4 Ø 3		
District I 1625 N French Dr. Hobbs NM 88240 Di 13 D REGISTERED 10 1220 S. St. Francis Dr., Santa re, NM 87303	State of New Mexico Enerov Minerals and Natural Resources Department Inservation Division puth St. Francis Dr. Santa Fe, NM 87505 8 PM	Form C-144 July 21, 2008 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 Ubspect Office.
Pit Clos	sed-Loop System Below-Grade 7	Fank or
Proposed Altern	ative Method Permit or Closure F	Plan Application
Type of action: X Permit of Existing BGT Closure o Modificat Closure p below-grade tank, or proposed	a pit, closed-loop system, below-grade tank, o f a pit, closed-loop system, below-grade tank, tion to an existing permit lan only submitted for an existing permitted or alternative method	or proposed alternative method or proposed alternative method r non-permitted pit, closed-loop system,
Instructions. Please submit one application	(Form C-144) per individual pit closed-loop syst	em below-arade tank or alternative request
Please be advised that approval of this request does not re environment. Nor does approval relieve the operator of it	lieve the operator of liability should operations result is s responsibility to comply with any other applicable go	in pollution of surface water, ground water or the overnmental authority's rules, regulations or ordinances.
Operator: XTO Energy, Inc.	OGRID #:	5380
Address: #382 County Road 3100, Aztec, NM	87410	
Facility or well name: GOTUR 1		
API Number: 30-045-25257	OCD Permit Number	
U/L or Otr/Otr A Section 08 Towned	bin 31N Pangé 14W Cou	unty: San Juan
Conter of Drongood Degions, Letitude 26 01001	Langituda 108 22526 NADU	
Surface Oursers 🛛 Federal 🗆 State 🗆 Bringto	LongitudeO8.52520 NAD.	
2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2.	A mil LLDPE HDPE PVC O Volume:bb	ther
3.		
□ Closed-loop System: Subsection H of 19.15.17 Type of Operation: □ P&A □ Drilling a new well intent) □ Drying Pad □ Above Ground Steel Tanks □ □ Lined □ Unlined Liner type: Thickness □ Liner Scenee □ Welded □ Fasters □ Other	.11 NMAC Workover or Drilling (Applies to activities wh Haul-off Bins Other	ich require prior approval of a permit or notice of
Liner SeamsweidedractoryOther		
Below-grade tank: Subsection I of 19.15.17.11 Volume: <u>120</u> bbl Type of fluid Tank Construction material: <u>Steel</u> Secondary containment with leak detection Visible sidewalls and liner Visible sidewalls Liner type: Thicknessmil [NMAC d: d: visible sidewalls, liner, 6-inch lift and automatic ov s only Ø OtherVisible sidewalls, vaulted, autor HDPE PVC Other	verflow shut-off natic high-level shut off, no liner
5.		
Submittal of an exception request is required. Exception	ptions must be submitted to the Santa Fe Environme	ental 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, hospital, institution or church)

Four foot height, four strands of barbed wire evenly spaced between one and four feet

Alternate. Please specify Four foot height, steel mesh field fence (hogwire) with pipe top railing

Netting: Subsection E of 1915 17 11 NMAC (Applies to permanent pits and permanent open top tank	
Nerting: Subsection F. of 19 15 17 11 NVIAL TANDUES to permanent bits and permanent open top tops	
	and permanent open top tanks
Treating: Outstand by the the treates to permanent pus and permanent open top tand	and permanent open top tanta)

Screen Netting Other Expanded metal or solid vaulted top

Monthly inspections (If netting or screening is not physically feasible)

Signs: Subsection C of 19.15.17.11 NMAC

7.

8.

9.

10.

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 office for consideration of approval.

Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

Siting Criteria (regarding permitting): 19.15.17.10 NMAC Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of accer material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appr office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to dry above-grade tanks associated with a closed-loop system.	ptable source opriate district approval. ying 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
 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.	Yes 🛛 No

-	Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological	
	Society; Topographic map	

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 19.15.17.12 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:
12. <u>Closed-loop Systems Permit Application Attachment Checklist</u> : 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)
13. 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 19.15.17.11 NMAC Huisance 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 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
Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)
 15. 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.

