Jones, Brad A., EMNRD

From:

James_McDaniel@xtoenergy.com

Sent: To: Tuesday, November 02, 2010 9:36 AM Jones, Brad A., EMNRD

Cc:

Kim Champlin@xtoenergy.com

Subject:

BGT Closures

Brad.

We are plugging and abandoning several wells, and would like to request approval of the closure plan only for the following wells:

Gallegos Federal 26-12-19 #1S (30-045-31985) Submitted on 12/5/08 Gallegos Federal 26-12-25 #1T (30-045-31783) Submitted 12/12/08 Gallegos federal 26-13-12 #1 (30-045-28903) submitted 11/21/08 Gallegos Federal 26-13-24 #24 (30-045-31654) submitted 11/21/08 Gallegos Federal 26-13-3 #2T (30-045-31865) submitted 11/21/08 Gallegos federal 26-12-24 #2 (30-045-28833) submitted 11/21/08 Gallegos Federal 26-12-12 #1S (30-045-31716) submitted 11/21/08

Thanks much!



<u>District I</u>
1625 N. French Dr., Hobbs, NM 88240
<u>District II</u>
1301 W. Grand Avenue, Artesia, NM 88210
<u>District III</u>
1000 Rio Brazos Road, Aztec, NM 87410
<u>District IV</u>
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources Department Oil Conservation Division

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 De Environmental Dureau 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

Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method

Existing BGT Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method Modification to an existing permit
Closure 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.
1. Operator: XTO Energy, Inc. OGRID #: 5380
Address: #382 County Road 3100, Aztec, NM 87410
Facility or well name: Gallegos Federal 26 13 24 #2
API Number: 3004528833 OCD Permit Number:
U/L or Qtr/Qtr _M _ Section _ 24 Township _ 26N Range _ 13W County:San Juan _
Center of Proposed Design: Latitude36.46895
Surface Owner: X Federal X State X Private X Tribal Trust or Indian Allotment
Pit: Subsection F or G of 19.15.17.11 NMAC Temporary:
Below-grade tank: Subsection I of 19.15.17.11 NMAC Volume: 95
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, to	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									
7.									
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)									
infolunty inspections (if feeting of selecting is not physically leasible)									
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 									
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								
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 appropriate of 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. ing pads or								
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) 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								

Tempórary 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 19.15.17.12 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: (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 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

Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Ste Instructions: Please indentify the facility or facilities for the disposal of liquids, drift facilities are required.							
•	sposal Facility Permit Number:						
Disposal Facility Name: Disposal Facility Permit Number:							
Will any of the proposed closed-loop system operations and associated activities occur Yes (If yes, please provide the information below) No	r on or in areas that will not be used for future serve	ice 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 re Re-vegetation Plan - based upon the appropriate requirements of Subsection I o Site Reclamation Plan - based upon the appropriate requirements of Subsection	quirements of Subsection H of 19.15.17.13 NMAC of 19.15.17.13 NMAC						
Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC Instructions: Each siting criteria requires a demonstration of compliance in the cloprovided below. Requests regarding changes to certain siting criteria may require a considered an exception which must be submitted to the Santa Fe Environmental B. demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for	dministrative approval from the appropriate distrureau office for consideration of approval. Justif	ict 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 of	btained from nearby wells	☐ Yes ☐ No ☐ NA					
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 of	btained from nearby wells	☐ Yes ☐ No ☐ NA					
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 of	btained from nearby wells	☐ Yes ☐ No ☐ NA					
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other signif lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	icant watercourse or lakebed, sinkhole, or playa	☐ Yes ☐ No					
Within 300 feet from a permanent residence, school, hospital, institution, or church in Visual inspection (certification) of the proposed site; Aerial photo; Satellite in		☐ Yes ☐ No					
Within 500 horizontal feet of a private, domestic fresh water well or spring that less th watering purposes, or within 1000 horizontal feet of any other fresh water well or spri NM Office of the State Engineer - iWATERS database; Visual inspection (cer	ng, in existence at the time of initial application.	☐ Yes ☐ No					
Within incorporated municipal boundaries or within a defined municipal fresh water valopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval	_	☐ Yes ☐ No					
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual in	nspection (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 are	nd Mineral Division	☐ Yes ☐ No					
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Society; Topographic map	α Mineral Resources; USGS; NM Geological	☐ 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 plan. Please indicate, by a check mark in the box, that the documents are attached. Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection 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 cannot be achieved) Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC							

