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 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 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 District Office.

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

Proposed Alternative Method Permit of	r Closure i	ran Applica	ation
Type of action: Existing BGT Permit of a pit, closed-loop system, below Closure of a pit, closed-loop system, below Modification to an existing permit Closure plan only submitted for an existing	ow-grade tank,	or proposed alte	ernative method
below-grade tank, or proposed alternative method			
Instructions: Please submit one application (Form C-144) per individual pit,	-		
Please be advised that approval of this request does not relieve the operator of liability should on the survivonment. Nor does approval relieve the operator of its responsibility to comply with any o	perations result i ther applicable go	in pollution of surfa	ace water, ground water or the rity's rules, regulations or ordinances.
1.	71		
Operator: XTO Energy, Inc.	OGRID #:	5380	
Address: #382 County Road 3100, Aztec, NM 87410			
Facility or well name: Cooper Gas Com #1E			
API Number: 30-045-24162 OCD Permit N	Number:	and the second	
U/L or Qtr/Qtr J Section 15 Township 29N Range	11W Cou	unty: San	Juan
Center of Proposed Design: Latitude 36.72282 Longitude	107.9742		NAD: □1927 ☑ 1983
Surface Owner: Federal State Private Tribal Trust or Indian Allotment			
2.			The state of the s
Pit: Subsection F or G of 19.15.17.11 NMAC			
Temporary: Drilling Workover			
☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A			
☐ Lined ☐ Unlined Liner type: Thickness mil ☐ LLDPE ☐ HDPE	□PVC □ O	ther	
☐ String-Reinforced			
	: bb	l 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 intent)	s to activities wh	ich require prior a	approval of a permit or notice of
☐ Drying Pad ☐ Above Ground Steel Tanks ☐ Haul-off Bins ☐ Other			
Lined Unlined Liner type: Thicknessmil LLDPE HE		Other	
Liner Seams: Welded Factory Other		J Outer	
Enter Sealis. Two deed En actory E other			
4. Subsection I of 19.15.17.11 NMAC			
Volume: 95 bbl Type of fluid: Produced Water			
Tank Construction material: Steel			
☐ Secondary containment with leak detection ☐ Visible sidewalls, liner, 6-inch lift	and automatic o	verflow shut-off	
☐ Visible sidewalls and liner ☐ Visible sidewalls only ☒ Other Visible sidewall			nut off, no liner
Liner type: Thickness mil HDPE PVC Other			
	NAC-14-1-1-1		
5. Alternative Method:			
Submittal of an exception request is required. Exceptions must be submitted to the San	ta Fe Environme	ental Bureau office	e for consideration of approval.

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,	hognital
institution or church) Four foot height, four strands of barbed wire evenly spaced between one and four feet	поѕриш,
☐ Alternate. Please specify Four foot height, steel mesh field fence (hogwire) with pipe top railing ☐ Four foot height, steel mesh field fence (hogwire) with pipe top railing	
7. Netting: Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks)	
☐ Screen ☐ Netting ☐ Other <u>Expanded metal or solid vaulted top</u>	
Monthly inspections (If netting or screening is not physically feasible)	
8. 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	
9. 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 consideration of approval. ☐ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.	office for
10.	
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 accept material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the approoffice 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 dry above-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 ☐ NoNA
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to permanent pits) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No ☐ NA
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	Yes 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 FEMA map	Yes No
	1/11/16

1. 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 Lak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC Quality Control/Quality Assurance Construction and Installation Plan Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Nuisance or Hazardous Odors, including H ₂ S, Prevention Plan Emergency Response Plan Oil Field Waste Stream Characterization Monitoring and Inspection Plan Erosion Control Plan Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
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 Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

16. Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: (19.15.17.13)	
Instructions: Please indentify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if facilities are required.	f more than two
Disposal Facility Name: Disposal Facility Permit Number:	
Disposal Facility Name: Disposal Facility Permit Number:	
Will any of the proposed closed-loop system operations and associated activities occur on or in areas that will not be used for future so Yes (If yes, please provide the information below) No	ervice and operations?
Required for impacted areas which will not be used for future service and operations: Soil Backfill and Cover Design Specifications based upon the appropriate requirements of Subsection H of 19.15.17.13 NM Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC	AC
Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable so provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate deconsidered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Judemonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.	istrict office or may be
Ground water is less than 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 between 50 and 100 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	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. - 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; Visual inspection (certification) of the proposed site	Yes 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 FEMA map	☐ Yes ☐ No
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure by a check mark in the box, that the documents are attached. Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.11 NMAC Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.13 NMAC Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Waste Material Sampling Plan - 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 or in case on-site closure standards call Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC	9.15.17.11 NMAC

19. Operator Application Certification:		
I hereby certify that the information submitted with this application is true	, accurate and complete to the	ne best of my knowledge and belief.
Name (Print): Kim Champlin	Title:	Environmental Representative
Signature: Kim Champlin	Date:	11/26/08
e-mail address: kim_champlin@xtoenergy.com		(505) 333-3100
20.		
OCD Approval: Permit Application (including closure plan) PClo		
OCD Representative Signature:		Approval Date: (((6
Title: Breeze Chref	OCD Permit Num	ber:
Closure Report (required within 60 days of closure completion): Substitutions: Operators are required to obtain an approved closure plan The closure report is required to be submitted to the division within 60 desection of the form until an approved closure plan has been obtained and	prior to implementing any tys of the completion of the	closure activities and submitting the closure report. closure activities. Please do not complete this been completed.
Closure Method: Waste Excavation and Removal On-Site Closure Method If different from approved plan, please explain.	Alternative Closure Method	☐ Waste Removal (Closed-loop systems only)
Closure Report Regarding Waste Removal Closure For Closed-loop S Instructions: Please indentify the facility or facilities for where the liquit two facilities were utilized.	ds, drilling fluids and drill o	cuttings were disposed. Use attachment if more than
Disposal Facility Name:		ermit Number:
Disposal Facility Name:		ermit Number:
Were the closed-loop system operations and associated activities performe Yes (If yes, please demonstrate compliance to the items below)		be used for future service and operations?
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		
Closure Report Attachment Checklist: Instructions: Each of the followark 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)	osure)	
On-site Closure Location: Latitude	Longitude	NAD: 1927 1983
Operator Closure Certification: I hereby certify that the information and attachments submitted with this closure. I also certify that the closure complies with all applicable closure re	osure report is true, accurate	e and complete to the best of my knowledge and specified in the approved closure plan.
Name (Print):	Title:	
Signature:	Date:	
e-mail address:	Telephone:	

Metrict I 1675 M Tranch Br., Mebba, MM 66248 Height H 811 South First, Artesia, NM 89210 Metrict III 1000 Rio Brazos Rd., Azteo, NM 87410 Metrict IV 1226 S. R. Evande Br., Senta Fa, MM 67565 State of New Mexico

Energy, Minerals & Netural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.

Form C-102 Revised October 12, 2005 Submit to Appropriate District Office Fee Lease - 3 Copies State Lease - 4 Copies

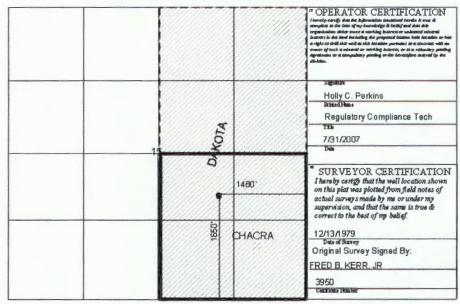
Santa Fe, NM 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

AMENDEDED REPORT

Feet from the Count J 15 29N 11W 1650 SOUTH 1480 EAST SAN JUAN 11Bottom Hole Location If Different From Surface UL er bine. Lot Ma DK: 320 ac CH: 160 ac Consulidation Cole

