 19:52		Jan-31-20 20:12		Jan-31-20 20:32		Jan-31-20 20:52		Jan-31-20 21:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00202	0.00202	<0.00201	0.00201	<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199
Toluene		<0.00200	0.00200	<0.00202	0.00202	<0.00201	0.00201	<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199
Ethylbenzene		<0.00200	0.00200	<0.00202	0.00202	<0.00201	0.00201	<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199
m,p-Xylenes		<0.00401	0.00401	<0.00404	0.00404	<0.00402	0.00402	<0.00397	0.00397	<0.00399	0.00399	<0.00398	0.00398
o-Xylene		<0.00200	0.00200	<0.00202	0.00202	<0.00201	0.00201	<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199
Total Xylenes		<0.00200	0.00200	<0.00202	0.00202	<0.00201	0.00201	<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199
Total BTEX		<0.00200	0.00200	<0.00202	0.00202	<0.00201	0.00201	<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199
Chloride by EPA 300 SUB: T104704400-19-19	***Extracted:***	Jan-23-20 17:45		Jan-23-20 17:45		Jan-23-20 17:45		Jan-23-20 17:45		Jan-23-20 17:45		Jan-23-20 17:45	
	Analyzed:	Jan-24-20 00:45		Jan-24-20 00:51		Jan-24-20 01:17		Jan-24-20 01:23		Jan-24-20 01:43		Jan-24-20 01:49	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1940	24.8	2010	25.0	1760	25.2	1580	25.0	1110	5.00	383	5.00
TPH by SW8015 Mod SUB: T104704400-19-19	***Extracted:***	Jan-25-20 12:00		Jan-25-20 12:00		Jan-25-20 12:00		Jan-25-20 12:00		Jan-25-20 12:00		Jan-25-20 12:00	
	Analyzed:	Jan-25-20 22:03		Jan-25-20 23:05		Jan-25-20 23:26		Jan-25-20 23:47		Jan-26-20 00:08		Jan-26-20 00:30	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<49.8	49.8	<49.9	49.9	<50.0	50.0	<49.8	49.8	<50.0	50.0
Diesel Range Organics (DRO)		<50.0	50.0	<49.8	49.8	<49.9	49.9	<50.0	50.0	<49.8	49.8	<50.0	50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<49.8	49.8	<49.9	49.9	<50.0	50.0	<49.8	49.8	<50.0	50.0
Total GRO-DRO		<50.0	50.0	<49.8	49.8	<49.9	49.9	<50.0	50.0	<49.8	49.8	<50.0	50.0
Total TPH		<50.0	50.0	<49.8	49.8	<49.9	49.9	<50.0	50.0	<49.8	49.8	<50.0	50.0

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Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 649846

LT Environmental, Inc., Arvada, CO

Project Name: JRU 29

Project Id: 012918135
Contact: Dan Moir
Project Location:

Date Received in Lab: Wed Jan-22-20 09:45 am
Report Date: 03-FEB-20
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	649846-007		649846-008		649846-009		649846-010		649846-011	
	Field Id:	SP-12 F		SP-12 G		SP-12 H		SP-12 I		SP-12 J	
	Depth:	10- ft		11- ft		12- ft		13- ft		14- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-21-20 10:49		Jan-21-20 10:50		Jan-21-20 10:51		Jan-21-20 10:53		Jan-21-20 10:54	
BTEX by EPA 8021B SUB: T104704400-19-19	***Extracted:***	Jan-31-20 10:30		Jan-31-20 10:30		Jan-31-20 10:30		Jan-31-20 10:30		Jan-31-20 10:30	
	Analyzed:	Jan-31-20 21:32		Jan-31-20 21:52		Jan-31-20 22:13		Jan-31-20 22:33		Jan-31-20 22:53	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Toluene		<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Ethylbenzene		<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
m,p-Xylenes		<0.00398	0.00398	<0.00398	0.00398	<0.00400	0.00400	<0.00399	0.00399	<0.00403	0.00403
o-Xylene		<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Total Xylenes		<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Total BTEX		<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Chloride by EPA 300 SUB: T104704400-19-19	***Extracted:***	Jan-23-20 17:45		Jan-23-20 17:45		Jan-23-20 17:45		Jan-23-20 17:45		Jan-23-20 18:00	
	Analyzed:	Jan-24-20 01:56		Jan-24-20 02:02		Jan-24-20 02:09		Jan-24-20 02:15		Jan-24-20 08:37	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		537	5.00	418	5.02	698	4.96	947	4.98	561	5.05
TPH by SW8015 Mod SUB: T104704400-19-19	***Extracted:***	Jan-25-20 12:00		Jan-25-20 12:00		Jan-25-20 12:00		Jan-25-20 12:00		Jan-25-20 12:00	
	Analyzed:	Jan-26-20 00:51		Jan-26-20 01:12		Jan-26-20 01:33		Jan-26-20 01:54		Jan-26-20 02:37	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.9	49.9
Diesel Range Organics (DRO)		<49.9	49.9	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.9	49.9
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.9	49.9
Total GRO-DRO		<49.9	49.9	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.9	49.9
Total TPH		<49.9	49.9	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.9	49.9

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Jessica Kramer
Project Assistant

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Certificate of Analytical Results 649846

LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**SP-12**	Matrix:	Soil	Date Received:	01.22.20 09.45
Lab Sample Id:	649846-001	Date Collected:	01.21.20 10.42	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.23.20 17.45	Basis:	Wet Weight
Seq Number:	3114316			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1940**	24.8	mg/kg	01.24.20 00.45		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	01.25.20 12.00	Basis:	Wet Weight
Seq Number:	3114508			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	01.25.20 22.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	01.25.20 22.03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.25.20 22.03	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	01.25.20 22.03	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.25.20 22.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-135	01.25.20 22.03	
o-Terphenyl	84-15-1	124	%	70-135	01.25.20 22.03	

