District I 1625 N. Prench 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.
Type of action: Below g Permit of Closure Modific Closure or proposed alternative methor <i>Instructions: Please submit one</i> Please be advised that approval of this request does not	of a pit or proposed alternative method of a pit, below-grade tank, or proposed alternat ation to an existing permit/or registration plan only submitted for an existing permitted o d <i>application (Form C-144) per individual pit, below</i> relieve the operator of liability should operations result	ive method r non-permitted pit, below-grade tank,
I. Operator: XTO Energy_Inc Address: 382 Road 3100_Aztec, New Mexico 874 Facility or well name: JF Day E # 1G API Number: 30-045-33643 U/L or Qtr/Qtr Section	OGRID #: <u>5380</u> <u>10</u> OCD Permit Number: Township <u>28N</u> Range <u>10W</u> Longitude <u>-107.92506</u>) County: <u>San Juan</u>
Lined Unlined Liner type: Thickness	AC &A Multi-Well Fluid Management L mil LLDPE HDPE PVC O Volume:bb	ther
 Secondary containment with leak detection Visible sidewalls and liner Visible sidewalls 		matic high-level shut off
 <u>Alternative Method</u>: Submittal of an exception request is required. Exc 	eptions must be submitted to the Santa Fe Environme	ental Bureau office for consideration of approval.
Form C-144	Oil Conservation Division	Page 1 of 6

P-----

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)

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

Variances and Exceptions:

7.

8

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.

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									
 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 									
 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.	Yes No								
- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image									
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								

 Vithin 100 feet of a wetland. US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site 	Yes 🗌
Cemporary 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,	
 r playa lake (measured from the ordinary high-water mark). Topographic map; Visual inspection (certification) of the proposed site 	Yes 🗌
 Vithin 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 🗌
 Within 500 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock vatering 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 🗌
 Vithin 300 feet of a wetland. US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site 	Yes 🗌
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 ake (measured from the ordinary high-water mark).	
- Topographic map; Visual inspection (certification) of the proposed site	Yes 🗌
 Vithin 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 🗌
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	
 nitial application. NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site 	Yes 🗌
Within 500 feet of a wetland.	
- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	Yes
US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NM Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the docu 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 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 19.1 nd 19.15.17.13 NMAC Previously Approved Design (attach copy of design) API Number: or Permit Number: or Permit Number:	uments are NMAC 5.17.9 NMAC
0. Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NM Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the doct Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the doct Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the doct Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the doct Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the doct Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the doct Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the doct Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the doct Instruction: State of the following items must be attached to the application. Please indicate, by a check mark in the box, that the doct Instruction: State of the following items must be attached upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC Instruction: State of the appropriate requirements of 19.15.17.10 NMAC <	MAC uments are NMAC 5.17.9 NMAC
	MAC uments are NMAC 5.17.9 NMAC
	MAC uments are NMAC 5.17.9 NMAC
	MAC uments are NMAC 5.17.9 NMAC

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 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 Quality Control/Quality Assurance Construction and Installation Plan Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Remergency Response Plan Oil Field Waste Stream Characterization Monitoring and Inspection Plan Errosion Control Plan Errosion Control Plan Closure Plan - based upon the appropriate requirements of 19.15.17.9 NMAC and 19.15.17.13 NMAC	documents are
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 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	luid Management Pit
 ^{14.} <u>Waste Excavation and Removal Closure Plan Checklist</u>: (19.15.17.13 NMAC) <i>Instructions: Each of the following items must be closure plan. Please indicate, by a check mark in the box, that the documents are attached.</i> 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. <u>Siting Criteria (regarding on-site closure methods only)</u> : 19.15.17.10 NMAC Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable sour provided below. Requests regarding changes to certain siting criteria require justifications and/or demonstrations of equivalency. If 19.15.17.10 NMAC for guidance.	
Ground water is less than 25 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	□ Yes □ No □ NA
Ground water is between 25-50 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Yes No
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	
 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). Topographic map; Visual inspection (certification) of the proposed site 	□ NA □ 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 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. NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site 	🗌 Yes 🗌 No
Written confirmation or verification from the municipality; Written approval obtained from the municipality	
Within 300 feet of a wetland. US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	Yes No
	Yes No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance	
Form C-144 Oil Conservation Division Page 4 o	f 6

٠

adopted pursuant to NMSA 1978, Section 3-27-3, as amended.									
- Written confirmation or verification from the municipality; Written approval obtained from the municipality	🗌 Yes 🗌 No								
 Within the area overlying a subsurface mine. Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division 	🗌 Yes 🗌 No								
 Within an unstable area. 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. - FEMA map	Yes 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.									
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 beli	ef.								
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:	119/18								
The OCD Termit Number									
^{19.} <u>Closure Report (required within 60 days of closure completion)</u> : 19.15.17.13 NMAC <i>Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting</i> <i>The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not</i>									
^{19.} <u>Closure Report (required within 60 days of closure completion)</u> : 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 is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not section of the form until an approved closure plan has been obtained and the closure activities have been completed.	complete this								

-

.

22. Operator Closure Certification:

4

Signature:

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

Kurt Hocketen

Date: <u>1-3-2018</u>

e-mail address: Kurt_Hoekstra@xtoenergy.com

Telephone: <u>505-333-3100</u>

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

Lease Name:JF Day E 1GAPI No.:30-045-33643Description:Unit D, Section 17, Township 28N, Range 10W, 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

.

- 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: December 27, 2017
- 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: December 27, 2017
- 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.

a

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	0.127 mg/kg
BTEX	EPA SW-846 8021B or 8260B	50	0.2239 mg/kg
ТРН	EPA 8015M	5000	4372.88 mg/kg
Chloride	EPA Method 300	250	752 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 excavation approximately 6" to 1 foot deep was backfilled using compacted, non-waste containing earthen material..
- 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 December 20th, 2017; 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 December 20th, 2017 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 has been backfilled to match these specifications.

a.