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



			Client:	XTO Energy
Lodestar Services, Inc.		Pit Permit	Project:	Pit Permits
PO Box 4465, Durange, CO 81302		Siting Criteria	Revised:	19-Nov-08
10 Del 4100, Duran	10, 00 01302	Information Sheet	Prepared by:	Brooke Herb
V				
API#:		3004524162	USPLSS:	T29N,R11W,S15J
Name:	C00	PER GAS COM #1E	Lat/Long:	36.72282, -107.9742
Depth to groundwater:		< 50 '	Geologic formation:	Nacimiento Formation
Distance to closest continuously flowing watercourse:	1.23 miles	N of the San Juan River		
Distance to closest significant watercourse, lakebed, playa lake, or sinkhole:	Ditch;	of Citizens Irrigation 47' W of Bloomfield Canyon Wash		
			Soil Type:	Entisols
Permanent residence, school, hospital, institution or church within 300'	Yes - 2	69' N of Permanent Residence		
			Annual Precipitation:	8.71 inches (Bloomfield)
Domestic fresh water well or spring within 500'		No	Precipitation Notes:	no significant precip events
Any other fresh water well or spring within 1000'	SJ02378	2' NE of iWaters well ; 648' NW of SJ03579; W of SJ03733 POD1		
Within incorporated municipal boundaries	V	es - Bloomfield	Attached Documents:	Groundwater report and Data; FEMA Flood Zone Map
Within defined municipal fresh water well field		No .		Aerial Photo, Topo Map, Mines Mills and Quarries Map
Wetland within 500'		No	Mining Activity:	
Within unstable area		No		1.38 miles NW of Sullivan Pit
Within 100 year flood plain	No - F	EMA Flood Zone 'X'		
Additional Notes:				

COOPER GAS COM #1E Below Ground Tank Siting Criteria and Closure Plan

Well Site Location

Legals: T29N, R11W, Section 15, Quarter Section J Latitude/Longitude: approximately 36.72282, -107.9742

County: San Juan County, NM

General Description: in Bloomfield, New Mexico

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 below ground tank location will be located in Bloomfield, New Mexico between the Animas and San Juan rivers. The Nacimiento Formation of Tertiary Age is exposed, along with Quaternary alluvial and aeoloian sands within dry washes and arroyos.

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 Nacimiento Formation lies at the surface. Thickness of the Nacimiento ranges from 418 to 2232 feet (Stone et al., 1983). Aquifers within the coarser and continuous sandstone bodies of the Nacimiento Formation are between 0 and 1000' deep in this section of the basin (Stone et al., 1983). Groundwater within these aquifers flows toward the nearby San Juan River and its tributaries.

The prominent soil type at the proposed site is entisols, which are defined as soils that do not show any profile development. Soils are basically unaltered from their parent rock. Miles of arroyos, washes and intermittent streams exist as part of the drainage network towards the La Plata River (www.emnrd.state.nm.us). These features often cut into soil and other unconsolidated materials, contributing to sedimentation downstream. The sudden influx of water from storm events easily erodes soils that cover the area.

The climate of the region is arid, averaging just over 8 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).