Certificate of Analytical Results 649846

LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**SP-12**	Matrix:	Soil	Date Received:	01.22.20 09.45
Lab Sample Id:	649846-001	Date Collected:	01.21.20 10.42	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	01.31.20 10.30	Basis:	Wet Weight
Seq Number:	3115184			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.31.20 18.33	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.31.20 18.33	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.31.20 18.33	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.31.20 18.33	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.31.20 18.33	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.31.20 18.33	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.31.20 18.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	118	%	70-130	01.31.20 18.33	
4-Bromofluorobenzene	460-00-4	77	%	70-130	01.31.20 18.33	

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LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**SP-12 A**	Matrix:	Soil	Date Received:	01.22.20 09.45
Lab Sample Id:	649846-002	Date Collected:	01.21.20 10.41	Sample Depth:	5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.23.20 17.45	Basis:	Wet Weight
Seq Number:	3114316			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2010**	25.0	mg/kg	01.24.20 00.51		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	01.25.20 12.00	Basis:	Wet Weight
Seq Number:	3114508			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	01.25.20 23.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	01.25.20 23.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	01.25.20 23.05	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	01.25.20 23.05	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	01.25.20 23.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	01.25.20 23.05	
o-Terphenyl	84-15-1	114	%	70-135	01.25.20 23.05	

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LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**SP-12 A**	Matrix:	Soil	Date Received:	01.22.20 09.45
Lab Sample Id:	649846-002	Date Collected:	01.21.20 10.41	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	01.31.20 10.30	Basis:	Wet Weight
Seq Number:	3115184			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.31.20 19.52	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.31.20 19.52	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.31.20 19.52	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	01.31.20 19.52	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.31.20 19.52	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.31.20 19.52	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.31.20 19.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	114	%	70-130	01.31.20 19.52	
4-Bromofluorobenzene	460-00-4	73	%	70-130	01.31.20 19.52	

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LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**SP-12 B**	Matrix:	Soil	Date Received:	01.22.20 09.45
Lab Sample Id:	649846-003	Date Collected:	01.21.20 10.44	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.23.20 17.45	Basis:	Wet Weight
Seq Number:	3114316			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1760**	25.2	mg/kg	01.24.20 01.17		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	01.25.20 12.00	Basis:	Wet Weight
Seq Number:	3114508			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	01.25.20 23.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	01.25.20 23.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.25.20 23.26	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	01.25.20 23.26	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.25.20 23.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	01.25.20 23.26	
o-Terphenyl	84-15-1	113	%	70-135	01.25.20 23.26	

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LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**SP-12 B**	Matrix:	Soil	Date Received:	01.22.20 09.45
Lab Sample Id:	649846-003	Date Collected:	01.21.20 10.44	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	01.31.20 10.30	Basis:	Wet Weight
Seq Number:	3115184			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.31.20 20.12	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.31.20 20.12	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.31.20 20.12	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.31.20 20.12	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.31.20 20.12	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.31.20 20.12	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.31.20 20.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	75	%	70-130	01.31.20 20.12	
1,4-Difluorobenzene	540-36-3	115	%	70-130	01.31.20 20.12	

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LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**SP-12 C**	Matrix:	Soil	Date Received:	01.22.20 09.45
Lab Sample Id:	649846-004	Date Collected:	01.21.20 10.45	Sample Depth:	7 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.23.20 17.45	Basis:	Wet Weight
Seq Number:	3114316			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1580**	25.0	mg/kg	01.24.20 01.23		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	01.25.20 12.00	Basis:	Wet Weight
Seq Number:	3114508			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	01.25.20 23.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	01.25.20 23.47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.25.20 23.47	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	01.25.20 23.47	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.25.20 23.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-135	01.25.20 23.47	
o-Terphenyl	84-15-1	116	%	70-135	01.25.20 23.47	

Certificate of Analytical Results 649846

LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**SP-12 C**	Matrix:	Soil	Date Received:	01.22.20 09.45
Lab Sample Id:	649846-004	Date Collected:	01.21.20 10.45	Sample Depth:	7 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	01.31.20 10.30	Basis:	Wet Weight
Seq Number:	3115184			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.31.20 20.32	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	01.31.20 20.32	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	01.31.20 20.32	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	01.31.20 20.32	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	01.31.20 20.32	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	01.31.20 20.32	U	1
Total BTEX		<0.00198	0.00198	mg/kg	01.31.20 20.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	113	%	70-130	01.31.20 20.32	
4-Bromofluorobenzene	460-00-4	73	%	70-130	01.31.20 20.32	

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LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**SP-12 D**	Matrix:	Soil	Date Received:	01.22.20 09.45
Lab Sample Id:	649846-005	Date Collected:	01.21.20 10.46	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.23.20 17.45	Basis:	Wet Weight
Seq Number:	3114316			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1110**	5.00	mg/kg	01.24.20 01.43		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	01.25.20 12.00	Basis:	Wet Weight
Seq Number:	3114508			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	01.26.20 00.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	01.26.20 00.08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	01.26.20 00.08	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	01.26.20 00.08	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	01.26.20 00.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	01.26.20 00.08	
o-Terphenyl	84-15-1	116	%	70-135	01.26.20 00.08	

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JRU 29

Sample Id:	**SP-12 D**	Matrix:	Soil	Date Received:	01.22.20 09.45
Lab Sample Id:	649846-005	Date Collected:	01.21.20 10.46	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	01.31.20 10.30	Basis:	Wet Weight
Seq Number:	3115184			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.31.20 20.52	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.31.20 20.52	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.31.20 20.52	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.31.20 20.52	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.31.20 20.52	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.31.20 20.52	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.31.20 20.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	74	%	70-130	01.31.20 20.52	
1,4-Difluorobenzene	540-36-3	115	%	70-130	01.31.20 20.52	

