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

Received by OCD: \$/20/2022 9:56:36 AM

## 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.

Dit Closed

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

110500	od i titornati i o i i totiloa .	CHIMIC OF CIODE	no man mpp.	TOUTION
Existing BGT Legacy BGT1	Permit of a pit, closed-loop syllication of a pit, closed-loop syllication to an existing polyclosure plan only submitted for proposed alternative method	system, below-grade ( ermit	tank, or proposed	alternative method
Instructions: Please submit of	ne application (Form C-144) per in	dividual pit, closed-loo	p system, below-gra	de tank or alternative request
lease be advised that approval of this requivironment. Nor does approval relieve the	uest does not relieve the operator of lia ne operator of its responsibility to comp	bility should operations rolly with any other applica	result in pollution of s able governmental au	surface water, ground water or the thority's rules, regulations or ordinance
t. Operator: XTO Energy, Inc.		OGRIJ	D#: 5380	
Address: #382 County Road 310				
Facility or well name: _Federal Gas Co				
API Number: <u>30-045-11711</u>				
U/L or Qtr/Qtr H Section				
Center of Proposed Design: Latitude _	36.56283	Longitude108.057	742	NAD: 🔲 1927 🛛 1983
Surface Owner: X Federal T State	] Private 🗌 Tribal Trust or Indian A	Allotment		
2.				
☐ Pit: Subsection F or G of 19.15.	17.11 NMAC			
Temporary: Drilling Workover				
☐ Permanent ☐ Emergency ☐ Cavi				
Lined Unlined Liner type: T			□ Othor	
	micknessmii LLDF	E HDPE HPVC	LJ Other	
String-Reinforced	_			
Liner Seams:  Welded Factory	Other	Volume:	bbl Dimensions	: L x W x D
3.				
Closed-loop System: Subsection	H of 19.15.17.11 NMAC			
Type of Operation: P&A Drill	ing a new well   Workover or Drif	ling (Applies to activitie	es which require pri	or approval of a permit or notice of
intent)	and Tanalan Ci Hard a Sing Ci Ool			
Drying Pad Above Ground St				
Lined Unlined Liner type: Thi			VC ∐ Other	
Liner Seams: Welded Factory	Other			
4.				
<b>⊠</b> Below-grade tank: Subsection I	of 19.15.17.11 NMAC			
Volume: 120 bbl	Type of fluid: Produced W	'ater		
Tank Construction material:	Steel			*
Secondary containment with leak of		r 6-inch lift and autom:	atic overflow shut-o	er S
☐ Visible sidewalls and liner ☐ Vi	_			<u> </u>
				snut off, no liner
Liner type: Thickness	mil   HDPE   PVC	Other		
5.				
Alternative Method:				(5)
Submittal of an exception request is rec	quired. Exceptions must be submitte	ed to the Santa Fe Envir	ronmental Bureau of	Fice for consideration of approval.  Page 1 of 5
r C 144	01.0	- Pivi		D. 1 CC
Fonn C-144	On Conse	rvation Division		Page 1 of 5
				\$
				pos

