Jones, Brad A., EMNRD

From: James_McDaniel@xtoenergy.com
Sent: Wednesday, August 10, 2011 6:32 AM

To: Jones, Brad A., EMNRD Subject: Bolack B #4 BGT Closure

Brad,

Can you approve the BGT closure plan only for the: Bolack B #4 30-045-11820 Sec 300, Twn 27N, Rge 8W.

It was submitted to your office on 2/27/2009

We are closing this BGT during routine upgrades at this location.

Thanks much!



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

Office # 505-333-3701 Cell # 505-787-0519 James_Mcdanlel@xtoenergy.com District I 1625.N. French Dr., Hobbs; NM 88240 . . . District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road; Aztec NM 8741 District IV 1220 S. 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

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office. For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD

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

Type of action: Existing BGT Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method Modification to an existing permit Glosure plan only submitted for an existing permitted or non-permitted pit, closed-loop system,
below-grade tank, or proposed alternative method
Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, 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.
I. Operator:XTO Energy, Inc. OGRID #:5380
Address: #382 County Road 3100, Aztec, NM 87410
Facility or well name: Bolack B #4
API Number: 30-045-11820 OCD Permit Number:
U/L or Qtr/Qtr O Section 30 Township 27N Range 08W County: San Juan
Center of Proposed Design: Latitude <u>36.540410</u> Longitude <u>107.719290</u> NAD: <u>□</u> 1927 ⊠ 1983
Surface Owner: X Federal X State Private Tribal Trust or Indian Allotment
2.
Pit: Subsection F or G of 19.15.17.11 NMAC
Temporary: Drilling Workover
Permanent Emergency Cavitation P&A
☐ Lined ☐ Unlined Liner type: Thicknessmil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other
☐ String-Reinforced
Liner Seams: Welded Factory Other Volume: bbl Dimensions: L x W x D
3. Closed-loop System: Subsection H of 19.15.17.11 NMAC
Type of Operation: P&A Drilling a new well Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent)
☐ Drying Pad ☐ Above Ground Steel Tanks ☐ Haul-off Bins ☐ Other
Lined Unlined Liner type: Thicknessmil LLDPE HDPE PVC Other
Liner Seams: Welded Factory Other
4. 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, no liner
Liner type: Thicknessmil
5. Alternative Method:

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

6. 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 height, steel mesh field fence (hogwire) with pipe top railing	
,	
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 19.15.3.103 NMAC	
o. Administrative Approvals 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: Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau of the Santa Fe En	office 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 application must demonstrate compliance for each siting criteria below in the application. Recommendations of accept material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of a Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to dryitabove-grade tanks associated with a closed-loop system.	priate district pproval.
Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ⊠ No
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 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to temporary, emergency, or cavitation pits and below-grade tanks) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☒ No ☐ NA
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to permanent pits)	☐ Yes ☐ No ☑ NA
- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ⊠ No
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Tes ☑ No
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. Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ 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
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.	☐ Yes ☒ No

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:
Closed-loop Systems 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. Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9 Siting Criteria Compliance Demonstrations (only for on-site closure) - 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:
Previously Approved Operating and Maintenance Plan API Number:(Applies only to closed-loop system that use
above ground steel tanks or haul-off bins and propose to implement waste removal for closure)
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 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 ₂ S, Prevention Plan Emergency Response Plan Oil Field Waste Stream Characterization Monitoring and Inspection Plan Erosion Control 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
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 Closed-loop System 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 (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)
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 F 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 G of 19.15.17.13 NMAC

NMAC) nore than two
ice and operations?
2
ce material are ict office or may be fications and/or
☐ Yes ☐ No ☐ NA
☐ Yes ☐ No ☐ NA
☐ Yes ☐ No ☐ NA
Yes No
☐ Yes ☐ No
☐ Yes ☐ No
☐ Yes ☐ No
☐ Yes ☐ No
☐ Yes ☐ No
☐ Yes ☐ No
☐ Yes ☐ No
n. Please indicate, 5.17.11 NMAC at be achieved)

19. 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): Kim Champlin Title: Environmental Representative
Signature:
e-mail address: kim_champlin@xtoenergy.com Telephone: (505) 333-3100
20
OCD Approval: Permit Application (including closure plan) Closure Plan (only) OCD Conditions (see attachment)
OCD Representative Signature: Approval Date: 811
Title: OCD Permit Number:
Closure Report (required within 60 days of closure completion): Subsection K of 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:
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.
23. Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: Instructions: Please indentify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.
Disposal Facility Name: Disposal Facility Permit Number:
Disposal Facility Name: Disposal Facility Permit Number:
Were the closed-loop system operations and associated activities performed on or in areas that <i>will not</i> be used for future service and operations? Yes (If yes, please demonstrate compliance to the items below) No
Required for impacted areas which will not be used for future service and operations:
Site Reclamation (Photo Documentation)
☐ Soil Backfilling and Cover Installation ☐ Re-vegetation Application Rates and Seeding Technique
24. 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)
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: \[\Boxed{1927} \Boxed{1983}
25.
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. Lelega again, that the allower countries with all analysis who allower provides the countries and confidence and confidence and confidence are allower provides and confidence are all the confidence are allower provides and confidence are allower provides and confidence are allower provides are allower provides and confidence are allower provides an
belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan. Name (Print): Title:
Signature: Date:
e-mail address: Telephone:

