625 N. French Dr., Hobbs, NM 88240 District II 301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico **Energy Minerals and Natural Resources** Department Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.
For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office 100 24 11 11 48

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

Type of action:	
Existing BGT	Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method
BGT1	Modification to an existing permit
	Closure plan only submitted for an existing permitted or non-permitted pit, closed-loop system,
below-grade tank	x, 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.

Operator:         XTO Energy, Inc.         OGRID #:         5380
Address: #382 County Road 3100, Aztec, NM 87410
Facility or well name:
API Number: 30-039-30191 OCD Permit Number:
U/L or Qtr/Qtr F Section 27 Township 26N Range 05W County: Rio Arriba
Center of Proposed Design: Latitude <u>36.45892</u> Longitude <u>107.34737</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: Lx Wx D
□ 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: Thickness       mil       □ LLDPE       □ HDPE       □ PVC       □ Other         Liner Seams:       □ Welded       □ Factory       □ Other       □
Below-grade tank: Subsection I of 19.15.17.11 NMAC
Volume: 120 bbl Type of fluid: Produced Water
Tank Construction material: Steel
Secondary containment with leak detection Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off
☐ Visible sidewalls and liner ☐ Visible sidewalls only ☒ Other _Visible sidewalls, vaulted, automatic high-level shut off, no liner
Liner type: Thickness mil
Alternative Method:
submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

Page 2 of 5

(30)				
II.  Temporary Pits, Emergency Pits, and Below Instructions: Each of the following items must attached.  Hydrogeologic Report (Below-grade Tan Hydrogeologic Data (Temporary and Em Siting Criteria Compliance Demonstratio Design Plan - based upon the appropriate Operating and Maintenance Plan - based Closure Plan (Please complete Boxes 14	ks) - based upor ergency Pits) - l ns - based upon requirements o upon the approp	the application. Please indicates the requirements of Paragraph (passed upon the requirements of P the appropriate requirements of f 19.15.17.11 NMAC priate requirements of 19.15.17.12	e, by a check mark in the box, that 4) of Subsection B of 19.15.17.9 Naragraph (2) of Subsection B of 19.15.17.10 NMAC 2 NMAC	t the documents are NMAC .15.17.9 NMAC
and 19.15.17.13 NMAC  Previously Approved Design (attach copy of	- ,		•	
Closed-loop Systems Permit Application Att Instructions: Each of the following items mustatached.  Geologic and Hydrogeologic Data (only Siting Criteria Compliance Demonstration Design Plan - based upon the appropriate Operating and Maintenance Plan - based Closure Plan (Please complete Boxes 14 and 19.15.17.13 NMAC	for on-site clost ons (only for on- e requirements of upon the appro through 18, if a	the application. Please indicate ure) - based upon the requirement site closure) - based upon the application of 19.15.17.11 NMAC priate requirements of 19.15.17.1 applicable) - based upon the appropriate requirements	e, by a check mark in the box, that is of Paragraph (3) of Subsection Expropriate requirements of 19.15.17  2 NMAC oppriate requirements of Subsection	of 19.15.17.9 .10 NMAC
Previously Approved Design (attach copy of				
☐ Previously Approved Operating and Maint			(Applies only to closed-	loop system that use
above ground steel tanks or haul-off bins and p	ropose to imple	ment waste removal for closure)		
Permanent Pits Permit Application Checklis Instructions: Each of the following items must attached.  Hydrogeologic Report - based upon the a Siting Criteria Compliance Demonstration Climatological Factors Assessment Certified Engineering Design Plans - based Dike Protection and Structural Integrity a Leak Detection Design - based upon the Liner Specifications and Compatibility A Quality Control/Quality Assurance Consactory Operating and Maintenance Plan - based Freeboard and Overtopping Prevention F Nuisance or Hazardous Odors, including Emergency Response Plan Oil Field Waste Stream Characterization Monitoring and Inspection Plan Erosion Control Plan Closure Plan - based upon the appropriate	requirements of ons - based upon the appropriate requissessment - base truction and Insupon the appro Plan - based upon H <sub>2</sub> S, Preventio	Paragraph (1) of Subsection B of the appropriate requirements of 19.15.17 pon the appropriate requirements of 19.15.17 pon the appropriate requirements of 19.15.17.11 NMAC and upon the appropriate requirement tallation Plan priate requirements of 19.15.17.1 n the appropriate requirements of	19.15.17.9 NMAC 19.15.17.10 NMAC 7.11 NMAC s of 19.15.17.11 NMAC nents of 19.15.17.11 NMAC 2 NMAC 19.15.17.11 NMAC	t the documents are
Proposed Closure: 19.15.17.13 NMAC  Instructions: Please complete the applicable in	boxes, Boxes 14	through 18, in regards to the pr	oposed closure plan.	
In-	ion and Remove I (Closed-loop Method (Only place Burial	ul systems only) for temporary pits and closed-loo ] On-site Trench Burial	-	
S.  Waste Excavation and Removal Closure Plantic Closure plan. Please indicate, by a check mark  □ Protocols and Procedures - based upon the Confirmation Sampling Plan (if applicate Disposal Facility Name and Permit Numer Soil Backfill and Cover Design Specificate Re-vegetation Plan - based upon the approximation Pl	n Checklist: (1 k in the box, the appropriate rele) - based upor ber (for liquids, ations - based upor opriate requires	9.15.17.13 NMAC) Instructions at the documents are attached, equirements of 19.15.17.13 NMA at the appropriate requirements of drilling fluids and drill cuttings) on the appropriate requirements ments of Subsection I of 19.15.17	Each of the following items must C Subsection F of 19.15.17.13 NMA of Subsection H of 19.15.17.13 NR	st be attached to the
Form C-144		Oil Conservation Division	Pag	e 3 of 5

