

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-144  
Revised April 3, 2017

For temporary pits, below-grade tanks, and multi-well fluid management pits, submit to the appropriate NMOCD District Office.  
For permanent pits submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

16298

Pit, Below-Grade Tank, or  
Proposed Alternative Method Permit or Closure Plan Application

NMOCD

MAR 19 2018

DISTRICT III

- Type of action:
- Below grade tank registration
  - Permit of a pit or proposed alternative method
  - Closure of a pit, below-grade tank, or proposed alternative method
  - Modification to an existing permit/or registration
  - Closure plan only submitted for an existing permitted or non-permitted pit, below-grade tank, or proposed alternative method

**Instructions: Please submit one application (Form C-144) per individual pit, below-grade tank or alternative request**

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1.  
Operator: XTO Energy Inc OGRID #: 5380  
Address: 382 Road 3100 Aztec, New Mexico 87410  
Facility or well name: Bolack C LS # 7  
API Number: 30-045-06143 OCD Permit Number: \_\_\_\_\_  
U/L or Qtr/Qtr E Section 33 Township 27N Range 8W County: San Juan  
Center of Proposed Design: Latitude 36.532580 Longitude -107.692720 NAD: 83  
Surface Owner:  Federal  State  Private  Tribal Trust or Indian Allotment

2.  
 **Pit:** Subsection F, G or J of 19.15.17.11 NMAC  
Temporary:  Drilling  Workover  
 Permanent  Emergency  Cavitation  P&A  Multi-Well Fluid Management Low Chloride Drilling Fluid  yes  no  
 Lined  Unlined Liner type: Thickness \_\_\_\_\_ mil  LLDPE  HDPE  PVC  Other \_\_\_\_\_  
 String-Reinforced  
Liner Seams:  Welded  Factory  Other \_\_\_\_\_ Volume: \_\_\_\_\_ bbl Dimensions: L \_\_\_\_\_ x W \_\_\_\_\_ x D \_\_\_\_\_

3.  
 **Below-grade tank:** Subsection I of 19.15.17.11 NMAC  
Volume: 120 bbl Type of fluid: Produced Water  
Tank Construction material: Steel  
 Secondary containment with leak detection  Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off  
 Visible sidewalls and liner  Visible sidewalls only  Other Visible sidewalls, vaulted, automatic high-level shut off  
Liner type: Thickness \_\_\_\_\_ mil  HDPE  PVC  Other \_\_\_\_\_

4.  
 **Alternative Method:**  
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

5.  
**Fencing:** Subsection D of 19.15.17.11 NMAC (Applies to permanent pits, temporary pits, and below-grade tanks)  
 Chain link, six feet in height, two strands of barbed wire at top (Required if located within 1000 feet of a permanent residence, school, hospital, institution or church)  
 Four foot height, four strands of barbed wire evenly spaced between one and four feet  
 Alternate. Please specify Four foot high, steel mesh field fence (hogwire) with pipe top rail

6.  
**Netting:** Subsection E of 19.15.17.11 NMAC (*Applies to permanent pits and permanent open top tanks*)

- Screen  Netting  Other Expanded metal or solid vaulted top  
 Monthly inspections (If netting or screening is not physically feasible)

7.  
**Signs:** Subsection C of 19.15.17.11 NMAC

- 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers  
 Signed in compliance with 19.15.16.8 NMAC

8.  
**Variations and Exceptions:**

Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.

**Please check a box if one or more of the following is requested, if not leave blank:**

- Variance(s): Requests must be submitted to the appropriate division district for consideration of approval.  
 Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

9.  
**Siting Criteria (regarding permitting):** 19.15.17.10 NMAC

**Instructions:** *The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Siting criteria does not apply to drying pads or above-grade tanks.*

**General siting**

**Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank.**

- NM Office of the State Engineer - iWATERS database search;  USGS;  Data obtained from nearby wells

Yes  No  
 NA

**Ground water is less than 50 feet below the bottom of a Temporary pit, permanent pit, or Multi-Well Fluid Management pit.**

NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

Yes  No  
 NA

Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. **(Does not apply to below grade tanks)**

- Written confirmation or verification from the municipality; Written approval obtained from the municipality

Yes  No

Within the area overlying a subsurface mine. **(Does not apply to below grade tanks)**

- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division

Yes  No

Within an unstable area. **(Does not apply to below grade tanks)**

- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map

Yes  No

Within a 100-year floodplain. **(Does not apply to below grade tanks)**

- FEMA map

Yes  No

**Below Grade Tanks**

Within 100 feet of a continuously flowing watercourse, significant watercourse, lake bed, sinkhole, wetland or playa lake (measured from the ordinary high-water mark).

- Topographic map; Visual inspection (certification) of the proposed site

Yes  No

Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption;

- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

Yes  No

**Temporary Pit using Low Chloride Drilling Fluid** (maximum chloride content 15,000 mg/liter)

Within 100 feet of a continuously flowing watercourse, or any other significant watercourse or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). (Applies to low chloride temporary pits.)

- Topographic map; Visual inspection (certification) of the proposed site

Yes  No

Within 300 feet from a occupied permanent residence, school, hospital, institution, or church in existence at the time of initial application.

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

Yes  No

Within 200 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 300feet of any other fresh water well or spring, in existence at the time of the initial application.

NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

Yes  No

Within 100 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

Yes  No

**Temporary Pit Non-low chloride drilling fluid**

Within 300 feet of a continuously flowing watercourse, or any other significant watercourse, or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).

- Topographic map; Visual inspection (certification) of the proposed site

Yes  No

Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

Yes  No

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, or 1000 feet of any other fresh water well or spring, in the existence at the time of the initial application;

- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

Yes  No

Within 300 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

Yes  No

**Permanent Pit or Multi-Well Fluid Management Pit**

Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).

- Topographic map; Visual inspection (certification) of the proposed site

Yes  No

Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

Yes  No

Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application.

- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

Yes  No

Within 500 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

Yes  No

10.

**Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist:** Subsection B of 19.15.17.9 NMAC

**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
- Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC
- Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

Previously Approved Design (attach copy of design) API Number: \_\_\_\_\_ or Permit Number: \_\_\_\_\_

11.

**Multi-Well Fluid Management Pit Checklist:** Subsection B of 19.15.17.9 NMAC

**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- A List of wells with approved application for permit to drill associated with the pit.
- Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
- Hydrogeologic Data - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
- Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC

Previously Approved Design (attach copy of design) API Number: \_\_\_\_\_ or Permit Number: \_\_\_\_\_

12. **Permanent Pits Permit Application Checklist:** Subsection B of 19.15.17.9 NMAC

**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC
- Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- Climatological Factors Assessment
- Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC
- Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC
- Quality Control/Quality Assurance Construction and Installation Plan
- Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- Nuisance or Hazardous Odors, including H<sub>2</sub>S, Prevention Plan
- Emergency Response Plan
- Oil Field Waste Stream Characterization
- Monitoring and Inspection Plan
- Erosion Control Plan
- Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

13. **Proposed Closure:** 19.15.17.13 NMAC

**Instructions:** Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.

- Type:  Drilling  Workover  Emergency  Cavitation  P&A  Permanent Pit  Below-grade Tank  Multi-well Fluid Management Pit  
 Alternative
- Proposed Closure Method:  Waste Excavation and Removal  
 Waste Removal (Closed-loop systems only)  
 On-site Closure Method (Only for temporary pits and closed-loop systems)  
 In-place Burial  On-site Trench Burial  
 Alternative Closure Method

14. **Waste Excavation and Removal Closure Plan Checklist:** (19.15.17.13 NMAC) **Instructions:** Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.

- Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
- Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.13 NMAC
- Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)
- Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

15. **Siting Criteria (regarding on-site closure methods only):** 19.15.17.10 NMAC

**Instructions:** Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria require justifications and/or demonstrations of equivalency. Please refer to 19.15.17.10 NMAC for guidance.

- |   |   |
|---|---|
| Ground water is less than 25 feet below the bottom of the buried waste.<br>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells   | <input type="checkbox"/> Yes <input type="checkbox"/> No<br><input type="checkbox"/> NA |
| Ground water is between 25-50 feet below the bottom of the buried waste<br>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells   | <input type="checkbox"/> Yes <input type="checkbox"/> No<br><input type="checkbox"/> NA |
| Ground water is more than 100 feet below the bottom of the buried waste.<br>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells  | <input type="checkbox"/> Yes <input type="checkbox"/> No<br><input type="checkbox"/> NA |
| Within 100 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).<br>- Topographic map; Visual inspection (certification) of the proposed site                        | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |
| Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.<br>- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image  | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |
| Within 300 horizontal feet of a private, domestic fresh water well or spring used for domestic or stock watering purposes, in existence at the time of initial application.<br>- NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |
| Written confirmation or verification from the municipality; Written approval obtained from the municipality   | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |
| Within 300 feet of a wetland.<br>US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site   | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |
| Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance   | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |

adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within a 100-year floodplain. - FEMA map	<input type="checkbox"/> Yes <input type="checkbox"/> No

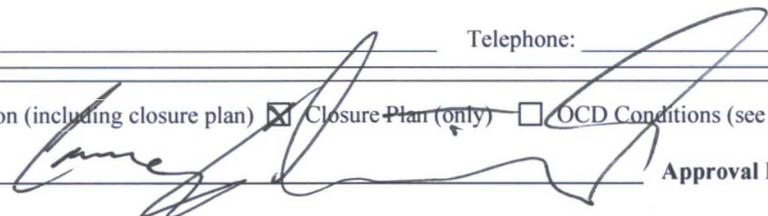
16.  
**On-Site Closure Plan Checklist:** (19.15.17.13 NMAC) *Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.*

Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC  
 Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection E of 19.15.17.13 NMAC  
 Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of Subsection K of 19.15.17.11 NMAC  
 Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.11 NMAC  
 Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC  
 Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of 19.15.17.13 NMAC  
 Waste Material Sampling Plan - based upon the appropriate requirements of 19.15.17.13 NMAC  
 Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)  
 Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC  
 Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC  
 Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

17.  
**Operator Application Certification:**  
I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.

Name (Print): \_\_\_\_\_ Title: \_\_\_\_\_  
Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
e-mail address: \_\_\_\_\_ Telephone: \_\_\_\_\_

18.  
**OCD Approval:**  Permit Application (including closure plan)  Closure Plan (only)  OCD Conditions (see attachment)

OCD Representative Signature:  Approval Date: 3/29/18  
Title: Environmental Spec. OCD Permit Number: \_\_\_\_\_

19.  
**Closure Report (required within 60 days of closure completion):** 19.15.17.13 NMAC  
*Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.*

Closure Completion Date: 2-27-2018

20.  
**Closure Method:**  
 Waste Excavation and Removal  On-Site Closure Method  Alternative Closure Method  Waste Removal (Closed-loop systems only)  
 If different from approved plan, please explain.

21.  
**Closure Report Attachment Checklist:** *Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached.*

Proof of Closure Notice (surface owner and division)  
 Proof of Deed Notice (required for on-site closure for private land only)  
 Plot Plan (for on-site closures and temporary pits)  
 Confirmation Sampling Analytical Results (if applicable)  
 Waste Material Sampling Analytical Results (required for on-site closure)  
 Disposal Facility Name and Permit Number  
 Soil Backfilling and Cover Installation  
 Re-vegetation Application Rates and Seeding Technique  
 Site Reclamation (Photo Documentation)

On-site Closure Location: Latitude \_\_\_\_\_ Longitude \_\_\_\_\_ NAD:  1927  1983

22.