NEW MEXICO OIL CONSERVATION COMMISSION WELL LOCATION AND ACERAGE DEDICATION PLAT

All distances must be from the outer houndaries of the Cartisa

	== 00101 000=00100	OF THE SECTION	
Operator	Lease	-	Well No
TENNECO OIL COMPANY	BOLACK "B"		4 -
Unit Letter Section Township	Range	County	
0 / 30 27 North	8 West	San Juan	
Actual Footage Location of Well.			
825 / feet from the South time and	1770 ~ fe	et from the East	line
Ground Level Elev Producing Formation	Poo!		Dedicated Avereage
6093'ungraded Basin Dakota	Basin Dakota	3 V	E/2 320 Acres
 2 If more than one lease is dedicated to the well, our interest and royalty), 3 If more than one lease of different ownership is dealing to communitization, unitization, force-pooling etc? 	dicated to the well, ho	ave the interests of all	
() Yes () No If answer is "yes," type of	f consolidation		
If answer is "no," list the owners and tract descriptions necessary.)	s which have actually	consolidated (Use re	verse side of this form if
No allowable will be assigned to the well until all interest pooling, or otherwise) or until a non standard unit, eliminating the standard unit, eliminatin	sts have been consolid inating such interests,	ated (by communitize has been approved by	ation, unitization, forced- the Commission

RELIVED AUGI 3 1966 COM. DIST. ROBERT H. ERNST NO. 2463 OF SETEROLE OF STERE OF THE PROPERTY OF THE PROPER

ERNST ENGINEERING CO. DURANGO, COLORADO

?

CERTIFICATION

kereis knowle	eroby certify that the information contained is true and complete to the best of my day and belief. Able Cyfichols:
Name	Harold C. Nichols
Position	Senior Production Clerk
	Tenneco Oil Company
Compa	•
Dote	August 10, 1966
this pl surveys that th	preby certify that the well location shown on at was plotted from field notes of actual mode by me or under my supervision, and e same is true and correct to the best of my dge and belief.
14 J	fuly 1966
Date S	urveyed
12	they to land
Kegiste	red Professional Engineer

and/or Land Surveyor
Robert H. Ernst

Certificate No

N. Mex. PE & LB 2463

Client: XTO Energy **Pit Permit** Lodestar Services, Inc. **Project:** tank permitting **Siting Criteria** PO Box 4465, Durango, CO 81302 Revised: 13-Sep-08 **Information Sheet** Prepared by: **Trevor Ycas** API#: 30-045-11820 USPLSS: 27N 08W 30 O Name: BOLACK B No. 004 Lat/Long: 36.540410°, -107.719290° Geologic 50-100' Nacimiento Formation (Tn) Depth to groundwater: formation: Distance to closest Site Elevation: continuously flowing 13.3 miles NW to 'San Juan River' 1860m/6102' watercourse: Distance to closest significant watercourse, 1160' W to 'Blanco Canyon' lakebed, playa lake, or sinkhole: **Soil Type:** Rockland/ Aridisols Permanent residence, school, hospital, NO institution or church within 300' **Annual** Navajo Dam: 12.95", Governador: 11.98", Precipitation: Capulin Rgr Stn.: 14.98", Otis: 10.41" **Domestic fresh water** Precipitation Historical daily max. precip.: 4.19" well or spring within NO Notes: (Bloomfield) 500' Any other fresh water well or spring within NO 26N06W_iWaters.pdf, 26N07W_iWaters.pdf, **Attached** 26N08W_iWaters.pdf, 27N07W_iWaters.pdf, **Documents:** NO 27N08W_iwaters.pdf, 27N09W_iwaters.pdf, Within incorporated 28N07W_iWaters.pdf, 28N08W_iWaters.pdf, municipal boundaries 28N09W_iWaters.pdf Within defined 30-045-11820_gEarth-PLS.jpg, 30-045-11820_topo-FM3500640750B 30 NO municipal fresh water 045-11820.jpg PLS.jpg, 30-045-11820_gEarth-iWaters.jpg well field NO **Mining Activity:**

Additional Notes:			
to Blanco Canyon	,	below Blanco Mesa	

NO

No -FEMA Zone 'X'

Wetland within 500'

Within unstable area

Within 100 year flood

drains

None Near

NM_NRD-MMD_MinesMillQuarries_30-045-11820.jpg

Hydrogeologic Report for Siting Criteria

BOLACK B No. 0048 Below Ground tank API: 30-045-11820

General Geology and Hydrology

The San Juan Basin is a typical Rocky Mountain basin with a gently dipping southern flank and a steeply dipping northern flank. Asymmetrically layered Tertiary sandstones and shales, along with Quaternary alluvial deposits, dominate surficial geology (Dane and Bachman, 1965). The proposed pit location will be located in the western Largo Canyon region of the San Juan Basin, below Blanco Mesa in Blanco Canyon. The predominant geologic formations are the Nacimiento and San Jose Formation of Tertiary age, which underlie surface soils and are often exposed (Dane and Bachman, 1965). Deposits of Quaternary alluvial and aeolian sands occur prominently near the surface of the area, especially near streams and washes.