encing: 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, astitution or church)	, hospital,
Four foot height, four strands of barbed wire evenly spaced between one and four feet	
Alternate. Please specify Four foot height, steel mesh field fence (hogwire) with pipe top railing	
letting: Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks)	
Screen Netting Other Expanded metal or solid vaulted top	
Monthly inspections (If netting or screening is not physically feasible)	
igns: Subsection C of 19.15.17.11 NMAC	
212"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers	
Signed in compliance with 19.15.3.103 NMAC	
designative Appropriate and Expertisms	
dministrative Approvals and Exceptions: ustifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.	
lease 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 onsideration of approval.	office for
Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.	
titing Criteria (regarding permitting): 19.15.17.10 NMAC istructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of accestate in a provided below. Requests regarding changes to certain siting criteria may require administrative approval from the approfice or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of a pplicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to dry bove-grade tanks associated with a closed-loop system.	opriate district approval.
round 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 ⊠
/ithin 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa ke (measured from the ordinary high-water mark).  - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes 🏻
Vithin 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.  Inplies to temporary, emergency, or cavitation pits and below-grade tanks)  Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☑ ☐ NA
/ithin 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.    Implies to permanent pits	☐ Yes ☐ ☑ NA
Vithin 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock attering 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 ⊠
ithin incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance lopted pursuant to NMSA 1978, Section 3-27-3, as amended.  - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ⊠
(ithin 500 feet of a wetland.  - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes 🏻
ithin the area overlying a subsurface mine.  - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes 🏻
<ul> <li>ithin an unstable area.</li> <li>Engineering measures incorporated into the design, NM Bureau of Geology &amp; Mineral Resources; USGS; NM Geological Society; Topographic map</li> </ul>	☐ Yes 🏻
ithin a 100-year floodplain FEMA map	☐ Yes 🏻
	☐ Yes ⊠
Form C-144 Oil Conservation Division Page 2 of 5	;

