## **NM OIL CONSERVATION**

ARTESIA DISTRICT

DEC 2 2 2015

Form C-141 Revised August 8, 2011

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

District 1 1625 N. French Dr., Hobbs, NM 88240; District II B11 S First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Azide, 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.

		O* 1	Rel	ease Notific	_	n and Co	-	ction			
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Name of C	ompany: B	OPCO, L.P.	a	40737		Contact; Amy Ruth					
				bad, N.M. 88220			No. 575-887-73				3230 3165
racility Na	ime: Jame	s Ranch Uni	t#10 Ba	tery	-1	Facility Type	e: Exploration	and Production		177	
Surface Ov	vner: Fede	ral		Mineral O	wner:	Federal		APIN	. 30-015-	23075	
		4 y - 1	18.7	LOCA	TIO	N OF RE	LEASE				
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MAZ I MBIC	redurse Read		Yes 🗵	No		If YES, Volume Impacting the Watercourse. N/A					
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The leak affi	ected 1550 ft	r.	within the	tank containment s							
regulations a public health should their or the enviro	or the envir	onment. The ave failed to a	report ar acceptance dequately CD accep	is true and comple id/or file certain relie of a C-141 report investigate and ren tancojof a C-141 re	by the	otifications as NMOCD m	nd perform correct arked as "Final R on that pose a thr	tive actions for rel eport" does not rel eat to pround water	cases which ieve the ope	may er	danger liability
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E-mail Addre	22/20	Ruth@bassper	Phone:	432-661-0571		STIBMIT B	EMEDIATION	. Rules & Gul	delinesed		
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District I
1625 N. French Dr., Hobbs, NM 88240
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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	AND ESCAPE A SE
District RP	2RP-3464
Facility ID	s de reference and a
Application ID	well in fail to a figure

# **Release Notification**

## **Responsible Party**

Responsible	Party: XTO	Energy, Inc	Marine San	OGRID: 5380				
Contact Nan	ne: Kyle Li	ttrell		Contact	Contact Telephone: (432)-221-7331			
Contact ema	il: Kyle_Li	ttrell@xtoenergy.c	om	Incident	#: 2RP-3464			
Contact mail NM 88220	ling address	522 W. Mermod, S	Suite 704 Carlsbad,					
			Location o	of Release	Source			
atitude 32.3	35560		(NAD 83 in deci	Longitud mal degrees to 5 de	c -103.827584 cimal places)			
Site Name Ja	mes Ranch	Unit #10 Battery		Site Typ	Exploration and Production			
Date Release	Discovered	12/14/15		API# (if a	pplicable) 30-015-23075			
Unit Letter	Section	Township	Range	Co	unty			
Н	1	23S	30E		ldy			
7 Cando Oil	Materia	l(s) Released (Select all	that apply and attach ca	alculations or speci-	ic justification for the volumes provided be	low)		
Crude Oil		Volume Released	l (bbls)		Volume Recovered (bbls)	HIANLES		
⊠ Produced	Water	Volume Released	d (bbls) 81		Volume Recovered (bbls) 40			
		Is the concentrati produced water >	on of dissolved chl 10,000 mg/l?	oride in the	ride in the Yes No			
_ Condensa	te	Volume Released			Volume Recovered (bbls)			
Natural G	as	Volume Released	l (Mcf)	100	Volume Recovered (Mcf)			
Other (describe) Volume/Weight Released (provide u				ınits)	Volume/Weight Recovered (provide units)			
Cause of Rele Coupling on vontainment. were recovere	water transfe The pump	er pump failed and was repaired. The l	pump shut down. I	Produced water t <sup>2</sup> of well pad w	tank filled and overflowed into the ithin the tank containment and star	e battery earthen		

Form C-141 Page 2

# State of New Mexico Oil Conservation Division

Incident ID	Edinated to the Nation
District RP	2RP-3464
Facility ID	
Application ID	

Was this a major release as defined by	If YES, for what reason(s) does	the responsible party co	nsider this a major release?
19.15.29.7(A) NMAC?	The release was greater than 25 l	bbls.	
⊠ Yes □ No			
If YES, was immediate n Yes, immediate notice w	otice given to the OCD? By whon as given by Amy Ruth to Mike Bra	n? To whom? When an ticher/ Heather Patterso	nd by what means (phone, email, etc)? n (NMOCD), and Jim Amos (BLM) on 12/14/15.
	Ini	tial Response	
The responsible	party must undertake the following actions	immediately unless they coul	d create a safety hazard that would result in injury
☐ The source of the rele	ease has been stopped.		
The impacted area ha	s been secured to protect human he	ealth and the environme	nt.
Released materials ha	ave been contained via the use of b	erms or dikes, absorben	t pads, or other containment devices.
All free liquids and re	ecoverable materials have been ren	noved and managed app	propriately.
has begun, please attach	a narrative of actions to date. If re	emedial efforts have be	nediately after discovery of a release. If remediation en successfully completed or if the release occurred information needed for closure evaluation.
I hereby certify that the information all operators are public health or the environr failed to adequately investige.	rmation given above is true and complete required to report and/or file certain renent. The acceptance of a C-141 report and remediate contamination that p	ete to the best of my know lease notifications and per t by the OCD does not rel ose a threat to groundwate	ledge and understand that pursuant to OCD rules and form corrective actions for releases which may endanger leve the operator of liability should their operations have r, surface water, human health or the environment. In r compliance with any other federal, state, or local laws
Printed Name: Kylo	Littrell	Title: SH&	E Coordinator
Signature:	Janel	Date: 4/1	2/2019
email: Kyle Littrell@xtoo	energy.com	Telephone:	432-221-7331
OCD Only			
Received by:		Date:	

f New Mexico

Incident ID

Prystion Division

Incident ID	
District RP	2RP-3464
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.

This information must be provided to the appropriate district office no taler than 50 days after the release discovery date.	
What is the shallowest depth to groundwater beneath the area affected by the release?	<u>&gt;150</u> (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ⊠ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ⊠ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ⊠ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ⊠ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ⊠ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ⊠ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ⊠ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ⊠ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ⊠ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes 🛛 No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ⊠ No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	☐ Yes ⊠ No
Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vercontamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.	rtical extents of soil
Characterization Report Checklist: Each of the following items must be included in the report.	
<ul> <li>Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring well</li> <li>Field data</li> <li>Data table of soil contaminant concentration data</li> <li>Depth to water determination</li> <li>Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release</li> </ul>	ls.
Z Determination of water sources and significant watercourses within /2-mine of the fateral extents of the felease	

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.

Boring or excavation logs

Topographic/Aerial maps

Photographs including date and GIS information

☐ Laboratory data including chain of custody

Received by OCD: 10/30/2019 5:56:36 PM Form C-141 State of New Mexico Page 4 Oil Conservation Division

		Page 5 of	<i>70</i>
Incident ID			
District RP	2RP-3464		
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: 10/30/2019

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

OCD Only

Received by: Date: Da

Received by OCD: 10/30/2019 5:56:36 PM Form C-141 State of New Mexico Page 5 Oil Conservation Division Incident ID nAB1535754351

District RP 2RP-3464

Facility ID

Application ID

# **Remediation Plan**

Remediation Plan Checklist: Each of the following items must be included in the plan.									
<ul> <li>Detailed description of proposed remediation technique</li> <li>Scaled sitemap with GPS coordinates showing delineation points</li> <li>Estimated volume of material to be remediated</li> <li>Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC</li> <li>Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)</li> </ul>									
<u>Deferral Requests Only</u> : Each of the following items must be confirmed as part of any request for deferral of remediation.									
Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.									
Extents of contamination must be fully delineated.									
Contamination does not cause an imminent risk to human health, the environment, or groundwater.									
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 LittrellTitle:SH&E Supervisor									
Signature: Date:									
email:Kyle_Littrell@xtoenergy.com Telephone:(432)-221-7331									
OCD Only									
Received by: Date:									
Approved Approved with Attached Conditions of Approval Denied Deferral Approved									
Signature: Date:									



LT Environmental, Inc.

3300 North "A" Street Building 1, Unit 103 Midland, Texas 79705 432.704.5178

October 30, 2019

Mr. Mike Bratcher New Mexico Oil Conservation Division 811 South First Street Artesia, New Mexico 88210

RE: Revised Remediation Work Plan – SVE System

James Ranch Unit #10 Battery

Remediation Permit Numbers 2RP-3179, 2RP-3464, and 2RP-5243

**Eddy County, New Mexico** 

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), is pleased to present the New Mexico Oil Conservation Division (NMOCD) with this Revised Remediation Work Plan (Work Plan) for the James Ranch Unit #10 Battery (Site). The Site is located in Unit H, Section 1, Township 23 South, Range 30 East, in Eddy County, New Mexico (Figure 1).

This Work Plan summarizes the release history, assessment, and remediation activities completed to date and the proposed remedial actions, specifically the installation and operation of a soil vapor extraction (SVE) system, to address residual subsurface soil impacts at the Site. The Work Plan is submitted to comply with Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC) as amended on August 14, 2018 and Bureau of Land Management (BLM) requirements for no further actions related to these releases. The Work Plan addresses comments from the NMOCD to conduct active remediation of subsurface hydrocarbon impacts.

#### **BACKGROUND**

Of the three open Remediation Permits (RPs) at the Site, two of the RPs (2RP-3179 and 2RP-3464) occurred while the facility was operated by the previous operator; however, XTO is the current operator and is committed to addressing any releases that remain unresolved. The releases were reported to NMOCD on a Release Notification and Corrective Action Form C-141 (Form C-141) and were assigned RP Numbers, which are included as Attachment 1.

Since the three releases occurred in the tank battery containment area, excavation and sampling activities were completed to address the three releases concurrently. RP Numbers 2RP-3179 and 2RP-3464 are included in the Compliance Agreement for Remediation for Historical Releases (Compliance Agreement) between XTO and 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 19.15.29 NMAC. The



releases are categorized as a Tier III sites in the Compliance Agreement, meaning remediation of the releases began prior to August 14, 2018, the effective date of 19.15.29 NMAC; however, remediation was ongoing.

Spill response activities at the Site included excavation of impacted soil from February through April of 2019. Following initial excavation activities, LTE drilled into the subsurface with a hollow stem auger drilling rig to depths ranging from approximately 10 feet to 80 feet below ground surface (bgs) to vertically delineate subsurface soil impacts. Based on results from the drilling event, a production tank was relocated, and additional excavation was conducted. A liner was proposed in a Proposed Remediation Work Plan, dated April 12, 2019, and subsequently installed to address impacts to soil not removed by excavation. The Proposed Remediation Work Plan was denied with comments from NMOCD and BLM concerning depth to groundwater, additional delineation, and active remediation of mobile petroleum hydrocarbons in the subsurface. As a result, LTE submitted a Revised Remediation Work Plan, dated June 28, 2019. The Revised Remediation Work Plan summarized additional delineation by sonic drill rig, confirmation of depth to groundwater as greater than 150 feet bgs, and an analysis of exposure pathways to nearby receptors.

