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. V 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

2009 DEC 8 PM 4 37

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

Type of action:

Existing BGT

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

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:GOLDEN BEAR # 7
API Number: <u>30-045-33340</u> OCD Permit Number:
U/L or Qtr/Qtr _ p Section 02 Township29N Range 13W County: San Juan
Center of Proposed Design: Latitude <u>36.75151</u> Longitude <u>108.16913</u> NAD: □1927 ☑ 1983
Surface Owner: Federal State Private Tribal Trust or Indian Allotment
2.
Pit: Subsection F or G of 19 15.17.11 NMAC
Temporary: Drilling Workover
Permanent Emergency Cavitation P&A
☐ Lined ☐ Unlined Liner type Thicknessmil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other
☐ String-Reinforced
Liner Seams: Welded Factory Other Volume: bbl Dimensions: L x W x D
3.
Closed-loop System: Subsection H of 19 15.17.11 NMAC
Type of Operation P&A Drilling a new well Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent)
☐ Drying Pad ☐ Above Ground Steel Tanks ☐ Haul-off Bins ☐ Other
☐ Lined ☐ Unlined Liner type: Thicknessmil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other
Liner Seams: Welded Factory Other
4
☑ Below-grade tank: Subsection I of 19.15.17.11 NMAC
Volume: 120 bbl Type of fluid: Produced Water
Tank Construction material: Steel
Secondary containment with leak detection Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off
☐ Visible sidewalls and liner ☐ Visible sidewalls only ☒ Other _ <u>Visible sidewalls</u> , vaulted, automatic high-level shut off, no liner
Liner type Thicknessmil
5.
Alternative Method:
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

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, institution or church)	hospital,
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	4
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)	
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 of the Santa Fe En	office for
consideration of approval.	office for
Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.	
Siting Criteria (regarding permitting): 19.15.17.10 NMAC Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of 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 drying above-grade tanks associated with a closed-loop system.	priate district ppròval,
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

Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are
attached. ☐ Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC ☐ Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC ☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC ☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
Previously Approved Design (attach copy of design) API Number: or Permit Number:
Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached. Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9 Siting Criteria Compliance Demonstrations (only for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
Previously Approved Design (attach copy of design) API Number:
Previously Approved Operating and Maintenance Plan API Number: (Applies only to closed-loop system that use
above ground steel tanks or haul-off bins and propose to implement waste removal for closure)
Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached. Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Climatological Factors Assessment Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC 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 Diffield Waste Stream Characterization Monitoring and Inspection Plan Erosion Control Plan Erosion Control Plan Erosion Control Plan Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
Proposed Closure: 19.15.17.13 NMAC Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.
Type: Drilling Workover Emergency Cavitation P&A Permanent Pit Below-grade Tank Closed-loop System Alternative Proposed Closure Method: Waste Excavation and Removal Waste Removal (Closed-loop systems only) On-site Closure Method (Only for temporary pits and closed-loop systems) In-place Burial On-site Trench Burial Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)
Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached. □ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC □ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC □ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings) □ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC □ Re-vegetation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: (19.15.17.13.D Instructions: Please indentify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if many contents of the disposal of the di	
facilities are required. Disposal Facility Name:	
Disposal Facility Name: Disposal Facility Permit Number: 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 service. Yes (If yes, please provide the information below) No	rice 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 NMAC Ré-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	
Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate districtions of acceptable source considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justifications of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.	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 obtained 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 obtained 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 obtained from nearby wells	☐ Yes ☐ No☐ NA
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 plan 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 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	5.17.11 NMAC

