

November 28, 2018

Ms. Maria Pruitt
New Mexico Oil Conservation Division
811 South First Street
Artesia, New Mexico 88210

**RE: Remediation Plan
James Ranch Unit #138 at JRU 19 Battery
XTO Energy, Inc.
Remediation Permit Number 2RP-4980
Eddy County, New Mexico**

Dear Ms. Pruitt:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), is submitting this summary of initial excavation activities and subsequent plan for additional excavation and closure sampling to confirm the remediation of impacted soil at the James Ranch Unit (JRU) #138 at JRU 19 battery (Site) in Unit J, Section 36, Township 22 South, Range 30 East, in Eddy County, New Mexico (Figure 1).

On September 8, 2018, a failed check valve on the flow line header caused approximately 194 barrels (bbls) of crude oil and 667 bbls of produced water to be released at the entrance of the battery. The release impacted approximately 48,450 square feet on site at the well pad and 25,350 square feet offsite for a total of 73,800 square feet of surface impacted materials. Free-standing fluid was recovered using a vacuum truck; approximately 180 bbls of crude oil and 620 bbls of produced water were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on September 21, 2018, and was assigned Remediation Permit (RP) number 2RP-4980 (Attachment 1). XTO initiated remediation activities by excavating impacted soil at the Site in accordance with the New Mexico Administration Code (NMAC) Title 19, Chapter 15, Part 29 Remediation and Closure Guidelines for Oil and Gas Releases, dated August 14, 2018 (19.15.29 NMAC).

BACKGROUND

Depth to groundwater at the Site is estimated to be less than 100 feet bgs based on the nearest water well data and known aquifer properties. The nearest permitted water well, water well number 02492, is located approximately 10,112 feet southeast of the Site. Depth to groundwater in the well is 85 feet bgs and total depth of the well is 135 feet bgs. The Site is located greater than 300 feet from any continuously flowing watercourse, 200 feet from any lakebed, sinkhole, or playa lake, and greater than 300 feet to a permanent residence, school, hospital, institution,





church, or wetland. The Site is greater than 500 feet from a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes and greater than 1,000 feet to a freshwater well or spring. The Site is not within an unstable area, 100-year floodplain, or overlying a subsurface mine. Based on these criteria, the NMOCD site ranking for remediation action levels is 10, and the following remediation action levels apply: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX); 1,000 mg/kg gasoline range organics (GRO) and diesel range organics (DRO); 2,500 mg/kg total petroleum hydrocarbons (TPH); and 10,000 mg/kg chloride.

The release impacted approximately 48,450 square feet on site on the well pad and 25,350 square feet offsite for a total of 73,800 square feet of surface impacted materials (Figure 2). Free-standing fluid was recovered with a vacuum truck. As a result, approximately 180 bbls of crude oil and 620 bbls of produced water were recovered. LTE personnel collected 57 soil samples to assess the lateral and vertical extent of the onsite and offsite impacted soil associated with release number 2RP-4980. The soil sample locations were selected based on visual indications of impacted soil from the release and on information provided on the initial C-141 Form. Based on the laboratory analytical results from initial soil sampling, three excavations were initiated north, south, and west of the pump jack equipment (Figure 2). Impacted soil was removed from these areas resulting in approximately 175 cubic yards of impacted material being removed.

REQUEST TO MODIFY CLOSURE SAMPLING REQUIREMENTS

Based on the aerial extent and confirmation soil sampling results approximately 2,000 square feet on site and approximately 23,350 square feet off site have not yet been excavated. LTE proposes to continue excavating the remaining portions of impacted soil from the release areas. Due to the size of the anticipated excavation and in referencing *Guidance on Choosing a Sampling Design for Environmental Data Collection for Use in Developing a Quality Assurance Project Plan*, United States Environmental Protection Agency (EPA) QA/G-5S, December 2002, LTE recommends composite sampling. The composite sampling protocol will consist of dividing each 1,000 square foot area of the sidewalls and floor of the excavation into five equal areas. Five aliquots of equal volume will be collected from each area. The aliquots will be deposited into a one-gallon resealable bag, thoroughly homogenized by mixing, and placed into a laboratory-supplied 4-ounce sampling jar. Sidewall samples will not be collected if sidewalls are less than two feet deep. In those instances, floor samples will represent excavation confirmation samples. Additional discrete soil samples will be collected if any visually stained or impacted material is observed. Remediation action levels onsite will comply with NMOCD Table 1 with depth to groundwater between 51 and 100 feet bgs. Offsite, XTO will ensure the top 4 feet of material complies with a 600 mg/kg chloride concentration since reclamation will occur immediately after remediation.