The additional drilling data allowed for revision of Closure Criteria presented in earlier reports. The following NMOCD Table 1 Closure Criteria were determined for the Site:

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

The Revised Remediation Work Plan supported excavation and liner installation, relocation of the tank battery, and continued natural attenuation of residual subsurface soil impacts beneath the liner.

NMOCD denied the Revised Remediation Work Plan on July 25, 2019, and required a method for mitigating the deeper impacts, specifically, the light end hydrocarbons at depth. In response, LTE has evaluated remediation alternatives for the Site and conducted pilot testing for an SVE system. The result of these efforts is presented in the subsequent sections of this report and were used to design an active remedial approach to address petroleum hydrocarbons that exist deeper than is practical to excavate.





## **Completed Remediation Activities**

As outlined in the Revised Remediation Action Plan submitted on June 28, 2019, XTO has performed the following remedial actions to address the releases associated with RP Numbers 2RP-3179, 2RP-3464, and 2RP-5243:

- Free standing crude oil and produced water were vacuumed off the well pad to minimize saturation into surficial soil and future vertical migration;
- Excavation and disposal of produced water and crude oil impacted soil from the top 4
  feet. Surficial soil impacts have been remediated to 4 feet bgs as determined by field
  screening and laboratory analytical results for confirmation sidewall soil samples and
  delineation soil samples. Approximately 1,740 cubic yards of impacted soil were
  excavated and disposed of between February and April 2019; and
- A 30-mil poly liner was installed at the base of the excavation on April 12, 2019 to address any elevated subsurface chloride concentrations. The liner covered a surface area of approximately 11,230 square feet and extended up the sidewalls approximately 2 to 3 feet;
- To minimize the potential of future releases in the vicinity of these three open RPs, XTO constructed their tank battery in a different location within the Site. In addition, XTO evaluated the integrity of all equipment and components utilized in the construction of the tank battery to reduce the likelihood of future releases due to faulty and/or worn equipment and/or components.

### **SOIL VAPOR EXTRACTION PILOT TEST**

LTE conducted an SVE pilot test to assess the viability of SVE to reduce and remediate residual petroleum hydrocarbon impacts as an alternative remediation approach. The petroleum hydrocarbon impacts are generally volatile (relatively high Henry's Constant) and amenable to microbial degradation processes. SVE has been an industry standard, cost effective technology for *in-situ* remediation of petroleum hydrocarbons. The objective of the SVE pilot test was to evaluate the effectiveness of the remedial technology to achieve site remediation cleanup goals. SVE pilot testing results assist in determining the required flow rate and applied vacuum to influence the subsurface and cause volatilization of petroleum hydrocarbons adsorbed to subsurface soil and to determine site-specific design radius of influence (ROI). The pilot testing program was designed based on previously observed geologic conditions, surface conditions, and current lateral and vertical extents of petroleum hydrocarbon impacts. Two SVE screen depths were tested (25 feet to 45 feet bgs and 15 feet to 30 feet bgs) to encourage uniform flow throughout the highest impacted interval (20 feet to 45 feet bgs).





## **SVE Well Installation**

Four SVE wells (SVE-PT-01 through SVE-PT-04) were installed prior to testing in the locations presented on Figure 2. During the advancement of each SVE well, continuous soil sampling was conducted, which included describing the lithology based on the Unified Soil Classification System (USCS) as specified in American Society for Testing and Materials (ASTM) D2488, observations of staining and odors, and field screening of volatile aromatic hydrocarbons and chloride utilizing a calibrated photo-ionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Soil boring logs were completed at the time of drilling and are provided with the construction diagrams of the SVE wells as Attachment 2.

Soil samples from the four SVE wells were not submitted for laboratory analysis due to their proximity of previously drilled and sampled boreholes. Based on the soil boring logs and observations made during all subsurface investigations, lithology in the vicinity of the three releases was generally characterized as the following:

- 5 feet to 20 feet bgs was a mix of poorly graded to well graded sand, and
- 20 feet to approximately 50 feet bgs was classified as sandstone and claystone.

Soil boring SVE-PT-01 was completed to a depth of approximately 45 feet bgs, while SVE-PT-02, SVE-PT-03, and SVE-PT-04 were completed to a depth of approximately 30 feet bgs. The SVE wells were constructed with 2-inch polyvinyl chloride (PVC) casing. A 10-foot section of 0.010-inch slotted PVC screen was installed at the base of SVE wells SVE-PT-02 and SVE-PT-03. A 20-foot and 15-foot section of 0.010-inch slotted PVC screens were installed at the base of SVE wells SVE-PT-01 and SVE-PT-04, respectively. A 10-20 size silica sand pack was used to fill the annular space from the bottom of the screen to approximately 1 foot above the top of screen. Two feet of hydrated bentonite chips was placed on top of the sand pack. The well was then grouted from the top of the bentonite chips to the ground surface. The PVC casing for the SVE wells extended beyond the ground surface approximately 3 feet and protected with steel well protector monuments.

#### **Pilot Testing Procedure**

Vacuum was applied to two of the SVE wells (SVE-PT-01 and SVE-PT-04), while the other two SVE wells were utilized as observation wells (SVE-PT-02 and SVE-PT-03). SVE wells SVE-PT-02 and SVE-PT-03 will ultimately be utilized for full-scale SVE design. The SVE wells were screened across different lithologies observed in the subsurface to test applied vacuum responses and influence within those lithologies.

A vacuum was applied to the SVE wells via a vacuum truck and through a manifold designed to measure applied vacuum, flowrate, and vapor concentrations. The first test was conducted by applying a vacuum at SVE well SVE-PT-01. The same procedure was repeated for the pilot test on





SVE well SVE-PT-04. Pilot test monitoring data (applied vacuum, air flow rate, and volatile aromatic hydrocarbons stack measurements) were recorded at the test well, while (vacuum response) was measured at surrounding SVE wells during performance of the test. The following procedures were followed when conducting the SVE pilot test:

- 1. Measured the distances from the test SVE well to each observation well;
- 2. Collected background volatile organic compound measurements using a calibrated PID at the test SVE and observation wells;
- 3. Connected the vacuum truck to the test SVE well via a flexible hose and manifold then slowly opened the valve and monitored the vacuum and flow rate;
- 4. Applied a vacuum ranging from approximately 10 inches of water column (wc) to 50 inches wc at the designated SVE well for each test;
- Measured at least two events of stabilized vacuum/flow rate. Measured the vacuum at the observation wells and PID measurements from the test SVE well. Collected readings 15 minutes apart;
- After the test SVE well vacuum readings stabilized, the applied vacuum was increased by reducing the amount of blower bypass air and collected the above measurements at the higher vacuum/flow rate;
- 7. Closed the valve to eliminate the vacuum pressure and collected stabilization readings from each observation well;
- 8. At the conclusion of the testing period, the blower was turned off, the system was allowed to equilibrate, and a final round of vacuum readings was collected from the observation wells; and
- Collected air emission samples from SVE well SVE-PT-04 in laboratory-prepared containers and delivered under strict chain of custody (COC) protocol to Xenco Laboratories located in Midland, Texas (Xenco) for analysis of BTEX and total volatile petroleum hydrocarbons (TVPH).

The resulting field measurements were reviewed, and vacuum measurements were plotted versus distance from the appropriate SVE well. Diagrams were generated for each of the different vacuum/flowrates tested. All test forms and diagrams are provided as Attachment 3. The laboratory analytical report for the air emission sample is provided in Attachment 4.

### **SVE Pilot Test Results**

Pilot test data appears to indicate SVE is a viable technology to remediate petroleum hydrocarbons at the Site. The introduction of a vacuum into the subsurface enhanced



volatilization of petroleum hydrocarbons throughout the tested impacted soil column. SVE vacuum influences were observed in all SVE wells during each test.

An effective SVE ROI of approximately 30 feet to 40 feet was graphically estimated from a plot of the observed vacuum response versus the distance from the applied vacuum. Influence of greater than 0.1 inches wc was observed during testing of SVE well SVE-PT-01 via vacuum and flow rates ranging from 10 inches wc at 4 actual cubic feet per minute (acfm) to 50 inches wc at 14 acfm. Influence of greater than 2.5 inches wc was observed during testing of SVE well SVE-PT-04 via vacuum and flow rates ranging from 10 inches wc at 60 acfm to 35 inches wc at 124 acfm. LTE believes a lower flow rate during testing of SVE well SVE-PT-04 would produce similar results. Full-scale design is based on 20 acfm per well at 30 inches wc.

The air emission sample collected during testing of SVE well SVE-PT-04 indicated recovery of total petroleum hydrocarbons – gasoline range organics (TPH-GRO) and BTEX. In the air stream, TPH-GRO was detected at a concentration of 20.2 milligrams per liter (mg/L) and total BTEX was detected at 0.957 mg/L. The air emission sample results are included as Table 1. At a full-scale design flow rate of 200 acfm, it is estimated the initial petroleum hydrocarbon removal rate would be as high as 360 pounds TPH per day and 17 pounds BTEX per day. As the system remediates subsurface soil, the removal rate is anticipated to decline via first order decline rate. The petroleum hydrocarbon concentration detected in the SVE pilot test emissions further demonstrates the technology is a viable remedial approach for the deeper subsurface soil impacts. Air emission samples will be collected during full scale system operation to track remediation progress and to model anticipated shutdown dates.

#### PROPOSED SVE SYSTEM DESIGN

An additional six SVE wells are recommended to influence the hydrocarbon impacted area in both the horizontal and vertical extents, for a total of 10 SVE wells. A well layout plan is included as Figure 3. Figures 4, 5, and 6 illustrate the SVE wells influencing different intervals at depths, 5 feet to 20 feet bgs, 15 feet to 30 feet bgs, and 25 feet to 65 feet bgs (shallow, medium, and deep), respectively. The well screened intervals are included as Table 2.

For the full-scale system, it is recommended that the vacuum blower be capable of at least 200 acfm at 50 inches wc. This would allow the system to operate 20 acfm per well at a vacuum of at least 30 inches wc. The SVE system will be powered with an electrical drop that will operate a regenerative or rotary lobe blower. The full-scale system will include a manifold with vacuum gauges to adjust system operations as necessary. Measurements of volatile organic compounds with a PID will be collected per zone or well to determine the area of the site to focus operations. Upon approval of this Work Plan, the remediation system equipment and parts will be sourced.