19. Operafor Application Certification:	
I hereby certify that the information submitted with this application is true, accurat	e and complete to the best of my knowledge and belief.
Name (Print): Kim Champlin	Title: Environmental Representative
Signature: Kim Champler	Date: 11/19/2008
e-mail address: kim_champlin@xtoenergy.com	
20.	
OCD Approval: Permit Application (including closure plan) Closure Plan	, ,
OCD Representative Signature	Approval Date: \\/\/\/\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
Title: Evinnerfa Engineer	OCD Permit Number:
Closure Report (required within 60 days of closure completion): Subsection K Instructions: Operators are required to obtain an approved closure plan prior to The closure report is required to be submitted to the division within 60 days of the section of the form until an approved closure plan has been obtained and the closure	implementing any closure activities and submitting the closure report. e completion of the closure activities. Please do not complete this ure activities have been completed.
	Closure Completion Date:
22. Closure Method: Waste Excavation and Removal On-Site Closure Method Alternati If different from approved plan, please explain.	ve Closure Method Waste Removal (Closed-loop systems only)
23. Closure Report Regarding Waste Removal Closure For Closed-loop Systems T Instructions: Please indentify the facility or facilities for where the liquids, drilling two facilities were utilized.	
	Disposal Facility Permit Number:
Disposal Facility Name:	Disposal Facility Permit Number:
Were the closed-loop system operations and associated activities performed on or in Yes (If yes, please demonstrate compliance to the items below) No	n areas that will not be used for future service and operations?
Required for impacted areas which will not be used for future service and operation Site Reclamation (Photo Documentation) Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique	ns:
24. Closure Report Attachment Checklist: Instructions: Each of the following iten	ns 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	deNAD: □1927 □ 1983
25.	
Operator Closure Certification: I hereby certify that the information and attachments submitted with this closure republished. I also certify that the closure complies with all applicable closure requirements.	
Name (Print):	Title:
Signature:	Date:
e-mail address:	Telephone:

Sub met to Appropriate District Office State Lease - 4 copies Fon Lease - 3 copies

Energy, Minerals and Natural Resources De, ...mest

Borbad 1-1-89

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

RECEIVED BLM

DISTRICT III
1000 Rio Brillos Rd., Aziec, NM 87410

DISTRICT II P.O. Drawer DD, Artesia, NM 88210

DISTRICT I P.O. Box 1980, Hobbs, NM 88240

WELL LOCATION AND ACREAGE DEDICATION PLAT 16 PH 2: 47

Operator		Lease	ang Fr	' \$ %' \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	X
SG Interests I, Ltd.		Gallegos Fe	deral 26	-13-24	21.
Una Letter Section Ton	enskúp 26 N	Rango 13 W	NMP	County San Ju	an
i iest from the	outh line and	700	foet (ro	West	line
Cround level Elev. Producing For 6108 Fruitlan	•	Pool Basin Ir	itland (. 1	olod Acreaga: 20 Acrea
1. Outline the acreage dedicated to the	e subject well by colored peo	cil or hachure merks on the	plat below.	·	
2. If more than one lease is dedicated	to the well, outline each and	ideatify the ownership the	ow at as thord) how	rking interest and royalty)	
3. If more than one lease of different unitization, force-pooling, etc.?			ll owners been con	rolidated by communities	tion,
Yes No If answer is "bo" list the owners and		sctually been consolidated.	(Uso reverse side	ď	
this form if necessary. No allowable will be assigned to the or until a non-standard unit, eliminati			unitrzecon, unitizza	oon, forced-pooling, or of	nervise)
330 660 590 1320 1650 1980 23	10 2640 2000	1300 1000 š	<u>0</u> 0	1	ERTIFICATION
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i ,		1	000%	President/	
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1		1		Due 11/16/92	
.	1	j			ERTIFICATION
1				I hereby certify that	the well location a
	=(24)		·	on this plat was pla actual surveys made	by me or under
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Lodestar Services, Inc. P0 Box 4465, Durango, C0 81302