A Right of Entry (ROE) Request for Remediation was submitted to the New Mexico State Land Office (NMSLO) on September 26, 2018, requesting to remediate off-site soil impacted by the release of crude oil and produced water at the Site. The ROE was received on November 2, 2018. Therefore, XTO is requesting 90 days from the receipt of the ROE, which is January 31, 2019, to complete remediation and closure reporting.

We look forward to your review of this report and subsequent approval of the remediation approach. If you have any questions or comments, please do not hesitate to contact Adrian Baker at (432) 887-1255 or abaker@ltenv.com.

Sincerely,

LT ENVIRONMENTAL, INC.

A handwritten signature in blue ink that reads 'Adrian Baker'.

Adrian Baker
Project Geologist

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

Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Ryan Mann, SLO

Attachments:

Figure 1 Site Location Map
Figure 2 Site Map
Attachment 1 Initial/Final NMOCD Form C-141

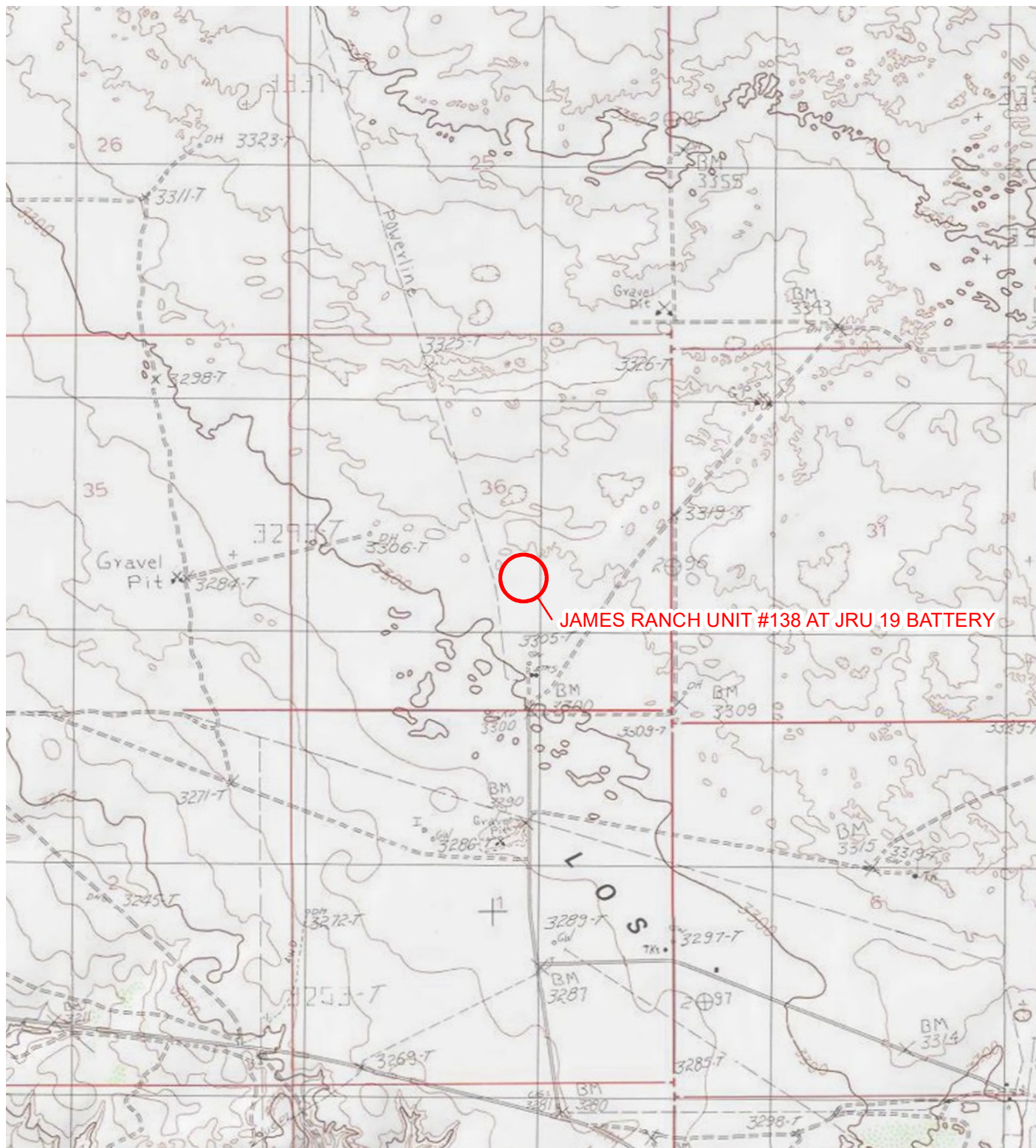
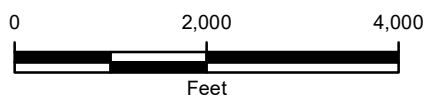