LTE anticipates the system will operate for a one to two-year period to remediate the residual subsurface impacts. An estimated timeline breakdown includes:





- Equipment sourcing, manufacturing, and delivery is expected to take 3 months and will be completed by January 31, 2020;
- Well installation is anticipated to take one week;
- System installation and startup is expected to take two weeks and will be completed by February 28, 2020;
- Operation and Maintenance (O&M) will be performed weekly for the first month after initial startup;
- Monthly O&M checks on the system will be performed over the lifecycle of the system;
- Air emission samples will be collected at startup, two weeks, one month, two months, three months, then quarterly for the lifecycle of the system;
- Quarterly reports documenting runtime, air emission sampling results, and O&M data with any system changes or recommendations will be provided to NMOCD;
- Once air monitoring results indicate a TPH concentration of below 1 mg/L and the system has operated for at least a one-year period, confirmation soil samples will be collected. If the stack emissions do not drop below 1 mg/L TPH then confirmation sampling will occur following two years of system operation; and
- Confirmation soil samples will be collected in the vicinity of boreholes BH01, BH07, and BH08 and pothole PH01. Continuous sampling will be conducted via field screenings with a PID. Samples will be collected from similar intervals exceeding the Closure Criteria and submitted for laboratory analysis of BTEX and TPH.

Should NMOCD require more than 30 days to review and respond to this report, XTO reserves the right to modify the proposed schedule.

LTE, on behalf of XTO, requests approval of this Work Plan and implementation of the SVE system. If you have any questions or comments, please do not hesitate to contact Mr. Robert Rebel at (303) 548-5097 or Ms. Ashley Ager at (970) 946-1093.

Sincerely,

LT ENVIRONMENTAL, INC.

Robert T Rebel

Robert Rebel, P.E. Senior Engineer Ashley L. Ager, P.G. Senior Geologist





cc: Kyle Littrell, XTO

Bradford Billings, NMOCD Robert Hamlet, NMOCD

Jim Amos, U.S. Bureau of Land Management

### Attachments:

Figure 1	Site Location Map
Figure 2	FULL-SCALE SVE Pilot Test Layout
Figure 3	Proposed SVE System Layout
Figure 4	Shallow SVE Well Layout (5-20 feet bgs)
Figure 5	Medium SVE Well Layout (15-30 feet bgs)
Figure 6	Deep SVE Well Layout (25-65 feet bgs)

Table 1 Air Analytical Results
Table 2 SVE Well Completions

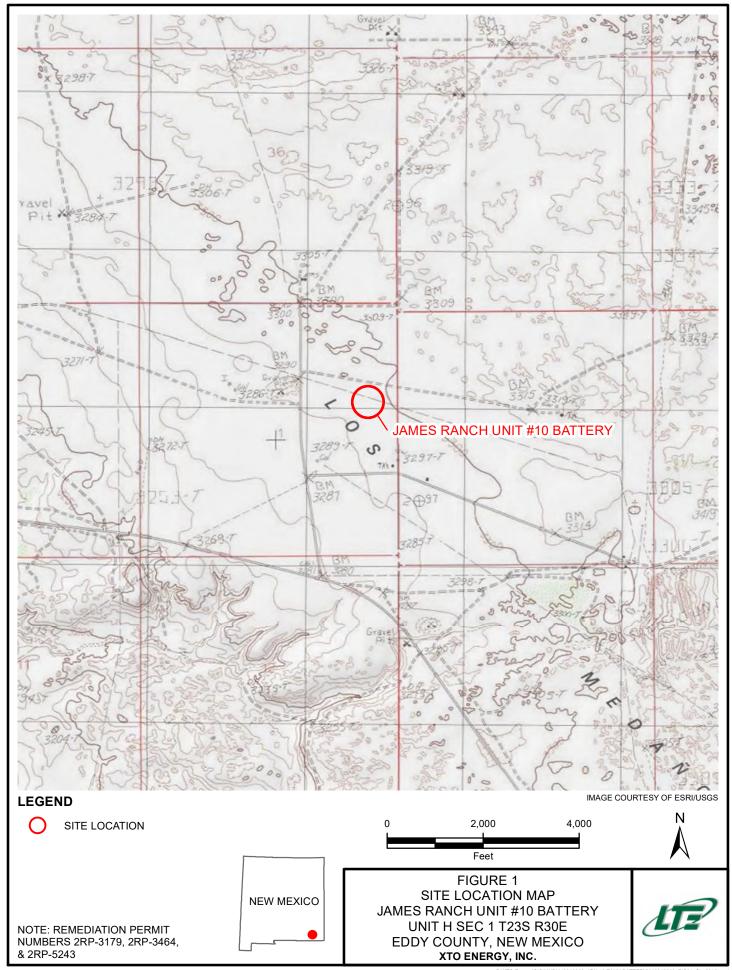
Attachment 1 Initial / Final NMOCD Form C-141s (2RP-3179, 2RP-3463, and 2RP-5243)

Attachment 2 Lithologic/Soil Sampling Logs

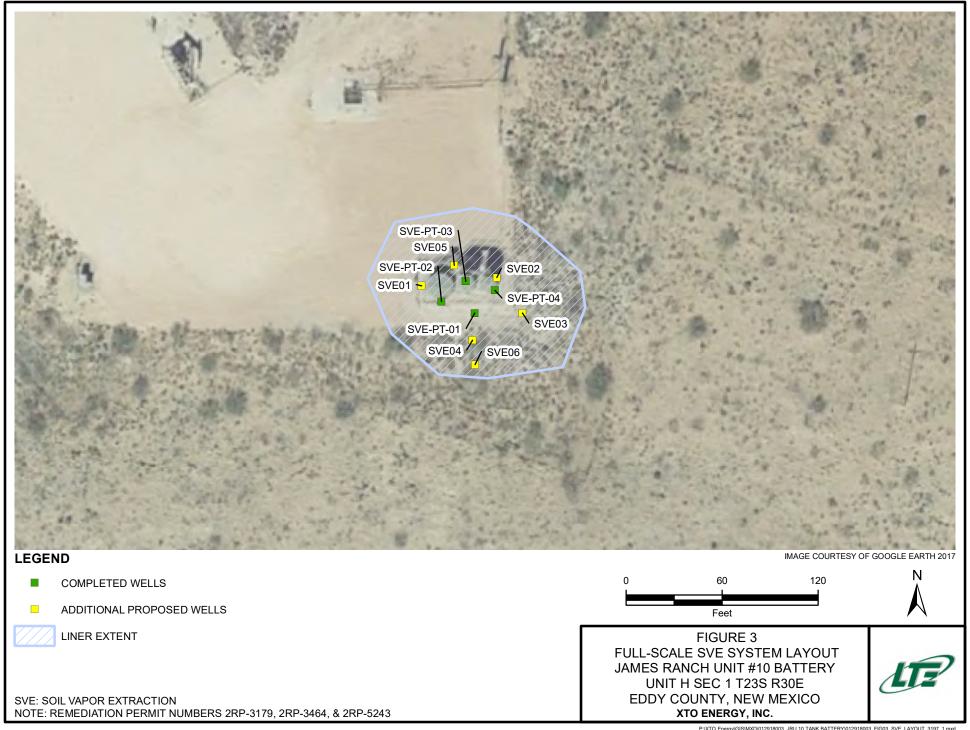
Attachment 3 Pilot Test Data

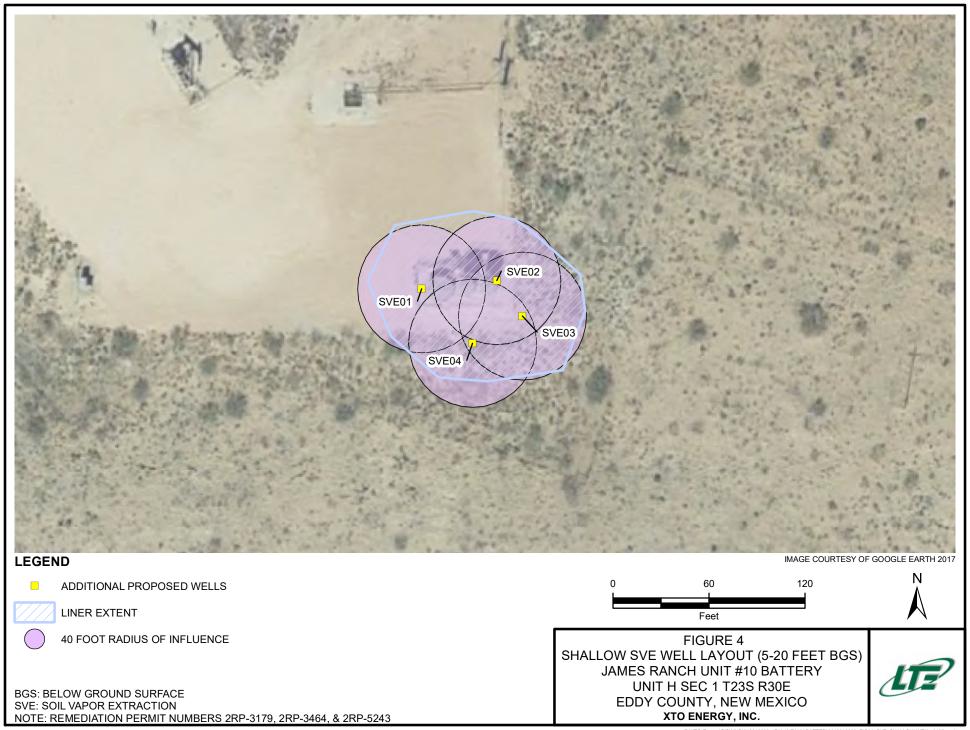
Attachment 4 Laboratory Analytical Report



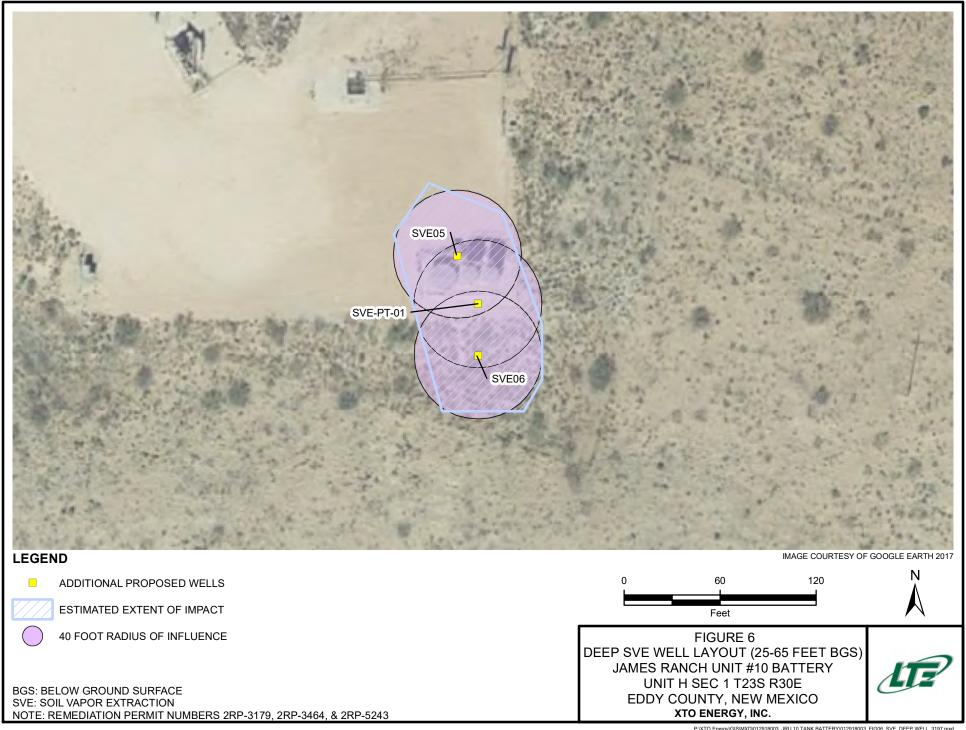












# TABLE 1 AIR ANALYTICAL RESULTS

# REVISED REMEDIATION WORK PLAN JAMES RANCH UNIT #10 BATTERY REMEDIATION PERMIT NUMBERS 2RP-3179, 2RP-3464, and 2RP-5243 EDDY COUNTY, NEW MEXICO XTO ENERGY, INC.