**Operator Closure Certification:**

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

Name (Print): Kurt Hoekstra Title: EHS Coordinator

Signature:  Date: 3-8-2018

e-mail address: Kurt\_Hoekstra@xtoenergy.com Telephone: 505-333-3100

# **XTO Energy Inc. San Juan Basin Below Grade Tank Closure Report**

**Lease Name: Bolack C LS # 7**

**API No.: 30-045-06143**

**Description: Unit E, Section 33, Township 27N, Range 8W, San Juan County**

In accordance with Rule 19.15.17.13 NMAC the following information describes the closure requirements of below-grade tanks on XTO Energy Inc. (XTO) locations. This is XTO's standard procedure for all below-grade tanks. A separate plan will be submitted for any below-grade tank which does not conform to this plan.

## **General Plan**

1. XTO will close below-grade tanks within the time periods provided in 19.15.17.13 NMAC, or by an earlier date that the division requires because of imminent danger to fresh water, public health or the environment.  
**Closure Date is: February 27, 2018**
2. XTO will close a below-grade tank that does not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC or is not included in Paragraph (5) of Subsection I of 19.15.17.11 NMAC within five years after June 16, 2008, if not retrofitted to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC.  
**Closure Date is: February 27, 2018**
3. XTO will close a permitted below-grade tank within 60 days of cessation of the below-grade tank's operation or as required by the transitional provisions of Subsection B of 19.15.17.17 NMAC in accordance with a closure plan that the appropriate division district office approves. The closure report will be filed on form C-144.  
**Required C-144 Form is attached to this document.**
4. XTO will remove liquids and sludge from below-grade tanks prior to implementing a closure method and will dispose of the liquids and sludge in a division-approved facility. Approved facilities and waste streams include:
  - Envirotech Permit No. NM01-0011 and IEI Permit No. NM 01-0010B
  - Soil contaminated by exempt petroleum hydrocarbons
  - Produced sand, pit sludge and contaminated bottoms from storage of exempt wastes
  - Basin Disposal Permit No. NM01-005
  - Produced water**All liquids and sludge were removed from the tank prior to closure activities.**
5. XTO will remove the below-grade tank and dispose of it in a division approved facility or recycle, reuse, or reclaim it in a manner that the appropriate division district office approves.  
**XTO has removed the below grade tank, and will dispose of it at a division approved facility, or recycle, reclaim or reuse it in a manner that is approved by the division.**

6. XTO will remove any on-site equipment associated with a below-grade tank unless the equipment is required for some other purpose  
**The below grade tank has been removed due to an integrity failure of the pit tank.**
7. XTO will test the soils beneath the below-grade tank to determine whether a release has occurred. At a minimum 5 point composite sample will be collected along with individual grab samples from any area that is wet, discolored or showing other evidence of a release. Samples will be analyzed for BTEX, TPH and chlorides to demonstrate that the benzene concentration, as determined by EPA SW-846 methods 8021B or 8260B or EPA method that the division approves, does not exceed 0.2 mg/kg; total BTEX concentration, as determined by EPA SW-846 methods 8021B or 8260B or other EPA method that the division approves, does not exceed 50 mg/kg; the TPH concentration, as determined by EPA method 418.1 or other EPA method that the division approves, does not exceed 100mg/kg; and the chloride concentration, as determined by EPA method 300.1 or other EPA method that the division approves, does not exceed 250 mg/kg, or the background concentration, whichever is greater. XTO will notify the division of its results on form C-141.

**A composite sample was taken of the pit using sampling tools and all samples tested per Subsection B of 19.15.17.1 3(B)( 1 )(b). (Sample results attached).**

Components	Test Method	Limit (mg/Kg)	Results (mg/Kg)
Benzene	EPA SW-846 8021B or 8260B	10	< 100 ug/kg
BTEX	EPA SW-846 8021B or 8260B	50	< 500 ug/kg
TPH	EPA 8015M	5000	< 95 mg/kg
Chloride	EPA Method 300	250	< 20 mg/kg

8. If XTO or the division determines that a release has occurred, XTO will comply with 19.15.3.116 NMAC and 19.15.1.19NMAC as appropriate.  
**Due to the integrity failure of the pit tank a release has been confirmed for this location.**
9. If the sampling program demonstrates that a release has not occurred or that any release does not exceed the concentrations specified in Paragraph (4) of Subsection E of 19.15.17.13 NMAC, XTO will backfill the excavation with compacted, non-waste containing, earthen material; construct a division prescribed soil cover; recontour and re-vegetate the site.  
**The pit cellar was sampled and results were below NMOCD standards for this site. XTO has Registered the below grade tank that will be installed into the existing cellar.**
10. Notice of Closure operations will be given to the Aztec Division District III office between 72 hours and one week prior to the start of closure activities via email or verbally.  
The notification will include the following:
  - i. Operator's name
  - ii. Well Name and API Number
  - iii. Location by Unit Letter, Section, Township, and Range

**Notification was provided to Mr. Cory Smith, and Ms. Vanessa Fields with the Aztec office of the OCD via email on February 19<sup>th</sup>, 2018; see attached email printout.**

The surface owner shall be notified of XTO's proposal to close the BGT as per the approved closure plan.

**The surface owner was notified on February 19<sup>th</sup>, 2018 Email has been approved as a means of surface owner notification to the BLM by Brandon Powell, NMOCD Aztec Office.**