acilities are required.  Disposal Facility Name:	Disposal Facility Permit Nu	ımber:					
	Il Facility Name: Disposal Facility Permit Number: Disposal Facility Permit Number:						
Vill any of the proposed closed-loop system operat  Yes (If yes, please provide the information b	tions and associated activities occur on or in areas that will n						
Re-vegetation Plan - based upon the appropri	If for future service and operations; as based upon the appropriate requirements of Subsection iate requirements of Subsection I of 19.15.17.13 NMAC opriate requirements of Subsection G of 19.15.17.13 NMAC						
rovided below. Requests regarding changes to ce	nstration of compliance in the closure plan. Recommenda ertain siting criteria may require administrative approval fi to the Santa Fe Environmental Bureau office for consider	rom the appropriate distr	ict office or may l				
Ground water is less than 50 feet below the bottom - NM Office of the State Engineer - iWATEI	of the buried waste. RS database search; USGS; Data obtained from nearby wells	s	Yes No				
iround water is between 50 and 100 feet below the NM Office of the State Engineer - iWATER	bottom of the buried waste RS database search; USGS; Data obtained from nearby wells	s	☐ Yes ☐ No ☐ NA				
round water is more than 100 feet below the botto NM Office of the State Engineer - iWATER	om of the buried waste. RS database search; USGS; Data obtained from nearby wells	5	☐ Yes ☐ No ☐ NA				
Vithin 300 feet of a continuously flowing watercounke (measured from the ordinary high-water mark)  Topographic map; Visual inspection (certified)		ped, sinkhole, or playa	☐ Yes ☐ No				
Vithin 300 feet from a permanent residence, school  Visual inspection (certification) of the prop	I, hospital, institution, or church in existence at the time of incosed site; Aerial photo; Satellite image	nitial application.	☐ Yes ☐ No				
vatering purposes, or within 1000 horizontal feet of	esh water well or spring that less than five households use for f any other fresh water well or spring, in existence at the tim RS database; Visual inspection (certification) of the proposed	e of initial application.	☐ Yes ☐ No				
dopted pursuant to NMSA 1978, Section 3-27-3, a	n a defined municipal fresh water well field covered under a is amended. he municipality; Written approval obtained from the municip		☐ Yes ☐ No				
Within 500 feet of a wetland US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site							
-	from the NM EMNRD-Mining and Mineral Division		Yes No				
Vithin an unstable area.  - Engineering measures incorporated into the Society; Topographic map	e design; NM Bureau of Geology & Mineral Resources; USC	GS; NM Geological	☐ Yes ☐ No				
Vithin a 100-year floodplain FEMA map			☐ Yes ☐ No				
y a check mark in the box, that the documents ar.  Siting Criteria Compliance Demonstrations - Proof of Surface Owner Notice - based upon Construction/Design Plan of Burial Trench ( Construction/Design Plan of Temporary Pit ( Protocols and Procedures - based upon the ap Confirmation Sampling Plan (if applicable) - Waste Material Sampling Plan - based upon to Disposal Facility Name and Permit Number ( Soil Cover Design - based upon the appropria Re-vegetation Plan - based upon the appropria	MAC) Instructions: Each of the following items must be at the attached.  based upon the appropriate requirements of 19.15.17.10 NN the appropriate requirements of Subsection F of 19.15.17.13 (if applicable) based upon the appropriate requirements of 19 (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.13 NMAC based upon the appropriate requirements of Subsection F of the appropriate requirements of Subsection F of 19.15.17.13 (for liquids, drilling fluids and drill cuttings or in case on-situate requirements of Subsection H of 19.15.17.13 NMAC (are requirements of Subsection I of 19.15.17.13 NMAC) appriate requirements of Subsection G of 19.15.17.13 NMAC	MAC 3 NMAC 9.15.17.11 NMAC riate requirements of 19.1 f 19.15.17.13 NMAC NMAC e closure standards canno	5.17.11 NMAC				
Form C-144	Oil Conservation Division	Page 4 of					