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JRU 29

Sample Id:	**SP-12 E**	Matrix:	Soil	Date Received:	01.22.20 09.45
Lab Sample Id:	649846-006	Date Collected:	01.21.20 10.48	Sample Depth:	9 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.23.20 17.45	Basis:	Wet Weight
Seq Number:	3114316			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**383**	5.00	mg/kg	01.24.20 01.49		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	01.25.20 12.00	Basis:	Wet Weight
Seq Number:	3114508			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	01.26.20 00.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	01.26.20 00.30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.26.20 00.30	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	01.26.20 00.30	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.26.20 00.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-135	01.26.20 00.30	
o-Terphenyl	84-15-1	114	%	70-135	01.26.20 00.30	

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JRU 29

Sample Id:	**SP-12 E**	Matrix:	Soil	Date Received:	01.22.20 09.45
Lab Sample Id:	649846-006	Date Collected:	01.21.20 10.48	Sample Depth:	9 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	01.31.20 10.30	Basis:	Wet Weight
Seq Number:	3115184			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.31.20 21.12	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.31.20 21.12	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.31.20 21.12	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.31.20 21.12	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.31.20 21.12	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.31.20 21.12	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.31.20 21.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	84	%	70-130	01.31.20 21.12	
1,4-Difluorobenzene	540-36-3	117	%	70-130	01.31.20 21.12	

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JRU 29

Sample Id:	**SP-12 F**	Matrix:	Soil	Date Received:	01.22.20 09.45
Lab Sample Id:	649846-007	Date Collected:	01.21.20 10.49	Sample Depth:	10 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.23.20 17.45	Basis:	Wet Weight
Seq Number:	3114316			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**537**	5.00	mg/kg	01.24.20 01.56		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	01.25.20 12.00	Basis:	Wet Weight
Seq Number:	3114508			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	01.26.20 00.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	01.26.20 00.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.26.20 00.51	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	01.26.20 00.51	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.26.20 00.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-135	01.26.20 00.51	
o-Terphenyl	84-15-1	114	%	70-135	01.26.20 00.51	

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JRU 29

Sample Id:	**SP-12 F**	Matrix:	Soil	Date Received:	01.22.20 09.45
Lab Sample Id:	649846-007	Date Collected:	01.21.20 10.49	Sample Depth:	10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	01.31.20 10.30	Basis:	Wet Weight
Seq Number:	3115184			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.31.20 21.32	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.31.20 21.32	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.31.20 21.32	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.31.20 21.32	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.31.20 21.32	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.31.20 21.32	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.31.20 21.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	79	%	70-130	01.31.20 21.32	
1,4-Difluorobenzene	540-36-3	113	%	70-130	01.31.20 21.32	

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JRU 29

Sample Id:	**SP-12 G**	Matrix:	Soil	Date Received:	01.22.20 09.45
Lab Sample Id:	649846-008	Date Collected:	01.21.20 10.50	Sample Depth:	11 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.23.20 17.45	Basis:	Wet Weight
Seq Number:	3114316			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**418**	5.02	mg/kg	01.24.20 02.02		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	01.25.20 12.00	Basis:	Wet Weight
Seq Number:	3114508			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	01.26.20 01.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	01.26.20 01.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.26.20 01.12	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	01.26.20 01.12	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.26.20 01.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	01.26.20 01.12	
o-Terphenyl	84-15-1	110	%	70-135	01.26.20 01.12	

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JRU 29

Sample Id:	**SP-12 G**	Matrix:	Soil	Date Received:	01.22.20 09.45
Lab Sample Id:	649846-008	Date Collected:	01.21.20 10.50	Sample Depth:	11 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	01.31.20 10.30	Basis:	Wet Weight
Seq Number:	3115184			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.31.20 21.52	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.31.20 21.52	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.31.20 21.52	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.31.20 21.52	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.31.20 21.52	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.31.20 21.52	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.31.20 21.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	117	%	70-130	01.31.20 21.52	
4-Bromofluorobenzene	460-00-4	77	%	70-130	01.31.20 21.52	

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JRU 29

Sample Id:	**SP-12 H**	Matrix:	Soil	Date Received:	01.22.20 09.45
Lab Sample Id:	649846-009	Date Collected:	01.21.20 10.51	Sample Depth:	12 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.23.20 17.45	Basis:	Wet Weight
Seq Number:	3114316			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**698**	4.96	mg/kg	01.24.20 02.09		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	01.25.20 12.00	Basis:	Wet Weight
Seq Number:	3114508			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	01.26.20 01.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	01.26.20 01.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.26.20 01.33	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	01.26.20 01.33	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.26.20 01.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-135	01.26.20 01.33	
o-Terphenyl	84-15-1	116	%	70-135	01.26.20 01.33	

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JRU 29

Sample Id:	**SP-12 H**	Matrix:	Soil	Date Received:	01.22.20 09.45
Lab Sample Id:	649846-009	Date Collected:	01.21.20 10.51	Sample Depth:	12 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	01.31.20 10.30	Basis:	Wet Weight
Seq Number:	3115184			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.31.20 22.13	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.31.20 22.13	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.31.20 22.13	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.31.20 22.13	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.31.20 22.13	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.31.20 22.13	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.31.20 22.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	72	%	70-130	01.31.20 22.13	
1,4-Difluorobenzene	540-36-3	113	%	70-130	01.31.20 22.13	

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JRU 29

Sample Id:	**SP-12 I**	Matrix:	Soil	Date Received:	01.22.20 09.45
Lab Sample Id:	649846-010	Date Collected:	01.21.20 10.53	Sample Depth:	13 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.23.20 17.45	Basis:	Wet Weight
Seq Number:	3114316			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**947**	4.98	mg/kg	01.24.20 02.15		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	01.25.20 12.00	Basis:	Wet Weight
Seq Number:	3114508			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	01.26.20 01.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	01.26.20 01.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.26.20 01.54	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	01.26.20 01.54	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.26.20 01.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-135	01.26.20 01.54	
o-Terphenyl	84-15-1	115	%	70-135	01.26.20 01.54	