Operator Application Certification:	
I hereby certify that the information submitted with this application is true, accura	ate and complete to the best of my knowledge and belief.
Name (Print): Kim Champlin	Title: Environmental Representative
Signature: Kim Mamplin	Date:
e-mail address: kim_champlin@xtoenergy.com	Telephone: (505) 333-3100
20.	
OCD Approval: Permit Application (including closure plan) Closure Pl	an (only) OCD Conditions (see attachment)
OCD Representative Signature:	Approval Date: 10/12/10
Title: Inime Togue	OCD Permit Number:
Closure Report (required within 60 days of closure completion): Subsection 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 plan prior to the division within 60 days of the days of	o implementing any closure activities and submitting the closure report. he completion of the closure activities. Please do not complete this osure activities have been completed.
	Closure Completion Date:
22. Closure Method: ☐ Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alterna ☐ If different from approved plan, please explain.	ative Closure Method Waste Removal (Closed-loop systems only)
23. Closure Report Regarding Waste Removal Closure For Closed-loop Systems Instructions: Please indentify the facility or facilities for where the liquids, drill two facilities were utilized.	That Utilize Above Ground Steel Tanks or Haul-off Bins Only: ling fluids and drill cuttings were disposed. Use attachment if more than
Disposal Facility Name:	Disposal Facility Permit Number:
Disposal Facility Name:	Disposal Facility Permit Number:
Were the closed-loop system operations and associated activities performed on or Yes (If yes, please demonstrate compliance to the items below) No	in 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	ons:
24.	No. 1. And Andrews and District Property of the Angel State Control of the
Closure Report Attachment Checklist: Instructions: Each of the following ite 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: LatitudeLongit	ude NAD: 1927 1983
Operator Closure Certification: I hereby certify that the information and attachments submitted with this closure r belief. I also certify that the closure complies with all applicable closure requirem.	nents and conditions specified in the approved closure plan.
Name (Print):	
Signature:	Date:
e-mail address:	Telephone:

State of New Mexico Energy. Minerals & Mining Resources Department OIL CONSERVATION DIVISION 2040 South Pacheco Santa Fe. NM 87505

MENDED REPORT

			WEL	L LOCAT	ION AND A	ACREAGE I	DEDICATION	1 PL/	<u>\T</u>	
]	VPA Nun	per		Pool Cod	· · · · · · · · · · · · · · · · · · ·	^	سر		Nome	
			7	162	4		usin F	rvi	Tla	nd Coul
Property	Code				Property N	Othe				Well Number
1					Golden Be	e a r				7
OGRID N	o.	,			Operator N	CERN)				Elevation
1				POC	30 PRODUC	ING CO.				5410
·					Surfac	e Location				
UL or Lor	Sec.	Тир.	Rga.	Lot lah.	Feet from>	North/South	Feet from>	East/	West	County
Р	2	29 N.	13 W.		1240	SOUTH	870	EA	ST	SAN JUAN
L			d	Botton	Hole Locatio	n If Different	From Surface	<u> </u>		
UL or Lot	Sec.	Twp.	Rga	Lot lan	Feet from>	North/South	Feet Iron>	East/	West	County
	1 1					}			}	
Dedication	1	int ?	Consolidat	ion		·	Onde	er No.		
320				ļ						
	N	O ALLOWAB					NTERESTS H		SEEN CON	ISOLDATED
			OR A NO	N-STANDARD	ONI HAS BE	EN APPROVE	BY THE DAY	SKON		
		West ***	•	1	53	18		1.		
,									OPER	ATOR CERTIFICATION
				}				- { - }	1 hereby	certify that the information
				1]]	to the	d herein is true and complete best of my knowledge and
·				ı				1.1	belief.	500. 5. my 155036 5.75
				ł			:		Signature	٠
ó							Ė		737	March man
2160		,	,	1			76.41		Printed	Nema
				ì				2	D (N. DAITMAN
									Title	2
•								1 }	1/16	CNT
,							•	1 1	Date &	7-24-05
						f c	ound iron pin		SURV	EYOR CERTIFICATION
			m BLM/GL	0				7		certify that the well location
			lculated					100	on this	plat was plotted from field
_		••• a	ssumed				0.07	808	notes o	factual surveys made by me
				ł		3	D 27	``	or under	r my supervision, and that the true and correct to the best
∪ ••				1		36.75l	l.of degree 543 N	1	of my b	relief.
+						108.168	518 W	ш	Date of	Survey
								10		05/05/05
-				1		P P	870	2	Signature	05/05/05 and Seduel Doll
				1			· · · · ·	-	Profession	one where
								<u> </u>	6	S. M. MING CO.
						1240		<u> </u>	Ju S	
				1		1 2		Clayton	(
•				}			i			2 100
	N S	39 03. M ·			C000:		- 20th St			EXMINICALLY.
	11 (, 11 CO C	· -		5280" •••	•		- 1		EXIMOLOUP.