11. Re-contouring of location will match fit, shape, line, form and texture of the surrounding area. Re-shaping will include drainage control, prevent ponding, and prevent erosion. Natural drainages will be unimpeded and water bars and/or silt traps will be placed in areas where needed to prevent erosion on a large scale. Final re-contour shall have a uniform appearance with smooth surface, fitting the natural landscape.  
**The location will be recontoured to match the above specifications when the well is P & A'd.**
12. A minimum of 4 feet of cover shall be achieved and the cover shall include 1 foot of suitable material to establish vegetation at the site, or the background thickness of topsoil, whichever is greater.  
**The site will be backfilled to match these specifications when the registered BGT cellar is closed.**
13. XTO will seed the disturbed areas the first growing season after the operator closes the pit. Seeding will be accomplished via drilling on the contour whenever practical or by other division-approved methods. BLM or Forest Service stipulated seed mixes will be used on federal lands. Vegetative cover will equal 70% of the native perennial vegetative cover (un-impacted) consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintain that cover through two successive growing seasons. Repeat seeding or planting will be continued until successful vegetative growth occurs.  
**The location will be reclaimed pursuant to per BLM, OCD specifications**
14. All closure activities will include proper documentation and be available for review upon request and will be submitted in closure report form to OCD within 60 days of closure of the below-grade tank. Closure report will be filed on form C-144 and incorporate the following:
  - i. Proof of closure notice to division and surface owner; **attached**
  - ii. Details on capping and covering, where applicable; **per BLM, OCD specifications**
  - iii. Inspection reports; **attached**
  - iv. Confirmation sampling analytical results; **attached**
  - v. Disposal facility name(s) and permit number(s); **see above**
  - vi. Soil backfilling and cover installation; **per BLM, OCD Specifications**
  - vii. Re-vegetation application rates and seeding techniques, (or approved alternative to re-vegetation requirements if applicable); **per BLM, OCD specifications**
  - viii. Photo documentation of the site reclamation. **attached**



Division: Denver  
 Dates: 6/1/2008-3/12/2018  
 Type: RouteStop  
 Type Value: BOLACK C 007

### Well Below Grade Tank Inspection

Route Name	StopName	Pumper	Foreman	Well Name	API Well Number	Section	Range	Township				
DEN NM Run 41	BOLACK C 007	Bryan, Thomas	Mulnix, John	BOLACK C LS 07	3004506143	33	8W	27N				
Inspector Name	Record Date	Inspection Time	Visible Liner Tears	Visible Liner Tears	Visible Tank Leak Overflow	Collection Of Surface Run	Visible Layer Oil	Visible Leak	Freeboard Est FT	Pit Location	Pit Type	Notes
PETER SCHMIDT	7/22/2008	02:11	No	No	No	Yes	Yes	No	4			PRODUCTION PIT
SHAWN ERRETT	8/27/2008	14:00	No	No	No	Yes	Yes	No	4			PRODUCTION PIT
SHAWN ERRETT	9/27/2008	13:15	No	No	No	Yes	Yes	No	3			PRODUCTION PIT
SHAWN ERRETT	10/17/2008	13:38	No	No	No	Yes	Yes	No	2	Well Water Pit	Below Ground	PRODUCTION PIT
SHAWN ERRETT	11/21/2008	14:48	No	No	No	Yes	Yes	No	4	Well Water Pit	Below Ground	PRODUCTION PIT
SE	12/6/2008	10:00	No	No	No	Yes	Yes	No	3	CDP Water Pit	Below Ground	PRODUCTION PIT
SE	1/11/2009	11:20	No	No	No	Yes	Yes	No	4	CDP Water Pit	Below Ground	PRODUCTION PIT
ES	2/23/2009	11:10	No	No	No	Yes	Yes	No	4	CDP Water Pit	Below Ground	PRODUCTION PIT
ES	3/25/2009	12:15	No	No	No	Yes	Yes	No	4	CDP Water Pit	Below Ground	PRODUCTION PIT
ES	4/28/2009	01:45	No	No	No	Yes	Yes	No	4	CDP Water Pit	Below Ground	PRODUCTION PIT
ES	5/20/2009	01:25	No	No	No	Yes	Yes	No	4	CDP Water Pit	Below Ground	PRODUCTION PIT
ES	6/16/2009	12:10	No	No	No	Yes	Yes	No	4	CDP Water Pit	Below Ground	PRODUCTION PIT
VM	7/27/2009	12:17	No	No	No	Yes	Yes	No	4	CDP Water Pit	Below Ground	PRODUCTION PIT
VM	8/18/2009	12:54	No	No	No	Yes	Yes	No	4	CDP Water Pit	Below Ground	PRODUCTION PIT
ES	3/29/2010	12:00	No	No	No	Yes	Yes	No	4	CDP Water Pit	Below Ground	PRODUCTION PIT
ES	4/15/2010	12:00	No	No	No	Yes	Yes	No	4	CDP Water Pit	Below Ground	PRODUCTION PIT
ES	5/11/2010	12:00	No	No	No	Yes	Yes	No	4	CDP Water Pit	Below Ground	PRODUCTION PIT
ds	7/15/2010	12:00	No	No	No	Yes	Yes	No	2	CDP Water Pit	Below Ground	PRODUCTION PIT
es	8/11/2010	12:00	No	No	No	Yes	Yes	No	2	CDP Water Pit	Below Ground	PRODUCTION PIT
es	9/9/2010	12:00	No	No	No	Yes	Yes	No	2	CDP Water Pit	Below Ground	PRODUCTION PIT
es	10/15/2010	12:00	No	No	No	Yes	Yes	No	2	CDP Water Pit	Below Ground	PRODUCTION PIT
es	2/8/2011	12:00	No	No	No	Yes	Yes	No	2	CDP Water Pit	Below Ground	PRODUCTION PIT
es	3/15/2011	12:00	No	No	No	Yes	Yes	No	2	CDP Water Pit	Below Ground	PRODUCTION PIT
es	4/29/2011	12:00	No	No	No	Yes	Yes	No	2	CDP Water Pit	Below Ground	PRODUCTION PIT
es	5/6/2011	12:00	No	No	No	Yes	Yes	No	2	CDP Water Pit	Below Ground	PRODUCTION PIT
es	6/1/2011	12:00	No	No	No	Yes	Yes	No	2	CDP Water Pit	Below Ground	PRODUCTION PIT