Sample Name	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethyl-benzene (mg/L)	Total Xylenes (mg/L)	Total BTEX (mg/L)	TPH-GRO (mg/L)
SVE-PT-04	10/01/2019	0.0722	0.370	0.0208	0.494	0.957	20.2

#### **Notes:**

BTEX - benzene, toluene, ethylbenzene, and total xylenes

GRO - gasoline range organics

mg/L - milligrams per Liter

TPH - total petroleum hydrocarbons



# TABLE 2 SOIL VAPOR EXTRACTION (SVE) WELL COMPLETIONS

# JAMES RANCH UNIT #10 BATTERY REMEDIATION PERMIT NUMBERS 2RP-3179, 2RP-3464, and 2RP-5243 EDDY COUNTY, NEW MEXICO XTO ENERGY, INC.

SOIL VAPOR EXTRACTION WELL	TOTAL DEPTH (FEET)	BENTONITE WELL SEAL (FEET)	SAND PACK (FEET)	CASING (FEET)	WELL SCREEN (FEET)
SVE-PT-01	45	28	17	25	20
SVE-PT-02	30	18	12	20	10
SVE-PT-03	30	18	12	20	10
SVE-PT-04	30	18	12	15	15
SVE-01	20	10	10	10	10
SVE-02	15	5	10	5	10
SVE-03	20	10	10	10	10
SVE-04	20	10	10	10	10
SVE-05	60	40	20	45	15
SVE-06	65	45	20	50	15

### **Notes:**

Drill with auger rig

0.010 slot screen

SVE-PT wells were installed on September 18, 2019 for the pilot test



District I 1625 N. French Dr., Hohbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rto 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

Form C-141 Revised August 8, 2011

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

THOS	52125	1588	-01			OPERA?	ror		🗵 Initi	al Report		Final Repo
Name of Company: BOPCO, L.P. AlDO / S/ Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220					Contact: To							
Description of the Control of the Co						No. 575-887-732						
raciiny iva	ilic. JRO-10	,				Facility Typ	e: Exploration a	and Pro	duction			
Surface Owner: Federal Mineral Owner:					Federal			APINO	.30-015-23	3075		
				LOCA	TIO	NI OR DRI	ID A COD					
Unit Letter	Section	Township	Range	Feel from the		N OF REI		L Cameron	V C.Y.			
Н	1	238	30E	1980		orth	Feet from the 660	Easi/v East	Vest Line	County Eddy		
								1/46/14		Eddy		
				⊿atitude N 32.1	33556	8º Longitude	W 103.827592	90				
								_				
Yuna a C Dala	Day Too			NAT	URE	OF RELI						
Type of Keit	ease: Produce	ed water and	condensate				Release: 50 bbls.	PW		Recovered: 1	3 bbls.	PW and 2
Source of Re	clease; Produ	ccd water tar	nk	_		Date and I-	condensate our of Occurrence	e:	bbls, con-	Hour of Dis	covery	7/29/15 at
						7/29/15, tir	ne unknown		approxim	ately 8:30 a	.m.	
Was Immed	iate Notice G		1 V $\Box$	N. C.		If YES, To	Whom? Mike Br	atcher,	Heather Pa	tterson, and	Jim An	nos
			J Y C5 [_]	No Not Re	gured							
	Tony Savoie					Date and H	our 7/29/15, first	attempt	at 1:51 p.:	n. confirme	l at 6:1	4 p.in.
was a water	comse Reac	nca/	Yes 🔯	No		HYES, Vo	lume Impacting t	he Wate		10.0.0.		
		- W - 4							N	IM OIL C	ONS	ERVATION
ir a watereo	urse was Imp	neted, Descr	the Pully,*							ARTE	SIA DI	STRICT
										.1111	3.0	2015
											. • 0	2013
	use of Proble									RE	CEIV	/ED
A confiring t	in the water t	ransier pump	ranea cau	sing the tank to o	verllov	w. The couplin	g was replaced th	e day of	the release			
Describe Are	ea Affected a	nd Cleanup A	Action Take	in.*								
vacuum truc	racted apoili	rooo sq.it. in	iside the ca	rthen containmer	it aroui	id the Oil and	PW tanks. All of	the free	standing ()	uid was reco	overed:	with a
		ned up in acc	cordance to	the NMOCD an	d BLM	remediation s	widelines.					
		·					, madimes					
I hereby cert	ify that the it	formation of	ven alvove	is true and compl	lata to t	the best of our	knowledge and u		. 1 41	A 4 N/3 4	OOD	
regulations a	ii operators a	ite required to	o report and	t/or life certain re	elease r	notifications at	id nerform correc	tive acti	one for rel	enege which	may er	idanaer
public health	or the envir	onnient. The	acceptance	of a C-141 reno	rt hv th	ie NMOCD ni	arked as "Final Re	opout!! di	one and rel	and the ago	eaton of	Tiobility.
mound men	орегания па	EVE TAILED TO F	tocquatery :	investigate and re	amedia	te contaminatio	on that nose a thre	eat to or	nund water	surface we	ater hui	man health
loderal state	, or local faw	s and/or rear	letione	ance of a C-141 (	report a	loes not relieve	e the operator of r	'esponsi	bility for e	ompliance v	vith any	other
The state of the s	Of Well live	and or regu	millions.		T		OIL COM	ernu.	ATION	DIMEIO	NAT.	
		0	3		- 1		OIL CONS	SERV	ATION	HIVISIC	少)	
Signature:	1_Ony	-X Die	uu _						1	/ /	/	
	U	10				Approved by	Environmental S <sub>l</sub>	necialist	H	. / /	1)	_
Different Marie	a Lony Savo	ne			-				11.	-1/		
Printed Name							7/1	_				
	Management	and Remedi	ation Speci	alist	- 1	Approval Date	1/31110	_	Same marking	Date! M	1)	
Fitle: Waste	Management			alist		Approval Dat	· 1/31/19	<b>&gt;</b>	expiration	Date: N	#	
Fitle: Waste	Management			alist		Approval Date Conditions of		<b>&gt;</b>   I	Expiration		_	
Fitle: Waste 3-mail Addre	ess: tasavoic(	@basspet.com	11	sa frincisca		Conditions of				Attuched	_	
3-mail Addre	ess: tasavoico	@basspet.com	n Phone:	alist 132-556-8730	-3	Conditions of wmediation	Approval:	lules (	& Guide	Attached	_	
Fithe: Waste  -mail Addre  Date: 7,	ess: tasavoic(	@basspet.com	n Phone:	sa frincisca		Conditions of wmediation	Approval: per O.C.D. F	lules (	& Guide	Attached		P-317

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-3179	
Facility ID		
Application ID		

# **Release Notification**

## **Responsible Party**

Responsible	Party: XTC	Energy, Inc		OGRID:	OGRID: 5380			
Contact Name: Kyle Littrell					Contact Telephone: (432)-221-7331			
Contact ema	il: Kyle_Lit	ttrell@xtoenergy.c	com	Incident a	#: 2RP-3179			
Contact mail NM 88220	ing address	522 W. Mermod,	Suite 704 Carlsba	d,				
			Location	of Release S	Source			
Latitude 32.3	35568		(NAD 83 in de	Longitude cimal degrees to 5 deci	-103.827592			
Site Name JR	RU-10			Site Type	Exploration and Production			
Date Release	Discovered	07/29/15		API# (if ap	plicable) 30-015-23075			
Unit Letter	Section	Township	Range	Cou	ntv			
Н	1	23S	30E	Ede				
	Materia	l(s) Released (Select al		l Volume of calculations or specific	justification for the volumes provided below)			
	Materia	l(s) Released (Select al	I that apply and attach	calculations or specific	justification for the volumes provided below?			
Crude Oil		Volume Release	d (bbls)		Volume Recovered (bbls)			
□ Produced	Water	Volume Release	d (bbls) 50		Volume Recovered (bbls) 13			
		Is the concentrat	ion of dissolved cl >10,000 mg/l?	hloride in the	☐ Yes ☐ No			
	te	Volume Release	d (bbls) 5		Volume Recovered (bbls) 2			
☐ Natural Ga	as	Volume Release	d (Mcf)		Volume Recovered (Mcf)			
Other (des	Other (describe) Volume/Weight Released (provide units				Volume/Weight Recovered (provide units)			
The spill impa	the water to	ransfer pump faile 1000 sq.ft. inside t red with a vacuum	he earthen contain	to overflow. The	coupling was replaced the day of the release.  Dil and produced water tanks. All of the free			

Form C-141 Page 2

# State of New Mexico Oil Conservation Division

Incident ID	
District RP	2RP-3179
Facility ID	
Application ID	

Was this a major	If YES, for what reason(s) does the responsible party consider this a major release?
release as defined by 19.15.29.7(A) NMAC?	The release was greater than 25 bbls.
, ,	The relation was greater than 25 oors.
X Yes No	
If VES was immediate n	otice given to the OCD2 December 2 To select 0 William 11 1 4 4 4 1 1 1 2
Yes, by Tony Savoie to	otice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Mike Bratcher/Heather Patterson (NMOCD), and Jim Amos (BLM) on 7/29/2015.
, , ,,	The state of the s
	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 rele	ease has been stopped.
l <u> </u>	s been secured to protect human health and the environment.
	eve been contained via the use of berms or dikes, absorbent pads, or other containment devices.
	ecoverable materials have been removed and managed appropriately.
	d above have not been undertaken, explain why:
Per 19.15.29.8 B. (4) NM	AC the responsible party may commence remediation immediately after discovery of a release. If remediation
has begun, please attach a	a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred
	t area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.
regulations all operators are	mation given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and required to report and/or file certain release notifications and perform corrective actions for releases which may endanger
public health or the environn	nent. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have
addition, OCD acceptance of	ate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In 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 Coordinator
Signature:	Date: 4/12/2019
7	Date: 4712/2010
email: Kyle Littrell@xtoe	Telephone:432-221-7331
OCD Only	
Received by:	Date:
	Date

te of New Mexico

Incident ID	
District RP	2RP-3179
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?	>150 (ft bgs)				
Did this release impact groundwater or surface water?	☐ Yes ⊠ No				
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ⊠ No				
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ⊠ No				
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ⊠ No				
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ⊠ No				
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ⊠ No				
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ⊠ No				
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ⊠ No				
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ⊠ No				
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes 🛛 No				
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ⊠ No				
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	☐ Yes ⊠ No				
Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vercontamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.	rtical extents of soil				
Characterization Report Checklist: Each of the following items must be included in the report.					
<ul> <li>         \infty         Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring well         \infty         Field data     </li> </ul>	ls.				
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					
<ul> <li>☑ Photographs including date and GIS information</li> </ul>					
☐ 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.