Cretaceous and Tertiary sandstones, as well as Quaternary alluvial deposits serve as the primary aquifers in the San Juan basin (Stone et al., 1983). In most of the proposed area, the San Jose Formation lies at the surface and overlies the Nacimiento Formation. Thickness of the San Jose ranges from 200 to 2700 feet, thickening from west to east across the region of interest (Stone et al., 1983). Aquifers within the coarser and continuous sandstone bodies of the San Jose Formation are between 0 and 2700' deep in this section of the basin (Stone et al., 1983). Groundwater within these aquifers flows north, toward the San Juan River. Little specific hydrogeologic data is available for the San Jose Formation system, but "numerous well and springs used for stock and domestic supplies" draw their water from the San Jose Formation (Stone et al, 1983).

The prominent soil type at the proposed site are rocklands and aridisols, which are defined as soils that exhibit little to no any profile development (www.emnrd.state.nm.us). Soils are basically unaltered from their parent rock. Miles of arroyos, washes and intermittent streams exist as part of the drainage network towards the San Juan River. These features often cut into soil and other unconsolidated materials, contributing to sedimentation downstream. The sudden influx of water from storm events easily erodes the soils that cover the area and prohibits effective recharge to the underlying aquifers.

Dry and arid weather further prohibit active recharge. The climate of the region is arid, averaging just over 12 inches of rainfall annually. As is typical of the southwestern United States monsoonal weather patterns, most precipitation falls from August through October. The heaviest rainfall occurs in the summer in isolated, intense cloudbursts. November through June is relatively dry. Snow generally falls from December to mid-February and averages less than one-half inch in depth. However, most recharge occurs during the winter months during snowmelt periods from the upper elevations (Western Regional Climate Center www.wrcc.dri.edu).

The predominant vegetation is sagebrush and grasses with a more restricted pinon-juniper association (Dick-Peddie, 1993).

Site Specific Hydrogeology

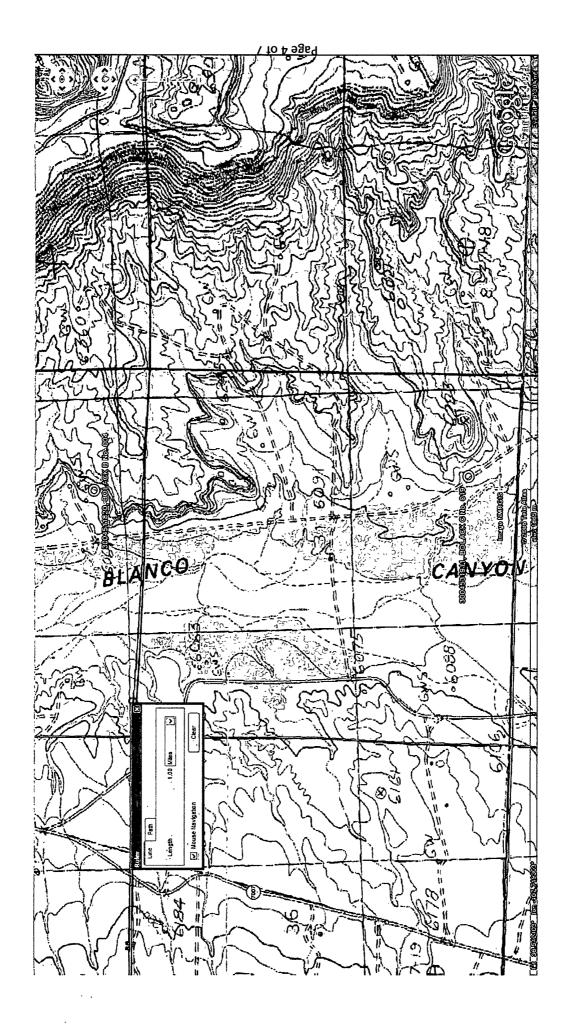
Depth to groundwater is estimated to be between 50 and 100 feet. This estimation is based on data from Stone and others (1983), the USGS Groundwater Atlas of the United States and depth to groundwater data published on the New Mexico State Engineer's iWaters Database website. Local topography and proximity to surface hydrologic features are also taken into consideration. Groundwater data is extremely limited in this region; the nearest iWaters data point lies 1.5 miles southwest (SJ02961). Other 'nearby' iWaters wells are located 4.4 miles east (SJ02410) and 2.3 miles southwest (SJ02962).

Beds of water-yielding sandstone are present in the San Jose Formation, which are fluvial in origin and are interbedded with mudstone, siltstone & shale. "Extensive intertonguing" of different members of this formation is reported. (Stone et al., 1983). Porous sandstones form the principal aquifers, while relatively impermeable shales and mudstones form confining units between the aquifers (Stone et al., 1983). Local aquifers exist within the San Jose Formation at depths greater than 100 feet and thicknesses of the aquifer can be up to several hundred feet (USGS, Groundwater Atlas of the US) (Stone et al., 1983).