.

- 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 divisionapproved 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

.

State of New Mexico Energy Minerals and Natural Resources

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.

1220 S. St. France	cis Dr., Santa	Fe, NM 87505	;	Sa	inta Fe	, NM 875	05						
Release Notification and Corrective Action													
						OPERA	🛛 Initia	l Report		Final Report			
Name of Co	mpany: X	TO Energy	Inc.		(Contact: Kurt Hoekstra							
Address: 38				ico	1	Telephone No. 505-333-3100							
Facility Nan	ne: JF Day	/ E # 1G			H	Facility Typ	e: Gas Well						
Surface Own	ner: Feder	al		Mineral C)wner				API No.	30-045-3	3643		
				LOCA	TION	OF RE	LEASE						
Unit Letter	Section	Township	Range	Feet from the		South Line	Feet from the	East/W	est Line		Count	ty	
D	17	28N	10W	770		FNL	665	F	WL		San Ju	an	
						de -107.92			D: 83				
		La	inuuc		0	_			. 05				
Turna of Dalay	agai Dradua	ad Watan		NAT	URE	OF REL	EASE Release: 11 BBL	,	Valuma P	ecovered: 1	Jana		
Type of Relea							Iour of Occurrenc					: December	
Source of iter	ieuse. I it it	anix				Unknown	iour or occurrence		19,2017	Iour of Die	covery.	. December	
Was Immedia	ate Notice (If YES, To	Whom?						
			Yes	No 🛛 Not R	equired								
By Whom? Was a Watero	Daumaa Daaa	had 9				Date and Hour							
was a water	course Read		Yes 🗵	No		If YES, Volume Impacting the Watercourse.							
If a Watercou	irse was Im	pacted, Descr	ibe Fully.'	k									
Deceribe Cou	co of Drobl	and Dama	dial Actio	n Taken.* On Dec	ambar 1	0 2017 :	a discovered they	a waa a l	alt in the l	alow grad	a tank a	llowing	
				grade tank cellar									
tank was emp	tied and no	fluids were r	ecovered f	from the cellar. Th	ne site wa	as ranked acc	cording to the NM	IOCD Gu	idelines fo	or the Reme	diation	of Leaks,	
				e to an estimated									
				1,000 feet. This second ten.* Due to a lea									
				this location.	k in the t	ciow grade	and approxim	natery 11	DDL 301	produced v	vater m	the below	
				e is true and comp									
				nd/or file certain r ce of a C-141 repo									
				investigate and r									
or the enviror	nment. In a	ddition, NMC	CD accep	tance of a C-141	report do	es not reliev	e the operator of	responsib	ility for co	mpliance v	vith any	other	
federal, state,	or local lay	vs and/or regu	lations.					CEDI	TION	DIUIOIO			
							OIL CON	SERVA	ATION	DIVISIC	DN		
	1/11	11											
Signature: K	met Ho	kellen			F	Approved by	Environmental S	pecialist:					
Printed Name													
		KSUA											
Title: EHS C	oordinator				F	Approval Dat	e:	E	xpiration E	Date:			
E-mail Addre	ss: <u>Kurt_H</u>	oekstra@xtoe	nergy.con	1	(Conditions of	Approval:			Attached			
Data: 1.2.2	0018	Dhamas	05 222 2	100						Anacheu			
Date: 1-3-2		ets If Necess	505-333-3 arv	100									

Hixon, Logan

From:	Hixon, Logan
Sent:	Wednesday, December 20, 2017 1:17 PM
То:	Smith, Cory, EMNRD; Fields, Vanessa, EMNRD; BRANDON POWELL
	(brandon.powell@state.nm.us); Thomas, Leigh (l1thomas@blm.gov)
Cc:	McDaniel, James (James_McDaniel@xtoenergy.com); Hoekstra, Kurt; Naegele, Otto
	(Otto_Naegele@xtoenergy.com); Dawes, Thomas (Thomas_Dawes@xtoenergy.com);
	Weaver, John (John_Weaver@xtoenergy.com); Logan, Michael
	(Michael_Logan@xtoenergy.com); Sanders, David (David_Sanders@xtoenergy.com);
	Trujillo, Marcos (Marcos_Trujillo@xtoenergy.com); Harrison, Lyndon; Marriott, Mike
	(Mike_Marriott@xtoenergy.com)
Subject:	2017-12-20, 72 Hour BGT Closure Notification, 2017/22/20-2017/12/29, JF Day E 1G
	(API: 30-045-33643)
Attachments:	2017-12-20 Approved Closure.pdf

All,

Please accept this email as the required notification for BGT closure activities at the following site:

-JF Day E 1G (API 30-045-33643) located in Section 17 (D), Township 28N, Range 10W, and San Juan County, New Mexico.

On December 19, 2017 it was discovered there was a leak in the below grade tank allowing produced water to be contained within the cellar. Approximately 11 bbls of produced water was released and none were recovered. This BGT is being closed and will be registered and will have approval before going back into operation as it meets the siting requirements for registration.

The closure plan was approved on December 20, 2017.

Work is tentatively scheduled for Friday December 20, 2017 at approximately 1400 MST.

If there is any unforeseen delays in closure activities with this BGT and it will not be initiated within a week's time (December 29, 2017), a follow up email notification will be made for the change.

Thank you and have a good day

If you have any questions do not hesitate to contact us. Thank You! Logan Hixon | 321 22nd Avenue East | Williston, ND 58801 |Cell: 505-386 8018 |Home: 505-320-6133 | Logan Hixon@xtoenergy.com XTO ENERGY INC., an ExxonMobil subsidiary This document may contain information that is privileged, confidential and exempt from disclosure under applicable law. If you are not the intended recipient, you are on notice that any unauthorized disclosure, copying, distribution or taking of any action in reliance on the contents of this document is prohibited.