Pit Permit Siting Criteria Information Sheet

Client:	XTO Energy	
Project:	Pit Permits	
Revised:	11/8/2008	
Prepared by:	Daniel Newman	٠

PU Box 4405, Durango, CU 81302			L KEAISEU.	11/8/2006		
		Information Sheet	Prepared by:	Daniel Newman		
API#:	API#:		USPLSS:	T26N,R13W,24M		
	t m y 1	pro production in the second		The state of the s		
Name:	Gallego	s Federal 26 13 24 #2	Lat/Long:	* 17 Y		
		> 100'	Geologic			
Depth to groundwater:	L		formation:	Nacimiento Formation		
Distance to closest	16 E0 mile	es south of the San Juan				
continuously flowing	ווווו ככ.טבן					
watercourse:		River				
Distance to closest				,		
significant watercourse,		outh of an unnamed	*	y the same of the		
lakebed, playa lake, or		arroyo	* 4	and the second s		
sinkhole:		4.1070	, , , , , , , , , , , , , , , , , , , ,			
Jimmor.			Soil Type:	Entisols & Aridisols		
Permanent residence,						
school, hospital,						
institution or church		No		·		
within 300'						
Within 300			Annual			
			Precipitation:	8.71 inches average		
Domestic fresh water	·		Precipitation			
well or spring within		No	· ·	no significant precipatation events		
500'			Notes:	`		
Any other fresh water			·			
well or spring within		No				
1000'		·		• ",		
			v.			
Within incorporated		.	Attached			
municipal boundaries		No	Documents:	-		
Within defined				Topo map, ground water data map, arie		
municipal fresh water	,	No		photo, mines and quarries map, FEMA		
well field				map		
Wetland within 500'		No	Mining Activity:	No		
Within unstable area		No		,		
		-	<u> </u>			
Within 100 year flood		,_ ,				
plain		Zone X				
		•				
Additional Notes:				· · · · · ·		
				•		

Gallegos Federal 26 13 24 #2 Below Ground Tank Hydrogeologic Report for Siting Criteria

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 southernmost Bisti region of the San Juan Basin within an area dominated by irrigated fields of the Navajo Indian Irrigation Project. The predominant geologic formation is the Nacimiento Formation of Tertiary age, which underlies surface soils and is 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 Nacimiento Formation lies at the surface and grades into the Animas Formation to the west. 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 San Juan River.

The prominent soil type at the proposed site are entisols 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.