• 11.

.....

Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: (19.15.17.13.D NMAC) Instructions: Please indentify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.									
Disposal Facility Name: Disposal Facility Permit Number:									
Disposal Facility Name: Disposal Facility Permit Number:									
Will any of the proposed closed-loop system operations and associated activities occur on or in areas that <i>will not</i> be used for future service and operations? Yes (If yes, please provide the information below) No									
Required for impacted areas which will not be used for future service and operations: Soil Backfill and Cover Design Specifications based upon the appropriate requirements of Subsection H of 19.15.17.13 NM Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC	AC								
^{17.} Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable so provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate di considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Just demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.	urce material are strict office or may be stifications and/or								
 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								
 18. On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure play 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 19.15.17.13 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 care 	Dlan. Please indicate, 9.15.17.11 NMAC not 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

	,
Operator Application Certification:	
I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.	
Name (Print): Kim Champlin Title: Environmental Representative	_
Signature: Kim Manden Date: 11.25.08	
e-mail address: kim champlin@xtoenergy.com Telephone: (505) 333-3100	
OCD Approval: Permit Application (including closure plan) Closure Plan (only) OCD Conditions (see attachment)	
OCD Representative Signature: Approval Date:	_
Title: OCD Permit Number:	
^{21.} <u>Closure Report (required within 60 days of closure completion)</u> : Subsection K of 19.15.17.13 NMAC Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.	port.
Closure Completion Date:	
 22. Closure Method: Waste Excavation and Removal On-Site Closure Method Alternative Closure Method Waste Removal (Closed-loop systems on If different from approved plan, please explain. 	ıy)
23. <u>Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:</u> Instructions: Please indentify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more two facilities were utilized.	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 in areas that <i>will not</i> be used for future service and operations? Yes (If yes, please demonstrate compliance to the items below) No	
Required for impacted areas which will not be used for future service and operations: Site Reclamation (Photo Documentation) Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique	
 24. Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a chemark 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) 	eck
On-site Closure Location: Latitude Longitude NAD: 1927 1983	
25. Operator Closure Certification: I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.	
Name (Print):	_
Signature: Date:	_
e-mail address: Telephone:	

STATE OF NEW	MEXICO
ENERGY AND MINERAL	S DEPARTMENT

OIL CONSERVATION DIVISION

P. O. DOX 2088

SANTA FE, NEW MEXICO 87501

EXHIBIT "A"	
Location and Elevation	Plat

Form C-102 Revised 10-1-78

		All distances must be fro	in the outer houndaries of	the Section.	
Operator Kimbar	k C&G		NML 1-10	Gotur	#1 G
Unit Letter	Section	Township	Rango	County Com Juan	
<u>A</u>	8	31North	14 West	San Juan	
Actual Fostage Loa 100/	Neution of Well:		020	Fast	line
Ground Level Flev.	Productors For	mation Canada I	020 m	D	edicated Acreoge:
61571	Deste	Furadon	Barden Do	me Ext.	640 Acres
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interest a	nd royalty).				
3. If more the dated by c	an one lease of d communitization, 1	ifferent ownership is de mitization, force-poolin	edicated to the well, g. ctc?	have the interests of a	ll owners been consoli-
Yes	No If a	nswer is "yes," type of	consolidation		
lf answer this form i	is "no;" list the f necessary.)	owners and tract descri	ptions which have a	ctually been consolidate	ed. (Use reverse side of
No allowa forced-poo	ble will be assign ling, or otherwise)	ed to the well until all i or until a non-standard	nterests have been unit, climinating suc	consolidated (by commu h interests, has been a	mitization, unitization. pproved by the Division.
			: /		CERTIFICATION
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				Date	1001
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			Client:	XTO Energy				
Lodestar Service	es, Inc.	Pit Permit	Project:	Pit Permits				
PD Box 4465, Durana	n. CO 81302	Siting Criteria	Revised:	9/30/2008				
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Information Shee	t Prepared by:	Daniel Newman				
v								
API#:		3004525257	USPLSS:	T31N,R14W,08A				
Name		GOTUR 1	Lat/Long.	36 91991 -108 32526				
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		>100!	Geologic	Cliff Hausa				
Depth to groundwater:		>100	formation:	Cliff House				
Distance to closest								
continuously flowing	7.8 miles	s E to the La Plata River						
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Distance to closest								
cignificant watercourse								
significant watercourse,	1,700'	north of Ute Canyon						
lakebed, playa lake, or								
sinkhole:								
	4 1 1		Soil Type:	Entisols				
Permanent residence,								
school, hospital,		No						
institution or church								
within 300'								
	• • •		Annual	8.21" Farmington FAA Airport				
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Domestic fresh water		· · · · · · · · · · · · · · · · · · ·	Precipitation					
well or spring within		No	Notes	3.82" largest daily rainfall on record				
500'			i totesi					
Any other fresh water								
well or spring within		No						
1000'								
Within incorporated		No	Attached					
municipal boundaries		NO	Documents:					
Within defined				Tone web, eround water data man erici				
municipal fresh water		No	-	Topo map, ground water data map, arier				
well field				photo, mines and quarries map,				
		No	Mining Activity	Alo.				
Wetland within 500'		UNI CONT	winning Activity:	INO				
Within unstable area		No						
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Within 100 year flood	N							
plain	NON	EIVIA data avalible						
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Additional Notes:								
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GOTUR 1 Below Ground Tank Siting Criteria and Closure Plan