Received by OCD: 10/30/2019 5:56:36 PM Form C-141 State of New Mexico Page 4 Oil Conservation Division

Page 30 of 70

Incident ID	
District RP	2RP-3179
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:10/30/2019						
email:Kyle_Littrell@xtoenergy.com	Telephone:(432)-221-7331						
OCD Only							
Received by:	Date:						

Remediation Plan Checklist: Each of the following items must be included in the plan.

ate of New Mexico

Incident ID	nAB1521257588
District RP	2RP-3179
Facility ID	
Application ID	

# **Remediation Plan**

Detailed description of proposed remediation technique  Scaled sitemap with GPS coordinates showing delineation points  Estimated volume of material to be remediated  Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC  Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)								
Deferral Requests Only: Each of the following items must be confi	rmed as part of any request for deferral of remediation.							
Contamination must be in areas immediately under or around production.	duction equipment where remediation could cause a major facility							
Extents of contamination must be fully delineated.								
Contamination does not cause an imminent risk to human health,	the environment, or groundwater.							
I hereby certify that the information given above is true and complete rules and regulations all operators are required to report and/or file cerwhich may endanger public health or the environment. The acceptance liability should their operations have failed to adequately investigate a surface water, human health or the environment. In addition, OCD acresponsibility for compliance with any other federal, state, or local law	rtain release notifications and perform corrective actions for releases the of a C-141 report by the OCD does not relieve the operator of and remediate contamination that pose a threat to groundwater, ceptance of a C-141 report does not relieve the operator of							
Printed Name: Kyle Littrell_	Title:SH&E Supervisor							
Signature:	Date:10/30/2019							
email:Kyle_Littrell@xtoenergy.com	Telephone:(432)-221-7331							
OCD Only								
Received by:	Date:							
Approved	pproval							
Signature: Bradford Billings	Date: 07/12/2021							

## NM OIL CONSERVATION

ARTESIA DISTRICT

DEC 2 2 2015

2 2015

Form C-141 Revised August 8, 2011

Revised August 8, 2011
Submit Copy to appropriate District Office in accordance with 19.15.29 NMAC.

District 1
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 87503

# State of New Mexico Energy Minerals and Natural Resources

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

		0"	Rel	ease Notifi	catio	n and C	orrective A	ction		
NABI	535	154-35	57			<b>OPERA</b>	TOR	⊠ Initi	al Report	
		OPCO, L.P.		100737		Contact: Ar	ny Ruth			
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220					0	Telephone	No. 575-887-73	29		
Facility Na	ıme: Jame	s Ranch Un	it #10 Ba	tery	1315	Facility Typ	e: Exploration :	and Production		
Surface Ov	wner: Fede	ral		Mineral	Owner:	Federal	100 P	APINO	. 30-015-23075	
		4 V 1		LOC	ATIO	N OF RE	LEASE			
Unit Letter H	Section	Township 23S	Range 30F.	Feet from the 1980		South Line	Feet from the 660	East/West Line East	County Eddy	
			Lat	itude 32,335	560°	Longitude	-103.827584	Van j		
	140			NAT	TURE	OF REL	EASE			
Type of Rel		Produced W	/ater		35010		Release 81 bbls		Recovered 40 bbls	
Source of R	elease Ta	nk Overflow					lour of Occurrence time unknown		Hour of Discovery 15 11:15 am	
Was Immed	iate Notice (		Yes [	No Not R	equired	If YES, To	Whom?	erson (NMOCD), J		
By Whom?				September 1	Tu v	Date and Hour 12/14/2015 4:52 pm				
Was a Wate	reourse Read		Yes 🗵	No		If YES, Volume Impacting the Watercourse. N/A				
If a Waterco	urse was im	pacted, Descr	ibe Fully.				2 1 2 2 2 2 2			
	water transl	em and Remo er pump faile			oduced '	water tank fill	ed and overflowed	d into the battery e	arthen containment. The pump	
Describe Are The leak affi	ea Affected octed 1550 fi	and Cleanup A 2 of well pad	Action Tak within the	en.* tank containmen	at and sti	anding fluids	vere recovered.			
regulations a public health should their or the enviro	or the environment in a	onment. The ave failed to	acceptance	d/or file certain reperture of a C-141 reperture and reper	release n ort by th emediat	otifications as e NMOCD m e contaminati	id perform correct arked as "Final Room that nose a thro	tive actions for rele eport" does not reli	nuant to NMOCD rules and cases which may endanger eve the operator of liability r, surface water, human health ompliance with any other	
Signature:			ul	8		Approved by	OIL CONS	SERVATION pecialist:	DIVISION	

Approval Date:

Date: 12/22/2015 Phone: 432-661-0571

Attach Additional Sheets If Necessary

Remediation-Specialist

ACRuth@basspet.com

E-mail Address:

Conditions of Approval:
Remediation per O.C.D. Rules & Guidelines

Expiration Date:

SUBMIT REMEDIATION PROPOSAL NO

2RP-3464

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	THE SHOWN HE SH
District RP	2RP-3464
Facility ID	s shipe in
Application ID	tvet his full and dis-

# **Release Notification**

## **Responsible Party**

Responsible Party: XTO Energy, Inc OGR			OGRID	: 5380	
Contact Name: Kyle Littrell Contact		Contact	Telephone: (432)-221-7331		
Contact email: Kyle_Littrell@xtoenergy.com Incid		Incident	#: 2RP-3464		
Contact mail NM 88220	ing address	522 W. Mermod, S	uite 704 Carlsbad,		
			Location of	of Release	Source
atitude <u>32.3</u>	35560		(NAD 83 in decin	Longitude anal degrees to 5 de	e -103.827584
Site Name Ja	mes Ranch	Unit #10 Battery		Site Type	e Exploration and Production
Date Release	Discovered	12/14/15		API# (if a	applicable) 30-015-23075
Unit Letter	Section	Township	Range	Со	unty
Н	1	23S	30E		ddy
Crude Oil					Release
Totalio Released (ODB)		l(s) Released (Select all	that apply and attach ca		fic justification for the volumes provided below)
		Volume Released	(bbls)		Volume Recovered (bbls)
		Volume Released Volume Released Is the concentration	(bbls) 81 on of dissolved chlo	lculations or specif	fic justification for the volumes provided below)
	Water	Volume Released  Volume Released	(bbls) 81 on of dissolved chle 10,000 mg/l?	lculations or specif	Volume Recovered (bbls) 40
✓ Produced	Water	Volume Released  Volume Released  Is the concentration produced water >	(bbls) 81 on of dissolved chlorous mg/l? (bbls)	lculations or specif	Volume Recovered (bbls)  Volume Recovered (bbls)  Volume Recovered (bbls) 40  Yes No
☐ Produced☐ Condensa	Water	Volume Released  Volume Released  Is the concentration produced water >  Volume Released  Volume Released	(bbls) 81 on of dissolved chlorous mg/l? (bbls)	lculations or specif oride in the	Volume Recovered (bbls)  Volume Recovered (bbls)  Volume Recovered (bbls) 40  Yes No  Volume Recovered (bbls)

Form C-141 Page 2

# State of New Mexico Oil Conservation Division

Incident ID	Elizabeth Nati
District RP	2RP-3464
Facility ID	
Application ID	

Was this a major release as defined by	If YES, for what reason(s) does	the responsible party co	nsider this a major release?
19.15.29.7(A) NMAC?	The release was greater than 25 l	bbls.	
⊠ Yes □ No			
If YES, was immediate n Yes, immediate notice w	otice given to the OCD? By whon as given by Amy Ruth to Mike Bra	n? To whom? When an ticher/ Heather Patterso	nd by what means (phone, email, etc)? n (NMOCD), and Jim Amos (BLM) on 12/14/15.
	Ini	tial Response	
The responsible	party must undertake the following actions	immediately unless they coul	d create a safety hazard that would result in injury
☐ The source of the rele	ease has been stopped.		
The impacted area ha	s been secured to protect human he	ealth and the environme	nt.
Released materials ha	ave been contained via the use of b	erms or dikes, absorben	t pads, or other containment devices.
All free liquids and re	ecoverable materials have been ren	noved and managed app	propriately.
has begun, please attach	a narrative of actions to date. If re	emedial efforts have be	nediately after discovery of a release. If remediation en successfully completed or if the release occurred information needed for closure evaluation.
I hereby certify that the information all operators are public health or the environr failed to adequately investige.	rmation given above is true and complete required to report and/or file certain renent. The acceptance of a C-141 report and remediate contamination that p	ete to the best of my know lease notifications and per t by the OCD does not rel ose a threat to groundwate	ledge and understand that pursuant to OCD rules and form corrective actions for releases which may endanger ieve the operator of liability should their operations have r, surface water, human health or the environment. In r compliance with any other federal, state, or local laws
Printed Name: Kyle	Littrell	Title: SH&	E Coordinator
Signature:	Junel	Date: 4/1	2/2019
email: Kyle Littrell@xtoo	energy.com	Telephone:	432-221-7331
OCD Only			
Received by:		Date:	

te of New Mexico

Incident ID	
District RP	2RP-3464
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?	<u>&gt;150</u> (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ⊠ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ⊠ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ⊠ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ⊠ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ⊠ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ⊠ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ⊠ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ⊠ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ⊠ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes 🛛 No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ⊠ No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	☐ Yes ⊠ No
Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vercontamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.	rtical extents of soil
Characterization Report Checklist: Each of the following items must be included in the report.	
<ul> <li>         \infty         Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring well         \infty         Field data     </li> </ul>	ls.
<ul> <li>✓ Data table of soil contaminant concentration data</li> <li>✓ Depth to water determination</li> </ul>	
Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release	
<ul> <li>☑ Boring or excavation logs</li> <li>☑ Photographs including date and GIS information</li> </ul>	
☐ 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.