19. Operator Application Certification:					
I hereby certify that the information submitted with this application is true, accurate and co	omplete to the best of my knowledge and belief.				
	itle: Environmental Representative				
	11 10 25				
Signature: Kim Wangker	Date: 11-19-08				
e-mail address: kim_champlin@xtoenergy.com Tel	ephone:(505) 333-3100				
20.					
OCD Approval:  Permit Application (including closure plan)  Closure Plan (only)	_ ,				
	Approval Date: <u>08/08/2022</u>				
Title: Environmental Specialist-A OCD P	ermit Number: BGT1				
Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC  Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report.  The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.					
C	osure Completion Date:				
22.  Closure Method:  Waste Excavation and Removal On-Site Closure Method Alternative Closure If different from approved plan, please explain.	sure Method  Waste Removal (Closed-loop systems only)				
23.  Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Ut Instructions: Please indentify the facility or facilities for where the liquids, drilling fluid two facilities were utilized.					
Disposal Facility Name: Dispos	al Facility Permit Number:				
Disposal Facility Name: Dispos	al Facility Permit Number:				
Were the closed-loop system operations and associated activities performed on or in areas  Yes (If yes, please demonstrate compliance to the items below) No	that will not be used for future service and operations?				
Required for impacted areas which will not be used for future service and operations:  Site Reclamation (Photo Documentation) Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique					
Closure Report Attachment Checklist: Instructions: Each of the following items must mark in the box, that the documents are attached.  Proof of Closure Notice (surface owner and division) Proof of Deed Notice (required for on-site closure) Plot Plan (for on-site closures and temporary pits) Confirmation Sampling Analytical Results (if applicable) Waste Material Sampling Analytical Results (required for on-site closure) Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation) On-site Closure Location: Latitude Longitude					
Us. Operator Closure Certification:					
I hereby certify that the information and attachments submitted with this closure report is to belief. I also certify that the closure complies with all applicable closure requirements and					
Name (Print): Tit	le:				
Signature:	Date:				
e-mail address: Te	elephone:				
a de la companya de l					

DISTRICT I 1625 N. French Dr., Hobbs, N.M. 88240

DISTRICT II 1301 W. Grand Ave., Artesia, N.M. 88210

DISTRICT III 1000 Rio Brozos Rd., Aztec, N.M. 87410

API Number

DISTRICT IV 1220 South St. Francis Dr., Santa Fe, NM 87505 State of New Mexico Energy, Minerals & Natural Resources Department

<sup>2</sup>Pool Code

## OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, NM 87505

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

<sup>3</sup>Pool Name

☐ AMENDED REPORT

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## WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>4</sup> Property Coo	le l				<sup>3</sup> Property N	ame			e W	ell Number
(13,413,433					JICARILLA AI					10G
<sup>7</sup> OGRID No.					*Operator N	orne	· · · · · · · · · · · · · · · · · · ·		٠,	Elevation
		XTO ENERGY INC.							6517	
<del>.</del>					<sup>10</sup> Surface	Location				
UL or lot no.	Section 27	Township 26-N	Range 5-W	Lat Idn	Feet from the 2175	North/South line NORTH	Feet from the 2355	East/We: WE	st line IST	RIO ARRIBA
			" Bott	om Hole	Location If	Different From	n Surface			
UL or lot no.	Section	Township	Ronge	Lot Idn	Feet from the	North/South line	Feet from the	East/We	at line	County
12 Dedicated Acres	<u> </u>	13 J	oint or Infil	.1	14 Consolidation Co	de	<sup>19</sup> Order No.	.l		<b>_1</b>
					<u> </u>					
NO ALLOW	ABLE W					ON UNTIL ALL I EEN APPROVEC			EN CO	NSOLIDATED
CALC'D COR. BY PROJECTION				89-54-3 5311.4' (0		CALC'D BY PROJE	I hereby ce is true and belief, and interest or including the right to dri contract wi interest, or	ertify that it is complete it that this or unleased m he proposed it this well of ith an owner r to a voluni	he informati to the best rganization ineral intera battom ho at this loca r of such a tary pooling	RTIFICATION on contained herein of my knowledge and either owns a working est in the land le location or has a tion pursuant to a mineral or working agreement or a re entered by the
}	355'			LONG: 1	.45892" N. (1 07.34737" W. 7'32.1" N. (NA 17'20'48.4" W. (N	D 27)	Signature Printed Nav	me	Date	1
\$ 00-17-47 5281.0' (C)				27 —			i hereby certificate for under my correct to the FEBRUA Date of Sur Signature or	fy that the can field not supervision, a best of my RY 13,	well location es of actual and that they belief.  2006	TIFICATION  In sharen on this plat  It surveys made by me  It some is true and
CALC'D COR. BY SINGLE PROP	· .				:		Cartificate N		ANONES	