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JRU 29

Sample Id:	**SP-12 I**	Matrix:	Soil	Date Received:	01.22.20 09.45
Lab Sample Id:	649846-010	Date Collected:	01.21.20 10.53	Sample Depth:	13 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	01.31.20 10.30	Basis:	Wet Weight
Seq Number:	3115184			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.31.20 22.33	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.31.20 22.33	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.31.20 22.33	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.31.20 22.33	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.31.20 22.33	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.31.20 22.33	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.31.20 22.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	71	%	70-130	01.31.20 22.33	
1,4-Difluorobenzene	540-36-3	112	%	70-130	01.31.20 22.33	

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JRU 29

Sample Id:	**SP-12 J**	Matrix:	Soil	Date Received:	01.22.20 09.45
Lab Sample Id:	649846-011	Date Collected:	01.21.20 10.54	Sample Depth:	14 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.23.20 18.00	Basis:	Wet Weight
Seq Number:	3114317			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**561**	5.05	mg/kg	01.24.20 08.37		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	01.25.20 12.00	Basis:	Wet Weight
Seq Number:	3114508			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	01.26.20 02.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	01.26.20 02.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.26.20 02.37	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	01.26.20 02.37	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.26.20 02.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	01.26.20 02.37	
o-Terphenyl	84-15-1	109	%	70-135	01.26.20 02.37	

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JRU 29

Sample Id:	**SP-12 J**	Matrix:	Soil	Date Received:	01.22.20 09.45
Lab Sample Id:	649846-011	Date Collected:	01.21.20 10.54	Sample Depth:	14 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	01.31.20 10.30	Basis:	Wet Weight
Seq Number:	3115184			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.31.20 22.53	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.31.20 22.53	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.31.20 22.53	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.31.20 22.53	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.31.20 22.53	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.31.20 22.53	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.31.20 22.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	78	%	70-130	01.31.20 22.53	
1,4-Difluorobenzene	540-36-3	113	%	70-130	01.31.20 22.53	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 649846

LT Environmental, Inc.

JRU 29

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3114316 — Matrix: Solid — Date Prep: 01.23.20
MB Sample Id: 7695087-1-BLK — LCS Sample Id: 7695087-1-BKS — LCSD Sample Id: 7695087-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	256	102	257	103	90-110	0	20	mg/kg	01.23.20 23:14	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3114317 — Matrix: Solid — Date Prep: 01.23.20
MB Sample Id: 7695088-1-BLK — LCS Sample Id: 7695088-1-BKS — LCSD Sample Id: 7695088-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	252	101	252	101	90-110	0	20	mg/kg	01.24.20 05:36	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3114316 — Matrix: Soil — Date Prep: 01.23.20
Parent Sample Id: 649845-001 — MS Sample Id: 649845-001 S — MSD Sample Id: 649845-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	32.9	249	299	107	296	106	90-110	1	20	mg/kg	01.23.20 23:33	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3114316 — Matrix: Soil — Date Prep: 01.23.20
Parent Sample Id: 649845-004 — MS Sample Id: 649845-004 S — MSD Sample Id: 649845-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	216	248	459	98	460	98	90-110	0	20	mg/kg	01.24.20 01:04	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3114317 — Matrix: Soil — Date Prep: 01.23.20
Parent Sample Id: 649966-005 — MS Sample Id: 649966-005 S — MSD Sample Id: 649966-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1260	202	1450	94	1460	99	90-110	1	20	mg/kg	01.24.20 07:26	

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 649846

LT Environmental, Inc.

JRU 29

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3114317 — Matrix: Soil — Date Prep: 01.23.20
Parent Sample Id: 649969-006 — MS Sample Id: 649969-006 S — MSD Sample Id: 649969-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	338	299	622	95	622	95	90-110	0	20	mg/kg	01.24.20 05:55	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3114508 — Matrix: Solid — Date Prep: 01.25.20
MB Sample Id: 7695229-1-BLK — LCS Sample Id: 7695229-1-BKS — LCSD Sample Id: 7695229-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1060	106	1050	105	70-135	1	20	mg/kg	01.25.20 21:21	
Diesel Range Organics (DRO)	<15.0	1000	1180	118	1180	118	70-135	0	20	mg/kg	01.25.20 21:21	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		123		122		70-135	%	01.25.20 21:21
o-Terphenyl	130		125		113		70-135	%	01.25.20 21:21

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3114508 — Matrix: Solid — Date Prep: 01.25.20
MB Sample Id: 7695229-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	01.25.20 21:00	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3114508 — Matrix: Soil — Date Prep: 01.25.20
Parent Sample Id: 649846-001 — MS Sample Id: 649846-001 S — MSD Sample Id: 649846-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	23.8	997	1070	105	996	97	70-135	7	20	mg/kg	01.25.20 22:24	
Diesel Range Organics (DRO)	<15.0	997	1140	114	1130	113	70-135	1	20	mg/kg	01.25.20 22:24	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	128		122		70-135	%	01.25.20 22:24
o-Terphenyl	126		111		70-135	%	01.25.20 22:24

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 649846

LT Environmental, Inc.

JRU 29

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3115184 Matrix: Solid Date Prep: 01.31.20
MB Sample Id: 7695650-1-BLK LCS Sample Id: 7695650-1-BKS LCSD Sample Id: 7695650-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.112	112	0.102	102	70-130	9	35	mg/kg	01.31.20 13:12	
Toluene	<0.000456	0.100	0.104	104	0.114	114	70-130	9	35	mg/kg	01.31.20 13:12	
Ethylbenzene	<0.000565	0.100	0.100	100	0.114	114	70-130	13	35	mg/kg	01.31.20 13:12	
m,p-Xylenes	<0.00101	0.200	0.197	99	0.233	117	70-130	17	35	mg/kg	01.31.20 13:12	
o-Xylene	<0.000344	0.100	0.0978	98	0.115	115	70-130	16	35	mg/kg	01.31.20 13:12	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		110		110		70-130	%	01.31.20 13:12
4-Bromofluorobenzene	76		87		99		70-130	%	01.31.20 13:12