IMAGE COURTESY OF ESRI/USGS

LEGEND

○ SITE LOCATION



NOTE: REMEDIATION PERMIT
NUMBER 2RP-4980

FIGURE 1
SITE LOCATION MAP
JAMES RANCH UNIT #138 AT JRU 19 BATTERY
UNIT J SEC 36 T22S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



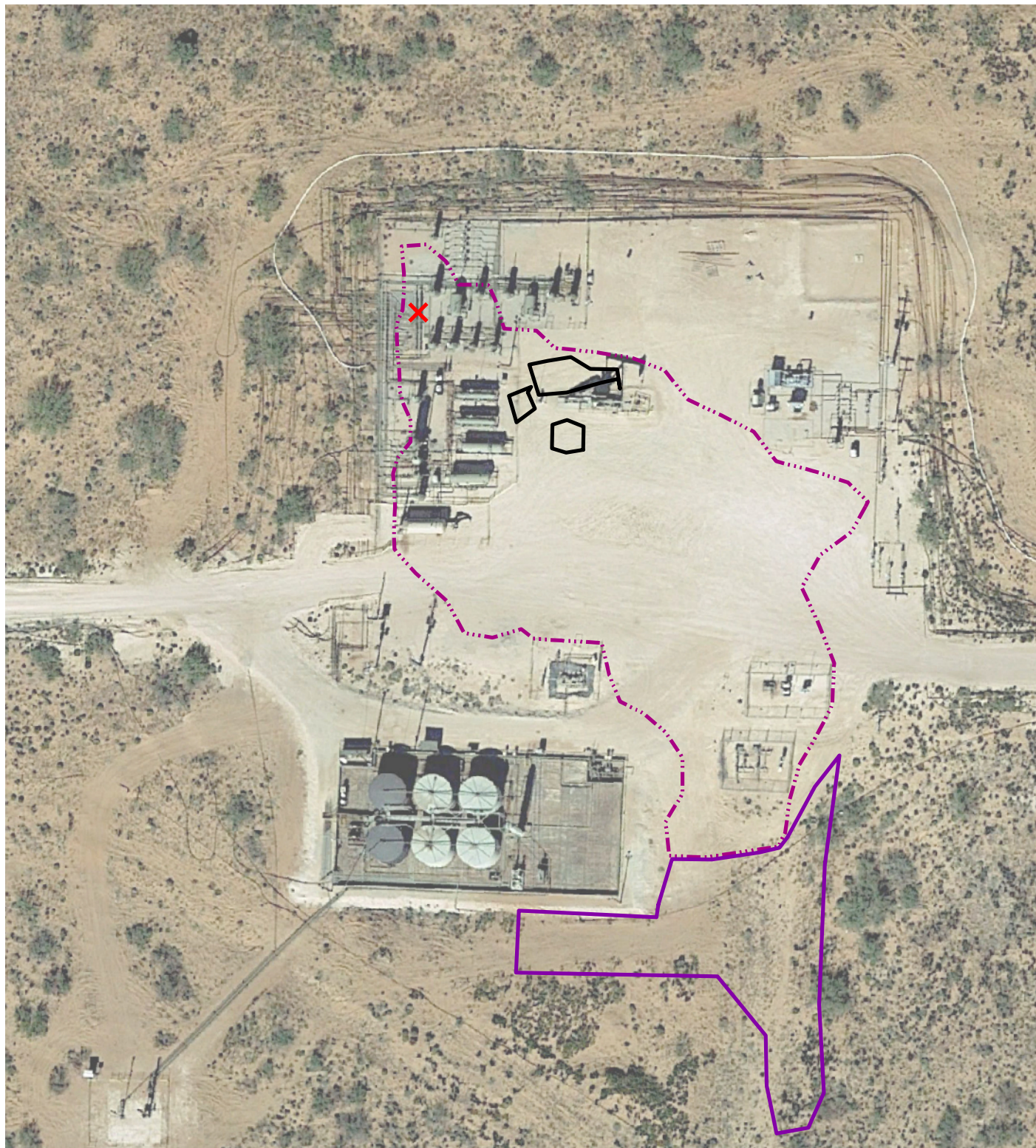


IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND

- X RELEASE LOCATION
- EXCAVATION EXTENT
- ONSITE RELEASE FOOTPRINT
- APPROXIMATE OFFSITE RELEASE EXTENT

NOTE: REMEDIATION PERMIT NUMBER 2RP-4980

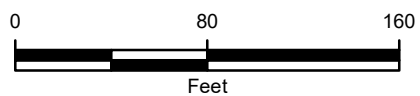


FIGURE 2
SITE MAP
 JAMES RANCH UNIT #138 AT JRU 19 BATTERY
 UNIT J SEC 36 T22S R30E
 EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.





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	NMAP1826932726
District RP	2 RP-4980
Facility ID	N/A
Application ID	pMAP1826932442

Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID5380
Contact Name Kyle Littrell	Contact Telephone 432-221-7331
Contact email Kyle_Littrell@xtoenergy.com	Incident # (assigned by OCD) NMAP1826932726
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.346880 Longitude -103.832500
(NAD 83 in decimal degrees to 5 decimal places)

Site Name James Ranch Unit #138 release at JRU 19 Battery	Site Type Separation/Bulk Storage Facility
Date Release Discovered 9/8/2018	API# (if applicable) 30-015-39766

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

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private (Name: New Mexico)

Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 194	Volume Recovered (bbls) 180
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 667	Volume Recovered (bbls) 620
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

Fluids were released from a failed check valve on the JRU 138 flow line header at its entrance to the battery. The well was temporarily shut down and the tubing and casing were shut in. Free standing fluids were recovered. The valve was repaired and the well was returned to production. An environmental contractor has been retained to assist with remediation efforts.