General Geology and Hydrology

The San Juan Basin is a typical Rocky Mountain basin with a gently dipping southern flank and a steeply dipping northern flank. Asymmetrically layered Tertiary sandstones and shales, along with Quaternary alluvial deposits dominate surficial geology (Dane and Bachman, 1965). The proposed below ground tank location will be located in the northwest corner of the San Juan Basin, where the Hogback monocline ends. Thicker sequences common throughout the central basin begin to pinch out and older units of Cretaceous Age are exposed, specifically the Menefee Formation and Cliff House Sandstone (Brister and Hoffman, 2002). The resistant Cliff House sandstones form prominent cliff bands, while shales and smaller sandstones of the Menefee Formation are exposed at lower elevations. The stratigraphic section reflects deposition in a coastal plain environment and consists of gray, brownish and tank sandstone interbedded with dark, carbonaceous shales and coal beds. Also, deposits of Quaternary alluvial and aeolian sands occur prominently near the surface, 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). The Cliff House Sandstone ranges from 20 to 245 feet in thickness and is very fine to fine-grained. In areas where the sandstone is less than 200 feet thick (such as the proposed location), transmissivity is approximately 2 ft^2/d (Stone et al., 1983). Specific conductance is high and water from thicker portions of the unit can produce high yields (Stone et al., 1983).

The prominent soil type at the proposed site is rockland, which are basically little to no soils that do not show any profile development. Soils that are present are 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 the soils that cover the area and prohibits effective recharge to the underlying aquifers.

Dry and arid weather further prohibit active recharge. The climate of the region is arid, averaging just over 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 onehalf 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).





New Mexico Office of the State Engineer POD Reports and Downloads WATER COLUMN REPORT 09/16/2008