Pit Permit Siting Criteria Information Sheet

Client:	XTO Energy
Project:	Pit Permits
Revised:	17-Nov-08
Prepared by:	Brooke Herb

V	Information Sheet	Prepared by:	Brooke Herb
API#:	3004533340	USPLSS:	T29N,R13W,S02P
Name:	GOLDEN BEAR #7	Lat/Long:	36.75151, -108.16913
Depth to groundwater:	< 50'	Geologic formation:	Nacimiento Formation
Distance to closest continuously flowing watercourse:	2970' NW of the Animas River		
Distance to closest significant watercourse, lakebed, playa lake, or sinkhole:	1317' S of Irrigation Ditch		*
		Soil Type:	Entisols
Permanent residence, school, hospital, institution or church within 300'	Yes - 275' to permanent . residence		•
		Annual Precipitation:	8.21 inches (Farmington)
Domestic fresh water well or spring within 500'	No	Precipitation Notes:	no significant precip events
Any other fresh water well or spring within 1000'	Yes - 662' SW of iWaters well SJ02750; 774' S of SJ02412	L	<u>`</u>
Within incorporated municipal boundaries	Yes - Farmington	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		1.57 miles SE of a Materials Pit
Within 100 year flood plain	No FEMA data in city limits		

GOLDEN BEAR #7 Below Ground Tank Siting Criteria and Closure Plan

Well Site Location

Legals: T29N, R13W, Section 02, Quarter Section P Latitude/Longitude: approximately 36.75151, -108.16913

County: San Juan County, NM

General Description: in Farmington, 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 on the flanks of the Farmington Glade between Aztec and La Plata, New Mexico. Within the Farmington Glade, the Tertiary Nacimiento Formation is exposed, along with Quaternary alluvial and aeoloian sands surrounding the center of the wash.

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).

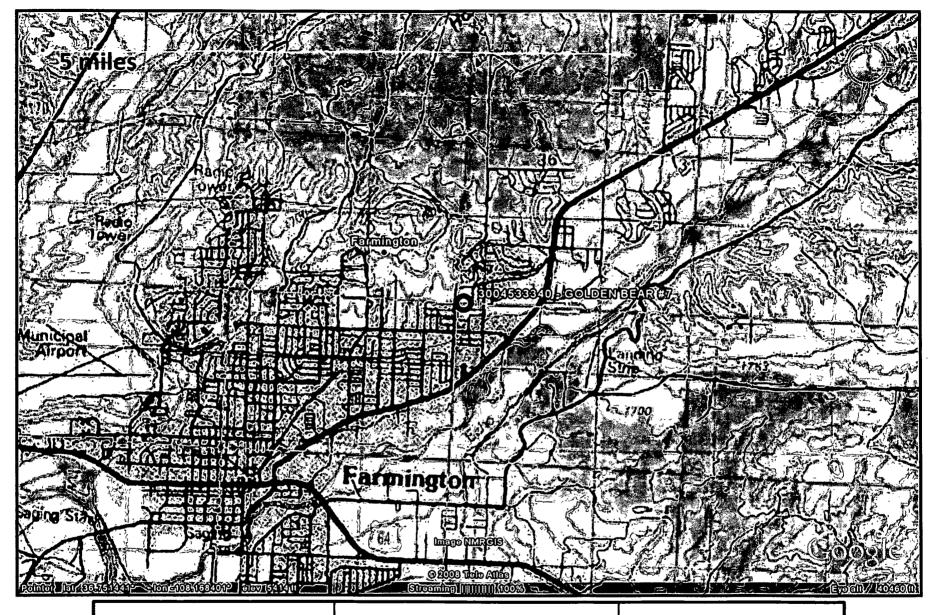
The predominant vegetation is sagebrush and grasses with a more restricted pinon-juniper association (Dick-Peddie, 1993).