The site in question is located between small cliffs and Blanco Wash, below Blanco Mesa, overlooking Blanco Canyon, at an elevation of 6102 feet and approximately 1160 feet east of Blanco Canyon. This site drains to Blanco Canyon, approximately 1160 feet west; the closest significant watercourse is Blanco Canyon. This region is deeply incised by canyons, washes, gullies and arroyos, with large, flat-topped mesas the predominant topographic feature. The mesas are composed of cliff-forming sandstone, and systems of dry washes and their tributaries composed of alluvium are evident on the attached aerial image. Groundwater is expected to be shallow within Largo and Blanco Canyons and within major tributary systems.

Groundwater data available from the NM State Engineer's iWaters Database for wells near the proposed site are attached.

Wells located at similar elevations along Largo & Blanco Canyons contain groundwater at depths of 18 feet and deeper. However, an elevation difference of over 20m between Blanco Wash and this site suggests that the water is deeper than 50 feet. A map showing the location of wells in reference to the proposed pit location is attached.





feet)

New Mexico Office of the State Engineer POD Reports and Downloads

Township:	28N Range: 08W Sec	etions:	
NAD27 X:	Y: Z	one: Search I	Radius:
County:	Basin:	Number:	Suffix:
Owner Name: (First)	(Last)	ONon-Dor	mestic ODomestic OAll
POD / Surf	ace Data Report Avg Depth	to Water Report Water C	Column Report
	Clear Form iWA	TERS Menu Help	

WATER COLUMN REPORT 08/04/2008

(quarters are higgest to smallest)

	(qu	arter	s are	e pr	gge	st to	smallest)			Depth	Depth	Water	(in
POD	Number	Tws	Rng	Sec	q (q q	Zone	X	Y	Well	Water	Column	
SJ	02283	28N	08W	14	4	2 1				540	. 480	60	
SJ	00209	28N	08W	17	3 :	2 1				15			
SJ	00209 -AMENDED-S	28N	08W	17	4	1 1				15			
SJ	00209 S	28N	08W	17	4	1 1				15		15	
SJ	00163 S	28N	08W	18	4	4 2				1450	800	650	

New Mexico Office of the State Engineer POD Reports and Downloads

	•
	Township: 28N Range: 07W Sections:
	NAD27 X: Zone: Search Radius:
	County: Basin: Number: Suffix:
	Owner Name: (First) (Last) ONon-Domestic ODomestic OAll
	POD / Surface Data Report Avg Depth to Water Report Water Column Report
	Clear Form iWATERS Menu Help
	WATER COLUMN REPORT 08/11/2008
	(quarters are 1=NW 2=NE 3=SW 4=SE)
	(quarters are biggest to smallest) Depth Depth Water (in feet)
POD Number	Tws Rng Sec q q q Zone X Y Well Water Column
SJ 00002	28N 07W 14 1 375
SJ 03116	28N 07W 21 3 3 3 98 20 78 .

-			POD Reports and						
		Townsh	ip 27N Range 09W Section	ns [
		NAD27 X	Y Zone	Search Radius					
		County	Basin.	☐ Number ☐ Suff	fix.				
		Owner Name (First)	(Last)	ONon-Domestic O	Domestic All				
		POD /	Surface Data Report Avg Depth to W	ater Report . Water Column Report	J	•			
			Clear Form iWATERS	Menu Help					
DB File Nbr	POD / SURFACE D (acre ft per annum) Use Diversion Owner	ATA REPORT 08/12/2008 POD Number	(quarters are 1=NW 2=NE 3 (quarters are biggest to Source Tws Rng Se	smallest X Y are in Fee		are in Meters) one Easting Northing	Start Date	Finish Date	Depth Dept Well Water
No Records for	und, try again								

1 of 1

New Mexico Office of the State Engineer POD Reports and Downloads

	Township: 27N Range: 08W Sections:
	NAD27 X: Y: Zone: Search Radius:
	County: Basin: Number: Suffix:
	Owner Name: (First) (Last) ONon-Domestic ODomestic OAll
	POD / Surface Data Report
	Clear Form iWATERS Menu Help
POD Number SJ 02410	WATER COLUMN REPORT 08/04/2008 (quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are biggest to smallest) Tws Rng Sec q q q Zone X Y Well Water Column 27N 08W 36 1 3 2 2200

New Mexico Office of the State Engineer **POD Reports and Downloads**

Township:	7N Range: 07W	Sections:			
NAD27 X:	Y:	Zone:	Search I	Radius:	
County:	Basin:		Number:	Suffix:	
Owner Name: (First)	(Last)		ONon-Don	nestic ODomestic OAll	
POD / Surfa	ce Data Report Avg I	Depth to Water F	Report Water C	olumn Report	
	Clear Form	iWATERS Men	u Help		

WATER COLUMN REPORT 08/04/2008

(quarters	are	1=NW	2=NE	3=SW	4=SE)
(quarters	are	bigge	st to	sma]	llest)