(qr.	larter	s ar	e 1=	RD	2=	=NE	3=SW 4=SE)							
(qr.	larter	s ar	e bi	gge	est	t to	smallest))		Depth	Depth	Water	(in	feet)
POD Number	Tws	Rng	Sec	P	P	P	Zone	X	Y	Well	Water	Column		
SJ 01187 CLW226675	32%	137	10	3	4	4				24	9	15		
SJ 01187	32N	1377	10	3	4	4				24	5	15		
SJ 01353	32N	1377	10	4	3						38			
SJ 01439	3227	1377	10	4	3					4.5	25	20		
SJ 02068	32N	1377	15	2						48	1 e	29		
SJ 01549	32N	130	15	2	1					47	26	19		
SJ 02985	32N	137	15	2	1	2				47	25	22		
SJ 02865	32N	137	15	2	3	2				44	25	15		
SJ 02558	32N	1377	15	3	2	4				42	23	16		
SJ 02934	323	137	15	4	1	1				34	18	16		
SJ 02890	32N	139	15	4	1	2				55	30	25		
SJ 02705	32N	137	22	1	4	2				25	12	13		
SJ 02704	32N-	139	22	1	4	2				2,5	12	13		
SJ 03111	32N	13W	22	2	1	4				19	e	13		
SJ 02848	32N	137	22	2	4	3				608	50	553		
SJ 00922	32N	137	22	3	1	4				27	12	15		
SJ 00906 X	32N	137	22	3	4					8 E	26	60		
SJ 02918	32N	137	22	3	-1	2				51	30	21		
SJ 00736	32N	13W	22	4	1					40	15	25		
SJ 00339	32N	137	22	4	1	1				50	12	39		
SJ 00340	32N	130	22	4	1	3				50	12	38		
SJ 02847	32N	1.377	22	4	4	1				1255		1255		
SJ 03524	32N	137	27	3	4	1				3.3	10	23		
SJ 03525	32N	137	27	4	3	1				71	12	59		
SJ 03256	32N	137	34	1	4	2				21	÷	15		
SJ 03066	32N	137	34	2	2	2				41	28	13		
SJ 01079	32N	137	34	З	з					100	30	70		
SJ 01943	32N	137	34	4						8	3	5		
SJ 03635	32N	137	34	4	2	4				44	35	9		
SJ 02577	32N	137	34	4	4					3.0	15	15		
SJ 03090	32N	137	35	3	ĩ	1				39	47	12		
SJ 02589	32N	137	35	3	3	2				60	35	25		
SJ 02783	32N	137	35	3	3	4				82	48	14		

New Mexico Office of the State Engineer POD Reports and Downloads

WATER COLUMN REPORT 09/22/2008

		(quarter:	s are	1=	NW 2	2=NE	3=SW 4=SE)							
		(quarter	s are	bi	gges	st to	smallest)	1		Depth	Depth	Water	(in	feet)
POI	Number	Tws	Rng	Sec	q	PI	Zone	X	Y	Well	Water	Column		
SJ	02590	31N	13W	02	1 1	2 3				114	70	44		
SJ	00835	31N	13W	02	23	2				34	19	15		
SJ	03386	31N	131	03	2					30	11	69		
SJ	02990	31N	13W	03	2 3	3 4				100	22	78		
SJ	01295	31N	13W	0.9	2 .	L 1				230	180	50		
SJ	02977	31N	13W	09	2 3	L 3				325	124	201		
SJ	02755	31N	13W	09	2 3	3 4				6 0	40	20		
SJ	02987	31N	13W	0.9	4	L 3				250	87	163		
SJ	02717	3.1N	13W	10	1 3	3				42	22	.20		
SJ	01094	31N	13W	10	2					130	60	70		
SJ	00798	31N	13W	10	2					125	65	60		
SJ	00089	31N	13W	10	2 1	L 1				80	18	62		
SJ	01952	31N	13W	10	2 -	4 #				16	ê	10		
SJ	01944	31N	13W	10^{-1}	2 -	1				20	4	16		
SJ	02276	31N	13W	10	3					24	19	5		
SJ	01945	31N	13W	10	3 0	3				31	16	15		
SJ	00729	31N	13W	10^{-1}	4	L				43	10	33		
SJ	01950	31N	13W	10	4	L				21	11	10		
SJ	02637	31N	13W	10	4 3	2 2				20	ē	14		
SJ	03734 POD1	31N	131	15	1 -	13				40	10	30		
SJ	02048	31N	13W	15	3 1	2 4				54	24	30		
SJ	00398	31N	13W	21						104	ē	98		
SJ	00965	31N	13W	22	1					115	30	85		
SJ	03197	31N	131	22	1 1	L 3				11	5	ê		
SJ	01820	31N	13W	22	3 .	L				50	20	30		
SJ	02737	31N	13W	22	3 (3				78	40	38		
SJ	02836	31N	13W	22	3 3	3 1				100	30	70		
SJ	03797 POD1	31N	13W	22	3 3	33				220	20	200		
SJ	03611	31N	13W	23	1 :	3 1				24	14	10		
SJ	02729	31N	13W	27	1 :	L				100	70	30		