Inspector Name	Record Date	Inspection Time	Visible Liner Tears	Visible Liner Tears	Visible Liner Tears	Visible Tank Leak Overflow	Collection Of Surface Run	Visible Layer Oil	Visible Leak	Freeboard Est FT	Pit Location	Pit Type	Notes
es	7/14/2011	12:00	No	No	No	No	Yes	Yes	No	2	CDP Water Pit	Below Ground	PRODUCTION PIT
es	8/22/2011	12:00	No	No	No	Yes	Yes	No	No	2	CDP Water Pit	Below Ground	PRODUCTION PIT
es	9/1/2011	12:00	No	No	No	Yes	Yes	No	No	2	CDP Water Pit	Below Ground	PRODUCTION PIT
es	10/17/2011	12:00	No	No	No	Yes	Yes	No	No	2	CDP Water Pit	Below Ground	PRODUCTION PIT
es	11/3/2011	12:00	No	No	No	Yes	Yes	No	No	2	CDP Water Pit	Below Ground	PRODUCTION PIT
es	12/6/2011	12:00	No	No	No	Yes	Yes	No	No	2	CDP Water Pit	Below Ground	PRODUCTION PIT
es	1/5/2012	12:00	No	No	No	Yes	Yes	No	No	2	CDP Water Pit	Below Ground	PRODUCTION PIT
es	2/29/2012	12:00	No	No	No	Yes	Yes	No	No	2	CDP Water Pit	Below Ground	PRODUCTION PIT
es	3/14/2012	12:00	No	No	No	Yes	Yes	No	No	2	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	10/21/2012	12:00	No	No	No	Yes	Yes	No	No	4	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	2/28/2013	12:30	No	No	No	Yes	Yes	No	No	3	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	3/21/2013	12:30	No	No	No	Yes	Yes	No	No	3	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	6/3/2013	01:00	No	No	No	Yes	Yes	No	No	3	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	7/31/2013	12:45	No	No	No	Yes	Yes	No	No	5	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	8/29/2013	08:45	No	No	No	Yes	Yes	No	No	3	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	10/2/2013	11:45	No	No	No	Yes	Yes	No	No	2	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	11/4/2013	11:45	No	No	No	Yes	Yes	No	No	3	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	12/2/2013	12:00	No	No	No	Yes	Yes	No	No	3	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	1/2/2014	11:40	No	No	No	Yes	Yes	No	No	3	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	2/3/2014	11:40	No	No	No	Yes	Yes	No	No	3	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	3/29/2014	11:40	No	No	No	Yes	Yes	No	No	3	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	4/2/2014	11:40	No	No	No	Yes	Yes	No	No	3	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	5/3/2014	11:40	No	No	No	Yes	Yes	No	No	3	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	6/2/2014	11:45	No	No	No	Yes	Yes	No	No	3	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	7/2/2014	11:45	No	No	No	Yes	Yes	No	No	3	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	8/1/2014	12:00	No	No	No	Yes	Yes	No	No	4	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	9/4/2014	12:00	No	No	No	Yes	Yes	No	No	4	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	10/6/2014	11:00	No	No	No	Yes	Yes	No	No	4	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	11/1/2014	12:15	No	No	No	Yes	Yes	No	No	3	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	12/1/2014	01:15	No	No	No	Yes	Yes	No	No	3	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	1/2/2015	11:15	No	No	No	Yes	Yes	No	No	3	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	2/2/2015	11:15	No	No	No	Yes	Yes	No	No	3	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	4/6/2015	12:20	No	No	No	Yes	Yes	No	No	2	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	3/2/2015	11:00	No	No	No	Yes	Yes	No	No	3	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	5/4/2015	12:30	No	No	No	Yes	Yes	No	No	5	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	6/1/2015	10:35	No	No	No	Yes	Yes	No	No	5	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	7/1/2015	01:35	No	No	No	Yes	Yes	No	No	5	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	8/3/2015	09:50	No	No	No	Yes	Yes	No	No	4	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	9/6/2015	09:50	No	No	No	Yes	Yes	No	No	4	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	10/5/2015	09:50	No	No	No	Yes	Yes	No	No	4	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	11/1/2015	09:50	No	No	No	Yes	Yes	No	No	2	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	12/11/2015	09:50	No	No	No	Yes	Yes	No	No	2	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	1/1/2016	09:50	No	No	No	Yes	Yes	No	No	2	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	2/2/2016	09:50	No	No	No	Yes	Yes	No	No	2	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	3/4/2017	09:50	No	No	No	Yes	Yes	No	No	2	CDP Water Pit	Below Ground	PRODUCTION PIT
bg	4/3/2017	09:50	No	No	No	Yes	Yes	No	No	2	CDP Water Pit	Below Ground	PRODUCTION PIT

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

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.

**Release Notification and Corrective Action**

**OPERATOR**

Initial Report  Final Report

Name of Company: XTO Energy, Inc.	Contact: Kurt Hoekstra
Address: 382 Road 3100, Aztec, New Mexico 87410	Telephone No.: (505) 333-3100
Facility Name: Bolack C LS # 7	Facility Type: Gas Well (Blanco Mesaverde, Otero Chacra)
Surface Owner: Federal	Mineral Owner
API No.: 30-045-06143	

**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
E	33	27N	8W	1840	FNL	918	FWL	San Juan

Latitude 36.532580 Longitude -107.692720

**NATURE OF RELEASE**

Type of Release: Produced Water	Volume of Release: Unknown	Volume Recovered: None
Source of Release: Pit Tank	Date and Hour of Occurrence: Time: Unknown	Date and Hour of Discovery: 2-14-2018 in the afternoon
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	
By Whom? N/A	Date and Hour:	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* On Wednesday, 2-14-2018 an XTO construction foreman found water inside the pit tank cellar on the Bolack C LS # 7 location during maintenance activities. An XTO construction crew washed the pit tank and found that the pit tank had an integrity failure and leaked produced water into the pit tank cellar. The spill was contained within the metal cellar and never left location. The site was then ranked according to the NMOCD Guidelines for the Remediation of Leaks, Spills and Releases. The site was ranked a 0 due to an estimated depth to groundwater of greater than 100 feet, greater than 1000 feet from a water source, and distance to an arroyo greater than 1000 feet. This set the closure standard to 5000 ppm TPH, 10 ppm benzene, and 50 ppm total BTEX.

Describe Area Affected and Cleanup Action Taken. \*A release has been confirmed based on an integrity failure of the pit tank.