	(quarter	s are	big	gest to	smallest)			Depth	Depth	Water	(in feet)
POD Number	Tws	Rng	Sec	qqq	Zone	X	Y	Well	Water	Column	
RG 81025	27N	07W	35	4.33				560	465	95	
SJ 00195	27N	07W	15	2				1633	500	1133	
SJ 02314	27N	07W	17	3 3				355	320	35	
SJ 02408	27N	07W	21	2 1 3				400	300	100	
SJ 03274	27N	07W	35	3 4 4				450			
SJ 02404	27N	07W	35	4 3 3				550	250	300	

New Mexico Office of the State Engineer POD Reports and Downloads

NAD27 X: Y: Zone: Search Radius: County: Number: Suffix:
County: Basin: Number: Suffix:
Owner Name: (First) (Last) ONon-Domestic ODomestic OAll
POD / Surface Data Report Avg Depth to Water Report Water Column Report
Clear Form WATERS Menu Help

WATER COLUMN REPORT 08/08/2008

(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are biggest to smallest)

-	(quarter	s ar	e bi	gge	est	t to	smalles	t)		Depth	Depth	Water	(in feet
POD Number	Tws	Rng	Sec	q	q	q	Zone	X	Y	Well	Water	Column	
SJ 02961	26N	09W	01	2	2	3				1500			
SJ 02962	26N	09W	01	3	2	3				1500			
SJ 01756	26N	09W	11	2	2	3				75	40	35	
SJ 03811 POD1	26N	09W	12	3	3	3				348	175	173	
SJ 00412	26N	09W	16	4	2					202	65	137	
SJ 00214	26N	09W	26	2	4	2				946	230	716	
SJ 00064	26N	09W	26	4	2	1				490	215	275	
SJ 00063	26N	09W	26	4	2	3				479	234	245	

New Mexico Office of the State Engineer POD Reports and Downloads

	Township: 26N	Range: 08W Se	ctions:			
•	NAD27 X:	Y:	Zone:	Sea	rch Radius:	
Cou	nty: Basin	:		Number:	Suffix:	
Own	er Name: (First)	(Last)		ONon-	Domestic ODomestic	e All
	POD / Surface Data	Report Avg Depti	n to Water Ře	port Wa	ter Column Report	
		Clear Form iWA	TERS Menu	Help		
	WATER CO	LUMN REPORT 08/07	7/2008			<u> </u>
(qua	arters are 1=NW 2=NE 3=S	W 4=SE)				
(qua	arters are biggest to sm	allest)	Depth	Depth	Water (in feet)	
POD Number	Tws Rng Sec q q q Zo	ne X	Y Well	Water	Column	
SJ 02405	26N 08W 01 3 4 3		180	100	80	
SJ 02411	26N 08W 01 4 4 1		6000			

2200

Record Count: 3

26N 08W 01 4 4 1

SJ 02407

New Mexico Office of the State Engineer POD Reports and Downloads

,	Township: 26N	Range: 07W	Sections:		
NA	D27 X:	Y:	Zone:	Search	Radius:
County:	Ba	sin:		Number:	Suffix:
Owner Name:	(First)	(Last)		ONon-Do	mestic ODomestic
;; ; ,	POD / Surface D	ata Report Avg	Depth to Water F	Report Water (Column Report
		Clear Form	iWATERS Men	u Help	

WATER COLUMN REPORT 08/06/2008

(quarters are 1=NW 2=NE 3=SW 4=SE)

	(quarter	s are	e bi	gges	t to	smallest)			Depth	Depth	Water	(in feet)
POD Number	Tws	Rng	Sec	qq	q	Zone	X	Y	Well	Water	Column	
SJ 02409	26N	07W	01	1 2	2				700	400	300	
SJ 02402	26N	07 W	05	3 3	2				36	18	18	
SJ 00071	26N	07 W	15	4 1	2				365	26	339	
SJ 00070	26N	07W	15	4 2	3				· 335	22	313	
SJ 02406	26N	07W	30	3 2	1				280	180	100	

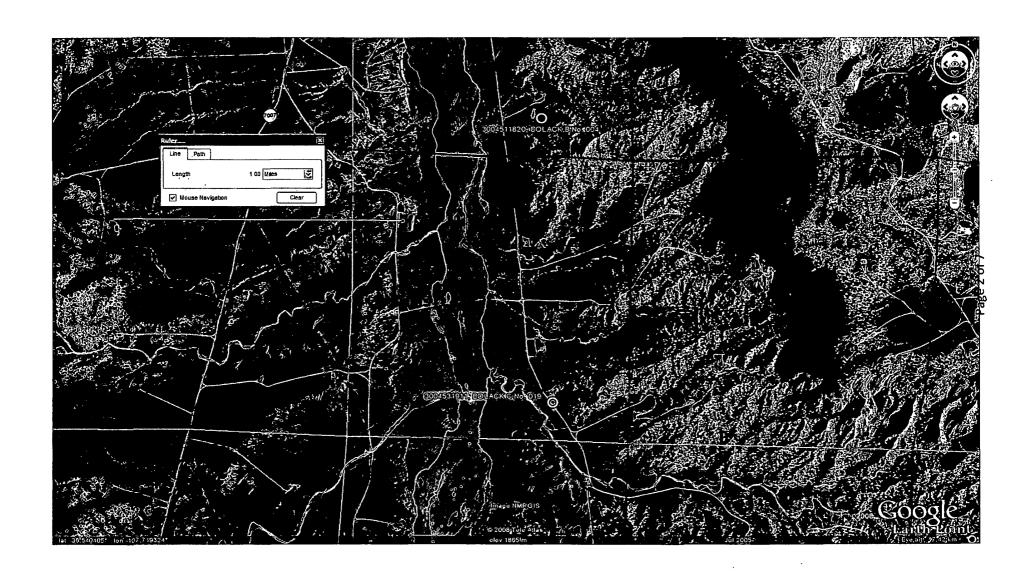
New Mexico Office of the State Engineer POD Reports and Downloads