SJ 02753	31N	13W	27	1	1	1
SJ 02832	31N	13W	27	1	1	1
SJ 03351	31N	13W	27	1	4	2
SJ 02761	31N	13W	27	3	3	
SJ 02294	31N	13W	28	4	2	3
SJ 02724	31N	13W	28	4	2	3
SJ 03730 POD1	31N	13W	28	4	3	1
SJ 02811	31N	13W	28	4	4	1
SJ 02766	31N	13W	28	4	4	4
SJ 02072	31N	13W	33	1	4	
SJ 01591	31N	13W	33	3	1	1
SJ 03083	31N	13W	33	3	2	2
SJ 02374	31N	13W	33	3	2	3

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Lodestar Services, IncGOTUR 1PO Box 446531N,14W,08ADurango, CO 81302SAN JUAN COUNTY, NM	Mines and Quarries Map
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XTO Energy Inc. San Juan Basin (Northwest New Mexico) General Design and Construction Plan For Below-Grade Tanks

In accordance with Rule 19.15.17.11 NMAC the following information describes the design and construction of below-grade tanks on XTO Energy Inc. (XTO) locations. This is XTO's standard procedure for all below-grade tanks. A separate plan will be submitted for any below-grade tank which does not conform to this plan.

General Plan

- 1. XTO will design and construct below-grade tanks to contain liquids and solids and prevent contamination of fresh water and protect public health and environment.
- 2. XTO will post a well sign, in compliance with 19.15.3.103 NMAC, on the existing well site operated by XTO where the existing below-grade tank is located. The sign will list the Operator on record as the operator, the location of the well site by unit letter, section, township, range, and emergency telephone numbers.
- 3. XTO is requesting approval of an alternative fencing to be used on below-grade tank locations. Below-grade tank locations will be fenced utilizing 48" steel mesh field-fence (hogwire) with pipe railing along the top. A 6' chain link fence will be utilized around the well pad if the well site is within a city limits or ¼ mile of a permanent residence, school, hospital, institution or church. Below-grade tanks located within 1000' of a permanent residence, school, hospital, institution or church will be fenced by 6' chain link fence with at least two strands of barbed wire at the top. All gates associated with below-grade tanks will remain closed and locked when responsible individuals are not on site.
- 4. XTO shall construct below-grade tanks with an expanded metal covering or solid vaulted top on the top of the below-grade tank.
- 5. XTO will ensure that below-grade tanks are constructed of materials resistant to the below-grade tank's particular contents and resistant to damage from sunlight. Tanks will be constructed of A36 carbon steel with 3/16" sides and ¼" 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).

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

11. The general specifications for design and construction are attached.



Z-SSANETO_PITTANKYCADATypical Deciperation PIT TANK deeparto PIT TANK deep

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 Basin (Northwest New Mexico) General Maintenance and Operating Plan For Below-Grade Tanks Page 2

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

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 tank overflows (Y/N)	Collection of surface run on (Y/N)	Visible layer of oil (Y/N)	Any visible signs of a tank leak (Y/N)	Freeboard Est. (ft)	
Notes:	Provide De	tailed Descri	ption:						
Misc:			····						

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

In accordance with Rule 19.15.17.13 NMAC the following information describes the closure requirements of below-grade tanks on XTO Energy Inc. (XTO) locations. This is XTO's standard procedure for all below-grade tanks. A separate plan will be submitted for any below-grade tank which does not conform to this plan.