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

Signature: 	<u>OIL CONSERVATION DIVISION</u>	
	Approved by Environmental Specialist:	
Printed Name: Kurt Hoekstra	Approval Date:	Expiration Date:
Title: EHS Coordinator	Conditions of Approval:	
E-mail Address: Kurt_Hoekstra@xtoenergy.com	Attached <input type="checkbox"/>	
Date: 3-8-2018	Phone: 505-333-3100	

\* Attach Additional Sheets If Necessary

District I  
1625 N. French Dr., Hobbs, NM 88240  
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State of New Mexico  
Energy Minerals and Natural Resources

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

Form C-141  
Revised August 8, 2011

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

**Release Notification and Corrective Action**

**OPERATOR**

Initial Report  Final Report

Name of Company: XTO Energy, Inc.	Contact: Kurt Hoekstra	
Address: 382 Road 3100, Aztec, New Mexico 87410	Telephone No.: (505) 333-3100	
Facility Name: Bolack C LS # 7	Facility Type: Gas Well (Blanco Mesaverde, Otero Chacra)	
Surface Owner: Federal	Mineral Owner	API No.: 30-045-06143

**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
E	33	27N	8W	1840	FNL	918	FWL	San Juan

Latitude 36.532580      Longitude -107.692720

**NATURE OF RELEASE**

Type of Release: Produced Water	Volume of Release: Unknown	Volume Recovered: None
Source of Release: Pit Tank	Date and Hour of Occurrence: Time: Unknown	Date and Hour of Discovery: 2-14-2018 in the afternoon
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	
By Whom? N/A	Date and Hour:	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* On Wednesday, 2-14-2018 an XTO construction foreman found water inside the pit tank cellar on the Bolack C LS # 7 location during maintenance activities . An XTO construction crew washed the pit tank and found that the pit tank had an integrity failure and leaked produced water into the pit tank cellar. The spill was contained within the metal cellar and never left location. The site was then ranked according to the NMOCD Guidelines for the Remediation of Leaks, Spills and Releases. The site was ranked a 0 due to an estimated depth to groundwater of greater than 100 feet, greater than 1000 feet from a water source, and distance to an arroyo greater than 1000 feet. This set the closure standard to 5000 ppm TPH, 10 ppm benzene, and 50 ppm total BTEX.

Describe Area Affected and Cleanup Action Taken. \*A release has been confirmed based on an integrity failure of the pit tank. On 2-23-2018 a composite sample was collected from the below grade tank cellar, the results were below standards for this site. A registered below grade tank will be placed in the cellar, no further action is required.

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

Signature: 	<b><u>OIL CONSERVATION DIVISION</u></b>	
	Approved by Environmental Specialist:	
Printed Name: Kurt Hoekstra	Approval Date:	Expiration Date:
Title: EHS Coordinator	Conditions of Approval:	
E-mail Address: Kurt_Hoekstra@xtoenergy.com	Attached <input type="checkbox"/>	
Date: 3-13-2018	Phone: 505-333-3100	

\* Attach Additional Sheets If Necessary

## Hoekstra, Kurt

---

**From:** Hoekstra, Kurt  
**Sent:** Monday, February 19, 2018 9:17 AM  
**To:** Smith, Cory, EMNRD; Fields, Vanessa, EMNRD (Vanessa.Fields@state.nm.us); Whitney Thomas (l1thomas@blm.gov)  
**Cc:** Mulnix, John; Trujillo, Marcos; Dawes, Thomas; Woolley, Jeff; Weaver, John; Hixon, Logan; Christianson, Bruce; Rensink, Ryan; Barnhill, Matthew; Karlin, Michael; Martin Nee (Martin\_Nee@xtoenergy.com)  
**Subject:** 72 hour notice for BGT's at the Florance D # 10B and Bolack C LS # 7

Mr. Smith, Ms. Fields and Ms. Thomas ,

Please accept this email as the required 72 hour notification for BGT closure activities at the following two(2) well sites:  
Florance D # 10B well site API # (30-045-31086) located in Section 17A, Township 27N, Range 8W, San Juan County, New Mexico.

Bolack C LS # 7 well site API # (30-045-06143) located in Section 33E, Township 27N, Range 8W, San Juan County, New Mexico

During maintenance activities holes were discovered in these below grade tanks.

Work is tentatively scheduled for Thursday February 22<sup>nd</sup> , 2018 at approximately 10:00 am.

The approved closure plan only, has been received from Santa Fe.

Thank you for your time in regards to this matter.

Kurt Hoekstra  
EHS Coordinator  
XTO Energy  
505-333-3202 Office  
505-486-9543 Cell  
[Kurt\\_Hoekstra@xtoenergy.com](mailto:Kurt_Hoekstra@xtoenergy.com)  
An **ExxonMobil** Subsidiary



## Analytical Report

### Report Summary

Client: XTO Energy Inc.  
Chain Of Custody Number:  
Samples Received: 2/26/2018 7:45:00AM  
Job Number: 98031-0528  
Work Order: P802044  
Project Name/Location: Bolack C LS #7

Report Reviewed By:

Date: 2/27/18

Walter Hinchman, Laboratory Director

Date: 2/27/18

Tim Cain, Quality Assurance Officer

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.



XTO Energy Inc.	Project Name:	Bolack C LS #7	<b>Reported:</b> 27-Feb-18 13:01
382 CR 3100	Project Number:	98031-0528	
Aztec NM, 87410	Project Manager:	Kurt Hoekstra	

**Analytical Report for Samples**

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BGT Cellar	P802044-01A	Soil	02/23/18	02/26/18	Glass Jar, 4 oz.