Lodestar Services, Inc. PD Box 4465, Durango, CO 81302		Pit Permit Siting Criteria Information Sheet		Client: Project: Revised: Prepared by:	XTO Energy Pit Permits 10/15/2008 Daniel Newman
API#:		3003930191		USPLSS:	T26N,R5W,27F
Name:	JICAR	ILLA APACHE #10G		Lat/Long:	36.45892 / -107.34737
Depth to groundwater:		<50'		Geologic formation:	San Jose Formation
Distance to closest continuously flowing watercourse:	32.2 mile	es north west to the San Juan River			
Distance to closest significant watercourse, lakebed, playa lake, or sinkhole:		outh of Tapicito Creek			
		W 27		Soil Type:	Entisols
Permanent residence, school, hospital, institution or church within 300'		No			
				Annual Precipitation:	10.88" Lybrook, NM
Domestic fresh water well or spring within 500'		No		Precipitation Notes:	7.19" largest daily rainfall on record
Any other fresh water well or spring within 1000'		south of Tapicito Creek			
Within incorporated municipal boundaries		No		Attached Documents:	
Within defined municipal fresh water well field		No			Topo map, ground water data map, ariel photo, mines and quarries map,
Wetland within 500'		No		Mining Activity:	No
Within unstable area		No			
Within 100 year flood plain	No F	EMA data available			
Additional Notes:				1	

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## Jicarilla Apache #10G Below Grade Tank Hydrogeologic Report for Siting Criteria

## General Geology and Hydrology

The San Juan Basin is a typical Rocky Mountain basin with a gently dipping southern flank and a steeply dipping northern flank. Asymmetrically layered Tertiary sandstones and shales, along with Quaternary alluvial deposits, dominate surficial geology (Dane and Bachman, 1965). The proposed pit location will be located in the San Juan Basin on the Jicarilla Apachie Indian Reservation near Tapicito Creek. The predominant geologic formation is the San Jose Formation of Tertiary age, which underlies surface soils and is often exposed (Dane and Bachman, 1965). Deposits of Quaternary alluvial and aeolian sands occur prominently near the surface of the area, especially near streams and washes.

Cretaceous and Tertiary sandstones, as well as Quaternary alluvial deposits serve as the primary aguifers in the San Juan basin (Stone et al., 1983). In most of the proposed area, the San Jose Formation lies at the surface and overlies the Nacimiento Formation. Thickness of the San Jose ranges from 200 to 2700 feet, thickening from west to east across the region of interest (Stone et al., 1983). Aquifers within the coarser and continuous sandstone bodies of the San Jose Formation are between 0 and 2700' deep in this section of the basin (Stone et al., 1983). Groundwater within these aguifers flows north, toward the San Juan River. Little specific hydrogeologic data is available for the San Jose Formation system, but "numerous well and springs used for stock and domestic supplies" draw their water from the San Jose Formation (Stone et al, 1983). The prominent soil type at the proposed site are rock lands and aridisols, which are defined as soils that exhibit little to no any profile development (www.emnrd.state.nm.us). Soils are basically unaltered from their parent rock. Miles of arroyos, washes and intermittent streams exist as part of the drainage network towards the San Juan River. These features often cut into soil and other unconsolidated materials, contributing to sedimentation downstream. The sudden influx of water from storm events easily erodes the soils that cover the area and prohibits effective recharge to the underlying aguifers.

Dry and arid weather further prohibit active recharge. The climate of the region is arid, averaging just over 12 inches of rainfall annually. As is typical of the southwestern United States monsoonal weather patterns, most precipitation falls from August through October. The heaviest rainfall occurs in the summer in isolated, intense cloudbursts. November through June is relatively dry. Snow generally falls from December to mid-February and averages less than one half inch in depth. However, most recharge occurs during the winter months during snowmelt periods from the upper elevations (Western Regional Climate Center www.wrcc.dri.edu). The predominant vegetation is sagebrush and grasses with a more restricted pinon-juniper association (Dick-Peddie, 1993).

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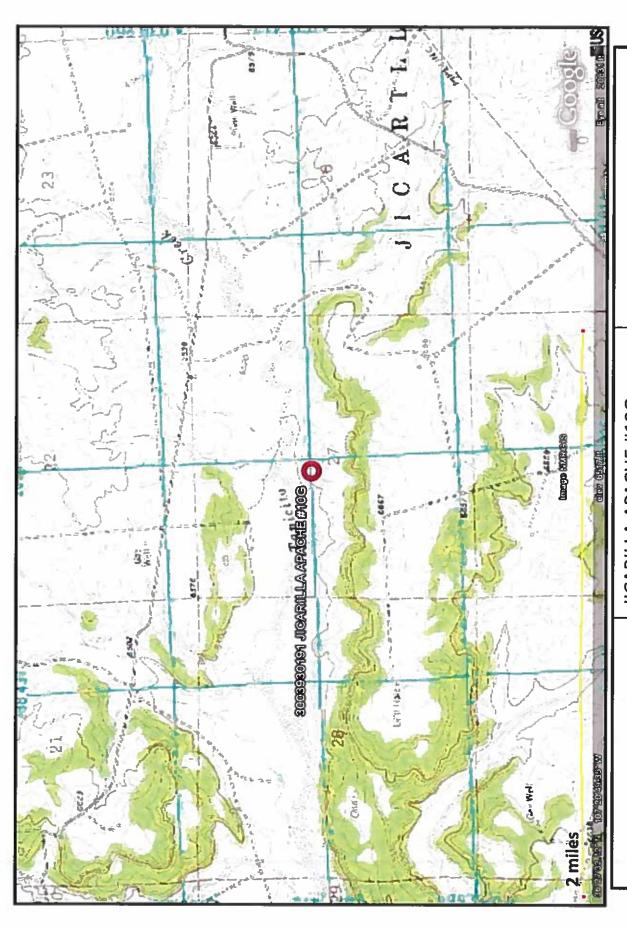
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## Site Specific Hydrogeology