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 Animas River can be shallow, as the Quaternary deposits near the river itself form shallow aquifers. However, the proposed site is situated 2970 feet to the north-northwest of the Animas River, and is approximately 50 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 all around the proposed site. Depth to groundwater within the surrounding wells ranges from 10 to 90 feet below ground surface. Topographic elevation at the proposed site is approximately 5412 feet (Google Earth). The closest well to the proposed site is 662 feet to the northeast at an elevation of approximately 5413 feet. Depth to groundwater within the well is 18 feet below ground surface. The shallow groundwater data nearby, as well as the close proximity to the Animas River suggest that groundwater at the proposed site is less than 50 feet below ground surface.



Lodestar Services, Inc PO Box 4465 Durango, CO 81302 GOLDEN BEAR #7 T29N, R13W, S02P San Juan County, NM

Topographic Map



Lodestar Services, Inc PO Box 4465 Durango, CO 81302 GOLDEN BEAR #7 T29N, R13W, S02P San Juan County, NM

iWaters Groundwater Data Map

New Mexico Office of the State Engineer POD Reports and Downloads

Township: 29h Range: 13V Sections:
NAD27 X: Y: Zone: Search Radius:
County: Basin: Number: Suffix:
Owner Name: (First) (Last) C Non-Domestic Domestic All
POD / Surface Data ReportAvg Depth to Water ReportWater Column Report

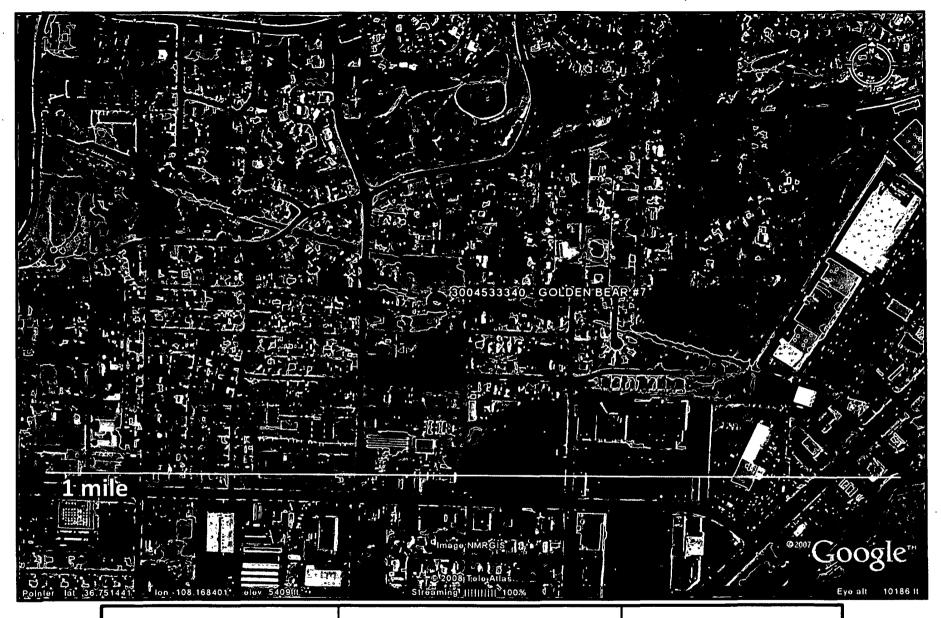
WATER COLUMN REPORT 11/14/2008

	quarter:	s are	e 1=	NW	2=	=ne	3=SW 4=SE)					
(quarter:	s are	e bi	gge	est	t to	smallest	.)		Depth	Depth	Water	(in feet)
POD Number	Tws	Rng	Sec	Œ	q.	q	Zone	X	Y	Well	Water	Column	
RG 23097	29N	13%	19	1	2	2				100	30	70	
RG 14227	29%	13W	29				C			65	. €	59	
SJ 00344	29%	130	01	3	1					75	. 40	35	
SJ 00168	298	137	01	3	1					50	19	31	
SJ 01363	29₩	130	01	3	1					85	34	51	
SJ 02484	29%	130	01	3	3	1				40			
SJ 02260 S	29N	13%	01	3	4					10			
SJ 02260 S-2	29N	13W	01	3	4					26			
SJ 02260	29%	13W	01	3	4					25			
SJ 03427	29₩	73M	01	4	1	4				60			
SJ 03333	29%	137	01	4	2	1				48	18	30	
SJ 03272	29₩	13W	02	1	3	3				140	33	105	
SJ 03273	29%	13%	02	3	2	3				120	20	100	
SJ 03288	298	134	02	3	4	ì				120	90	30	