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5796 US Highway 64, Farmington, NM 87401

Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301

Ph (505) 632-0615 Fx (505) 632-1865

Ph (970) 259-0615 Fr (800) 362-1879

[envirotech-inc.com](http://envirotech-inc.com)  
[laboratory@envirotech-inc.com](mailto:laboratory@envirotech-inc.com)



XTO Energy Inc. 382 CR 3100 Aztec NM, 87410	Project Name: Bolack C LS #7 Project Number: 98031-0528 Project Manager: Kurt Hoekstra	Reported: 27-Feb-18 13:01
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**BGT Cellar  
P802044-01 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b><u>Volatile Organics by EPA 8021</u></b>									
Benzene	ND	100	ug/kg	1	1809001	02/26/18	02/26/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1809001	02/26/18	02/26/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1809001	02/26/18	02/26/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1809001	02/26/18	02/26/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1809001	02/26/18	02/26/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1809001	02/26/18	02/26/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1809001	02/26/18	02/26/18	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-FID</i>		96.4 %		50-150	1809001	02/26/18	02/26/18	EPA 8021B	
<b><u>Nonhalogenated Organics by 8015</u></b>									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1809001	02/26/18	02/26/18	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1809006	02/26/18	02/26/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1809006	02/26/18	02/26/18	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		97.4 %		50-150	1809001	02/26/18	02/26/18	EPA 8015D	
<i>Surrogate: n-Nonane</i>		81.0 %		50-200	1809006	02/26/18	02/26/18	EPA 8015D	CV3
<b><u>Anions by 300.0</u></b>									
Chloride	ND	20.0	mg/kg	1	1809005	02/26/18	02/26/18	EPA 300.0	

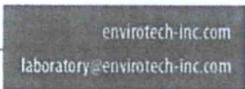
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5796 US Highway 64, Farmington, NM 87401

Three Springs - 65 Mercado Street, Suite 115, Durango, CO 81301

Ph (505) 632-0615 Fx (505) 632-1865

Ph (970) 259-0615 Fr (800) 362-1879





XTO Energy Inc. 382 CR 3100 Aztec NM, 87410	Project Name: Bolack C LS #7 Project Number: 98031-0528 Project Manager: Kurt Hoekstra	Reported: 27-Feb-18 13:01
---	--	------------------------------

**Volatile Organics by EPA 8021 - Quality Control**  
**Envirotech Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1809001 - Purge and Trap EPA 5030A**

Blank (1809001-BLK1) Prepared & Analyzed: 26-Feb-18										
Benzene	ND	100	ug/kg							
Toluene	ND	100	"							
Ethylbenzene	ND	100	"							
p,m-Xylene	ND	200	"							
o-Xylene	ND	100	"							
Total Xylenes	ND	100	"							
Total BTEX	ND	100	"							
Surrogate: 4-Bromochlorobenzene-PID	7750		"	8000		96.8	50-150			

LCS (1809001-BS1) Prepared & Analyzed: 26-Feb-18										
Benzene	4840	100	ug/kg	5000		96.9	70-130			
Toluene	4780	100	"	5000		95.6	70-130			
Ethylbenzene	4800	100	"	5000		96.1	70-130			
p,m-Xylene	9600	200	"	10000		96.0	70-130			
o-Xylene	4720	100	"	5000		94.4	70-130			
Total Xylenes	14300	100	"	15000		95.5	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7820		"	8000		97.7	50-150			

Matrix Spike (1809001-MS1) Source: P802044-01 Prepared & Analyzed: 26-Feb-18										
Benzene	4690	100	ug/kg	5000	ND	93.9	54.3-133			
Toluene	4630	100	"	5000	ND	92.7	61.4-130			
Ethylbenzene	4650	100	"	5000	ND	93.1	61.4-133			
p,m-Xylene	9300	200	"	10000	ND	93.0	63.3-131			
o-Xylene	4580	100	"	5000	ND	91.7	63.3-131			
Total Xylenes	13900	100	"	15000	ND	92.6	63.3-131			
Surrogate: 4-Bromochlorobenzene-PID	7910		"	8000		98.8	50-150			

Matrix Spike Dup (1809001-MSD1) Source: P802044-01 Prepared & Analyzed: 26-Feb-18										
Benzene	4750	100	ug/kg	5000	ND	95.0	54.3-133	1.17	20	
Toluene	4710	100	"	5000	ND	94.3	61.4-130	1.73	20	
Ethylbenzene	4730	100	"	5000	ND	94.7	61.4-133	1.65	20	
p,m-Xylene	9460	200	"	10000	ND	94.6	63.3-131	1.71	20	
o-Xylene	4660	100	"	5000	ND	93.2	63.3-131	1.65	20	
Total Xylenes	14100	100	"	15000	ND	94.1	63.3-131	1.69	20	
Surrogate: 4-Bromochlorobenzene-PID	7800		"	8000		97.4	50-150			

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XTO Energy Inc. 382 CR 3100 Aztec NM, 87410	Project Name: Bolack C LS #7 Project Number: 98031-0528 Project Manager: Kurt Hoekstra	Reported: 27-Feb-18 13:01
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**Nonhalogenated Organics by 8015 - Quality Control**

**Envirotech Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1809001 - Purge and Trap EPA 5030A**

<b>Blank (1809001-BLK1)</b>		Prepared & Analyzed: 26-Feb-18								
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.89		"	8.00		98.6	50-150			
<b>LCS (1809001-BS2)</b>		Prepared & Analyzed: 26-Feb-18								
Gasoline Range Organics (C6-C10)	49.8	20.0	mg/kg	50.0		99.6	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.05		"	8.00		101	50-150			
<b>Matrix Spike (1809001-MS2)</b>		Source: P802044-01		Prepared & Analyzed: 26-Feb-18						
Gasoline Range Organics (C6-C10)	49.6	20.0	mg/kg	50.0	ND	99.2	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.87		"	8.00		98.4	50-150			
<b>Matrix Spike Dup (1809001-MSD2)</b>		Source: P802044-01		Prepared & Analyzed: 26-Feb-18						
Gasoline Range Organics (C6-C10)	49.1	20.0	mg/kg	50.0	ND	98.3	70-130	0.956	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.03		"	8.00		100	50-150			

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XTO Energy Inc. 382 CR 3100 Aztec NM, 87410	Project Name: Bolack C LS #7 Project Number: 98031-0528 Project Manager: Kurt Hoekstra	Reported: 27-Feb-18 13:01
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**Nonhalogenated Organics by 8015 - Quality Control**