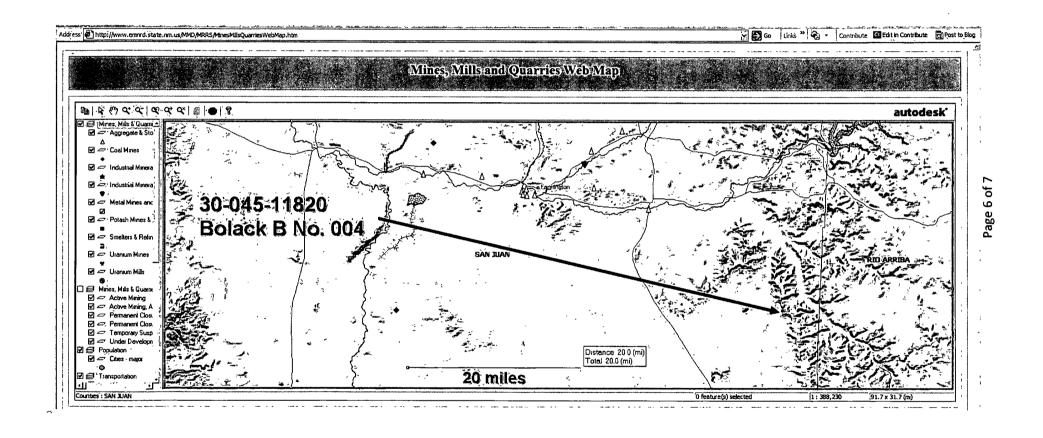
Township: 28N	Range: 09W Sectio	ons:	
NAD27 X:	Y: Zone	e: Search Radius:	
County: Ba	sin:	Number: Suffix:	
Owner Name: (First)	(Last)	ONon-Domestic ODomestic	Ail
POD / Súrface I	Data Report Avg Depth to	Water Report Water Column Report	
	Clear Form iWATER	RS Menu Help	

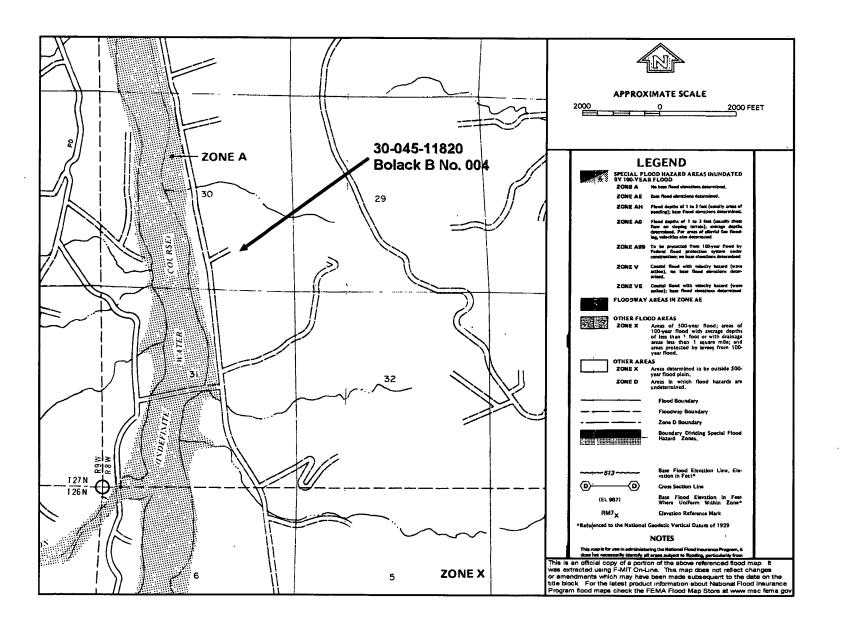
WATER COLUMN REPORT 08/06/2008

(quarters	are	1=NW :	2=NE	3=SW	4=SE)	
(quarters	are	bigge	st to	smal	.lest)	
	_	_		_		

	(quarter	s are biggest	to	smallest)			Depth	Depth	Water	(in feet)
POD Number	Tws	Rng Sec q q	q	Zone	X	Y	Well	Water	Column	
SJ 03746 POD1	28N	09W 20 1 2	3				190	40	150	
SJ 00018	28N	09W 20 3 1	4				135	71	64	•
SJ 02800	28N	09W 24 4 2	3				200			







XTO Energy Inc. San Juan Basin (Northwest New Mexico) General Closure Plan For Below-Grade Tanks

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.
- 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.
- 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.
- 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

- 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 has approved prior to removal. Any associated liners will be removed, properly cleaned and disposed of per 19.15.9.712 NMAC at San Juan County Landfill. Documentation of the final disposition will be included in the closure report.
- 6. XTO will remove any on-site equipment associated with a below-grade tank unless the equipment is required for some other purpose.
- 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

XTO Energy Inc. San Juan Basin (Northwest New Mexico) General Closure Plan For Below-Grade Tanks Page 2

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.