11.			
Temporary Pits, Emergence		ks Permit Application Attachment Checkl	
	ollowing items must be attache	ed to the application. Please indicate, by a c	check mark in the box, that the documents are
☐ Hydrogeologic Data (*  Siting Criteria Compli	Femporary and Emergency Pits	upon the requirements of Paragraph (4) of Su s) - based upon the requirements of Paragraph pon the appropriate requirements of 19.15.17	h (2) of Subsection B of 19.15.17.9 NMAC
		ts of 19.15.17.11 NMAC propriate requirements of 19.15.17.12 NMA(	C
			equirements of Subsection C of 19.15.17.9 NMA
Previously Approved De	sign (attach copy of design)	API Number:	or Permit Number:
12. Closed-loop Systems Perm	it Application Attachment Cl	hecklist: Subsection B of 19.15.17.9 NMAG	
			check mark in the box, that the documents are
Geologic and Hydrog Siting Criteria Compl Design Plan - based u Operating and Mainte	iance Demonstrations (only for pon the appropriate requiremen nance Plan - based upon the ap	propriate requirements of 19.15.17.12 NMA	e requirements of 19.15.17.10 NMAC
☐ Previously Approved De	esign (attach copy of design)	API Number:	_
		API Number:	(Applies only to closed-loop system that use
	_	plement waste removal for closure)	
	plication Checklist: Subsection		theck mark in the box, that the documents are
attached.	_	•	
		s of Paragraph (1) of Subsection B of 19.15.1 upon the appropriate requirements of 19.15.1	
☐ Climatological Factor	s Assessment		
		appropriate requirements of 19.15.17.11 NM ed upon the appropriate requirements of 19.1	
Leak Detection Design	n - based upon the appropriate	requirements of 19.15.17.11 NMAC	
	nd Compatibility Assessment - ty Assurance Construction and	based upon the appropriate requirements of Installation Plan	19.15.17.11 NMAC
Operating and Mainte	nance Plan - based upon the ap	propriate requirements of 19.15.17.12 NMA	
	pping Prevention Plan - based us Odors, including H <sub>2</sub> S, Preven	upon the appropriate requirements of 19.15.1	17.11 NMAC
Emergency Response	Plan	nion I idi	
Oil Field Waste Stream Monitoring and Inspec			
Erosion Control Plan	Alon Flatt		
Closure Plan - based u	pon the appropriate requirement	nts of Subsection C of 19.15.17.9 NMAC an	nd 19.15.17.13 NMAC
14. Proposed Closure: 19.15.1	7.13 NMAC		
Instructions: Please comple	te the applicable boxes, Boxes	s 14 through 18, in regards to the proposed	closure plan.
	over   Emergency   Cavit	ation 🗌 P&A 📗 Permanent Pit 🔯 Belo	w-grade Tank 🔲 Closed-loop System
☐ Alternative Proposed Closure Method: {	■ Waste Excavation and Rem	loval	
	Waste Removal (Closed-lo	oop systems only)	
l		only for temporary pits and closed-loop system  On-site Trench Burial	ms)
			Fe Environmental Bureau for consideration)
closure plan. Please indicat	te, by a check mark in the box,	: (19.15.17.13 NMAC) Instructions: Each that the documents are attached. te requirements of 19.15.17.13 NMAC	of the following items must be attached to the
Protocols and Procedu		pon the appropriate requirements of Subsect	ion F of 19.15.17.13 NMAC
		ids, drilling fluids and drill cuttings)	II - C 10 15 17 12 NIMA C
<ul><li>☒ Confirmation Samplin</li><li>☒ Disposal Facility Nam</li></ul>	e and Permit Number (for liqui		ection H of 19.13.17 13 NMAL
	he and Permit Number (for liquider Design Specifications - based assed upon the appropriate requ	d upon the appropriate requirements of Substitution of Subsection I of 19,15,17,13 NM	IAC
	he and Permit Number (for liquider Design Specifications - based assed upon the appropriate requ	d upon the appropriate requirements of Subse	IAC
□ Confirmation Samplin     □ Disposal Facility Nam     □ Soil Backfill and Cove     □ Re-vegetation Plan - b     □ Site Reclamation Plan	e and Permit Number (for liquier Design Specifications - based ased upon the appropriate require based upon the appropriate re	d upon the appropriate requirements of Subscirements of Subsection 1 of 19.15.17.13 NM equirements of Subsection G of 19.15.17.13	IAC
□ Confirmation Samplin     □ Disposal Facility Nam     □ Soil Backfill and Cove     □ Re-vegetation Plan - backfill	e and Permit Number (for liquier Design Specifications - based ased upon the appropriate require based upon the appropriate re	d upon the appropriate requirements of Substitution of Subsection I of 19,15,17,13 NM	IAC
⊠ Confirmation Samplin     □ Disposal Facility Nam     □ Soil Backfill and Cove     □ Re-vegetation Plan - b     □ Site Reclamation Plan	e and Permit Number (for liquier Design Specifications - based ased upon the appropriate require based upon the appropriate re	d upon the appropriate requirements of Subscirements of Subsection 1 of 19.15.17.13 NM equirements of Subsection G of 19.15.17.13	IAC NMAC
⊠ Confirmation Samplin     □ Disposal Facility Nam     □ Soil Backfill and Cove     □ Re-vegetation Plan - b     □ Site Reclamation Plan	e and Permit Number (for liquier Design Specifications - based ased upon the appropriate require based upon the appropriate re	d upon the appropriate requirements of Subscirements of Subsection 1 of 19.15.17.13 NM equirements of Subsection G of 19.15.17.13	IAC NMAC
⊠ Confirmation Samplin     □ Disposal Facility Nam     □ Soil Backfill and Cove     □ Re-vegetation Plan - b     □ Site Reclamation Plan	e and Permit Number (for liquier Design Specifications - based ased upon the appropriate require based upon the appropriate re	d upon the appropriate requirements of Subscirements of Subsection 1 of 19.15.17.13 NM equirements of Subsection G of 19.15.17.13	IAC NMAC