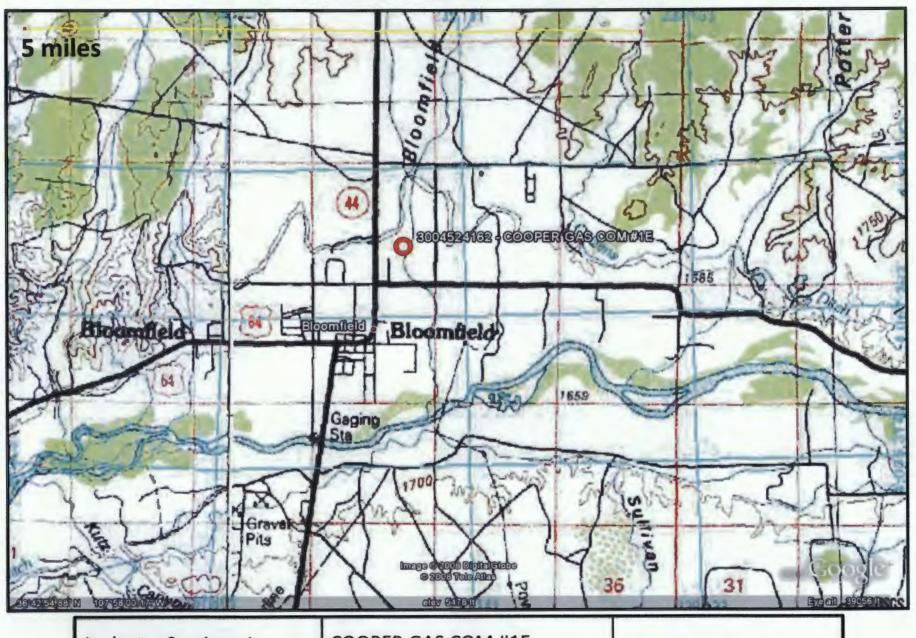
The predominant vegetation is sagebrush and grasses with a more restricted pinon-juniper association (Dick-Peddie, 1993).

Site Specific Hydrogeology

Depth to groundwater is estimated to be less than 50 feet. This estimation is based on data from Stone and others, 1983 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.

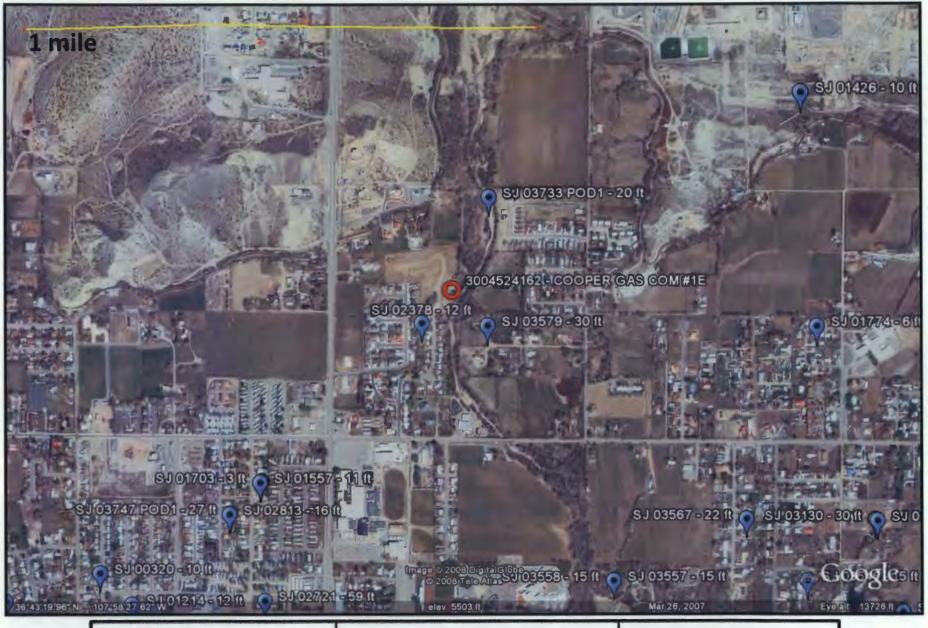
Local aquifers include sandstones within the Nacimiento Formation, which ranges from 0 to 1000 feet deep in this area, as well as shallow aquifers within Quaternary alluvial deposits (Stone et al., 1983). The 1000-foot depth range for Nacimiento aquifers covers an area over 20 miles wide, and depth decreases towards the margin of the San Juan Basin. The site in question is more centrally located, and depth to the aquifer is expected to be closer to 1000 feet. It is well known that groundwater close to the San Juan River can be shallow, as the Quaternary deposits near the river itself form shallow aquifers. However, the proposed site is situated 1.23 miles to the north of the San Juan River, and is approximately 70 feet higher in elevation (Google Earth).