- 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.
- 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.
- 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

The surface owner shall also be notified prior to the implementation of any closure operations of below-grade tanks as per the approved closure plan using certified mail, return receipt requested.

- 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.
- 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. Soil cover will be constructed to the site's existing grade and ponding of water and erosion of the cover material will be prevented with drainage control, natural drainages and silt traps where needed.
- 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.

XTO Energy Inc. San Juan Basin (Northwest New Mexico) General Closure Plan For Below-Grade Tanks Page 3

- 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;
 - ii. Details on capping and covering, where applicable;
 - iii. Inspection reports;
 - iv. Confirmation sampling analytical results;
 - v. Disposal facility name(s) and permit number(s);
 - vi. Soil backfilling and cover installation;
 - vii. Re-vegetation application rates and seeding techniques, (or approved alternative to re-vegetation requirements if applicable);
 - viii. Photo documentation of the site reclamation.

XTO Energy Inc. San Juan Basin (Northwest New Mexico) General Design and Construction Plan For Below-Grade Tanks

In accordance with Rule 19.15.17.11 NMAC the following information describes the design and construction 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.

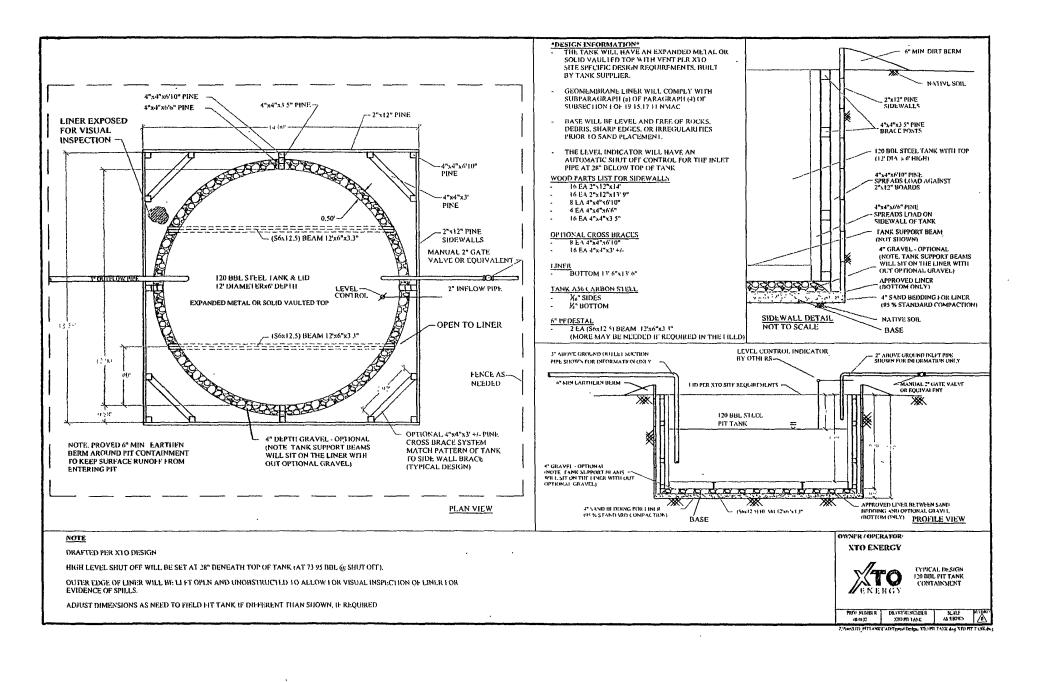
General Plan

- 1. XTO will design and construct below-grade tanks to contain liquids and solids and prevent contamination of fresh water and protect public health and environment.
- 2. XTO will post a well sign, in compliance with 19.15.3.103 NMAC, on the existing well site operated by XTO where the existing below-grade tank is located. The sign will list the Operator on record as the operator, the location of the well site by unit letter, section, township, range, and emergency telephone numbers.
- 3. XTO is requesting approval of an alternative fencing to be used on below-grade tank locations. Below-grade tank locations will be fenced utilizing 48" steel mesh field-fence (hogwire) with pipe railing along the top. A 6' chain link fence will be utilized around the well pad if the well site is within a city limits or ¼ mile of a permanent residence, school, hospital, institution or church. Below-grade tanks located within 1000' of a permanent residence, school, hospital, institution or church will be fenced by 6' chain link fence with at least two strands of barbed wire at the top. All gates associated with below-grade tanks will remain closed and locked when responsible individuals are not on site.
- 4. XTO shall construct below-grade tanks with an expanded metal covering or solid vaulted top on the top of the below-grade tank.
- 5. XTO will ensure that below-grade tanks are constructed of materials resistant to the below-grade tank's particular contents and resistant to damage from sunlight. Tanks will be constructed of A36 carbon steel with 3/16" sides and '4" bottom. (See attached drawing).
- 6. The below-grade tank system will have a properly constructed foundation consisting of a level base free of rocks, debris, sharp edges or irregularities to prevent punctures, cracks or indentations of the liner or tank bottom. Sand bedding (4") will be placed on top of a level foundation to ensure prevention of punctures, cracks or indentations of the liner or tank bottom.
- 7. XTO will construct a berm and/or diversion ditch in a manner that prevents the collection of surface water run-on. Below-grade tanks will be equipped with automatic high level shut-off devices as well as manually operated shut-off valves. (See attached drawing).
- 8. XTO will construct and use below-grade tanks that do not have double walls. The below-grade tank sidewalls will be open for visual inspection for leaks. The sidewalls of the cellar will be constructed with 2" X 12" pine sidewalls and 4" X 4" pine brace posts. The below-grade tank

XTO Energy Inc. San Juan Basin (Northwest New Mexico) General Design and Construction Plan For Below-Grade Tanks Page 2