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3115184 Matrix: Soil Date Prep: 01.31.20
Parent Sample Id: 650807-001 MS Sample Id: 650807-001 S MSD Sample Id: 650807-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.110	110	0.0951	94	70-130	15	35	mg/kg	01.31.20 13:53	
Toluene	<0.000457	0.100	0.107	107	0.0961	95	70-130	11	35	mg/kg	01.31.20 13:53	
Ethylbenzene	<0.000567	0.100	0.103	103	0.0914	90	70-130	12	35	mg/kg	01.31.20 13:53	
m,p-Xylenes	<0.00102	0.201	0.205	102	0.179	89	70-130	14	35	mg/kg	01.31.20 13:53	
o-Xylene	<0.000346	0.100	0.104	104	0.0884	88	70-130	16	35	mg/kg	01.31.20 13:53	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	115		118		70-130	%	01.31.20 13:53
4-Bromofluorobenzene	94		78		70-130	%	01.31.20 13:53

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike
Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added
LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

Chain of Custody

Work Order No: 604846

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

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.236.3849	Email:	bbelill@ltenv.com

Work Order Comments

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

Project Name:	JRU 29	Turn Around	
Project Number:	012918135	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	0.4	Thermometer ID	
Received Intact:	(Yes) No	T-NM-007	
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Total Containers:	11

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SP-12	S	1/21/20	1042	4'	1	X	X	X
SP-12 A			1041	5'		X	X	X
SP-12 B			1044	6'		X	X	X
SP-12 C			1045	7'		X	X	X
SP-12 D			1046	8'		X	X	X
SP-12 E			1048	9'		X	X	X
SP-12 F			1049	10'		X	X	X
SP-12 G			1050	11'		X	X	X
SP-12 H			1051	12'		X	X	X
SP-12 I	↓	↓	1053	13'	↓	X	X	X

Work Order Notes

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

Sample Comments

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
		1/22/20 9:00	2		1/22/20 0945
			4		
			6		

Revised Date 051418 Rev. 2018.1

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: W49846

www.xenco.com Page 2 of 2

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.236.3849	Email:	bbelill@ltenv.com

Work Order Comments

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

		Turn Around	
Project Name:	JRU 29	Routine	☒
Project Number:	012918135	Rush:	
P.O. Number:		Due Date:	
Sampler's Name:	Benjamin Belill		

SAMPLE RECEIPT

Temp Blank: Yes No		Wet Ice: Yes No	
Temperature (°C):	~~0.4~~ @ 1/1/22	Thermometer ID	
Received Intact:	Yes No	see PDF	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	
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
SP-12 J	S	1/21/20	1054	14'	1	x	x	x	

Work Order Notes

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

BG 1/21/20

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
[signature]	[signature]	1/22/20 / 9:00am	2 [signature]	[signature]	1/22/20 9:45
			4		
			6		

Revised Date 051418 Rev. 2018.1

Inter-Office Shipment

IOS Number **56551**

Date/Time: 01/22/20 11:52
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Elizabeth Mcclellan
Delivery Priority:
Air Bill No.: 777580852397

Please send report to: Jessica Kramer
Address: 1089 N Canal Street
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
649846-001	S	SP-12	01/21/20 10:42	SW8021B	BTEX by EPA 8021B	01/28/20	02/04/20	JKR	BZ BZME EBZ XYLENES	
649846-001	S	SP-12	01/21/20 10:42	SW8015MOD_NM	TPH by SW8015 Mod	01/28/20	02/04/20	JKR	GRO-DRO PHCC10C28 PI	
649846-001	S	SP-12	01/21/20 10:42	E300_CL	Chloride by EPA 300	01/28/20	02/18/20	JKR	CL	
649846-002	S	SP-12 A	01/21/20 10:41	SW8015MOD_NM	TPH by SW8015 Mod	01/28/20	02/04/20	JKR	GRO-DRO PHCC10C28 PI	
649846-002	S	SP-12 A	01/21/20 10:41	E300_CL	Chloride by EPA 300	01/28/20	02/18/20	JKR	CL	
649846-002	S	SP-12 A	01/21/20 10:41	SW8021B	BTEX by EPA 8021B	01/28/20	02/04/20	JKR	BZ BZME EBZ XYLENES	
649846-003	S	SP-12 B	01/21/20 10:44	SW8015MOD_NM	TPH by SW8015 Mod	01/28/20	02/04/20	JKR	GRO-DRO PHCC10C28 PI	
649846-003	S	SP-12 B	01/21/20 10:44	SW8021B	BTEX by EPA 8021B	01/28/20	02/04/20	JKR	BZ BZME EBZ XYLENES	
649846-003	S	SP-12 B	01/21/20 10:44	E300_CL	Chloride by EPA 300	01/28/20	02/18/20	JKR	CL	
649846-004	S	SP-12 C	01/21/20 10:45	E300_CL	Chloride by EPA 300	01/28/20	02/18/20	JKR	CL	
649846-004	S	SP-12 C	01/21/20 10:45	SW8015MOD_NM	TPH by SW8015 Mod	01/28/20	02/04/20	JKR	GRO-DRO PHCC10C28 PI	
649846-004	S	SP-12 C	01/21/20 10:45	SW8021B	BTEX by EPA 8021B	01/28/20	02/04/20	JKR	BZ BZME EBZ XYLENES	
649846-005	S	SP-12 D	01/21/20 10:46	SW8021B	BTEX by EPA 8021B	01/28/20	02/04/20	JKR	BZ BZME EBZ XYLENES	
649846-005	S	SP-12 D	01/21/20 10:46	SW8015MOD_NM	TPH by SW8015 Mod	01/28/20	02/04/20	JKR	GRO-DRO PHCC10C28 PI	
649846-005	S	SP-12 D	01/21/20 10:46	E300_CL	Chloride by EPA 300	01/28/20	02/18/20	JKR	CL	
649846-006	S	SP-12 E	01/21/20 10:48	E300_CL	Chloride by EPA 300	01/28/20	02/18/20	JKR	CL	
649846-006	S	SP-12 E	01/21/20 10:48	SW8015MOD_NM	TPH by SW8015 Mod	01/28/20	02/04/20	JKR	GRO-DRO PHCC10C28 PI	
649846-006	S	SP-12 E	01/21/20 10:48	SW8021B	BTEX by EPA 8021B	01/28/20	02/04/20	JKR	BZ BZME EBZ XYLENES	
649846-007	S	SP-12 F	01/21/20 10:49	E300_CL	Chloride by EPA 300	01/28/20	02/18/20	JKR	CL	
649846-007	S	SP-12 F	01/21/20 10:49	SW8021B	BTEX by EPA 8021B	01/28/20	02/04/20	JKR	BZ BZME EBZ XYLENES	
649846-007	S	SP-12 F	01/21/20 10:49	SW8015MOD_NM	TPH by SW8015 Mod	01/28/20	02/04/20	JKR	GRO-DRO PHCC10C28 PI	
649846-008	S	SP-12 G	01/21/20 10:50	E300_CL	Chloride by EPA 300	01/28/20	02/18/20	JKR	CL	
649846-008	S	SP-12 G	01/21/20 10:50	SW8021B	BTEX by EPA 8021B	01/28/20	02/04/20	JKR	BZ BZME EBZ XYLENES	
649846-008	S	SP-12 G	01/21/20 10:50	SW8015MOD_NM	TPH by SW8015 Mod	01/28/20	02/04/20	JKR	GRO-DRO PHCC10C28 PI	
649846-009	S	SP-12 H	01/21/20 10:51	SW8021B	BTEX by EPA 8021B	01/28/20	02/04/20	JKR	BZ BZME EBZ XYLENES	