Disposal Facility Name:	Disposal Fac	cility Permit Number:	
Disposal Facility Name:		cility Permit Number:	
ill any of the proposed closed-loop system operation Yes (If yes, please provide the information below	ns and associated activities occur on or in a	-	
equired for impacted areas which will not be used for Soil Backfill and Cover Design Specifications Re-vegetation Plan - based upon the appropriat Site Reclamation Plan - based upon the appropriat	- based upon the appropriate requirements or Fundaments of Subsection I of 19.15.17	.13 NMAC	С
ting Criteria (regarding on-site closure methods istructions: Each siting criteria requires a demons ovided below. Requests regarding changes to cert onsidered an exception which must be submitted to emonstrations of equivalency are required. Please	tration of compliance in the closure plan. iin siting criteria may require administra the Santa Fe Environmental Bureau offi	tive approval from the appropriate dist ce for consideration of approval. Just	rict office or ma
round water is less than 50 feet below the bottom of NM Office of the State Engineer - iWATERS		om nearby wells	Yes N
round water is between 50 and 100 feet below the be - NM Office of the State Engineer - iWATERS	ottom of the buried waste database search; USGS; Data obtained fro	om nearby wells	☐ Yes ☐ N
round water is more than 100 feet below the bottom - NM Office of the State Engineer - iWATERS		om nearby wells	☐ Yes ☐ N
Tithin 300 feet of a continuously flowing watercours ke (measured from the ordinary high-water mark).  - Topographic map; Visual inspection (certification)		rcourse or lakebed, sinkhole, or playa	Yes N
ithin 300 feet from a permanent residence, school, l Visual inspection (certification) of the propos		at the time of initial application.	☐ Yes ☐ N
ithin 500 horizontal feet of a private, domestic fresh atering purposes, or within 1000 horizontal feet of a NM Office of the State Engineer - iWATERS	ny other fresh water well or spring, in exis	tence at the time of initial application.	☐ Yes ☐ N
ithin incorporated municipal boundaries or within a lopted pursuant to NMSA 1978, Section 3-27-3, as a	mended.		☐ Yes ☐ N
<ul> <li>Written confirmation or verification from the</li> <li>ithin 500 feet of a wetland.</li> <li>US Fish and Wildlife Wetland Identification in</li> </ul>		·	☐ Yes ☐ N
ithin the area overlying a subsurface mine.  - Written confirmation or verification or map fi			☐ Yes ☐ N
ithin an unstable area.  - Engineering measures incorporated into the d Society; Topographic map	esign; NM Bureau of Geology & Mineral I	Resources; USGS; NM Geological	☐ Yes ☐ N
ithin a 100-year floodplain FEMA map			☐ Yes ☐ N
n-Site Closure Plan Checklist: (19.15.17.13 NMA)  a check mark in the box, that the documents are a  Siting Criteria Compliance Demonstrations - ba  Proof of Surface Owner Notice - based upon th  Construction/Design Plan of Burial Trench (if  Construction/Design Plan of Temporary Pit (fo  Protocols and Procedures - based upon the appr  Confirmation Sampling Plan (if applicable) - ba  Waste Material Sampling Plan - based upon the  Disposal Facility Name and Permit Number (fo  Soil Cover Design - based upon the appropriate  Re-vegetation Plan - based upon the appropriate  Site Reclamation Plan - based upon the appropriate	estached.  ased upon the appropriate requirements of eappropriate requirements of Subsection I applicable) based upon the appropriate requirements of in-place burial of a drying pad) - based upor the requirements of 19.15.17.13 NMA ased upon the appropriate requirements of appropriate requirements of appropriate requirements of I iquids, drilling fluids and drill cuttings of requirements of Subsection H of 19.15.17 are requirements of Subsection I of 19.15.17	19.15.17.10 NMAC F of 19.15.17.13 NMAC quirements of 19.15.17.11 NMAC pon the appropriate requirements of 19.00 C Subsection F of 19.15.17.13 NMAC of 19.15.17.13 NMAC or in case on-site closure standards cannot 13 NMAC 7.13 NMAC	.15.17.11 NMA
Form C-144	Oil Conservation Division	Page 4 c	of 5

the best of my knowledge	and belief.
Environmental Repre	esentative
_01/05/2009	
(505) 333-3100	
O Conditions (see attachn	nent)
Approval Date: _	08/12/2022
nber: <u>Legacy BGT</u>	
MAC  colosure activities and su colosure activities. Pleas been completed.  pletion Date:	se do not complete this
d Waste Removal (0	Closed-loop systems onl
e Ground Steel Tanks or cuttings were disposed.	
Permit Number:	
Permit Number:	
t be used for future service	e and operations?
d to the closure report. I	.tr
NAD:	1927 🗌 1983
te and complete to the bes	
	<u> </u>
	Chief to
-	
	Page 5 of 5