9

.

Route Name DEN NM Run 55	StopName DAY JF E 001G	Pumper Randolph, Steve	Foreman Sanders, David	Well Name JF DAY E 01G	API Well Number 3004533643	Section 17	Range 10W	Township 28N			-	
nspector Name	Record Date	Inspection Time	Visible Liner Tears	Visible Liner Tears	Visible Tank Leak Overflow	Collection Of Surface Run	Visible Layer Oil	Visible	Freeboard Est FT	Pit Location	Pit Type	Notes
	8/24/2008	11.10	No	No	No	No	No	No	4			
	10/14/2008	10 15	No	No	No	No	No	No	5		Below Ground Below Ground	
	12/1/2008	01.45	No	No	No	No	No	No	4		Below Ground	
	1/12/2009	10 15	No	No	No	No	No	No	3		Below Ground	
	3/16/2009	11 50	No	No	No	No	No	No	4		Below Ground	
	4/10/2009	12:00	No	No	No	No	No	No	2		Below Ground	
	5/4/2009	12:00	No	No	No	No	No	No	4		Below Ground	
	6/2/2009	10.45	No	No	No	No	No	No	2	Well Water Pit	Below Ground	
	7/7/2009	10.50	No	No	No	No	No	No	4	Well Water Pit	Below Ground	
	8/4/2009	02 35	No	No	No	No	No	No	2		Below Ground	
	8/5/2009	10.50	No	No	No	No	No	No	2		Below Ground	
	9/1/2009	10.10	No	No	No	No	Yes	No	3	Well Water Pit	Below Ground	
1	10/1/2009	10.50	No	No	No	No	Yes	No	5		Below Ground	
	11/3/2009	10:15	No	No	No	No	Yes	No	3	Well Water Pit	Below Ground	
	12/4/2009	09:30	No	No	No	No	Yes	No	5	Well Water Pit	Below Ground	
	1/10/2010	09:45	No	No	No	No	Yes	No	3	Well Water Pit	Below Ground	
r i i i i i i i i i i i i i i i i i i i	2/19/2010	09:15	No	No	No	No	Yes	No	4	Well Water Pit	Below Ground	
n	3/6/2010	03.15	No	No	No	No	Yes	No	2	Well Water Pit	Below Ground	
n	4/1/2010	12:15	No	No	No	No	Yes	No	5	Well Water Pit	Below Ground	
n	5/10/2010	12:45	No	No	No	No	Yes	No	1		Below Ground	
ks	5/27/2010	09 00	No	No	No	No	Yes	No	3		Below Ground	
	7/6/2010	09 00	No	No	No	No	Yes	No	4		Below Ground	
	8/16/2010	09:15	No	No	No	No	Yes	No	3		Below Ground	
	9/14/2010	10.00	No	No	No	No	Yes	No	5		Below Ground	
	10/5/2010	10.45	No	No	No	No	Yes	No	4		Below Ground	
	11/8/2010	11 00	No	No	No	No	Yes	No	3		Below Ground	
¢.	12/11/2010	01.00	No	No	No	No	Yes	No	3		Below Ground	
r	1/16/2011	10:30	No	No	No	No	Yes	No	4		Below Ground	
	2/16/2011	10 15	No	No	No	No	Yes	No	3		Below Ground	
	4/27/2011	09.45	No	No	No	No	Yes	No	3		Below Ground	
	5/23/2011	11.15	No	No	No	No	Yes	No	4		Below Ground	
r .	6/13/2011	11.15	No	No	No	No	Yes	No	3	**********	Below Ground	
	7/15/2011	10:30	No	No	No	No	Yes	No	4			
r	8/15/2011	11:00	No	No	No	No	No	No	4		Below Ground	
	9/21/2011	08.00	No	No	No	No	No	No	3		Below Ground	
	10/18/2011	08.00	No	No	No	No	No	No	4		Below Ground	0
	11/16/2011	09:45	No	No	No	No	No	No	3		Below Ground Below Ground	0
	12/13/2011	11.30	No	No	No	No	No	No	3		Below Ground	0
	1/9/2012	10:15	No	No	No	No	No	NO	4		Below Ground	0
·	2/9/2012	10:45	No	No	No	No	No	No	3		Below Ground Below Ground	0
t t	3/6/2012	10:45	No	No	No	No	No	No	3		Below Ground	0
	5/8/2012	09.45	No	No	No	No	No	No	4		Below Ground	0