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

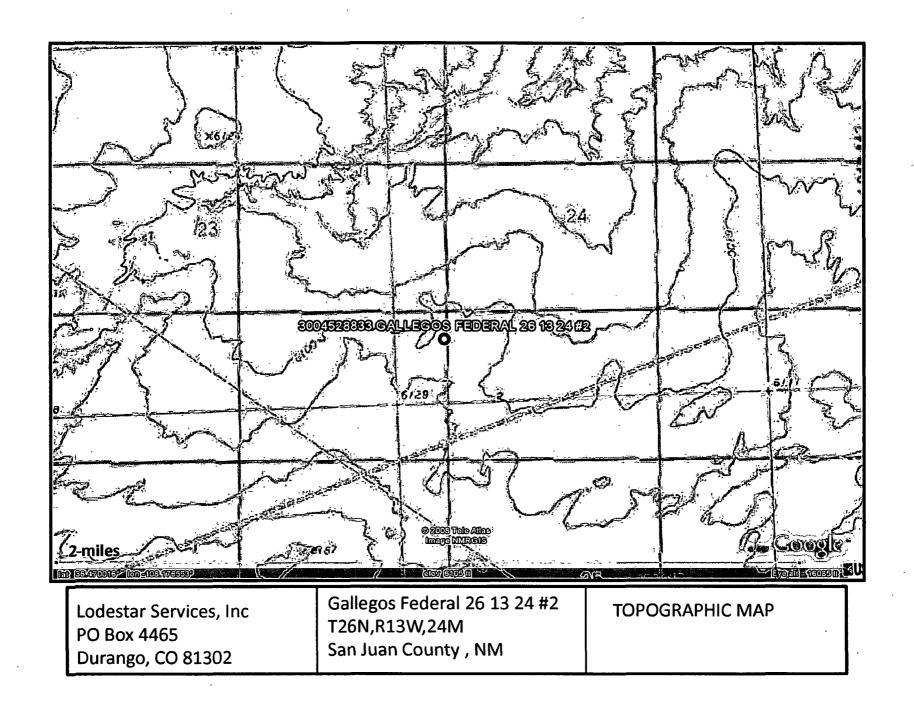
Depth to groundwater is estimated to be greater than 100 feet. This estimation is based on data from Stone and others (1983), the USGS Groundwater Atlas of the United States and depth to groundwater data published on the New Mexico State Engineer's iWaters Database website. Local topography and proximity to surface hydrologic features are also taken into consideration.

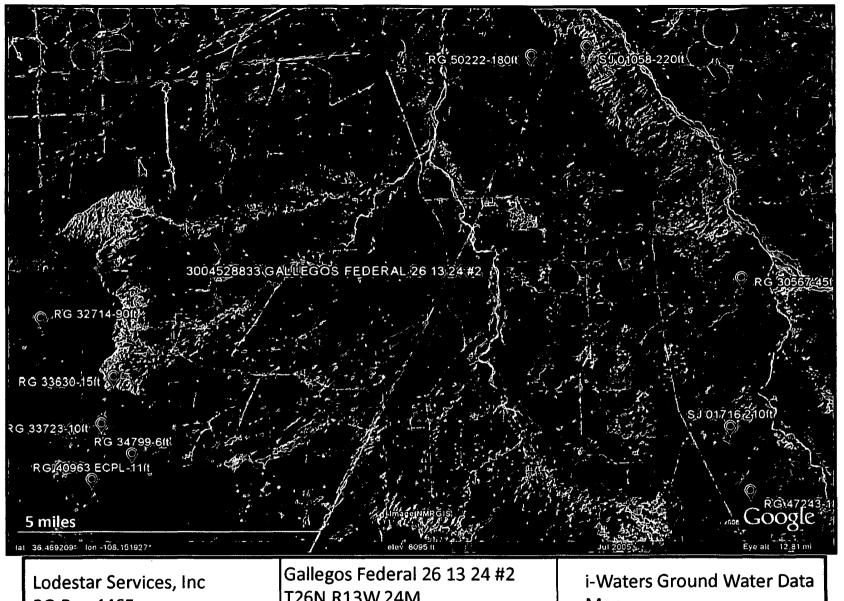
Beds of water-yielding sandstone are present in the Nacimiento Formation, which are fluvial in origin and are interbedded with siltstone, shale and coal. Porous sandstones form the principal aquifers, while relatively impermeable shales form confining units between the aquifers (Stone et al., 1983). Local aquifers exist within the Nacimiento Formation at depth s greater than 100 feet and thicknesses of the aquifer can be up to 3500 feet (USGS, Groundwater Atlas of the US).

The site in question is located 1.26 miles south of Moncisco Wash, at an elevation of approximately 6,103 feet and approximately 2.69 miles west of the West Fork of Gallegos Canyon. Broad shalely hills are interspersed with occasional sandstone outcrops, and systems of dry washes and their tributaries are evident on the attached aerial image. Groundwater is expected to be shallow within Gallegos Canyon. The floor of the West Fork Gallegos Canyon is at an elevation of approximately 5,949 feet approximately 150 feet lower in elevation.