**Envirotech Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1809006 - DRO Extraction EPA 3570</b>										
<b>Blank (1809006-BLK1)</b>				Prepared & Analyzed: 26-Feb-18						
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40+)	ND	50.0	"							
Surrogate: n-Nonane	60.0		"	50.0		120	50-200			
<b>LCS (1809006-BS1)</b>				Prepared & Analyzed: 26-Feb-18						
Diesel Range Organics (C10-C28)	505	25.0	mg/kg	500		101	38-132			
Surrogate: n-Nonane	38.0		"	50.0		76.1	50-200			
<b>Matrix Spike (1809006-MS1)</b>				Source: P802044-01		Prepared & Analyzed: 26-Feb-18				
Diesel Range Organics (C10-C28)	521	25.0	mg/kg	500	ND	104	38-132			
Surrogate: n-Nonane	26.6		"	50.0		53.1	50-200			
<b>Matrix Spike Dup (1809006-MSD1)</b>				Source: P802044-01		Prepared & Analyzed: 26-Feb-18				
Diesel Range Organics (C10-C28)	513	25.0	mg/kg	500	ND	103	38-132	1.45	20	
Surrogate: n-Nonane	29.9		"	50.0		59.7	50-200			

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XTO Energy Inc. 382 CR 3100 Aztec NM, 87410	Project Name: Bolack C LS #7 Project Number: 98031-0528 Project Manager: Kurt Hoekstra	Reported: 27-Feb-18 13:01
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**Anions by 300.0 - Quality Control**  
**Envirotech Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1809005 - Anion Extraction EPA 300.0/9056A</b>										
<b>Blank (1809005-BLK1)</b> Prepared & Analyzed: 26-Feb-18										
Chloride	ND	20.0	mg/kg							
<b>LCS (1809005-BS1)</b> Prepared & Analyzed: 26-Feb-18										
Chloride	249	20.0	mg/kg	250		99.8	90-110			
<b>Matrix Spike (1809005-MS1)</b> Source: P802044-01 Prepared & Analyzed: 26-Feb-18										
Chloride	249	20.0	mg/kg	250	ND	99.8	80-120			
<b>Matrix Spike Dup (1809005-MSD1)</b> Source: P802044-01 Prepared & Analyzed: 26-Feb-18										
Chloride	250	20.0	mg/kg	250	ND	100	80-120	0.352	20	

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XTO Energy Inc. 382 CR 3100 Aztec NM, 87410	Project Name: Bolack C LS #7 Project Number: 98031-0528 Project Manager: Kurt Hoekstra	Reported: 27-Feb-18 13:01
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**Notes and Definitions**

- CV3 CV recovery was below quality control limits.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference

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January 27, 2015

Mr. Cory Smith  
Oil Conservation Division  
1000 Rio Brazos Rd.  
Aztec, New Mexico 87410

Email: cory.smith@state.nm.us  
Phone (505) 334-6178 Ext 115

**RE: VARIANCE REQUEST FOR 19.15.17 NMAC TABLE I AND TABLE II**

Mr. Smith,

Please accept this letter as a variance request as outlined in 19.15.17.15(A) NMAC. XTO Energy would like to request the replacement of USEPA Method 418.1 for the analysis of Total Petroleum Hydrocarbons (TPH) for USEPA Method 8015M, measuring carbon ranges C6-C36, for all sampling associated with closures and confirmations samples in relation to 19.15.17 NMAC, both in Table I and Table II (2103) and the 'pit rule' passed in 2008.

XTO Energy is requesting this variance on the grounds that USEPA Method 418.1 is an outdated analytical method that reports a full range of hydrocarbons from C<sub>8</sub> through C<sub>40</sub>. (*Reference: American Petroleum Institute*). The attached table demonstrates the carbon ranges, and the typical hydrocarbon products that can be found in those ranges. As you can see, lube oil ranges from C<sub>28</sub>-C<sub>35</sub>. Analytical Method USEPA 418.1 extends past lube oils from C<sub>35</sub> through C<sub>40</sub>. This range of hydrocarbons is above the range that can reasonably be expected to be found in our field in both drilling pits and beneath below grade tanks. USEPA Method 8015M (GRO/DRO + extended analysis) will report hydrocarbons ranging from C<sub>6</sub>-C<sub>10</sub> for GRO, C<sub>10</sub>-C<sub>28</sub> for DRO, and C<sub>28</sub>-C<sub>36</sub> for extended analysis. This information was provided by Environmental Science Corporation Laboratories. As the information demonstrates, the 8015M analytical method reports as low as C<sub>6</sub>, reporting lower than USEPA Method 418.1. Utilizing analytical method 8015M, lighter range hydrocarbons will be reported instead of higher range, heavy hydrocarbons that may not be reasonably expected to be found in our field. Utilization of USEPA Method 8015M will better protect groundwater resources by identifying lighter, more mobile hydrocarbons that USEPA Method 418.1 cannot identify. The heavier range hydrocarbons, C<sub>36</sub>-C<sub>40</sub>, that are not identified by USEPA Method 8015M are not a mobile form of hydrocarbon, and are not a threat to human health and the environment. With your acceptance of this variance request, XTO Energy will begin utilizing USEPA Method 8015M in place of USEPA Method 418.1 for all sampling activities associated with 19.15.17 NMAC, both from the rules passed in 2008 and 2013.

Respectfully Submitted,

James McDaniel, CHMM #15676  
EH&S Supervisor  
XTO Energy, Inc.  
Western Division

**Carbon Ranges of Typical Hydrocarbons**

<b>Hydrocarbon</b>	<b>Carbon Range</b>
Condensate	C2-C12
Aromatics	C5-C7
Gasoline	C7-C11
Kerosene	C6-C16
Diesel Fuel	C8-C21
Fuel Oil #1	C9-C16
Fuel Oil #2	C11-C20
Heating Oil	C14-C20
Lube Oil	C28-C35



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