r	6/5/2012	09:30	No	No	No	No	No	No	3		Below Ground	0
r r	7/10/2012	08:30	No	No	No	No	No	No	3		Below Ground	0
r r	8/21/2012	09:30	No	No	No	No	No	No	4		Below Ground	0
r	9/11/2012	09.45	No	No	No	No	No	No	4		Below Ground	0
	10/8/2012	11.45	No	No	No	No	No	No	4		Below Ground	0
	11/13/2012	08.45	No	No	No	No	No	No	4		Below Ground	0
	12/18/2012	09.45	No	No	No	No	No	No	4		Below Ground	0
	1/14/2013	11.15	No	No	No	No	No	No	4		Below Ground	0
	2/11/2013	11 30	No	No	No	No	No	No	4		Below Ground	0
	3/6/2013	10:00	No	No	No	No	No	No	4		Below Ground	0
1	4/10/2013	08.00	No	No	No	No	No	No	4		Below Ground	0
	5/13/2013	10:15	No	No	No	No	No	No	4		Below Ground	0
	6/17/2013	09:15	No	No	No	No	No	No	4		Below Ground	0
	7/15/2013	09:15	No	No	No	No	No	No	4		Below Ground	0
	8/13/2013	10:15	No	No	No	No	No	No	3		Below Ground	0
	10/9/2013	08:15	No	No	No	No	No	No	3	Well Water Pit	Below Ground	0
	11/6/2013	08:30	No	No	No	No	No	No	3	Well Water Pit	Below Ground	0
	2/10/2014	09:45	No	No	No	No	No	No	3		Below Ground	0
	4/17/2014	08:00	No	No	No	No	No	No	3		Below Ground	0
	6/11/2014	10:15	No	No	No	No	No	No	3		Below Ground	0
	7/22/2014	10:00	No	No	No	No	No	No	3	Well Water Pit	Below Ground	0
· · · ·	8/19/2014	10.15	No	No	No	No	No	No	3		Below Ground	0
	9/11/2014	08 00	No	No	No	No	No	No	3		Below Ground	0
	12/9/2014	10:45	No	No	No	No	No	No	3		Below Ground	0
	3/3/2015	11:15	No	No	No	No	No	No	3	Well Water Pit	Below Ground	0
() () () () () () () () () ()	6/16/2015	10.00	No	No	No	No	No	No	3	Well Water Pit	Delott Cround	0
	7/8/2015	01:45	No	No	No	No	No	No	3		Below Ground	0
r	9/15/2015	10 00	No	No	No	No	No	No	3		Below Ground	0
	10/13/2015	10:15	No	No	No	No	No	No	3		Below Ground	0
	1/12/2016	10 30	No	No	No	No	No	No	3		Below Ground	0
	2/16/2016	10:30	No	No	No	No	No	No	3		Below Ground	0
	4/19/2016	09:30	No	No	No	No	No	No	3		Below Ground	0
	5/17/2016	09/20	No	No	No	No	No	No	3		Below Ground	0
	6/25/2016	10:00	No	No	No	No	No	No	3		Below Ground	0
	7/26/2016	09.45	No	No	No	No	No	No	3		Below Ground	0
	9/15/2016	10:00	No	No	No	No	No	No	3		Below Ground	0
	10/11/2016	09.45	No	No	No	No	No	No	3		Below Ground	0
	11/15/2016	10.45	No	No	No	No	No	No	3		Below Ground	0
	12/27/2016	09.45	No	No	No	No	No	No	3		Below Ground	0
G	1/10/2017	10.25	No	No	No	No	Yes	No	5		Below Ground	0
G	2/16/2017	10.15	No	No	No	No	Yes	No	5		Below Ground	0
0	3/10/2017	10:15	No	No	No	No	Yes	No	4	Well Water Pit	Below Ground	0
D	4/5/2017	12.10	No	No	No	No	Yes	No	4		Below Ground	0
D	5/3/2017	12:41	No	No	No	No	Yes	No	3	Well Water Pit	Below Ground	0
D	6/6/2017	11:42	No	No	No	No	Yes	No	4		Below Ground	0
5	7/6/2017	13.53	No	No	No	No	Yes	No	3		Below Ground	0
D	8/1/2017	12.52	No	No	No	No	Yes	No	2		Below Ground	0
D	9/5/2017	11.54	No	No	No	No	Yes	No	4		Below Ground	0
	10/2/2017	13:53	No	No	No	No	Yes	No	3		Below Ground	0
0							100					
0	11/1/2017	11.57	No	No	No	No	Yes	No	4	Well Water Pit	Below Ground	0