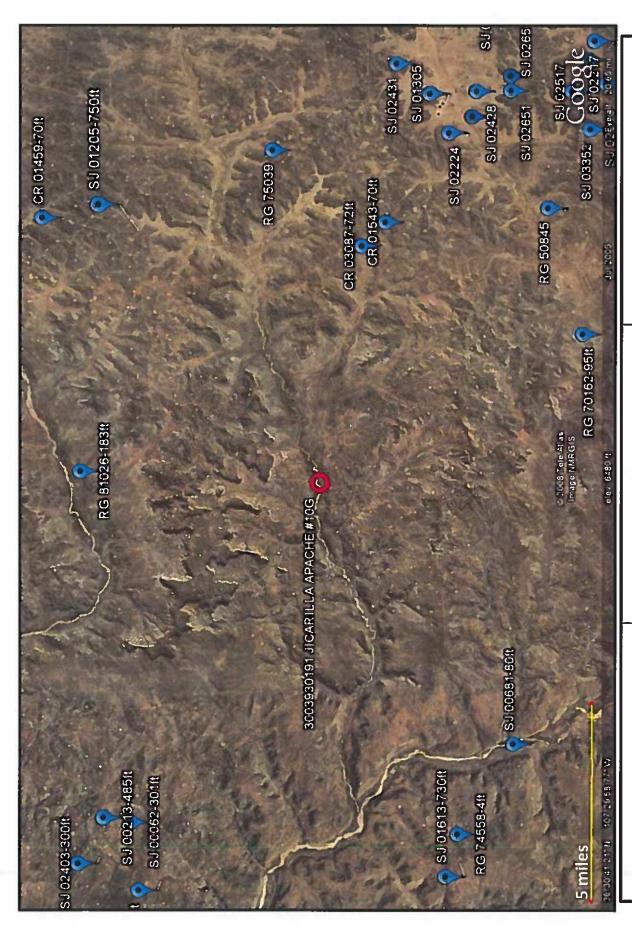
Depth to groundwater is estimated to be less than 50 feet. This estimation is based on data from Stone and others (1983), the USGS Groundwater Atlas of the United States and depth to groundwater data published on the New Mexico State Engineer's iWaters Database website. Local topography and proximity to surface hydrologic features are also taken into consideration.

Beds of water-yielding sandstone are present in the San Jose Formation, which are fluvial in origin and are interbedded with mudstone, siltstone, and shale. "Extensive intertonguing" of different members of this formation is reported. (Stone et al, 1983). Porous sandstones form the principal aquifers, while relatively impermeable shales and mudstones form confining units between the aquifers (Stone et al., 1983). Local aquifers exist within the San Jose Formation at depths greater than 100 feet and thicknesses of the aquifer can be up to several hundred feet (USGS, Groundwater Atlas of the US) (Stone et al, 1983). The site in question is located within a slightly vegetative bank of Tapicito Creek at an elevation of approximately 6500 feet. This region is deeply incised by canyons, washes, gullies and arroyos, with Tacipito Creek being the predominant topographic feature. The mesas are composed of cliff-forming sandstone, and systems of dry washes and their tributaries composed of alluvium are evident on the attached aerial image. Groundwater is expected to be shallow within Tapicito Creek and within the surrounding tributary systems. An elevation difference between the site and the base of Tapicito Creek of barley ten feet suggests groundwater at the proposed site is not considerably deep.

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 attached. Water drops show locations of wells and the labels for each water drop indicate depth to groundwater in feet. The nearest water well is approximately six miles to the north and sits approximately at the same elevation, but does not accurately represent this site. Therefore, the proximity to Tapicito Creek is used to estimate groundwater to be less than 50 feet deep at the proposed location.



**TOPOGRAPHIC MAP** 



Lodestar Services, Inc
PO Box 4465
Durango, CO 81302
IICARILLA APACHE #10G
T26N,R5W,27F
RIO ARRIBA, NM

i-Waters Ground Water Data Map

1     125     125     125       1     165     165     165       1     18     18     18       1     245     245     245       1     265     265     265       1     225     225     225       1     225     225     225       2     850     850     850       1     75     75     75       1     110     110     110       1     110     110     100       1     110     110     110       1     30     30     30       2     70     75     75       7     70     75     75	Zone	
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75		35
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	Zone	
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	Rng	0.4W
	Tws	25N

Bsn RG

Feet)	Avg	500	80
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(Depth	Min	500	80
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	×		
	×		
	Zone		
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	Rng	OEW	0.6W
	Tws	25N	25N
	Bsn	a در	נו כן