						•
t						
		_				
	SJ 02412	29N 13W 02 4 2	,48	28	20	•
	SJ 02751	29N 13W 02 4 2 4	58	17	41	
	SJ 02750 SJ 02281	29N 13W 02 4 2 4 29N 13W 02 4 3 4	59 59	18 30	41 29	
	SJ 02328	29% 13% 02 4 3 4 29% 13% 04 3 3	40	10	30	
	SJ 02730	29% 13W 04 3 3 3	40	16	24	
	SJ 02912	29N 13W 04 3 3 3	50	10	- 7	•
	SJ 02899	29N 13W 04 3 3 3	45			
1	SJ 03203	29N 13W 05 2 4 4	59	20	39	•
1	SJ 03234	29% ~ 13W 05 4 2 4 .	. 60	20	40	-
	SJ 02728	29N 13W 05 4 2 4	52	12	40	
	SJ 01444	29N 13W 05 4 4 2	55	10	45	
	SJ 02931 SJ 02134	29% 13W 06 4 3 2 29% 13W 08 2 2	50 33	12 4	38 29	·
	SJ 03346	29% 13W 08 2 2 29% 13W 08 4 3 4	33 80	30	50	
	SJ 01333		38	20	18	n.
	SJ 01487	- 29% 13W 09 1 1	26	10	16	
	SJ 01038	29N 13W 09 .1 1	42	10	32	
	SJ 01556	29% 13W 09 1 1 3	27	10	17	
	SJ 03457	29N 13W 09 1 1 3	29	9	20	
	SJ 02594	29N 13W 09 1 1 4	44	17	27	
	SJ 02386	29N 13W 09 1 1 4	30	10	20	
	SJ 01779	29% 13W 09 1 4	31 ,	11	20	
	SJ 00512	29N 13W 09 1 4 1	41	15	26	•
	SJ 02209 SJ 00957	29N 13W 09 1 4 1 29N 13W 09 4 3	74	20	54	
	SJ 00894		30	15	15	
	SJ 02712	29N 13W 09 4 3 3	90	50	40	
	SJ 02367	29N 13W 09 4 3 4	50	20	30	
	SJ 02052	29N 13W 10	69	22	46	
	SJ 00775	29N 13W 10 2 1 4	. 3€	14	22	
	SJ 01271	29% 13W 10 2 2 4	60	30	30	
	SJ 03404	29N 13W 10 2 3 4	42	22	20	
	SJ 01317	29N 13W 10 2 4 2	50 50	23	27	
	SJ 00852 SJ 00314 X	29N 13W 10 2 4 2 29N 13W 10 2 4 2	50 ⁻ 58	24 38	26 20	
	SJ 01402	29N 13W 10 3 2	25	15	10	
	SJ 03311	29N 13W 10 3 2 1	42	20	22	
	SJ 03314	29N 13W 10 3 2 3	32	18	14	
	SJ 02935	29N 13W 10 3 2 4	100	10	90	