## MEXICO OIL CONSERVATION COMMISSION WELL LOCATION AND ACERAGE DEDICATION PLAT

		Ali distant	es must be fr	om the out	r bounder	ies of the Sect	rien	
	ERICAN PETROL		RATION		DERAL	GAS COM.	"J"	Well No.
Jnit Letter H	Section 24	Township 27 NO	RTH	Range 12	WEST,	NMPM.	SAN JUA	N
ctual Footage Loc 1850		ORTH	line and	1190		feet from the	EAST	line
round Level Elev.	Producing Fo	ormation LLUP	6	Pool UN	DESIGNA	ATED GALL	UP	Dedicated Avereage: 320 Acres
								below. reof (both as to working
by communitiz	ation, unitization	, force-poolin	g. etc?					owners been consolidated
necessary.)	o," list the owner		escriptions v	which hav	e octual	lly consolida	ted. (Use re	everse side of this Form if
pooling, or oth	erwise) or until a	non standard	unit, elimin	ating suc	n interes	11/6	C E I	the Commission.  RTIFICATION  rify that the information contains
ALBOV	PAN A		AMERICA OSB	N +		. 9 .66 CON. COL DIST. 3	knowl dge gad May 107	and complete to the best of n belief.
ALEX N.	Cambell	24_	M-048368	) //×	2'	1	Date	ineer  CAN PETROLEUM CORP.  11 18, 1966
+	- + - +	_	1	- + - - -	N	\$2 	this plat was surveys made b	tify that the well location shown opported from field notes of actually me or under my supervision, as true and correct to the best of a belief.
- +	+ 		+	  - \ \ \     \		. [	Date Surveyed	APRIL 1966 essioner Engineer inversit
	NCHES EQUALS 1		FARMING	топ, н. М	i.		N.M. Reg	No. 1463

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A		Dia Dannaia	Client:	XTO Energy	
Lodestar Services, Inc. PO Box 4465, Darago, CO 81302		Pit Permit	Project:	Pit Permits	
		Siting Criteria	Revised:	12/24/2008	
V		Information Sheet	Prepared by:	Daniel Newman	
API#:		30-045-11711	USPLSS:	T27N,R12W,24H	
Name:	Fed	eral Gas Com J #1	Lat/Long:	36.56283 / -108.05742	
			Geologic		
Depth to groundwater:	> 100'		_	Nacimiento Formation	
Distance to closest continuously flowing watercourse:	8.47 mile	s south of the San Juan River			
Distance to closest significant watercourse, lakebed, playa lake, or sinkhole:		es east of an irrigation I supplying nearby agriculture			
			Soil Type:	Entisols & Aridisols	
Permanent residence, school, hospital, institution or church within 300'		No			
			Annual Precipitation:	8.71 inches average	
Domestic fresh water well or spring within 500'		No	Precipitation Notes:	no significant precipatation events	
Any other fresh water well or spring within 1000'		No			
Within incorporated		No	Attached		
municipal boundaries		No	Documents:		
Within defined municipal fresh water well field		No		Topo map, ground water data map, ario photo, mines and quarries map, FEMA map	
Wetland within 500'		No	Mining Activity:	No	
Within unstable area		No			
Within 100 year flood plain		Zone X			
Within unstable area		No	wiining Activity:	No	

## Federal Gas Com J #1 Below Ground Tank Hydrogeologic Report for Siting Criteria

## General Geology and Hydrology

The San Juan Basin is a typical Rocky Mountain basin with a gently dipping southern flank and a steeply dipping northern flank. Asymmetrically layered Tertiary sandstones and shales, along with Quaternary alluvial deposits, dominate surficial geology (Dane and Bachman, 1965). The proposed pit location will be located in the northernmost Bisti region of the San Juan Basin within an area dominated by irrigated fields of the Navajo Indian Irrigation Project. The predominant geologic formation is the Nacimiento Formation of Tertiary age, which underlies surface soils and is often exposed (Dane and Bachman, 1965). Deposits of Quaternary alluvial and aeolian sands occur prominently near the surface of the area, especially near streams and washes.