	Feet)	Avg	730
	Water in	Max	
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WATER		×	
VERAGE DEPTH OF		Zone	9
GE		Sec	12
AVERA		Rng	07W
		TWB	25N
		Bsn	а Д

	Feet)	Avg	400	18	2.4	180
	Water in	•	400	18	26	180
8	(Depth	Min	400	18	61 61	180
9/30/200		Wells	Н	τ·I	¢1	ત
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WATER		×				
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AVERA			07W	07W		
		Tws	26N	26N	26N	2 <b>6N</b>
		Bsn	B.J.	s G	ສຸ	9 G

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REPORT	
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OF	
DEPTH	
AVERAGE	

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	Min	750
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	×	
	Zone	
	Sec	34
	Rng	04W 34
	Tws	27N
	Bsn	3,7

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REPORT
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OF
DEPTH
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(Depth	Min	186	260
	Wells	1	1
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	×		
	Zone		
	Sec	27	04
	Rng	05W	05%
	Tws	27N	27N
	Bsn	RG	ba

Record Count: 2

	Feet)	Avg	41	300	362
	Water in	Max	41	300	485
8	(Depth	Min	41	300	301
09/30/2008		Wells	Н	Ħ	ന
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WATER		×			
AVERAGE DEPTH OF		Zone			
GE		Sea	07	30	32
AVERA			0 ew	0.6W	
		TWS	27N	27N	27N
		Bsn	s C	a را	B D

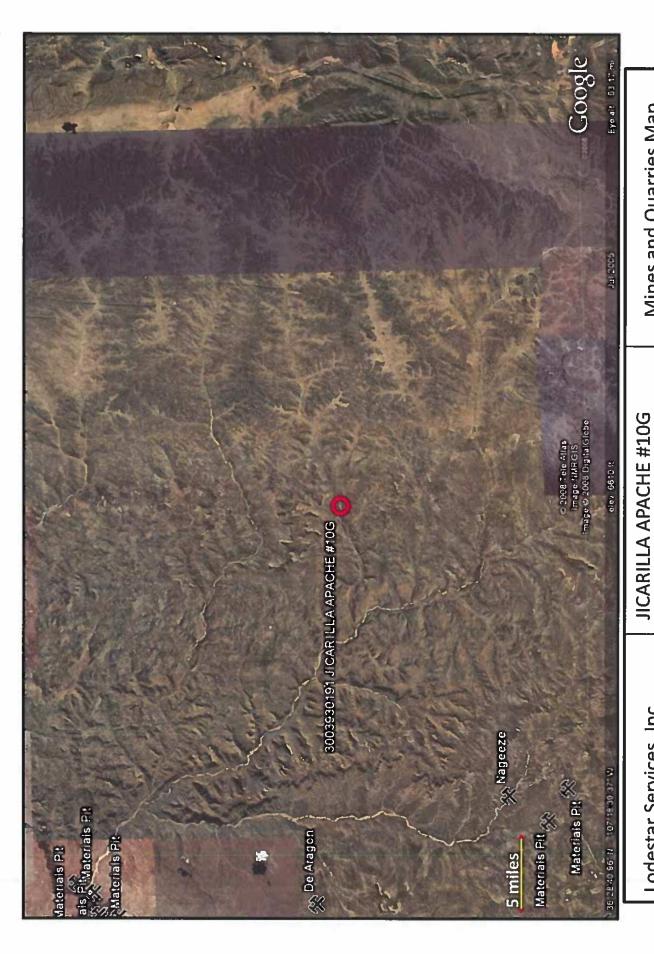
	Feet)	Avg	465	200	320	300	250
	Water in	Max	465	500	320	300	250
89	(Depth	Min	465	500	320	300	250
09/30/500		Wells	r <del>-</del> l	Ħ	<del>-</del> l	н	Η
REPORT		Ħ					
WATER		×					
VERAGE DEPTH OF WATER		Zone					
GE		Sec	35	15	17	21	35
AVERA			07W	070		07W	07W
		Tws	27N	27N	27N	27N	27N
		Bsn	RG	3,7	s C	ھ ب	30



**AERIAL PHOTOGRAPH** 

Lodestar Services, Inc PO Box 4465 Durango, CO 81302

JICARILLA APACHE #10G T26N,R5W,27F RIO ARRIBA, NM



RIO ARRIBA, NM T26N,R5W,27F Lodestar Services, Inc Durango, CO 81302 PO Box 4465

Mines 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

- 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.
- 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