Groundwater data available from the NM State Engineer's iWaters Database for wells near the proposed site are attached. A map showing the location of wells in reference to the proposed pit location is also included. Pinpoints show locations of wells and the labels for each pinpoint indicate depth to groundwater in feet. Wells are clustered to the south along the San Juan River. Depth to groundwater within the nearby wells ranges from 3 feet to 56 feet below ground surface. The closest well to the proposed site is located approximately 602 feet to the southwest, and is approximately 3 feet higher in elevation (Google Earth). Depth to groundwater within the well is 12 feet below ground surface. A well to the east is approximately the same elevation as the proposed site, and has a depth to groundwater of 30 feet below ground surface.



Lodestar Services, Inc PO Box 4465 Durango, CO 81302 COOPER GAS COM #1E T29N, R11W, S15J San Juan County, NM

Topographic Map



Lodestar Services, Inc PO Box 4465 Durango, CO 81302 COOPER GAS COM #1E T29N, R11W, S15J San Juan County, NM

iWaters Groundwater Data Map

New Mexico Office of the State Engineer POD Reports and Downloads

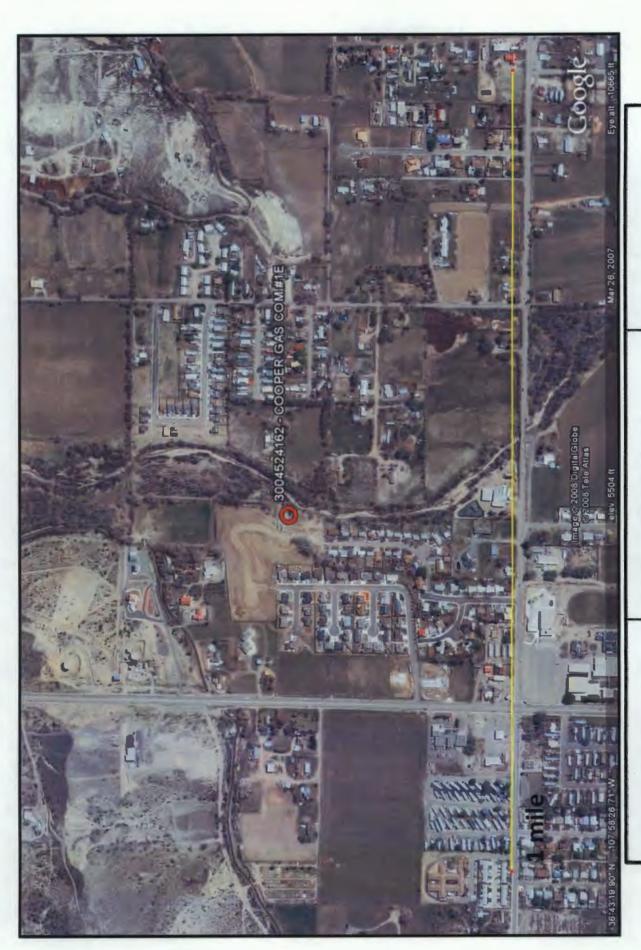
WATER COLUMN REPORT 10/20/2008

							3=SW 4								
_							small		_	_	Depth	Depth	Water	(in	feet)
POD Number	Tws	-		_	q	q	Zone	X	,	ľ	Well	Water	Column		
SJ 00867	29N	118		4							77	55	22		
SJ 01302	29N	11W		4							250	210	40		
SJ 01891	29N	118	-	4	1	3					157				
SJ 01851	29N	11W		4	4						125	48	77		
SJ 02466 S	29N	11W		4	3	3					65				
SJ 02466	29N	11W	11	4	3	3					66				
SJ 02991	29N	11W	13	3	4	2					60				
SJ 03136	29N	118	13	3	4	4					20				
SJ 00987	29N	111	13	4							415	300	115		
SJ 01426	29N	11W		1	4						155	10	145		
SJ 00007	29N	11W	14	2	2	3					752				
SJ 03550	29N	IIW	14	3	2	1					10				
SJ 01774	29N	11W	14	3	4	2					82	6	76		
SJ 03360	29N	111	14	3	4	2					40				
SJ 03175	29N	11W	14	4	2	1					60	24	36		
SJ 03164	29N	11W	14	4	2	1					75	56	19		
SJ 03733 POD1	29N	118	15	4	2	1					64	20	44		
SJ 02378	29N	11W	15	4	3	2					75	12	63		
SJ 03579	29N	11W	15	4	4	1					83	30	53		
SJ 02141	29N	11W	16	4	3	4					110	40	70		
SJ 02926	29N	11W	17	2	4	3					375	80	295		
SJ 03399	29N	11W	17	4	2						100				
SJ 00487	29N	11W	17	4	4						60	6	54		
SJ 02868	29N	11W	17	4	4	4					50				
SJ 01641	29N	11W	19	2	2	3					120	55	65		
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SJ 02970	29N	11W	19	4	3	2					100	18	82		