Lined channels associated with the Navajo Irrigation Project supply water for the fields surrounding the proposed site, which are characterized by center-pivot irrigation patterns. During spring and summer, irrigation practices often produces shallow perched aquifers that are not defined in published literature. These shallow zones of water are not continuous and are not saturated year round.

Groundwater data available from the NM State Engineer's iWaters Database for wells near the proposed site are attached. A map showing the locations of wells in reference to the proposed pit location is also attached. Water drops show locations of wells and the labels for each water drop indicate depth to groundwater in feet. The closest well to the site is an elevation of approximately of 6,390 feet and is located 3.90 miles to the southwest this well puts groundwater at 15 feet below the surface. This well is not representative of the site. The observations made within this report suggest that groundwater is greater than 100 feet deep at the proposed location.





PO Box 4465 Durango, CO 81302

T26N,R13W,24M San Juan County, NM

Map

New Mexico Office of the State Engineer POD Reports and Downloads

AVERAGE DEPTH OF WATER REPORT 11/04/2008

•								(Depth	Water in	Feet)
Bsn	Tws	Rng Sec	Zone	x		Y	Wells	Min	Max	Avg
RG	26N	12W 04	-1		-		1	180	180	180
RG	26N	12W 25					1	45	45	45
SJ	26N	12W 03					1	220	220	220

New Mexico Office of the State Engineer POD Reports and Downloads

AVERAGE DEPTH OF WATER REPORT 11/07/2008

							(Deptn	water in	reet)
Bsn	Tws	Rng Sec	Zone	X	Y	Wells	Min	Max	Avg
RG	26N	13W 30				1	90	90	90
RG	26N	13W 32				1	15	15	15

Record Count: 2

New Mexico Office of the State Engineer POD Reports and Downloads

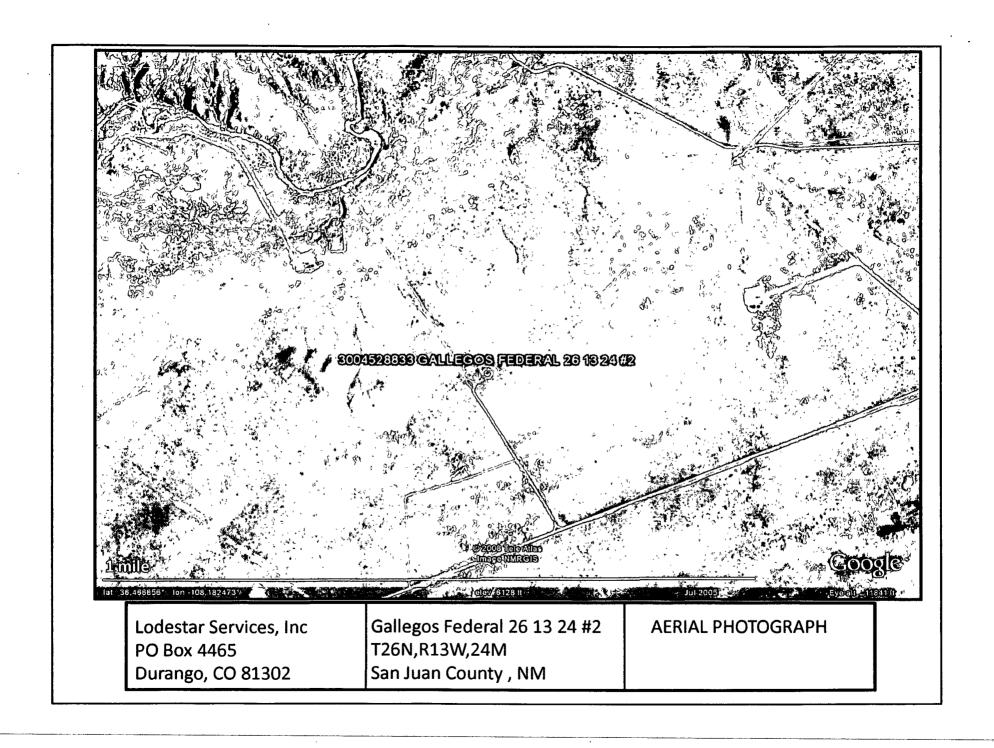
AVERAGE DEPTH OF WATER REPORT 11/03/2008