Inter-Office Shipment

IOS Number **56551**

Date/Time: 01/22/20 11:52
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Elizabeth Mcclellan
Delivery Priority:
Air Bill No.: 777580852397

Please send report to: Jessica Kramer
Address: 1089 N Canal Street
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
649846-009	S	SP-12 H	01/21/20 10:51	E300_CL	Chloride by EPA 300	01/28/20	02/18/20	JKR	CL	
649846-009	S	SP-12 H	01/21/20 10:51	SW8015MOD_NM	TPH by SW8015 Mod	01/28/20	02/04/20	JKR	GRO-DRO PHCC10C28 PI	
649846-010	S	SP-12 I	01/21/20 10:53	SW8015MOD_NM	TPH by SW8015 Mod	01/28/20	02/04/20	JKR	GRO-DRO PHCC10C28 PI	
649846-010	S	SP-12 I	01/21/20 10:53	E300_CL	Chloride by EPA 300	01/28/20	02/18/20	JKR	CL	
649846-010	S	SP-12 I	01/21/20 10:53	SW8021B	BTEX by EPA 8021B	01/28/20	02/04/20	JKR	BZ BZME EBZ XYLENES	
649846-011	S	SP-12 J	01/21/20 10:54	E300_CL	Chloride by EPA 300	01/28/20	02/18/20	JKR	CL	
649846-011	S	SP-12 J	01/21/20 10:54	SW8021B	BTEX by EPA 8021B	01/28/20	02/04/20	JKR	BZ BZME EBZ XYLENES	
649846-011	S	SP-12 J	01/21/20 10:54	SW8015MOD_NM	TPH by SW8015 Mod	01/28/20	02/04/20	JKR	GRO-DRO PHCC10C28 PI	

Inter Office Shipment or Sample Comments:

Relinquished By: Elizabeth McClellan

Date Relinquished: 01/22/2020

Received By: Brianna Teel

Date Received: 01/23/2020 11:20

Cooler Temperature: 0.3

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 56551

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : R8

Sent By: Elizabeth McClellan **Date Sent:** 01/22/2020 11:52 AM

Received By: Brianna Teel **Date Received:** 01/23/2020 11:20 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	.3	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 *Custody Seals Signed and dated for Containers/coolers	**Yes**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: Brianna Teel Date: 01/23/2020

Brianna Teel

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 01/22/2020 09:45:00 AM

Work Order #: 649846

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	.4	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 Custody Seals intact on sample bottles?	**Yes**	
#6*Custody Seals Signed and dated?	**Yes**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**Yes**	Subbed to Midland
#18 Water VOC samples have zero headspace?	**N/A**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 01/22/2020

Checklist reviewed by: Jessica Kramer Date: 01/23/2020

Jessica Kramer

Analytical Report 655037

for

LT Environmental, Inc.

Project Manager: Dan Moir

JRU 29

012918135

10-MAR-20

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

10-MAR-20

Project Manager: **Dan Moir**
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, CO 80003

Reference: XENCO Report No(s): **655037**
JRU 29
Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 655037. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 655037 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 655037

LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	03-09-20 13:40	5.5 ft	655037-001

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU 29

Project ID: *012918135*
Work Order Number(s): *655037*

Report Date: *10-MAR-20*
Date Received: *03/09/2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3119031 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 655037

LT Environmental, Inc., Arvada, CO

Project Name: JRU 29

Project Id: 012918135
Contact: Dan Moir
Project Location:

Date Received in Lab: Mon Mar-09-20 03:03 pm
Report Date: 10-MAR-20
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	655037-001					
	Field Id:	FS01					
	Depth:	5.5- ft					
	Matrix:	SOIL					
	Sampled:	Mar-09-20 13:40					
BTEX by EPA 8021B	***Extracted:***	Mar-09-20 15:30					
	Analyzed:	Mar-10-20 02:19					
	Units/RL:	mg/kg	RL				
Benzene		<0.00200	0.00200				
Toluene		<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200				
m,p-Xylenes		<0.00401	0.00401				
o-Xylene		<0.00200	0.00200				
Total Xylenes		<0.00200	0.00200				
Total BTEX		<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	Mar-09-20 16:00					
	Analyzed:	Mar-09-20 20:01					
	Units/RL:	mg/kg	RL				
Chloride		2200	50.0				
TPH by SW8015 Mod	***Extracted:***	Mar-09-20 17:00					
	Analyzed:	Mar-10-20 05:29					
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8				
Diesel Range Organics (DRO)		<49.8	49.8				
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8				
Total GRO-DRO		<49.8	49.8				
Total TPH		<49.8	49.8				