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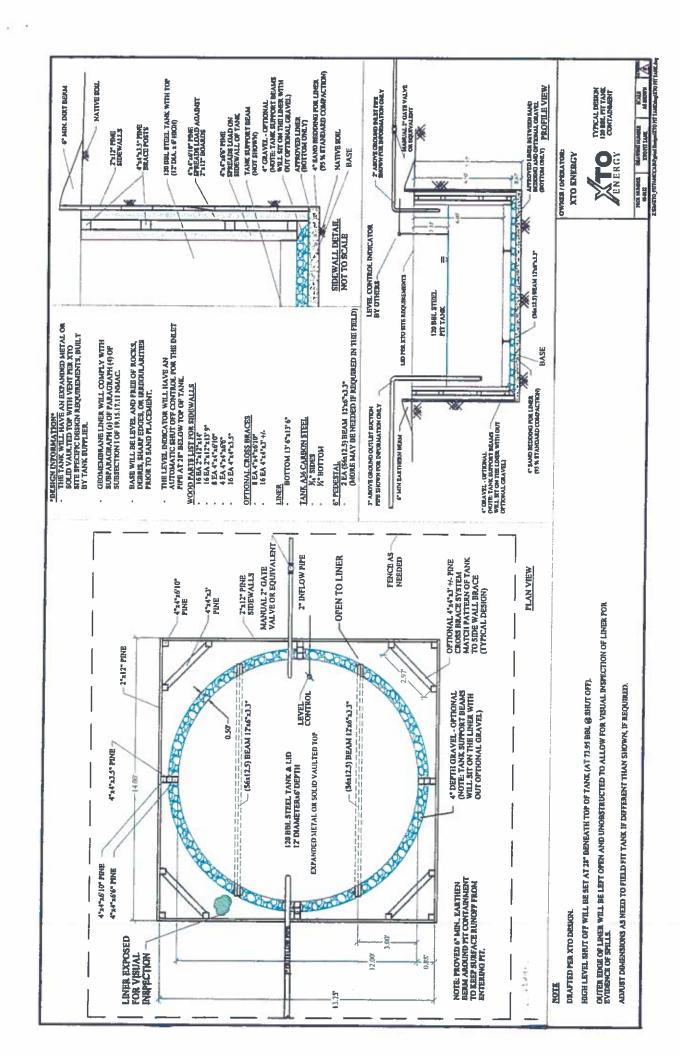
XTO Energy Inc. San Juan Basin (Northwest New Mexico) General Design and Construction Plan For Below-Grade Tanks Page 2

> 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).

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



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

In accordance with Rule 19.15.17.12 NMAC the following information describes the operation and maintenance of below-grade tanks on XTO Energy Inc. (XTO) locations. This is XTO's standard procedure for all below-grade tanks. A separate plan will be submitted for any below-grade tank which does not conform to this plan.

## General Plan

- 1. XTO will operate and maintain below-grade tanks to contain liquids and solids, maintain the integrity of the liner and secondary containment system, prevent contamination of fresh water and protect public health and the environment. Fluid levels will be monitored weekly and high levels will be removed as necessary. Monthly inspections will be conducted to monitor integrity of below-grade tank systems and below-grade tanks will be equipped with automatic high-level shut-off devices.
- 2. XTO will not allow below-grade tanks to overflow and will use berms and/or diversion ditch to prevent surface run on to enter the below-grade tank. Below-grade tanks will be equipped with automatic high-level shut-off control devices as well as manually operated shut-off valves. See attached drawing for vault design and placement of diversion berms and shut-off devices.
- 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.
- 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.

				Freehoard	Est. (ft)														
				Anv visible signs	of a tank leak (Y/N)														:
N FORM				Visible laver	of oil (Y/N)														
INSPECTIO	API No.:	C	Kange:	Collection of surface	run on (Y/N)										į				
MONTHLY BELOW GRADE TANK INSPECTION FORM				Any visible signs of	tank overflows (Y/N)		:												
1LY BELO			ownsinp.	Any visible liner	tears (Y/N)									otion:					
MONT				Inspection	Time									Provide Detailed Description:					
		Ö	3ec.	Inspection	Date									Provide Del			-		
	Well Name:	3,000	Canal	XTO Inspector's	Name									Notes:		Misc			

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

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

## General Plan

- 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.
- XTO will remove any on-site equipment associated with a below-grade tank unless the equipment is required for some other purpose.
- 7. XTO will test the soils beneath the below-grade tank to determine whether a release has occurred. At a minimum 5 point composite sample will be collected along with individual grab samples from any area that is wet, discolored or showing other evidence of a release. Samples will be

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

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

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

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

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

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

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

811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720 District III 1000 Rio Brazos Rd., Aztec, NM 87410

Phone:(505) 334-6178 Fax:(505) 334-6170 1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

**State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division** 1220 S. St Francis Dr. **Santa Fe, NM 87505** 

QUESTIONS

Action 97766

## **QUESTIONS**

Operator:	OGRID:
HILCORP ENERGY COMPANY	372171
1111 Travis Street	Action Number:
Houston, TX 77002	97766
	Action Type:
	[C-144] Legacy Below Grade Tank Plan (C-144LB)

### QUESTIONS

Facility and Ground Water		
Please answer as many of these questions as possible in this group. More information will help us identify the appropriate associations in the system.		
acility or Site Name  JICARILLA APACHE 10G		
Facility ID (f#), if known	Not answered.	
Facility Type	Below Grade Tank - (BGT)	
Well Name, include well number	JICARILLA APACHE 10G	
Well API, if associated with a well	30-039-30191	
Pit / Tank Type	Not answered.	
Pit / Tank Name or Identifier	Not answered.	
Pit / Tank Opened Date, if known	Not answered.	
Pit / Tank Dimensions, Length (ft)	Not answered.	
Pit / Tank Dimensions, Width or Diameter (ft)	Not answered.	
Pit / Tank Dimensions, Depth (ft)	Not answered.	
Ground Water Depth (ft)	Not answered.	
Ground Water Impact	Not answered.	
Ground Water Quality (TDS)	Not answered.	