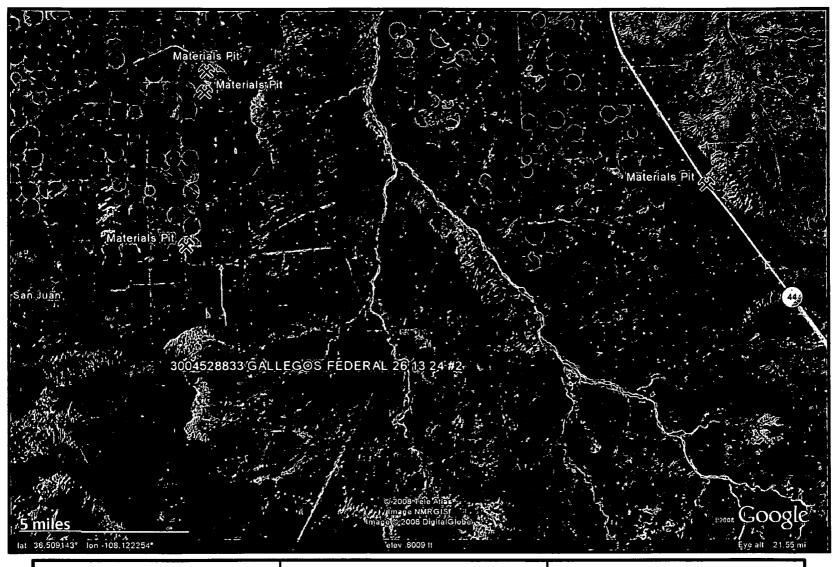
							(nebru	water in	reet)
Bsn	Tws	Rng Sec	Zone	X	Y	Wells	Min	Max	Avg
RG	27N	12W 02				1	145	145	145
SJ ·	27N	12W 13				4	177	422	306

New Mexico Office of the State Engineer POD Reports and Downloads

AVERAGE DEPTH OF WATER REPORT 11/07/2008

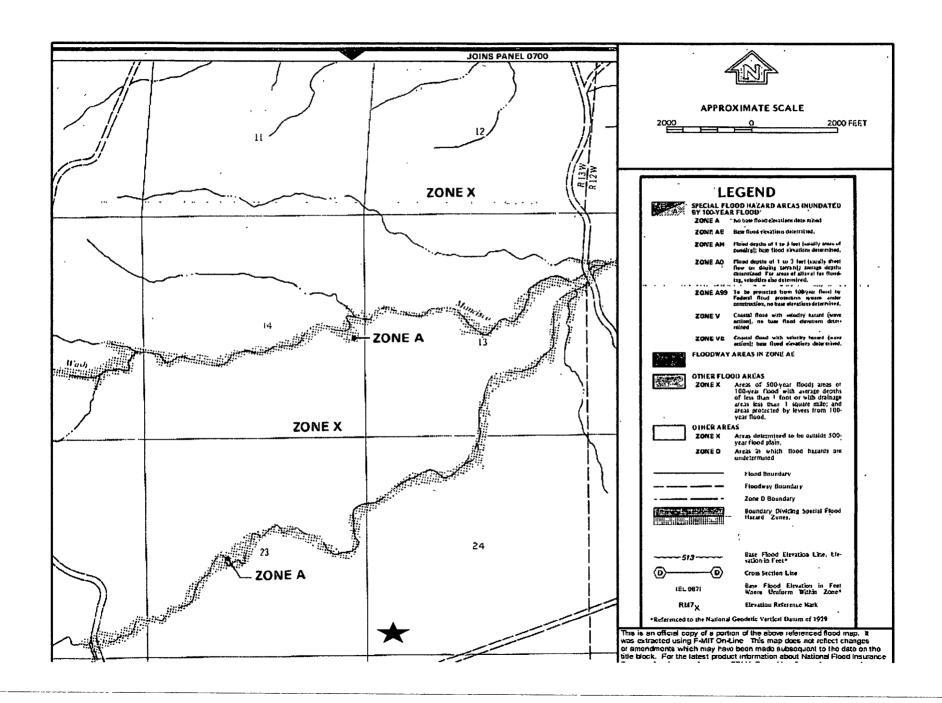
							(Depth	Water in	Feet)
Bsn	Tws	Rng Sec	Zone	x	Y	Wells	Min	Max	Avg
RG	·27N	13W 33				1	310	310	310