Pagel of 1

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 C₈ through C₄₀. (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 C₂₈-C₃₅. Analytical Method USEPA 418.1 extends past lube oils from C₃₅ through C_{40} . 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_6 - C_{10} for GRO, C_{10} -C₂₈ for DRO, and C₂₈-C₃₆ for extended analysis. This information was provided by Environmental Science Corporation Laboratories. As the information demonstrates, the 8015M analytical method reports as low as C₆, 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, C₃₆-C₄₀, 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.

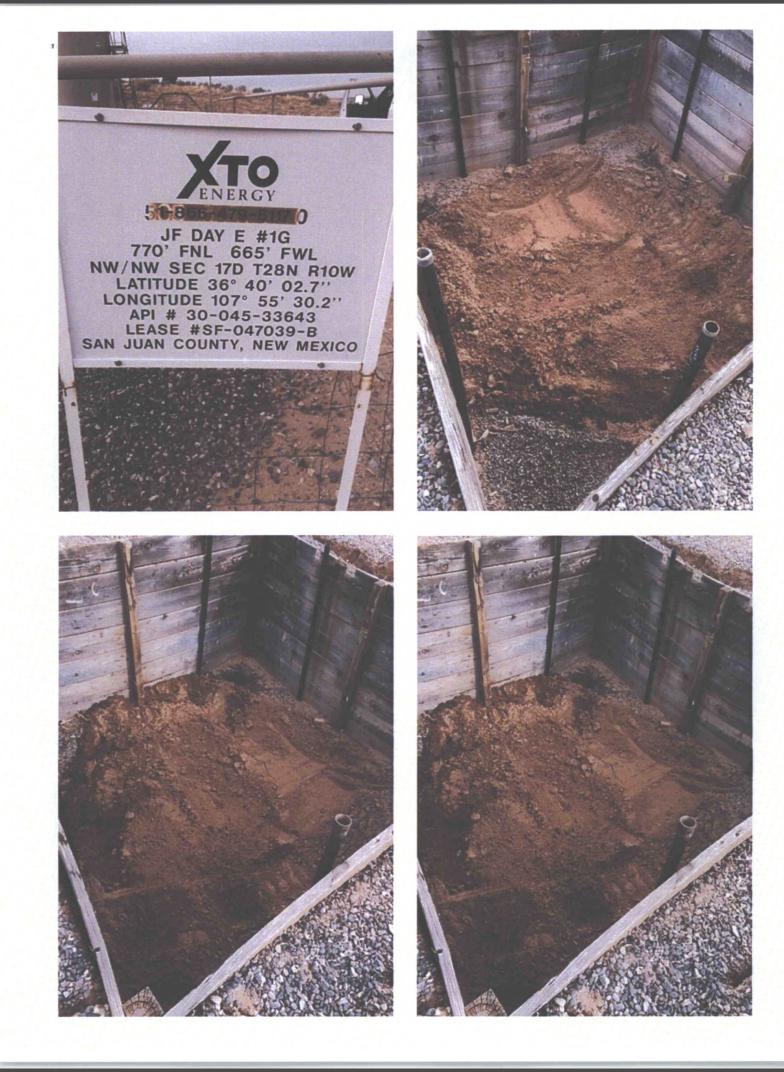
Respectfully Submitted,

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

Carbon Ranges of Typical Hydrocarbons						
Hydrocarbon	Carbon Range					
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					

.

à



State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr.

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

District IV 1220 S. St. Fran	cis Dr., Santa	a Fe, NM 87505	5			, NM 875						
			Rel				orrective A	ction				
						OPERA				l Report	🖂 F	inal Repor
Name of Co	mpany: X	TO Energy	Inc.			Contact: Kurt Hoekstra						
Address: 38				ico		Telephone No. 505-333-3100						
Facility Nan	ne: JF Day	y E # 1G]	Facility Type: Gas Well						
Surface Ow	ner: Feder	al		Mineral (Owner				API No.	30-045-3	3643	
				LOCA	ATION	N OF REI	LEASE					
Unit Letter	Section	Township	Range	Feet from the	-	South Line	Feet from the	East/W	/est Line		County	
D	17	28N	10W	770		FNL	665	F	WL		San Juan	
		La	titude	36.6674167	Longitu	ide -107.92	2506	NAI	D: 83			
			_			OF REL						
Type of Relea	ase: Produc	ed Water			UNE		Release: 11 BBL	's	Volume R	ecovered: N	None	
Source of Re						Date and H	lour of Occurrenc		Date and I	Hour of Dis		
Weelerered	te Metice (7:0				Unknown	W/h a m 9		December	19,2017		
Was Immedia	ate Notice (Yes [No 🛛 Not R	equired	If YES, To	wnom?					
By Whom?						Date and Hour						
Was a Water	Was a Watercourse Reached?					If YES, Volume Impacting the Watercourse.						
10 111									_			
If a Watercou	irse was Im	pacted, Descr	ibe Fully.	•								
produced wat water was rel NMOCD Gui 100 feet, dista	er to be con eased and n idelines for ance to surf	ntained within none was reco the Remediat ace water grea	the below vered. The ion of Lea ater than 2	y grade tank cellar tank was emptie ks, Spills, and Re 00feet, and distar	r, NMOC d and no eleases. T	CD was notifi fluids were r The site was r	as discovered there ed on December 2 recovered from the anked a 0 due to a greater than 1,000	20,2017. e cellar. in estima	Approxim The site wa ated depth t	nately 11 Bl as ranked ac to groundwa	BL's of pr ccording to ater of gre	o the eater than
TPH, 10 ppm Describe Are					k in the l	helow grade t	ank and approxim	nately 11	BBL's of	produced w	ater in the	e helow
grade tank ce	llar a releas	e has been co	nfirmed at	this location.								
regulations al public health should their o	l operators or the envir operations h ment. In a	are required t ronment. The ave failed to a ddition, NMC	o report and acceptance adequately OCD accept	nd/or file certain r ce of a C-141 repo investigate and r	elease no ort by the emediate	otifications and NMOCD m e contaminati	knowledge and un nd perform correct arked as "Final Ro on that pose a three e the operator of r	tive action eport" do eat to gro	ons for rele bes not relie ound water,	eve the open , surface wa	may enda rator of lia ater, huma	nger ability in health
		0				OIL CONSERVATION DIVISION						
Signature: Kurt Horketen						Approved by Environmental Specialist:						
Printed Name	: Kurt Hoe	kstra										
Title: EHS C	oordinator					Approval Dat	e:	E	Expiration E	Date:		
E-mail Addre	ess: <u>Kurt_H</u>	oekstra@xtoe	nergy.con	1		Conditions of	Approval:			Attached	ied 🗌	
Date: 1-3-2			505-333-3	100								
Attach Addit	tional Shee	ets If Necess	ary									



ANALYTICAL REPORT

January 02, 2018



XTO Energy - San Juan Division

Sample Delivery Group:

Samples Received:

Project Number:

Description:

JF Day E #1G

L960063 12/28/2017

Report To:

Logan Hixon 382 County Road 3100 Aztec, NM 87410

Entire Report Reviewed By: Naphne R Richardf

Daphne Richards Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

12065 Lebanon Rd Mount Juliet. TN 37122 615-758-5858 800-767-5859 www.esclabsciences.com

TABLE OF CONTENTS

3

Ср

Ss

Cn

Sr

Qc

GI

AI

Sc

Cp: Cover Page	1						
Tc: Table of Contents	2						
Ss: Sample Summary							
Cn: Case Narrative							
Sr: Sample Results							
BGT CELLAR L960063-01	5						
Qc: Quality Control Summary							
Total Solids by Method 2540 G-2011	6						
Wet Chemistry by Method 300.0	7						
Volatile Organic Compounds (GC) by Method 8015/8021	8						
Semi-Volatile Organic Compounds (GC) by Method 8015	10						
GI: Glossary of Terms	11						
Al: Accreditations & Locations	12						
Sc: Sample Chain of Custody	13						

.