Below-Grade Tank		
Subsection I of 19.15.17.11 NMAC		
Volume / Capacity (bbls)	120	
Type of Fluid	Produced Water	
Pit / Tank Construction Material	Steel	
Secondary containment with leak detection	Not answered.	
Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off	Not answered.	
Visible sidewalls and liner	Not answered.	
Visible sidewalls only	Not answered.	
Tank installed prior to June 18. 2008	Not answered.	
Other, Visible Notation. Please specify	Not answered.	
Liner Thickness (mil)	Not answered.	
HDPE (Liner Type)	Not answered.	
PVC (Liner Type)	Not answered.	
Other, Liner Type. Please specify (Variance Required)	Not answered.	

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## **State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division** 1220 S. St Francis Dr. **Santa Fe, NM 87505**

QUESTIONS, Page 2

QUESTIONS (continued)			
Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171 Action Number: 97766 Action Type: [C-144] Legacy Below Grade Tank Plan (C-144LB)		
QUESTIONS			
Fencing			
Subsection D of 19.15.17.11 NMAC (Applies to permanent pits, temporary pits, and below-grade tank	s)		
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)	Not answered.		
Four foot height, four strands of barbed wire evenly spaced between one and four feet	Not answered.		
Alternate, Fencing. Please specify (Variance Required)	4' steel mesh		
Netting			
Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks)			
Screen	Not answered.		
Netting	Not answered.		
Other, Netting. Please specify (Variance May Be Needed)	expanded metal or solid vaulted top		
Signs			
Subsection C of 19.15.17.11 NMAC (If there are multiple operators at a site, each operator must have	e their own sign in compliance with Subsection C of 19.15.17.11 NMAC.)		
12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers	Not answered.		
Signed in compliance with 19.15.16.8 NMAC	True		
Variances and Exceptions			
Justifications and/or demonstrations ofequivalency are required. Please refer to 19.15.17 NMAC for Please check a box if one or more of the following is requested, if not leave blank:	guidance.		
Variance(s): Requests must be submitted to the appropriate division district for consideration of approval.	Not answered.		
Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval	Not answered.		

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**State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division** 1220 S. St Francis Dr. **Santa Fe, NM 87505** 

QUESTIONS, Page 3

Action 97766

Operator:	OGRID:
HILCORP ENERGY COMPANY	372171
1111 Travis Street	Action Number:
Houston, TX 77002	97766

Action Type:

[C-144] Legacy Below Grade Tank Plan (C-144LB)

**QUESTIONS** (continued)

## QUESTIONS

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 acceptable source material are provided below. Siting criteria does not apply to drying pads or above-grade tanks.

Siting Criteria, General Siting		
Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank	Not answered.	
NM Office of the State Engineer - iWATERS database search	Not answered.	
USGS	Not answered.	
Data obtained from nearby wells	Not answered.	

Siting Criteria, Below Grade Tanks	
Within 100 feet of a continuously flowing watercourse, significant watercourse, lakebed, sinkhole, wetland or playa lake (measured from the ordinary high-water mark)	No
Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption	No

Proposed Closure Method	
Below-grade Tank Below Grade Tank - (BGT)	
Waste Excavation and Removal	Not answered.
Alternate Closure Method. Please specify (Variance Required)	Not answered.

Operator Application Certification	
Registered / Signature Date	11/19/2008

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ACKNOWLEDGMENTS

Action 97766

## **ACKNOWLEDGMENTS**

Operator:	OGRID:
HILCORP ENERGY COMPANY	372171
1111 Travis Street	Action Number:
Houston, TX 77002	97766
	Action Type:
	[C-144] Legacy Below Grade Tank Plan (C-144LB)

### **ACKNOWLEDGMENTS**

V	I acknowledge that I have received prior approval from the OCD to submit documentation of a legacy below-grade tank on behalf of my operator.	
V	I hereby certify that the information submitted with this documentation is true, accurate and complete to the best of my knowledge and belief.	

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CONDITIONS

Action 97766

CONDITIONS

CONDITIONS	
Operator:	OGRID:
HILCORP ENERGY COMPANY	372171
1111 Travis Street	Action Number:
Houston, TX 77002	97766
	Action Type:
	[C-144] Legacy Below Grade Tank Plan (C-144LB)

### CONDITIONS

Created By		Condition Date
jburdine	None	8/8/2022