Lodestar Services, Inc PO Box 4465 Durango, CO 81302 Gallegos Federal 26 13 24 #2 T26N,R13W,24M San Juan County , NM

Mines and Quarries Map



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

Basın 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

- 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
- 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.
- 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:
 - 1 Operator's name
 - 11 Well Name and API Number
 - 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.
- 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.
- 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

- 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:
 - Proof of closure notice to division and surface owner,
 - 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.

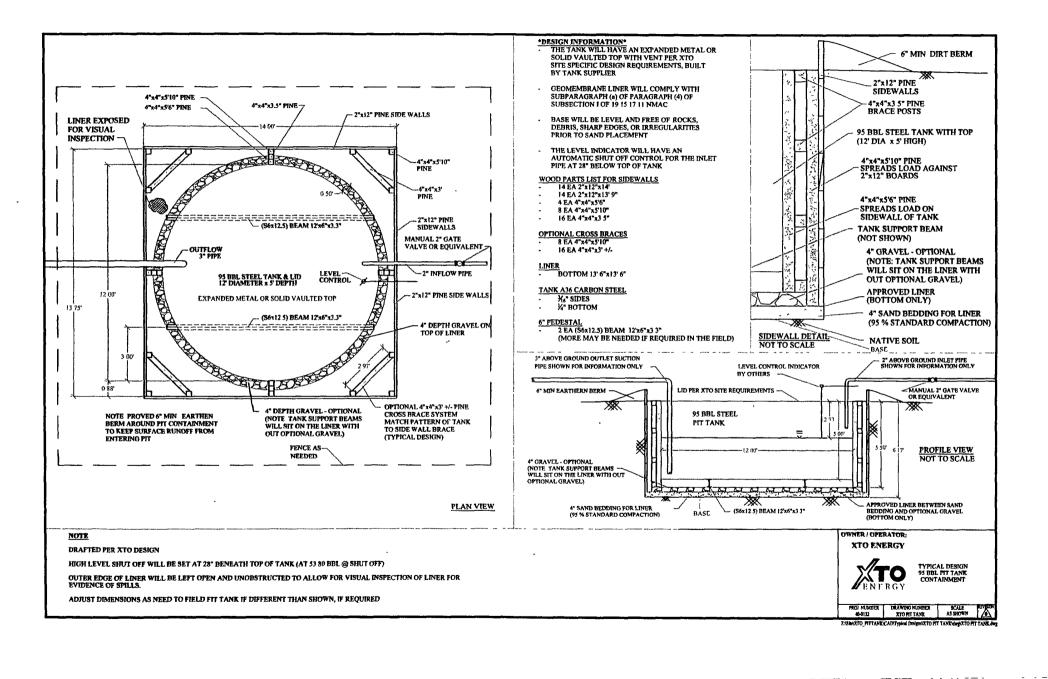
General Plan

- 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.
- 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

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 belowgrade tank will be underlain with a geomembrane liner to divert leaked liquid to a location that can be visually inspected. (See attached drawing)

- YTO 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)
- 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

- 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 Basın (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.:				
egals	Sec:		Township:		Range:			
XTO Inspector's		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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