4

SDG: L960063

DATE/TIME: 01/02/18 09:54

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.

BGT CELLAR L960063-01 Solid			Collected by James McDaniel	Collected date/time 12/27/17 09:30	Received date/time 12/28/17 08:45
Method	Batch	Dilution	Preparation	Analysis	Analyst
			date/time	date/time	
Total Solids by Method 2540 G-2011	WG1057966	1	12/28/17 12:25	12/28/17 12:41	KDW
Wet Chemistry by Method 300.0	WG1057967	1	12/28/17 11:51	12/28/17 22:03	KCF
Volatile Organic Compounds (GC) by Method 8015/8021	WG1058040	1	12/28/17 10:59	12/28/17 18:48	RAS
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1058274	10	12/28/17 22:58	12/29/17 19:45	ACM

	_
² Tc	
³ Ss	Contraction of the local division of the loc
⁴ Cn	
⁵ Sr	
⁶ Qc	
⁷ Gl	
⁸ AI	
⁹ Sc	

3

.

*

DATE/TIME: 01/02/18 09:54

PAGE: 3 of 14

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been knowingly withheld that would affect the quality of the data.

apline R Richards

Daphne Richards Technical Service Representative

DATE/TIME: 01/02/18 09:54 PAGE: 4 of 14

BGT CELLAR Collected date/time: 12/27/17 09:30

SAMPLE RESULTS - 01

Cn

Tatal Salida by Mathad 2540 C 2011

	Result	Qualifier	Dilution	Analysis	Batch	 Ср
Analyte	%			date / time		2
Total Solids	93.4		1	12/28/2017 12:41	WG1057966	Tc
Wet Chemistry b	y Method 300.0					³ Ss

Qualifier RDL (dry) Result (dry) Dilution Analysis Batch date / time Analyte mg/kg mg/kg 12/28/2017 22:03 WG1057967 Chloride 752 10.7 1

Volatile Organic Compounds (GC) by Method 8015/8021

Volatile Organic Comp	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg		date / time		⁶ Qc
Benzene	0.127		0.000535	1	12/28/2017 18:48	WG1058040	
Toluene	0.0508		0.00535	1	12/28/2017 18:48	WG1058040	⁷ GI
Ethylbenzene	0.0180		0.000535	1	12/28/2017 18:48	WG1058040	O
Total Xylene	0.0281		0.00161	1	12/28/2017 18:48	WG1058040	2
TPH (GC/FID) Low Fraction	2.88		0.107	1	12/28/2017 18:48	WG1058040	AI
(S) a,a,a-Trifluorotoluene(FID)	85.0		77.0-120		12/28/2017 18:48	WG1058040	
(S) a,a,a-Trifluorotoluene(PID)	96.8		75.0-128		12/28/2017 18:48	WG1058040	°Sc

Semi-Volatile Organic Compounds (GC) by Method 8015

	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg		date / time	
C10-C28 Diesel Range	1860		42.8	10	12/29/2017 19:45	WG1058274
C28-C40 Oil Range	2510		42.8	10	12/29/2017 19:45	WG1058274
(S) o-Terphenyl	174	<u>J1</u>	18.0-148		12/29/2017 19:45	WG1058274

WG105790 Total Solids by M		11			QUALITY CONTROL SUMMARY							
Method Blank	(MB)							1				
(MB) R3276479-1 12	/28/17 12:41							Cp				
	MB Result	MB Qualifier	MB MDL	MB RDL				2_				
Analyte	%		%	%				To				
Total Solids	0											
								SS				
L960081-01 Or	riginal Sample (OS) • Dup	licate (D	UP)				⁴ Cr				
(OS) L960081-01 12	/28/17 12:41 • (DUP) R	3276479-3 12	2/28/17 12:4	1								
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits		^s Sr				
Analyte	%	%		%		%		5				
Total Solids	84.7	78.3	1	8	<u>J3</u>	5		6				
								်ီဝဖ				
Laboratory Co	ntrol Sample (L	CS)						GI				
(LCS) R3276479-2 1	12/28/17 12:41											
	Spike Amount	LCS Result	LCS Rec.	Rec. Lim	its LCS Qua	lifier		A				
Analyte	%	%	%	%				A				
Total Solids	50.0	50.0	100	85-115				0				
								Sc				

v 1 +

ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
XTO Energy - San Juan Division		L960063	01/02/18 09:54	6 of 14

	G1057967 QUALITY CONTROL SUMMARY ONE LAB. NATIONWIDE.											
Method Blank (M	1B)											1
MB) R3276439-1 12/28	8/17 21:20											Ct
	MB Result	MB Qualifier	MB MDL	MB RDL								2
Analyte	mg/kg		mg/kg	mg/kg								Tc
Chloride	8.3	<u>1</u>	0.795	10.0								
												³ Ss
L960063-01 Oric	ninal Sample	OSI . Dur	licato (C									
OS) L960063-01 12/2				,								^⁴ Cn
03/1960063-01 12/20	Original Result					DUP RPD						
	(dry)	(dry)	Dilution	DUP RPD	DUP Qualifier	Limits						⁵ Sr
Analyte	mg/kg	mg/kg		%		%						51
Chloride	752	753	1	0.163		20						6
												ိဝ၀
abaratary Cart			anter C	antial Can	ala Dualia							7
Laboratory Cont					ipie Duplic	ate (LCSD)					-	GI
LCS) R3276439-2 12/2												
	Spike Amount	LCS Result	LCSD Res	ult LCS Rec.	LCSD Ree		LCS Qualifier	LCSD Qualifier	RPD	RPD Limits		A
Analyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%		
Chloride	200	195	196	97.3	98.2	90-110			0.849	20		9
												Sc