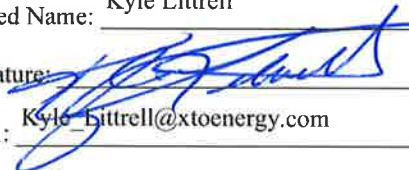

State of New Mexico
Oil Conservation Division

Incident ID	NMAP1826932726
District RP	2 RP-4980
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Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? An unauthorized release of a volume of 25 barrels or more
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Notice was provided by Kyle Littrell to Maria Pruett/Mike Bratcher/Jim Griswold (NMOCD), Ryan Mann (SLO), and Shelly Tucker/Jim Amos (BLM) on 9/8/18 by email.	

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: 	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: Kyle Littrell	Title: SH&E Coordinator
Signature: 	Date: 9-21-18
email: Kyle_Littrell@xtoenergy.com	Telephone: 432-221-7331
<u>OCD Only</u> Received by: 	
Date: 09/26/18	

Incident ID	
District RP	2
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?	85 _____ (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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

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

- ☐ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☐ Field data
- ☐ Data table of soil contaminant concentration data
- ☐ Depth to water determination
- ☐ Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☐ Photographs including date and GIS information.
- ☐ Topographic/Aerial maps
- ☐ Laboratory data including chain of custody

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

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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

Printed Name: Kyle Littrell

Title: SH&E Coordinator

Signature: 

Date: 9-21-18

email: Kyle.Littrell@xtoenergy.com

Telephone: 432-221-7331

OCD Only

Received by: _____

Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: *Each of the following items must be included in the 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 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: EHS Coordinator
Signature: [Signature] Date: 11-29-18
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: _____