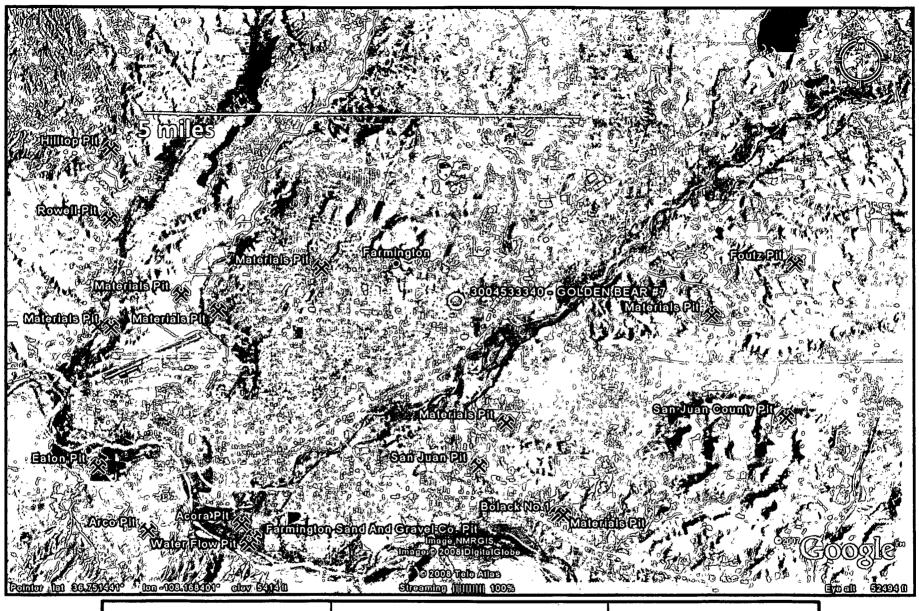
SJ 01402	29N	13W 10	3 2		25	15	10
SJ 03311	29N	13W 10	3 2 1		42	20	22
SJ 03314	29N	13W 10	3 2 3	3	32	18	14
SJ 02935	29N	13W 10	3 2 4	-	100	10	90
SJ 03578	29N	13W 10	3 3 1	L	240	23	217
SJ 03297	29N	13W 10	3 3 2		29	9	20
SJ 00720	29N	13W 10	3 3 3	3	29	15	14
SJ 03332	29N	13W 10	4 2 3	3	60		
SJ 00776	29N	13W 10	4 4		25	. 10	15
SJ 02417	29N	13W 11	131	L	. 37	2ŭ	17
SJ 00955	29N	13W 11	1 4		59	30	29
SJ 02333	29N	13W 11	2 2 1	L	40	10	30
SJ 02136	29N	13W 11	2 2 2	2	50	20	30
SJ 01951	29N	13W 11	23		39	39	
SJ 02001	29N	13W 11	2 3		20	10	10
SJ 00758	29N	13W 11	2 3		35	15	20
SJ 00310	29N	13W 11	2 3 1	L	45	11	34
SJ 00301	29N	13W 11	3			20	
SJ 02795	2 9N	13W 11	4 4 1	Ĺ	180		

Record Count: 42



Lodestar Services, Inc PO Box 4465 Durango, CO 81302 GOLDEN BEAR #7 T29N, R13W, S02P San Juan County, NM

Aerial Photograph



Lodestar Services, Inc PO Box 4465 Durango, CO 81302 GOLDEN BEAR #7 T29N, R13W, S02P San Juan County, NM

Mines, Mills, and Quarries 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.