L960081-03	Original	Sample (OS) • M	atrix Spik	e (MS)	• Matrix Sp	ike Duplicate (MS
(OS) L960081-03	12/28/17 22	2:37 • (MS) R	3276439-5	12/28/17 22	:45 • (MSI	D) R3276439-6	12/28/17 23:11

(03) Labudo 103 12/2011 22.3 • (MS) K32/04333 12/2011 22.43 • (MSD) K32/04330 12/2011 23.11													
	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits	
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	36	ž		%			26	%	
Chloride	595	287	862	961	96.8	113	1	80-120			10.9	20	

ACCOUNT: XTO Energy - San Juan Division

7 2 0

PROJECT:

SDG: L960063 DATE/TIME: 01/02/18 09:54 PAGE: 7 of 14

WG1058040

Volatile Organic Compounds (GC) by Method 8015/8021

QUALITY CONTROL SUMMARY L950063-01

ONE LAB. NATIONWIDE. *

Method Blank (MB)

Method Blank (MB)													
MB) R3276425-5 12/28/	17 11:29											- C	
	MB Result	MB Qualifier	MB MDL	MB RDL								2	
Analyte	mg/kg		mg/kg	mg/kg								T	
lenzene	0.000285	Ţ	0.000120	0.000500									
oluene	0.000190	L	0.000150	0.00500								³ S	
thylbenzene	U		0.000110	0.000500								Ľ	
otal Xylene	U		0.000460	0.00150								4	
PH (GC/FID) Low Fraction	U		0.0217	0.100								C	
(S) n.a.a-Trifluorotoluene(FID)	94.4			77.0-120								5	
(S) .a,a-Trifluorotoluene(PID)	106			75.0-128								S	
												° C	
aboratory Contro) Sample (L	CS) • Labo	ratory Con	trol Samp	le Duplicat	e (LCSD)						7	
CS) R3276425-1 12/28/	/17 09:36 • (LCS	D) R3276425-2	2 12/28/17 09:	58								- 6	
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits			
nalyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%		^a A	
enzene	0.0500	0.0471	0.0463	94.3	92.6	71.0-121			1.72	20		- L.	
oluene	0.0500	0.0504	0.0492	101	98.3	72.0-120			2.46	20		9	
thylbenzene	0.0500	0.0491	0.0479	98.2	95.8	76.0-121			2.47	20		S	
Total Xvlene	0.150	0.152	0.148	101	98.5	75.0-124			2.61	20		L	

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3276425-1 12/28	/17 09:36 • (LCSI	D) R3276425-	-2 12/28/17 09:5	58							
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits	
Analyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%	10
Benzene	0.0500	0.0471	0.0463	94.3	92.6	71.0-121			1.72	20	L
Toluene	0.0500	0.0504	0.0492	101	98.3	72.0-120			2.46	20	9
Ethylbenzene	0.0500	0.0491	0.0479	98.2	95.8	76.0-121			2.47	20	1
Total Xylene	0.150	0.152	0.148	101	98.5	75.0-124			2.61	20	L
(S) a,a,a-Trifluorotoluene(FID)				93.0	92.4	77.0-120					
(S) a,a,a-Trifluorotoluene(PID)				103	103	75.0-128					

Laboratory Control Sample (LCS) - Laboratory Control Sample Duplicate (LCSD)

(LCS) R3276425-3 12/28	/17 10:21 • (LCSD) R3276425-4	4 12/28/17 10:43	3							
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits	
Analyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%	
TPH (GC/FID) Low Fraction	5.50	5.64	5.38	103	97.9	70.0-136			4.67	20	
(S) a,a,a-Trifluorotoluene(FID)				113	111	77.0-120					
(S) a.a.a-Trifluorotoluene(PID)				123	122	75.0-128					

ACCOUNT: XTO Energy - San Juan Division PROJECT:

SDG: L960063

DATE/TIME: 01/02/18 09:54

PAGE: 8 of 14

WG1058040 Volatile Organic Com		by Method 80	015/8021	QL	JALITY			UMMA	RY			ONE LAB. NATIONWIDE.	*
L960099-01 Origin	nal Sample	(OS) • Matr	ix Spike (MS) • Matrix	Spike Du	uplicate (MS	SD)						1
(OS) L960099-01 12/28/1	17 20:18 • (MS) R	3276425-6 12	28/17 13:55 •	(MSD) R32764	25-7 12/28/17	7 14:17							Ср
	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits	2
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%	Tc
Benzene	0.0500	ND	1.12	1.03	89.1	81.8	25	10.0-146			8.52	29	
Toluene	0.0500	ND	1.19	1.11	92.3	86.0	25	10.0-143			6.77	30	³ Ss
Ethylbenzene	0.0500	ND	1.14	1.07	90.6	85.6	25	10.0-147			5.67	31	55
Total Xylene	0.150	ND	3.53	3.37	93.3	89.0	25	10.0-149			4.64	30	4
(S) a,a,a-Trifluorotoluene(FID)					93.5	93.8		77.0-120					Cn
(S) a,a,a-Trifluorotoluene(PID)					103	104		75.0-128					⁵ Sr
L960099-01 Origir	nal Sample	(OS) • Matr	ix Spike (MS) • Matri>	Spike Du	uplicate (MS	SD)						٥Ĉ
(OS) L960099-01 12/28/1	17 20:18 • (MS) R	3276425-8 12/	28/17 14:40 •	(MSD) R32764	25-9 12/28/17	7 15:02							7
	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits	GI
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%	
TPH (GC/FID) Low Fraction	5.50	ND	146	147	106	106	25	10.0-147			0.836	30	AI
(S) a,a,a-Trifluorotoluene(FID)					107	108		77.0-120					3