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Kramer
Project Manager

Final 1.000

Certificate of Analytical Results 655037

LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	03.09.20 15.03
Lab Sample Id:	655037-001	Date Collected:	03.09.20 13.40	Sample Depth:	5.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.09.20 16.00	Basis:	Wet Weight
Seq Number:	3119022				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2200**	50.0	mg/kg	03.09.20 20.01		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	03.09.20 17.00	Basis:	Wet Weight
Seq Number:	3119055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	03.10.20 05.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	03.10.20 05.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	03.10.20 05.29	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	03.10.20 05.29	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	03.10.20 05.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	03.10.20 05.29	
o-Terphenyl	84-15-1	112	%	70-135	03.10.20 05.29	

Certificate of Analytical Results 655037

LT Environmental, Inc., Arvada, CO

JRU 29

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	03.09.20 15.03
Lab Sample Id:	655037-001	Date Collected:	03.09.20 13.40	Sample Depth:	5.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.09.20 15.30	Basis:	Wet Weight
Seq Number:	3119031				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.10.20 02.19	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.10.20 02.19	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.10.20 02.19	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.10.20 02.19	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.10.20 02.19	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.10.20 02.19	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.10.20 02.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	70-130	03.10.20 02.19	
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.10.20 02.19	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 655037

LT Environmental, Inc.

JRU 29

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3119022 Matrix: Solid Date Prep: 03.09.20
MB Sample Id: 7698414-1-BLK LCS Sample Id: 7698414-1-BKS LCSD Sample Id: 7698414-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	258	103	263	105	90-110	2	20	mg/kg	03.09.20 19:19	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3119022 Matrix: Soil Date Prep: 03.09.20
Parent Sample Id: 654990-026 MS Sample Id: 654990-026 S MSD Sample Id: 654990-026 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3480	248	3760	113	3770	117	90-110	0	20	mg/kg	03.09.20 19:37	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3119055 Matrix: Solid Date Prep: 03.09.20
MB Sample Id: 7698462-1-BLK LCS Sample Id: 7698462-1-BKS LCSD Sample Id: 7698462-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	916	92	927	93	70-135	1	35	mg/kg	03.10.20 09:41	
Diesel Range Organics (DRO)	<50.0	1000	916	92	914	91	70-135	0	35	mg/kg	03.10.20 09:41	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		107		100		70-135	%	03.10.20 09:41
o-Terphenyl	106		111		104		70-135	%	03.10.20 09:41

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3119055 Matrix: Solid Date Prep: 03.09.20
MB Sample Id: 7698462-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.10.20 09:21	

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike
Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added
LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

QC Summary 655037

LT Environmental, Inc.

JRU 29

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3119055 | Matrix: Soil | Date Prep: 03.09.20
Parent Sample Id: 654990-026 | MS Sample Id: 654990-026 S | MSD Sample Id: 654990-026 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	997	962	96	984	98	70-135	2	35	mg/kg	03.10.20 04:28	
Diesel Range Organics (DRO)	<49.9	997	939	94	956	96	70-135	2	35	mg/kg	03.10.20 04:28	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	130		119		70-135	%	03.10.20 04:28
o-Terphenyl	125		125		70-135	%	03.10.20 04:28

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3119031 | Matrix: Solid | Date Prep: 03.09.20
MB Sample Id: 7698418-1-BLK | LCS Sample Id: 7698418-1-BKS | LCSD Sample Id: 7698418-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.107	107	0.108	108	70-130	1	35	mg/kg	03.09.20 23:36	
Toluene	<0.00200	0.100	0.102	102	0.104	104	70-130	2	35	mg/kg	03.09.20 23:36	
Ethylbenzene	<0.00200	0.100	0.0961	96	0.0989	99	71-129	3	35	mg/kg	03.09.20 23:36	
m,p-Xylenes	<0.00400	0.200	0.196	98	0.204	102	70-135	4	35	mg/kg	03.09.20 23:36	
o-Xylene	<0.00200	0.100	0.0995	100	0.103	103	71-133	3	35	mg/kg	03.09.20 23:36	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		107		108		70-130	%	03.09.20 23:36
4-Bromofluorobenzene	94		93		94		70-130	%	03.09.20 23:36

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3119031 | Matrix: Soil | Date Prep: 03.09.20
Parent Sample Id: 654990-026 | MS Sample Id: 654990-026 S | MSD Sample Id: 654990-026 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0852	86	0.0958	96	70-130	12	35	mg/kg	03.10.20 00:16	
Toluene	<0.00199	0.0994	0.0807	81	0.0905	91	70-130	11	35	mg/kg	03.10.20 00:16	
Ethylbenzene	<0.00199	0.0994	0.0747	75	0.0835	84	71-129	11	35	mg/kg	03.10.20 00:16	
m,p-Xylenes	<0.00398	0.199	0.152	76	0.169	85	70-135	11	35	mg/kg	03.10.20 00:16	
o-Xylene	<0.00199	0.0994	0.0762	77	0.0852	85	71-133	11	35	mg/kg	03.10.20 00:16	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		107		70-130	%	03.10.20 00:16
4-Bromofluorobenzene	96		93		70-130	%	03.10.20 00:16

MS/MSD Percent Recovery | [D] = 100*(C-A) / B | LCS = Laboratory Control Sample | MS = Matrix Spike
Relative Percent Difference | RPD = 200* | (C-E) / (C+E) | | A = Parent Result | B = Spike Added
LCS/LCSD Recovery | [D] = 100 * (C) / [B] | C = MS/LCS Result | D = MSD/LCSD % Rec
Log Difference | Log Diff. = Log(Sample Duplicate) - Log(Original Sample) | E = MSD/LCSD Result