Received by OCD: 10/30/2019 5:56:36 PM Form C-141 State of New Mexico Page 4 Oil Conservation Division

Page 36 of 70

Incident ID	
District RP	2RP-3464
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

Date: 10/30/2019

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

OCD Only

Received by: Date: Date:

M Page 37 of 70 tate of New Mexico Incident ID PARIS 2575 4257

Incident ID	nAB1535754357
District RP	2RP-3464
Facility ID	
Application ID	

### **Remediation Plan**

Remediation Plan Checklist: Each of the following items must be included in the plan.
<ul> <li>☑ Detailed description of proposed remediation technique</li> <li>☑ Scaled sitemap with GPS coordinates showing delineation points</li> <li>☑ Estimated volume of material to be remediated</li> <li>☑ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC</li> <li>☑ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)</li> </ul>
Deferral Requests Only: Each of the following items must be confirmed as part of any request for deferral of remediation.
Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
Extents of contamination must be fully delineated.
Contamination does not cause an imminent risk to human health, the environment, or groundwater.
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:
email:Kyle_Littrell@xtoenergy.com Telephone:(432)-221-7331
OCD Only
Received by: Date:
Approved
Signature: Bradford Billings Date: 07/12/2021

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 Fc, NM 87505

Responsible Party: XTO Energy, Inc

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	NAB1904653072
District RP	2RP-5243
Facility ID	
Application ID	pAB1904652533

### **Release Notification**

### **Responsible Party**

OGRID: 5380

Contact Name: Kyle Littrell  Contact email: Kyle_Littrell@xtoenergy.com				Contact Telephone: (432)-221-7331				
		and the second second			Incident #: 2RP-5243			
Contact mail NM 88220	ing address	522 W. Mermod, S	Suite 704 Carlsbad,					
atitude 32.3	35540			of Release S	-103.827513			
			(NAD 83 in deci	imal degrees to 5 dec	cimal places)			
Site Name Ja	mes Ranch	Unit #10 Battery	State In the	Site Type	Bulk Storage and S	eparation Facility		
Date Release	Discovered	01/29/19		API# (if a	pplicable) 30-015-23075			
Unit Letter	Section	Township	Range	Co	ınty			
Н	1	23S	30E		ldy			
	Material	Federal Tri	Nature and	Volume of	Release	umes provided below)		
⊠ Crude Oil	Material		Nature and	Volume of	Release	umes provided below) ed (bbls) 7		
	Material	l(s) Released (Select all	Nature and that apply and attach cold (bbls) 9.8	Volume of	Release	ed (bbls) 7		
⊠ Crude Oil	Material	Volume Released Volume Released	Nature and that apply and attach cold (bbls) 9.8 d (bbls) on of dissolved chl	Volume of	Release	ed (bbls) 7		
⊠ Crude Oil	Material Water	l(s) Released (Select all Volume Released Volume Released	Nature and that apply and attach cold (bbls) 9.8 d (bbls) on of dissolved child (bbls)	Volume of	Release  ic justification for the volume Recovery  Volume Recovery	ed (bbls) 7 ed (bbls)		
<ul><li>✓ Crude Oil</li><li>✓ Produced</li><li>✓ Condensal</li><li>✓ Natural Ga</li></ul>	Material Water te	Volume Released Volume Released Volume Released Is the concentrati produced water >	Nature and that apply and attach cold (bbls) 9.8 d (bbls) on of dissolved child (bbls) 10,000 mg/l?	Volume of	Release  Volume Recovery  Volume Recovery  Volume Recovery  Yes No	ed (bbls) 7 ed (bbls) ed (bbls)		
Crude Oil Produced Condensat	Material Water te	Volume Released Is the concentrati produced water > Volume Released	Nature and that apply and attach cold (bbls) 9.8 d (bbls) on of dissolved child (bbls) 10,000 mg/l?	Volume of alculations or specifically alculated alculations or specifically alculated alculations or specifically alculated alculations or specifically alculated alculate	Release  Volume Recovered Yes No  Volume Recovered Yes No  Volume Recovered Yes No  Volume Recovered Yes No	ed (bbls) 7 ed (bbls) ed (bbls)		

Form C-141 Page 2

## State of New Mexico Oil Conservation Division

Incident ID	
District RP	2RP-5243
Facility ID	SAGrammatica per esta
Application ID	Pervisional superior (

Was this a major release as defined by	If YES, for what reason(s) do	oes the responsible party consider this a major release?
19.15.29.7(A) NMAC?		
☐ Yes ⊠ No		
If YES, was immediate n	otice given to the OCD? By w	whom? To whom? When and by what means (phone, email, etc)?
		Initial Response
The responsible	party must undertake the following ac	tions immediately unless they could create a safety hazard that would result in injury
The source of the rele	ease has been stopped.	
☐ The impacted area ha	s been secured to protect huma	an health and the environment.
Released materials ha	we been contained via the use	of berms or dikes, absorbent pads, or other containment devices.
All free liquids and re	coverable materials have been	removed and managed appropriately.
If all the actions described	d above have not been undertal	ken, explain why:
Per 19.15.29.8 B. (4) NM	AC the responsible party may	commence remediation immediately after discovery of a release. If remediation
has begun, please attach a within a lined containmen	narrative of actions to date. t area (see 19.15.29.11(A)(5)(a	If remedial efforts have been successfully completed or if the release occurred a) NMAC), please attach all information needed for closure evaluation.
I hereby certify that the infor	mation given above is true and co	emplete to the best of my knowledge and understand that pursuant to OCD rules and
public health or the environm	nent. The acceptance of a C-141 r	in release notifications and perform corrective actions for releases which may endanger report by the OCD does not relieve the operator of liability should their operations have
failed to adequately investiga	ate and remediate contamination th	hat pose a threat to groundwater, surface water, human health or the environment. In the operator of responsibility for compliance with any other federal, state, or local laws
and/or regulations.	a C-1+1 report does not reneve th	te operator of responsibility for compnance with any other federal, state, or local laws
Printed Name: Kyle	Littrell	Title: SH&E Coordinator
Signature:	Victor	Date: 4/12/2019
email: Kyle Littrell@xtoe	nergy.com	Telephone: <u>432-221-7331</u>
OCD Only		
Received by:		Date:

te of New Mexico

Incident ID	
District RP	2RP-5243
Facility ID	
Application ID	

### **Site Assessment/Characterization**

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Data table of soil contaminant concentration data	
Depth to water determination  Determination of water sources and significant watersources within 1/2 mile of the lateral extents of the release	
Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release  Boring or excavation logs	
<ul> <li>☑ Photographs including date and GIS information</li> </ul>	
☐ 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.

Received by OCD: 10/30/2019 5:56:36 PM Form C-141 State of New Mexico Page 4 Oil Conservation Division

Page 41 of 70

Incident ID	
District RP	2RP-5243
Facility ID	
Application ID	

Mate of New Mexico

Incident ID	nAB1904653072
District RP	2RP-5243
Facility ID	
Application ID	

### **Remediation Plan**

Remediation Plan Checklist: Each of the following items must be included in the plan.
<ul> <li>Detailed description of proposed remediation technique</li> <li>Scaled sitemap with GPS coordinates showing delineation points</li> <li>Estimated volume of material to be remediated</li> <li>Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC</li> <li>Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)</li> </ul>
<u>Deferral Requests Only</u> : Each of the following items must be confirmed as part of any request for deferral of remediation.
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Extents of contamination must be fully delineated.
Contamination does not cause an imminent risk to human health, the environment, or groundwater.
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:10/30/2019
email:Kyle_Littrell@xtoenergy.com Telephone:(432)-221-7331
OCD Only
Received by: Date:
Approved Deferral Approved Deferral Approved
Signature: Bradford Billings Date: 07/12/2021



<u> 25</u>		LT Environmental, Inc. 508 West Stevens Street						tdentifier:  SVE - PT 01  Project Name:  JRU 10		Date: 9 118/19  RP Number: 211-3424,  ZRP - 3179,  218-3464.	
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LT: UEnguiro	ental inc.	LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation LITHOLOGIC / SOIL SAMPLING LOG				Street to 88220		Identifier:   Date:   9/12/19	
		LITHO	LOGIC	/SOII	SAMPL	ING LO	G	Lagged By: JE Method: Sonic	
avLong:					Field Screen	ning:	J. C		
Comments									
	Set well with 2" PUC, 15' serven, soul						1 / 200	L'Over screen, Bentwife to surfece	
Moisture Content	Chloride (ppm)	(mpm)  Sample  Soil/Rock  Type  Soil/Rock  S					Soil/Rock Type	Lithology/Remarks	well
					2			0-41 Hand agger, not lossed	Stice)
					3	1			5
						Ŧ			
Dry	<128	170.4	None		5 6 7		Sky	4-19 Fine to median sandpointh gravel, some rabbles, light brown, dry, no skin, odar -6" of skin at 8.5"	3
	854	5,000	34in		8 9 10 11 12			- Stin from 15t - 19'  19-25 Chycy fine to helium grained sand with  smel, some rubbles, dark brown,  mist, non cohesine, low plasticity,  odor, no stin  - Dry at 22.5	3
	236	4,587			13 14 15 16 17		Sw	- Diy X + XX.3	****
		<i>फे</i> ट्ड(	34:4		18	#			
16ict	276	<i>5</i> 000	None		20 21	#			1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
Dry					22 23	1	541		, 20 , 1 s , 30 ,
j	4128	5300			24	#			

LT	?			LT Env	ironment	al, Inc.			Identifier: SUE-PTC4	Dute: 9/12/13	
תרכיות ל	net he		Car	os we.	st Stevens New Mexi	Street co 88220	)		Project Name:	RP Number:	
25	1				Engineering				JRU #10	2RP-3179	
t/Long:		LITHO	LOGIC		LSAMPI				Logged By: JE	Method: Sorie	
		Field Screening: PID/Chloride Strip					e Strin	1	Hole Diameter: 6	Total Depth: 301	
omments							′				
Moisture	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth	Sample	tock				
S S	S G	Va (pp	Stair	Sam	(ft. bgs.)	Depth	Soil/Rock Type		Lithology/	Remarks	Completion
)m			None		26		ces	25.	-30C/L /		>   E
1					27		3	blo	chy red / box on	highly fractured, I day, low plastic	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
		3000			28	#		not	n robesive	I day , low plast.	
					29	#			_		一门门门门
*	7178	300	1		30	#					13-
					31	#					1///
					32	# .					
					33	#					
					34	#					
					35	#					
					36	#					
					37	#					
					38	∄ .					
					39	#					
					40	1					
					41	1					
					42	1					
					43	±					
					44	1					
					45	$\mathbf{H}$					
					46	Ŧ					
					47	Ŧ					
					48	#					
					49	#					
					50	7					