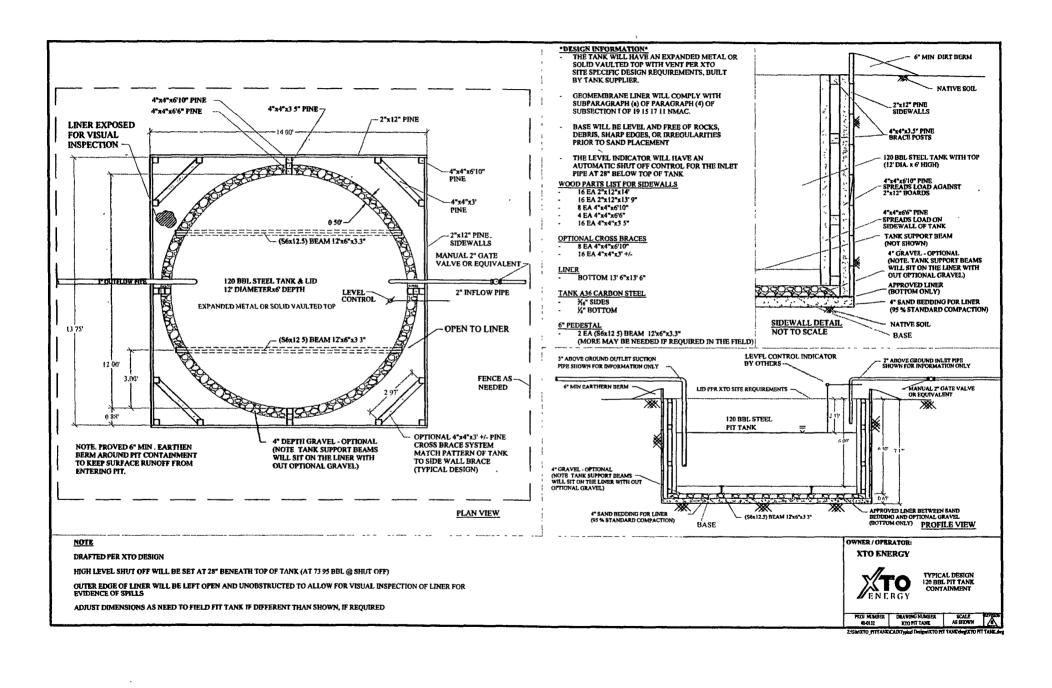
General Plan

- 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 '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)
- The general specifications for design and construction are attached



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

In accordance with Rule 19 15 17 12 NMAC the following information describes the operation and maintenance of below-grade tanks on XTO Energy Inc (XTO) locations. This is XTO's standard procedure for all below-grade tanks. A separate plan will be submitted for any below-grade tank which does not conform to this plan.

General Plan

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

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

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

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

notify the appropriate division district office within 48 hours of the discovery and repair the damage or replace the below-grade tank. If an existing below-grade tank does not meet current requirements of Paragraphs 1-4 of Subsection I of 19 15 17.11 NMAC the tank will be modified or retrofitted to comply. If compliance can not be achieved XTO will implement the approved closure plan.

MONTHLY BELOW GRADE TANK INSPECTION FORM								
Well Name:				API No.:				•
Legals	Sec:		Township:		Range [.]	- -		
XTO Inspector's Name	Inspection Date	Inspection Time	Any visible liner tears (Y/N)	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)
								£-
			<u> </u>					
					 			
<u> </u>		 						
					 			
			 		 			
		-	 				 	
							·	
		<u></u>					<u> </u>	
Notes:	Provide De	etailed Descr	iption					
Misc:			——————————————————————————————————————		·			<u> </u>
								

.

.

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 Dısposal 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.
- 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
 - Operator's name
 - u 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.
- 12. A minimum of 4 feet of cover shall be achieved and the cover shall include 1 foot of suitable material to establish vegetation at the site, or the background thickness of topsoil, whichever is greater. Soil cover will be constructed to the site's existing grade and ponding of water and erosion of the cover material will be prevented with drainage control, natural drainages and silt traps where needed.
- 13. XTO will seed the disturbed areas the first growing season after the operator closes the pit. Seeding will be accomplished via drilling on the contour whenever practical or by other division-approved methods. BLM or Forest Service stipulated seed mixes will be used on federal lands Vegetative cover will equal 70% of the native perennial vegetative cover (un-impacted) consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintain that cover through two successive growing seasons. Repeat seeding or planting will be continued until successful vegetative growth occurs.

XTO Energy Inc San Juan Basın (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,
 - 11 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,
 - Re-vegetation application rates and seeding techniques, (or approved alternative to re-vegetation requirements if applicable),
 - viii Photo documentation of the site reclamation

Jones, Brad A., EMNRD

From:

James_McDaniel@xtoenergy.com

Sent:

Monday, October 04, 2010 6:46 AM

To: Cc: Jones, Brad A., EMNRD Kım_Champlin@xtoenergy.com

Subject:

Pit Closures

Brad,

We are in the process of scheduling BGT closure activities at the below mentioned well sites. These sites are all scheduled for P&A. Could you approve the closure plans only for the sites listed below? The date that the closure plans were submitted to your office are listed next to the well site name. Thanks much!

Blackhills 25-2 (API # 30-045-31607) Unit O, Section 25, Township 26N, Range 13W, San Juan County, New Mexico. (Submittal Date 11/21/2008)

Gallegoes Federal 26-13-1-2S (API #30-045-31907) Unit D, Section 1, Township 26N, Range 13W, San Juan County, New Mexico. (Submittal Date 11/8/2008)

Golden Bear #7 (API #30-045-33340) Uńit P, Section 2, Township 29N, Range 13W, San Juan County, New Mexico.(Submittal Date 12/5/2008)