ACCOUNT: XTO Energy - San Juan Division

2 3 - 2

(S) a,a,a-Trifluorotoluene(PID)

PROJECT:

118

119

SDG: L960063

75.0-128

DATE/TIME: 01/02/18 09:54

PAGE: 9 of 14 Sc

WG105827		GC) by Met	hod 8015	QL	JALITY			IMARY			ONE LAB. NATIONWIDE.	*
Method Blank (M	1B)											1 Cm
(MB) R3276614-1 12/29	9/17 11:10											- Cp
	MB Result	MB Qualifier	MB MDL	MB RDL								2
Analyte	mg/kg		mg/kg	mg/kg								² Tc
C10-C28 Diesel Range	U		1.61	4.00								
C28-C40 Oil Range	U		0.274	4.00								³ Ss
(S) o-Terphenyl	43.6			18.0-148								00
												⁴Cn
Laboratory Cont	rol Sample (I C	S) . Labor	atory Con	trol Sampl	e Duplicat	e (LCSD)						Cir
				ni or oampi	e ouplicat							5
(LCS) R3276614-2 12/2	29/17 11:24 • (LCSD) R	3276614-3 1	2/29/17 11:37									Sr
	Spike Amount I	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits		

(LCS) R32/0014-2 12/29	17 11.24 · (LCSD)	1832/0014-3	12/29/1/ 11.37								
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits	
Analyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%	
C10-C28 Diesel Range	60.0	31.2	34.2	52.0	57.0	50.0-150			9.22	20	
(S) o-Terphenyl				58.1	65.6	18.0-148					

ACCOUNT: XTO Energy - San Juan Division

2 #1 X

PROJECT:

SDG: L960063 DATE/TIME: 01/02/18 09:54 PAGE: 10 of 14

⁶Qc ⁷Gl

AI

Sc

.

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and	d Definitions
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
DL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
J	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
imits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Driginal Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality contro sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the resu reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates an times of preparation and/or analysis.
Qualifier	Description

J The identification of the analyte is acceptable; the reported value is an estimate.	
J1 Surrogate recovery limits have been exceeded; values are outside upper control limits.	
J3 The associated batch QC was outside the established quality control range for precision.	

PROJECT:

Sc

10.0

ACCREDITATIONS & LOCATIONS

34

Тс

Ss

Cn

Sr

Qc

GI

Sc

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or precared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE**. * Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

. ...

.

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey-NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina 1	DW21704
Florida	E87487	North Carolina ²	41
Georgia	NELAP	North Dakota	R-140
Georgia ¹	923	Ohio-VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
lowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky '	90010	South Dakota	n/a
Kentucky ²	16	Tennessee 14	2006
Louisiana	AI30792	Texas	T 104704245-07-T)
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-0S-15-05		

Third Party & Federal Accreditations

A2LA - ISO 17025	1461.01	AIHA-LAP,LLC	100789	
A2LA - ISO 17025 ⁵	1461.02	DOD	1461.01	
Canada	1461.01	USDA	S-67674	
EPA-Crypto	TN00003			

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ³⁴ Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. ESC Lab Sciences performs all testing at our central laboratory.



ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	
XTO Energy - San Juan Division		L960063	01/02/18 09:54	

Environ Email Results to: Western Division Logan-Hiron@xfornergy.comb_FireEdinie/ Weil Site/Location API Number Saturday Delivery (V(N)) Office Dirango Babken = Collected Bu Samples on Ice Turnaround	960063
ENERGY Email Results to: Weisstern Division Logan-Hiron@xfachergy.comb_Factorie/ Weil Site/Logation API Number Saturday Delivery (Y (N) J F Day E #16 Samples on Ice Turnaround	hhhandahla
Weil Site/Location API Number Saturday Delivery (Y (N) Durango J F Day E #16 Samples on Ice Turnaround Saturday Delivery (Y (N) Saturday Delivery (Y (N)) Saturday Delivery (Y	Abbreviation
Collected By Gamples on ree Turnarouna	= DUR BAK
James McDanie (V) N) Standard Company Test Reason X Next Day EX Roosevelt	= PC
XTC RGT Closure Two Day DE S	ile = OV
Ignature Inree Day Orangevi Gray Areas for Lab Use Only! Same Day 0100000000000000000000000000000000000	54
	ole Number
BGT Cellar S 17/27/17 0930 Cocil 1/402 XXX	-0
	Salar and
	de strates
	Constant Los - Pr
tedla: Filter = F Soil = 3 Wastewater = WW Groundwater = CW Drinking Waster = DW Sludge = SG Surface Water = SW Air = A Drill Mud = DM Other = OT telinquished By: (Signature) / Date: / Time: Received By: (Signature) Number of Bottles Sam	ple Condition
# 12/27/17 1023 teilinguished By: (Signature) Date: Time: Temperature:	
telinquished By: (Signature) Date: Time: Revolved for Lab By: (Signature) Date: Time:	er Informatio
Comments Devel 055 1219/8/085	0

a (1 0

Client: XTO.	SDG#	La	360063
Cooler Received/Opened On: 12/ J/17	Temperature: 47		
Received by : Kate Moffitt			
Signature: Charles Van Van			
Receipt Check List	NP	Yes	No
COC Seal Present / Intact?	/		
COC Signed / Accurate?		1	- Anna Par
Bottles arrive intact?		/	
bottles arrive integer.		-	all a second
	+ · · · · · · · · · · · · · · · · · · ·	Constant in	
Correct bottles used?	an to supplier Attacts	1	
Correct bottles used? Sufficient volume sent?		-	1-15.12
Correct bottles used? Sufficient volume sent? If Applicable VOA Zero headspace?		1	

p + + - 17