General Plan

- 1. XTO will close below-grade tanks within the time periods provided in 19.15.17.13 NMAC, or by an earlier date that the division requires because of imminent danger to fresh water, public health or the environment.
- 2. XTO will close a below-grade tank that does not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC or is not included in Paragraph (5) of Subsection I of 19.15.17.11 NMAC within five years after June 16, 2008, if not retrofitted to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC.
- 3. XTO will close a permitted below-grade tank within 60 days of cessation of the below-grade tank's operation or as required by the transitional provisions of Subsection B of 19.15.17.17 NMAC in accordance with a closure plan that the appropriate division district office approves. The closure report will be filed on form C-144.
- 4. XTO will remove liquids and sludge from below-grade tanks prior to implementing a closure method and will dispose of the liquids and sludge in a division-approved facility. Approved facilities and waste streams include:

Envirotech Permit No. NM01-0011 and IEI Permit No. NM 01-0010B

Soil contaminated by exempt petroleum hydrocarbons

Produced sand, pit sludge and contaminated bottoms from storage of exempt wastes

Basin Disposal Permit No. NM01-005 Produced water

- 5. XTO will remove the below-grade tank and dispose of it in a division approved facility or recycle, reuse, or reclaim it in a manner that the appropriate division district office has approved prior to removal. Any associated liners will be removed, properly cleaned and disposed of per 19.15.9.712 NMAC at San Juan County Landfill. Documentation of the final disposition will be included in the closure report.
- 6. XTO will remove any on-site equipment associated with a below-grade tank unless the equipment is required for some other purpose.
- 7. XTO will test the soils beneath the below-grade tank to determine whether a release has occurred. At a minimum 5 point composite sample will be collected along with individual grab samples from any area that is wet, discolored or showing other evidence of a release. Samples will be

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

analyzed for BTEX, TPH and chlorides to demonstrate that the benzene concentration, as determined by EPA SW-846 methods 8021B or 8260B or EPA method that the division approves, does not exceed 0.2 mg/kg; total BTEX concentration, as determined by EPA SW-846 methods 8021B or 8260B or other EPA method that the division approves, does not exceed 50 mg/kg; the TPH concentration, as determined by EPA method 418.1 or other EPA method that the division approves, does not exceed 100mg/kg; and the chloride concentration, as determined by EPA method 300.1 or other EPA method that the division approves, does not exceed 250 mg/kg, or the background concentration, whichever is greater. XTO will notify the division of its results on form C-141.

- 8. If XTO or the division determines that a release has occurred, XTO will comply with 19.15.3.116 NMAC and 19.15.1.19NMAC as appropriate.
- 9. If the sampling program demonstrates that a release has not occurred or that any release does not exceed the concentrations specified in Paragraph (4) of Subsection E of 19.15.17.13 NMAC, XTO will backfill the excavation with compacted, non-waste containing, earthen material; construct a division prescribed soil cover; recontour and re-vegetate the site.
- Notice of Closure operations will be given to the Aztec Division District III office between 72 hours and one week prior to the start of closure activities via email or verbally. The notification will include the following:
 - i. Operator's name
 - ii. Well Name and API Number
 - iii. Location by Unit Letter, Section, Township, and Range

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

- 11. Re-contouring of location will match fit, shape, line, form and texture of the surrounding area. Re-shaping will include drainage control, prevent ponding, and prevent erosion. Natural drainages will be unimpeded and water bars and/or silt traps will be placed in areas where needed to prevent erosion on a large scale. Final re-contour shall have a uniform appearance with smooth surface, fitting the natural landscape.
- 12. A minimum of 4 feet of cover shall be achieved and the cover shall include 1 foot of suitable material to establish vegetation at the site, or the background thickness of topsoil, whichever is greater. Soil cover will be constructed to the site's existing grade and ponding of water and erosion of the cover material will be prevented with drainage control, natural drainages and silt traps where needed.
- 13. XTO will seed the disturbed areas the first growing season after the operator closes the pit. Seeding will be accomplished via drilling on the contour whenever practical or by other divisionapproved methods. BLM or Forest Service stipulated seed mixes will be used on federal lands. Vegetative cover will equal 70% of the native perennial vegetative cover (un-impacted) consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintain that cover through two successive growing seasons. Repeat seeding or planting will be continued until successful vegetative growth occurs.

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

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14. All closure activities will include proper documentation and be available for review upon request and will be submitted in closure report form to OCD within 60 days of closure of the below-grade tank. Closure report will be filed on form C-144 and incorporate the following:

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