SJ 01250	29N	11W	19	4	4						60	20	40		
SJ 02869	29N	11W	20	2	2	1					50				
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SJ 01355	29N	11W 20	4	4		36	3	33
SJ 00452	29N	11W 21				42	10	32
SJ 01969	29N	11W 21				65	55	10
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SJ 00701	29N	11W 21			1	73		
SJ 03350	29N	11W 21	. 2		3	50		
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SJ 03659	29N	11W 21	. 3	2	2	45	10	35
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SJ 02200	29N	11W 22	2			60	22	38
SJ 01557	29N	11W 22	1	2		70	11	59
SJ 00796	29N	11W 22	1	2		50	8	42
SJ 00704	29N	11W 22	1	2		55	20	35
SJ 01703	29N	11W 22	1	2		68	3	65
SJ 03747 POD1	29N	11W 22	1	2	3	47	27	20
SJ 02813	29N	11W 22	1		3	59	16	43
SJ 01214	29N	11W 22	1	3		49	12	37
SJ 00484	29N	11W 22	1	3	1	37	10	27
SJ 00320	29N	11W 22	2 1	3	1	38	10	28
SJ 03532	29N	11W 22	2 1	3	3	49	14	35
SJ 00151	29N	11W 22	1	3	4	45	18	27
SJ 02721	29N	11W 22	2 1	4			59	
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SJ 02578	29N	11W 22	2 2	3	3	58	24	34
SJ 03093	29N	11W 22	2 2	3	4	42	22	20
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SJ 03479	29N	11W 22	2 4	2	3	43	4	39
SJ 03049	29N	11W 22	2 4	2	4	33	10	23
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SJ 03559	29N	11W 23		. 3	4	45	15	30
SJ 00812	29N	11W 23	3 1	4		44		

SJ 03546	29N	11W 23	1	4	2			50	15	35
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SJ 03073	29N	11W 23	2	3	1			30		
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SJ 02799	29N	11W 23	4	1	1			56	15	41
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SJ 01962	29N	11W 24	1	2	2			45	12	33
SJ 03343	29N	11W 24	1	4	1			35	18	17
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SJ 01808 0-5	29N	11W 26	3	1	1			52	43	9
SJ 02121	29N	11W 27	1	1				30	6	24
SJ 02210	29N	11W 27	1	1				32	8	24
SJ 03588	29N	11W 27	1	1	2					
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SJ 01808 0-4	29N	11W 27	2	3	3			32	25	7
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SJ 02664 S-3	29N	11W 27	3	2				41	30	11
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SJ 02664 S-10	29N	11W 27	3	2				33	19	14
SJ 02664 S-5	29N	11W 27	3	2				41	30	11
SJ 02664 S-6	29N	11W 27	3	2				40	28	12
SJ 02664 S-7	29N	11W 27	3	2				37	23	14
SJ 02664 S-8	29N	11W 27	3	2				35	25	10
SJ 02148	29N	11W 27	4	2				305	186	119
SJ 01808 0-6	29N	11W 27	4	2	1			50		**
SJ 03762 POD1	29N	11W 2B	1	1		267348	2075529	27	15	12
SJ 03476	29N	11W 2B	1	1	2			65		