# SOIL VAPOR EXTRACTION PILOT TEST FIELD MEASUREMENTS XTO ENERGY REMEDIATION PROJECT JRU 10 TANK BATTERY

Site: JRU 10	Personnel:	Lynda Laumbach	Test Start Time:	9:50
	Date:	10/1/2019	Test End Time:	12:20
SVE Well DTI	P/DTW Before Test:		SVE Well DTP/DTW After:	

		Test Extraction W	/ell Name: SVE-P	T-01				Monitoring Points		1
SVE	SVE	SVE	VOC			Time	SVE-PT-04	SVE-PT-03	SVE-PT-02	]
Vacuum	Velocity	Flowrate	Stack	Tempera	ature (°F)	(minutes)		nce From Test Well		
(IWC)	(fm)	(cfm)	(ppm)				18	25	40	
				Manifold	Ambient			Vacuum (IWC)	T	Air Sample Collected?
Static			208			0		0	0	
10	170	3.7	1506	78.9	79.1	15	0.125	0.175	0.14	
10	175	3.8	1216	78.4	78	30	0.125	0.175	0.14	
20	343	7.5	1557	78.0	78.4	55	0.18	0.22	0.14	
20	338	7.4	1412	79.6	79.8	70	0.18	0.19	0.14	
20	342	7.5	1270	81.4	81.4	85	0.175	0.19	0.14	
50	640	14.0	1009	83.2	86.7	110	0.28	0.3	0.15	
50	627	13.7	1184	83.2	83.4	125	0.28	0.3	0.16	
Post (Static) Test		155				135	0	0	0	
Maximur	n Change:									

Notes:

cfm - cubic feet per minute ppm - parts per million DTW - Depth To Water IWC - inches water column SVE - soil vapor extraction DTP - Depth to Product



# SOIL VAPOR EXTRACTION PILOT TEST FIELD MEASUREMENTS XTO ENERGY REMEDIATION PROJECT JRU 10 TANK BATTERY

Site: JRU 10	Personnel:	Lynda Laumbach	Test Start Time:	13:00
	Date:	10/1/2019	Test End Time:	15:15
SVE Well DTF	P/DTW Before Test:		SVE Well DTP/DTW After:	

		Test Extraction W	/ell Name: SVE-P	T-04				Monitoring Points		1
SVE	SVE	SVE	VOC			Time	SVE-PT-01	SVE-PT-03	SVE-PT-02	
Vacuum	Velocity	Flowrate	Stack	Tempera	ature (°F)	(minutes)		ance From Test Well		
(IWC)	(fm)	(cfm)	(ppm)			(111114005)	18	33	56.5	
				Manifold	Ambient			Vacuum (IWC)	1	Air Sample Collected?
Static						0		0	0	
10	2733	60	1478	79.6	84.5	15	4.5	6	2.5	
10	2765	60	1556	80.2	85.9	30	4.5	6	2.5	
20	5687	124	1380	77.5	83.6	45	9	11.5	5	
20	5683	124	1321	78.7	85	60	9	11.5	5	Yes, 14:50
35	E	Е	1629	77.8	85.0	85	10.5	13	5.5	
35	Е	Е	1584	77.5	84.8	100	10.5	13	5.5	
Post (Static) Test						120	0	0	0	
	n Change:									

Notes:

cfm - cubic feet per minute

IWC - inches water column

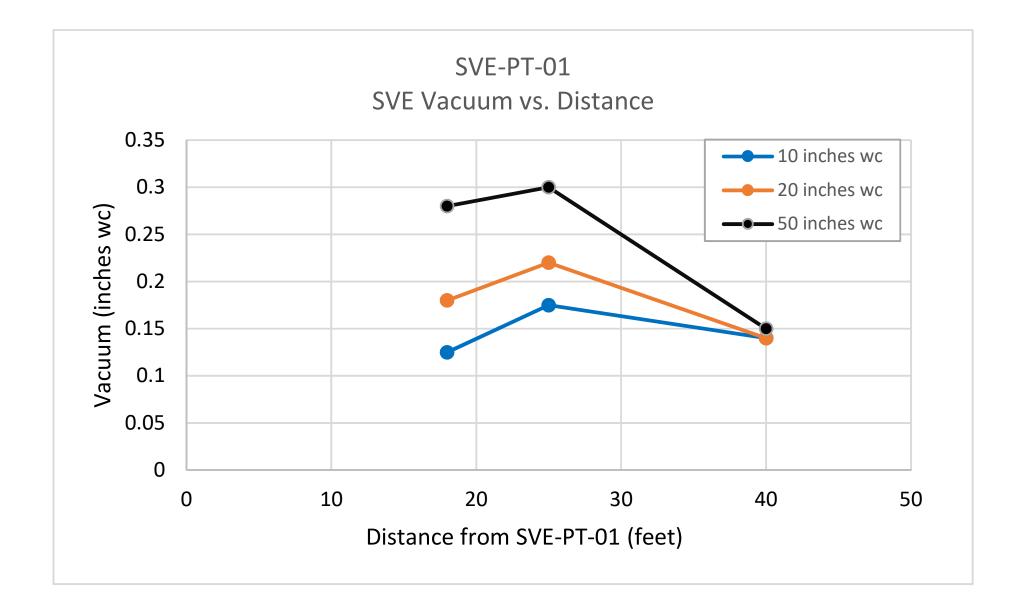
ppm - parts per million

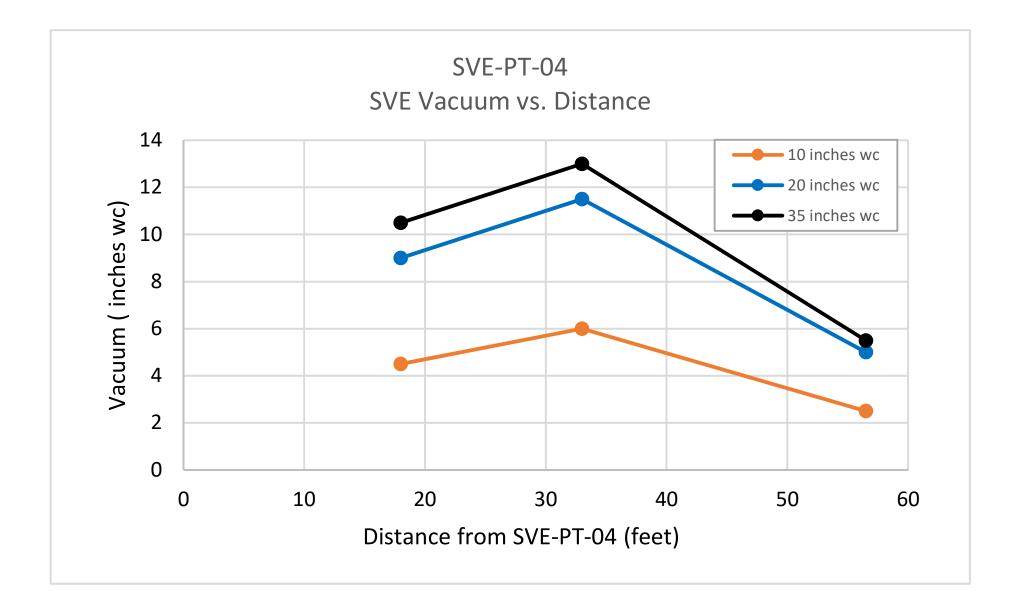
DTW - Depth To Water

SVE - soil vapor extraction DTP - Depth to Product

E - Exceeds anenomenter range: 15,000 fm







### **Analytical Report 638711**

for

LT Environmental, Inc.

Project Manager: Dan Moir JRU 10 Tank Battery 012918003 07-OCT-19

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 (2017-142), North Carolina (681)

> 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-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)



07-OCT-19

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

Reference: XENCO Report No(s): 638711

**JRU 10 Tank Battery** 

Project Address: Rural Eddy County

### 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) 638711. 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. 638711 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 Vramer

**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 638711**

### LT Environmental, Inc., Arvada, CO

JRU 10 Tank Battery

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
SVE-PT-04	A	10-01-19 14:50		638711-001

### **CASE NARRATIVE**

Client Name: LT Environmental, Inc. Project Name: JRU 10 Tank Battery

 Project ID:
 012918003
 Report Date:
 07-OCT-19

 Work Order Number(s):
 638711
 Date Received:
 10/02/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

# Received by OCD: 10/30/2019 5:56:36 PM

**Project Id:** 

Certificate of Analysis Summary 638711

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10 Tank Battery

Date Received in Lab: Wed Oct-02-19 08:35 am

Report Date: 07-OCT-19 Project Manager: Jessica Kramer

**Contact:** Dan Moir **Project Location:** Rural Eddy County

012918003

	Lab Id:	638711-00	1			
Analysis Beaussted	Field Id:	SVE-PT-04	4			
Analysis Requested	Depth:					
	Matrix:	AIR				
	Sampled:	Oct-01-19 14	:50			
BTEX by EPA 8021B	Extracted:	Oct-04-19 11	:00			
SUB: T104704295-19-22	Analyzed:	Oct-04-19 14	:00			
	Units/RL:	ppmv	RL			
Benzene		22.6 +	3.13			
Toluene		98.3 +	2.65			
Ethylbenzene		4.79 +	2.30			
m,p-Xylenes		98.2 +	4.61			
o-Xylene		15.6 +	2.30			
Total Xylenes		114 +	2.30			
Total BTEX		239 +	2.30			
TPH GRO by EPA 8015 Mod.	Extracted:	Oct-04-19 11	:00			
SUB: T104704295-19-22	Analyzed:	Oct-04-19 14	:00			
	Units/RL:	ppmv	RL			
TPH-GRO		5170 +	128			

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Jessica Kramer Project Assistant



### **Certificate of Analytical Results 638711**

### LT Environmental, Inc., Arvada, CO

JRU 10 Tank Battery

SVE-PT-04 Sample Id:

Matrix:

Air

10.01.19 14.50

Date Received:10.02.19 08.35

Lab Sample Id: 638711-001

Date Collected:

Prep Method:

SW5030B

Analytical Method:

BTEX by EPA 8021B

Tech: Analyst: AKC AKC

Date Prep:

% Moisture: 10.04.19 11.00

Seq Number:

3103365

SUB: T104704295-19-22

Parameter	Cas Number	Result mg/m3	RL mg/m3	Result ppmv	RL ppmv	Analysis Date	Flag	Dil
Benzene	71-43-2	72.2	10.0	22.6	3.13	10.04.19 14.00	+	10
Toluene	108-88-3	370	9.98	98.3	2.65	10.04.19 14.00	+	10
Ethylbenzene	100-41-4	20.8	9.98	4.79	2.30	10.04.19 14.00	+	10
m,p-Xylenes	179601-23-1	426	20.0	98.2	4.61	10.04.19 14.00	+	10
o-Xylene	95-47-6	67.7	9.98	15.6	2.30	10.04.19 14.00	+	10
Total Xylenes	1330-20-7	494	9.98	114	2.30	10.04.19 14.00	+	10
Total BTEX		957	9.98	239	2.30	10.04.19 14.00	+	10
g .				%				

Surrogate **Analysis Date** Flag Recovery Units Limits 4-Bromofluorobenzene 95 % 70-135 10.04.19 14.00

Analytical Method:

TPH GRO by EPA 8015 Mod.