Chain of Custody

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432) 704-5440 EL Paso,TX (915) 585-3443 Lubbock,TX (806) 794-1296 Crasbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701
www.xenco.com

Work Order No: 655037

Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc. Permian Office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 East Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432-236-3849	Email:	slo@ltenv.com, dmoir@ltenv.com, acole@ltenv.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:	JRU 29	Turn Around	
Project Number:	01291813S	Routine ☐	
Project Location		Rush: 24H	
Sampler's Name:		Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	3.0	Thermometer ID	T-NM-007
Received Intact:	(Yes) No	Correction Factor:	-0.2
Cooler Custody Seals:	Yes (No) N/A	Total Containers:	1
Sample Custody Seals:	Yes (No) N/A		

Preservative Codes

MeOH: Me
None: NO
HNO3: HN
H2S04: H2
HCL: HL
NaOH: Na
Zn Acetate+ NaOH: Zn

TAT starts the day recevied by the lab, if received by 4:00pm

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300)	Sample Comments
	FS01	S	3-9-20	1340	5.5'	1		x	x	x	

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
		3/9/20 15:03	2		
			4		
			6		

Revised Date 022619 Rev. 2019.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 03.09.2020 03.03.00 PM

Work Order #: 655037

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.6
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6*Custody Seals Signed and dated?	**Yes**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 03.09.2020

Checklist reviewed by: Jessica Kramer Date: 03.10.2020

Jessica Kramer

Green, Garrett J

From: Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@state.nm.us>
Sent: Wednesday, August 3, 2022 1:25 PM
To: Green, Garrett J
Cc: Billings, Bradford, EMNRD
Subject: RE: [EXTERNAL] Response to denial of C141 for incident ID (n#) nAB1518142271, Application ID: 8143

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: External Sender

External Email – Think Before You Click

To whom it may concern,

Regarding incident ID (n#) nAB1518142271, Application ID: 8143.
Please resubmit the C-141 closure request/report through our application portal. Please include a copy of this email correspondence and all attachments. The OCD will review the resubmitted application in the order it is received.

If you have any other questions or concerns, please feel free to contact me.

JH
Jocelyn Harimon ● Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@state.nm.us
http:// **www.emnrd.nm.gov**

From: Green, Garrett J <garrett.green@exxonmobil.com>
Sent: Thursday, July 21, 2022 1:03 PM
To: Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@state.nm.us>
Cc: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Pennington, Shelby G <shelby.g.pennington@exxonmobil.com>
Subject: [EXTERNAL] Response to denial of C141 for incident ID (n#) nAB1518142271, Application ID: 8143

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Ms. Harimon,

XTO is requesting NMOCD reconsider denial of the C141/Closure Request for incident ID (n#) nAB1518142271. NMOCD recently denied the closure request for the following reasons:

- Depth to ground water is insufficiently defined
- Unclear confirmation samples - Not vertically defined

XTO would like to clarify that a borehole was drilled at the site to confirm depth to water is greater than 100 feet. I have attached a boring log and a revised site map showing the location of that boring. As stated in the report, the boring was drilled in January of 2020 to 110 feet bgs and left open for over 72 hours to allow for potential infill of groundwater. No groundwater was observed in the borehole following the 72-hour waiting period and groundwater was confirmed to be greater than 100 feet deep.

Regarding a lack of vertical delineation/definition, all of the samples collected from the delineation borings advanced within the release footprint (SP-4, SP-6, SP-7/SP-11, SP-8, SP-9, SP-10, and SP-12) and depicted in Figure 3 of the report meet the site-specific closure criteria for chloride and each boring was advanced until samples met the strictest closure criteria (600 mg/kg). This ranges from 4 feet bgs in SP-6 to 23 feet bgs in SP-11 and generally occurs near 10 feet bgs in the majority of the boreholes.

XTO acknowledges that confirmation sampling to confirm removal of impacted material does not follow Part 29 guidance. However, please consider the circumstances of the timing and approach. First of all, the excavation included removal of 33,000 cubic yards of material and occurred in 2018 under the conditions of an NMOCD-approved corrective action plan. The confirmation samples were collected in a manner generally acceptable at that time when liner installations were included in the scope of work. These included discrete sidewall samples, but no floor samples. The floor samples were deemed unnecessary because the entirety of the top 4 feet of impacted material in the pasture was removed and because delineation sampling defined the concentration of chloride remaining in place below 4 feet. The highest chloride concentrations documented in samples collected from 4 feet or greater in the delineation borings ranged from 529 mg/kg to 15,600 mg/kg. None of the concentrations exceeded 20,000 mg/kg. Please reference Table 1 of the report.

In summary, a depth to water boring confirmed that groundwater is greater than 100 feet at the site and that the closure criteria applied was correct. The top 4 feet of material within the release footprint in the pasture was removed and sidewall samples confirm remaining soil in the top 4 feet meet the reclamation standard (600 mg/kg chloride). Material remaining in place beneath 4 feet bgs meets the site-specific closure criteria as documented by 59 discrete delineation samples collected from depths ranging from 4 feet bgs to 26 feet bgs. The delineation samples additionally document vertical delineation to the strictest closure criteria (600 mg/kg chloride). The excavation was conducted in 2018 and removed 33,000 cubic yards of material. The excavation was backfilled and collection of composite confirmation samples from the floor of the excavation is no longer practical. XTO believes the discrete sidewall samples define lateral delineation and the delineation samples provide sufficient data to characterize remaining chloride concentrations in the soil below 4 feet bgs. In light of these clarifications, XTO respectfully requests NMOCD review this additional information and reconsider the denial.

If NMOCD prefers a meeting, XTO is open to a video conference or in-person meeting to discuss the unique details of this project.

Thank You,

Garrett Green
Environmental Coordinator
Delaware Business Unit
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Garrett.Green@ExxonMobil.com

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

CONDITIONS

Action 136535

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 136535
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	9/20/2022