SJ 03415	29N	11W 28	1	2	1			60	20	40
SJ 02559	29N	11W 28	1					15	7	8
SJ 02330	29N	11W 28	2	1				128	115	13
SJ 03021	29N	11W 28	2	1	3			16	5	11
SJ 01606	29N	11W 28	2	2				35	8	27
SJ 03468	29N	11W 28	2	4		367704	2073506	50		
SJ 03469	29N	11W 28	2	4	3			50		
SJ 02713	29N	11W 28	3	1	1			26	12	14
SJ 02858	29N	11W 28	3	1	3			40		
SJ 02714	29N	11W 28	13	2				43	28	15
SJ 02708	29N	11W 28	3	2				26	12	14
SJ 03149	29N	11W 28	4	2	2			60	35	25
SJ 03475	29N	11W 29	1	. 1	3			40	20	20
SJ 00292	29N	11W 29	2	1	4			24	9	15
SJ 01554	29N	11W 29	2	2				35	18	17
SJ 02038	29N	11W 29	4					14	4	10
SJ 03298	29N	11W 29	4	1	1			70	6	64
SJ 02023	29N	11W 29	4	2				24	7	17
SJ 02182	29N	11W 29	4	2				27	11	16
SJ 00822	29N	11W 29	4	3				34	15	19
SJ 03421	29N	11W 29	4	4	3			50	28	22
SJ 01391	29N	11W 30	2					40	25	15
SJ 03348	29N	11W 30	1	1	3			60		
SJ 01260	29N	11W 30	2	2				42	16	26
SJ 01264	29N	11W 30	- 2	2				27	12	15
SJ 01328	29N	11W 30	2	2				28	15	13
SJ 01821	29N	11W 30	2	4				70	6	64
SJ 00875	29N	11W 30	4	1				37	20	17
SJ 02922	29N	11W 31	4	2	2			75		
SJ 03795 POD1	29N	11W 31	2	2	4	266438	2067001	75	45	30
SJ 03541	29N	11W 31	2	4	1			80	40	40
SJ 00441	29N	11W 32	2	2						
SJ 00103	29N	11W 32	4	4	4			263		
SJ 00103 S	29N	11W 32	-	4	4			254		
SJ 03666	29N	11W 33	1	1	3			49	30	19