Prep Method: % Moisture:

SW5030B

Tech:

AKC

Analyst:

AKC

Date Prep:

10.04.19 11.00

Seq Number:

3103363

SUB: T104704295-19-22

Parameter	Cas Number	Result mg/m3	RL mg/m3	Result ppmv	RL ppmv		Analysis	Date	Flag	Dil
TPH-GRO	8006-61-9	20200	501	5170	128		10.04.19	14.00	+	10
				%						
Surrogate				Recovery	Units	Limits	<b>Analysis Date</b>	Flag		
4-Bromofluorobenzene				95	%	60-140	10.04.19 14.00			



### **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.

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

<sup>\*\*</sup> Surrogate recovered outside laboratory control limit.

Prep Method:

SW5030B

SW5030B

MS = Matrix Spike

D = MSD/LCSD % Rec

B = Spike Added

Prep Method:

LCS = Laboratory Control Sample



### QC Summary 638711

### LT Environmental, Inc.

JRU 10 Tank Battery

Analytical Method:BTEX by EPA 8021BPrep Method:SW5030BSeq Number:3103365Matrix: AirDate Prep:10.04.19

MB Sample Id: 7687502-1-BLK LCS Sample Id: 7687502-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec		Limits		Units	Analysis Date	Flag
Benzene	< 0.313	31.3	29.2	93		70-125		ppmv	10.04.19 11:57	
Toluene	< 0.133	26.5	22.8	86		70-125		ppmv	10.04.19 11:57	
Ethylbenzene	< 0.115	23.0	19.7	86		70-125		ppmv	10.04.19 11:57	
m,p-Xylenes	< 0.230	46.1	40.4	88		70-125		ppmv	10.04.19 11:57	
o-Xylene	< 0.115	23.0	19.2	83		70-125		ppmv	10.04.19 11:57	
Surrogate	MB %Rec	MB Flag			LCS Flag		Limits	Units	Analysis Date	
4-Bromofluorobenzene	100		1	.04			70-135	%	10.04.19 11:57	

Analytical Method: BTEX by EPA 8021B

Seq Number: 3103365 Matrix: Air Date Prep: 10.04.19

Parent Sample Id: 638711-001 MD Sample Id: 638711-001 D

Parameter	Parent Result	MD Result	%RPI	RPD Limit	Units	Analysis Date	Flag
Benzene	22.6	27.2	18	35	ppmv	10.04.19 14:13	
Toluene	98.3	117	17	35	ppmv	10.04.19 14:13	
Ethylbenzene	4.79	5.37	11	35	ppmv	10.04.19 14:13	
m,p-Xylenes	98.2	119	19	35	ppmv	10.04.19 14:13	
o-Xylene	15.6	19.5	22	35	ppmv	10.04.19 14:13	
Total Xylenes	114	139	NC	35	ppmv	10.04.19 14:13	
Total BTEX	239	288	NC	35	ppmv	10.04.19 14:13	

Analytical Method:TPH GRO by EPA 8015 Mod.Prep Method:SW5030BSeq Number:3103363Matrix: AirDate Prep:10.04.19

MB Sample Id: 7687498-1-BLK LCS Sample Id: 7687498-1-BKS

MBLCS LCS Units Spike Limits Analysis Flag **Parameter** Result Amount Result %Rec Date TPH-GRO 179 168 65-115 10.04.19 11:57 < 6.39 ppmv LCS MB LCS Limits MB Units Analysis **Surrogate** %Rec Flag %Rec Flag Date

4-Bromofluorobenzene 100 104 60-140 % 10.04.19 11:57

Analytical Method: TPH GRO by EPA 8015 Mod.

[D] = 100\*(C-A) / B

Seq Number: 3103363 Matrix: Air Date Prep: 10.04.19

Parent Sample Id: 638711-001 MD Sample Id: 638711-001 D

ParameterParent ResultMD Result%RPD RPD Limit UnitsAnalysis DateFlagTPH-GRO517055707 35 ppmy10.04.19 14:13

PH-GRO 5170 5570 7 35 ppmv 10.04.19 14:13

Relative Percent Difference RPD = 200 \* | (C-E) / (C+E) | A = Parent Result LCS/LCSD Recovery [D] = 100 \* (C) / [B] C = MS/LCS Result Log Difference Log (Sample Duplicate) - Log (Original Sample) E = MSD/LCSD Result

Page 8 of 12 Final 1.000

MS/MSD Percent Recovery



# AIR SAMPLING CHAIN OF CUSTODY

San Antonio, Texas (210-509-3334)

Dallas, Texas (214-902-0300)

Stafford, Texas (281-240-4200)

Midland, TX (432-704-5251)

Lubbock, TX (806-794-1296)

Phoenix, Arizona (480-355-0900)

438710

El Paso, TX (915-585-3443)

(4) Relinquished By: (3)30 elinquished By: (2 pelinquished By: 6:36 PM
Relinquished By: Received by Sampler(s): Lynda Laumbach P.O. No.: Task#002 Site Location: Rural Eddy County, NM Project Name & No.: JRU 10 Tank Battery , 012918003 Email: dmoir@ltenv.com Project Contact: Dan Moir Company Name: XTO Energy SVE-PT-64 Field ID/Point of Collection ient/Project Information Date/Time Date/Time Date/Time Date/Tim 10/2/219 Contact: Kyle Littrell Company: LT Environmental, Inc 10/01/2019 Start Date 14:40 Start Time Ph.No.: (432) 238-4292 Email: klittrell@xtoenergy.com (4) Received By: (3) Received By: (2) Received By: (1) Received By 10/01/21/01 Stop Date Stop -05:41 Time I = Indoor SV = Soil Vapor AIR TYPE A = Ambient Special Requests/Instructions: 7 Day 5 Day Contract TAT Sampling Equipment Information Canister ID Flow Regulator ID Requested TAT Canister Pressure in field 3 Day 2 Day 1 Day "Hg) Start Canister Pressure in field ("Hg) Stop Need By: Incoming Canister Same Day Pressure ("Hg) Lab BTEX **Analysis Requested** LSO UPS FedEx Page ipping Information Tracking No. Other: 9 Remarks Released to Imaging: 7/12/2021 2:27:40 PM

### **Inter-Office Shipment**

Page 1 of 1

IOS Number 49169

Date/Time: 10/02/19 11:52

Created by: Elizabeth Mcclellan

Please send report to: Jessica Kramer

Lab# From: Carlsbad

**Delivery Priority:** 

Address: 1089 N Canal Street

Lab# To: Dallas

Air Bill No.:

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
638711-001	A	SVE-PT-04	10/01/19 14:50	SW8015GRO	TPH GRO by EPA 8015 Mod.	10/08/19	10/04/19 14:50	JKR	PHCG	
638711-001	A	SVE-PT-04	10/01/19 14:50	SW8021B	BTEX by EPA 8021B	10/08/19	10/15/19	JKR	BR4FBZ BZ BZME EBZ X	

### **Inter Office Shipment or Sample Comments:**

Relinquished By:

Elizabeth McClellan

Date Relinquished: 10/02/2019

Received By:

Whitney Capps

Date Received: <u>10/03/2019 09:23</u>

Cooler Temperature: 22.8



### **XENCO Laboratories**

### **Inter Office Report- Sample Receipt Checklist**

Sent To: Dallas IOS #: 49169

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

Temperature Measuring device used: XDA

Elizabeth McClellan 10/02/2019 11:52 AM Sent By: **Date Sent:** 

Received By: Whitney Capps	<b>Date Received:</b> 10/03/2019	09:23 AM	
	Sample Receipt Check	klist	Comments
#1 *Temperature of cooler(s)?		22.8	
#2 *Shipping container in good conditi	on?	Yes	
#3 *Samples received with appropriate	temperature?	Yes	
#4 *Custody Seals intact on shipping of	container/ cooler?	No	
#5 *Custody Seals Signed and dated f	or Containers/coolers	N/A	
#6 *IOS present?		Yes	
#7 Any missing/extra samples?		No	
#8 IOS agrees with sample label(s)/ma	atrix?	Yes	
#9 Sample matrix/ properties agree wi	th IOS?	Yes	
#10 Samples in proper container/ bottl	e?	Yes	
#11 Samples properly preserved?		Yes	
#12 Sample container(s) intact?		Yes	
#13 Sufficient sample amount for indic	ated test(s)?	Yes	
#14 All samples received within hold ti	me?	Yes	
* Must be completed for after-hours d NonConformance:	elivery of samples prior to pla	acing in the refrigerator	
Corrective Action Taken:			
	Nonconformance Docu	mentation	
Contact:	Contacted by :	Date:	
Checklist reviewed by:	Whitney Capps Whitney Capps	Date: <u>10/03/2019</u>	



# XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 10/02/2019 08:35:00 AM

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

Work Order #: 638711

Temperature Measuring device used: T-NM-007

	Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?		20	
#2 *Shipping container in good condition?		Yes	
#3 *Samples received on ice?		Yes	
#4 *Custody Seals intact on shipping conta	iner/ 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 relinquis	hed/ received?	Yes	
#10 Chain of Custody agrees with sample	abels/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 Dallas
#18 Water VOC samples have zero heads	pace?	N/A	

Analyst:		PH Device/Lot#:	
	Checklist completed by:	Elizabeth McClellan	Date: <u>10/02/2019</u>
	Checklist reviewed by:	Jessica Vramer	Date: 10/04/2019

Jessica Kramer

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

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II 811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III 1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 2175

### **CONDITIONS**

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	2175
	Action Type:
	[C-141] Release Corrective Action (C-141)

### CONDITIONS

Created By	Condition	Condition Date
bbillings	SVE approach is approved. In future, each individual incident number must be attached to separate report on portal, although the report can be identical to the other associated incidents at this location	7/12/2021