bottom will be elevated a minimum of 6" above the underlying ground surface and the below-grade tank will be underlain with a geomembrane liner to divert leaked liquid to a location that can be visually inspected. (See attached drawing).

- 9. XTO will equip below-grade tanks designed in this manner with a properly functioning automatic high-level shut-off control device and manual controls to prevent overflows. (See attached drawing).
- 10. XTO will demonstrate to the OCD that the geomembrane liner complies with the specifications of Subparagraph (a) of Paragraph (4) of Subsection I of 19.15.17.11 NMAC and obtain approval from OCD prior to the installation of the design. The geomembrane liner shall have a hydraulic conductivity no greater than 1 x 10-9 cm/sec. The geomembrane liner shall be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts and acidics and alkaline solutions. The liner material shall be resistant to ultraviolet light. Liner compatibility shall comply with EPA SW-846 method 9090A. (See attached drawing).
- 11. The general specifications for design and construction are attached.



XTO Energy Inc. San Juan Basin (Northwest New Mexico) General Maintenance and Operating Plan For Below-Grade Tanks

In accordance with Rule 19.15.17.12 NMAC the following information describes the operation and maintenance 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 operate and maintain below-grade tanks to contain liquids and solids, maintain the integrity of the liner and secondary containment system, prevent contamination of fresh water and protect public health and the environment. Fluid levels will be monitored weekly and high levels will be removed as necessary. Monthly inspections will be conducted to monitor integrity of below-grade tank systems and below-grade tanks will be equipped with automatic high-level shut-off devices.
- 2. XTO will not allow below-grade tanks to overflow and will use berms and/or diversion ditch to prevent surface run on to enter the below-grade tank. Below-grade tanks will be equipped with automatic high-level shut-off control devices as well as manually operated shut-off valves. See attached drawing for vault design and placement of diversion berms and shut-off devices.
- 3. XTO will continuously remove any visible or measurable layer of oil from the fluid surface of below-grade tanks in order to prevent significant accumulation of oil.
 - 4. XTO will inspect the below-grade tank monthly and maintain written records for five years. Monthly inspections will consist of documenting the following: (see attached template),

Well Name
API #
Sec., Twn., Rng.
XTO Inspector's name
Inspection date and time
Visible tears in liner
Visible signs of tank overflow
Collection of surface run on
Visible layer of oil
Visible signs of tank leak
Estimated freeboard

- 5. XTO will maintain adequate freeboard to prevent over topping of the below-grade tank. High level shut-off devices control the freeboard at an average of 28" beneath the top of the tank.
- 6. XTO will not discharge into or store any hazardous waste in any below-grade tank.
- 7. If a below-grade tank develops a leak, or if any penetration of a below-grade tank occurs below the liquids surface, XTO will remove all liquids above the damage or leak line within 48 hours,

XTO Energy Inc.
San Juan Basin (Northwest New Mexico)
General Maintenance and Operating Plan
For Below-Grade Tanks
Page 2

notify the appropriate division district office within 48 hours of the discovery and repair the damage or replace the below-grade tank. If an existing below-grade tank does not meet current requirements of Paragraphs 1-4 of Subsection I of 19.15.17.11 NMAC the tank will be modified or retrofitted to comply. If compliance can not be achieved XTO will implement the approved closure plan.

MONTHLY BELOW GRADE TANK INSPECTION FORM								
Well Name:				API No.:				•
l omalo	Soot		Township		· Banna			
Legals	Sec.		Township:		. Kange:			
XTO Inspector's	Inspection	Inspection	Any visible liner	Any visible signs of	Collection of surface	Visible layer	Any visible signs	Freeboard
Name	Date	Time	tears (Y/N)	tank overflows (Y/N)	run on (Y/N)	of oil (Y/N)	of a tank leak (Y/N)	Est. (ft)
		;						
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Notes:	Provide De	tailed Descri	ption:					
Misc:				<u> </u>		<u> </u>		
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