Aerial Photograph

Lodestar Services, Inc Durango, CO 81302 PO Box 4465

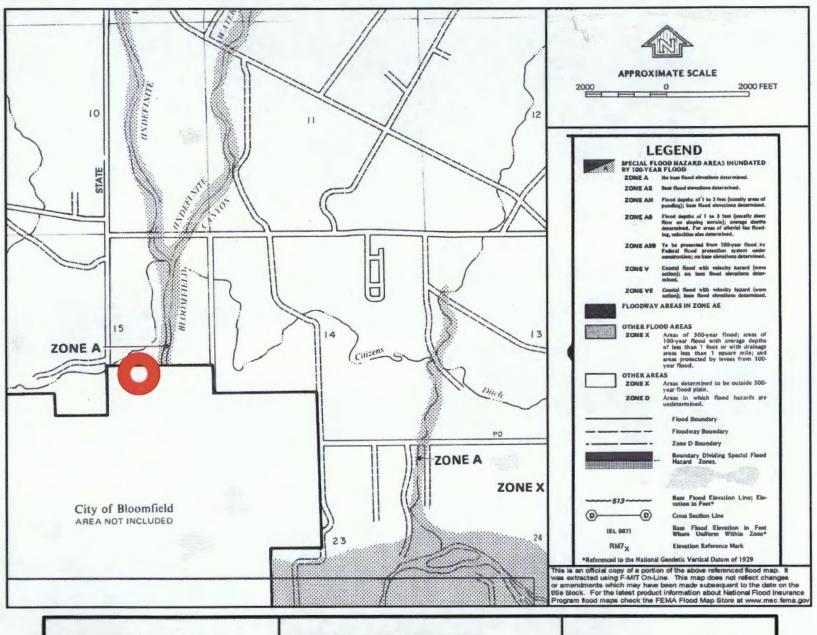
COOPER GAS COM #1E T29N, R11W, S15J

San Juan County, NM



Lodestar Services, Inc PO Box 4465 Durango, CO 81302 COOPER GAS COM #1E T29N, R11W, S15J San Juan County, NM

Mines, Mills, and Quarries Map



PO Box 4465 Durango, CO 81302 COOPER GAS COM #1E T29N, R11W, S15J San Juan County, NM

FEMA Flood Zone Map

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.

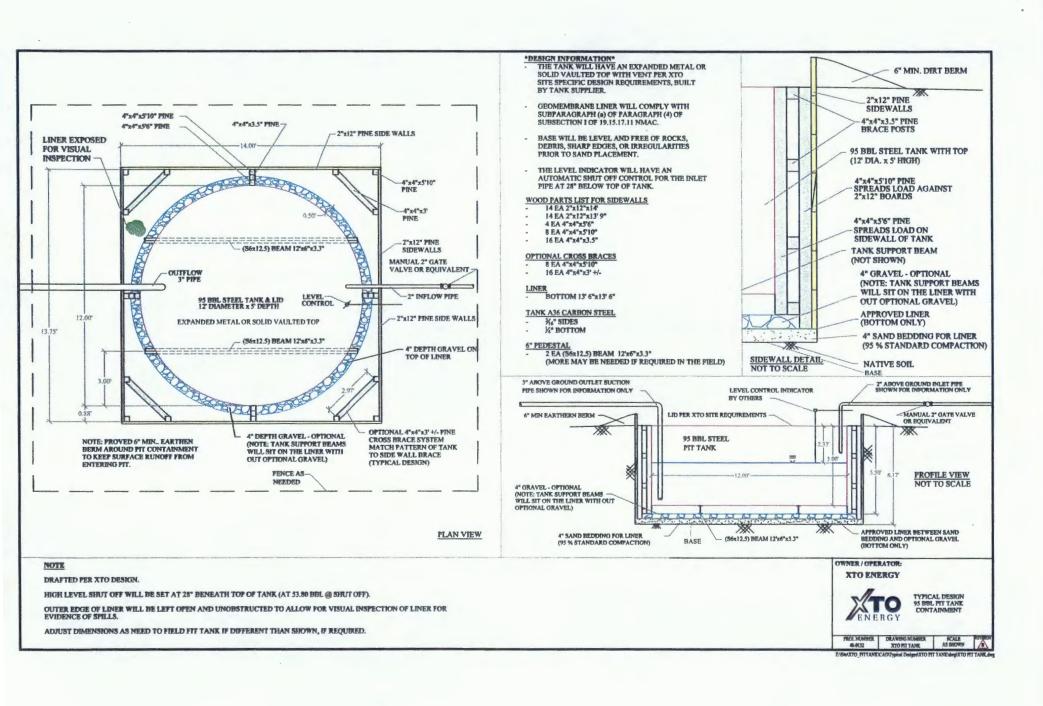
General Plan

- 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 1/4" 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

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General Design and Construction Plan
For Below-Grade Tanks
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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 1 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,

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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.

Well Nar	ne:				API No.:			
Legals	Sec:		Township:		Range:			
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)
Notes:	Provide De	tailed Descri	iption:					
		-						
Misc:								

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

- 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

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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 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.

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For Below-Grade Tanks
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- 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.