Cretaceous and Tertiary sandstones, as well as Quaternary alluvial deposits serve as the primary aquifers in the San Juan basin (Stone et al., 1983). In most of the proposed area, the Nacimiento Formation lies at the surface and grades into the Animas Formation to the west. Thickness of the Nacimiento ranges from 418 to 2232 feet (Stone et al., 1983). Aquifers within the coarser and continuous sandstone bodies of the Nacimiento Formation are between 0 and 1000' deep in this section of the basin (Stone et al., 1983). Groundwater within these aquifers flows toward the San Juan River.

The prominent soil type at the proposed site are entisols and aridisols, which are defined as soils that exhibit little to no any profile development (www.emnrd.state.nm.us). Soils are basically unaltered from their parent rock. Miles of arroyos, washes and intermittent streams exist as part of the drainage network towards the San Juan River. These features often cut into soil and other unconsolidated materials, contributing to sedimentation downstream. The sudden influx of water from storm events easily erodes the soils that cover the area.

The climate of the region is arid, averaging just over 8 inches of rainfall annually. As is typical of the southwestern United States monsoonal weather patterns, most precipitation falls from August through October. The heaviest rainfall occurs in the summer in isolated, intense cloudbursts. November through June is relatively dry. Snow generally falls from December to mid-February and averages less than one-half inch in depth. However, most recharge occurs during the winter months during snowmelt periods from the upper elevations (Western Regional Climate Center www.wrcc.dri.edu).

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

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## Site Specific Hydrogeology

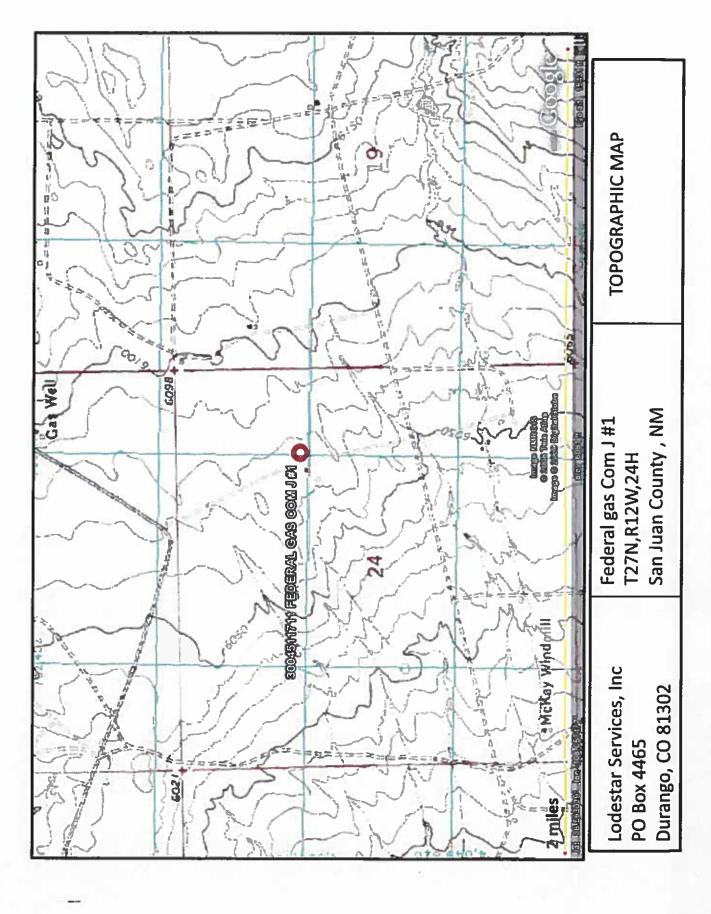
Depth to groundwater is estimated to be greater than 100 feet. This estimation is based on data from Stone and others (1983), the USGS Groundwater Atlas of the United States and depth to groundwater data published on the New Mexico State Engineer's iWaters Database website. Local topography and proximity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

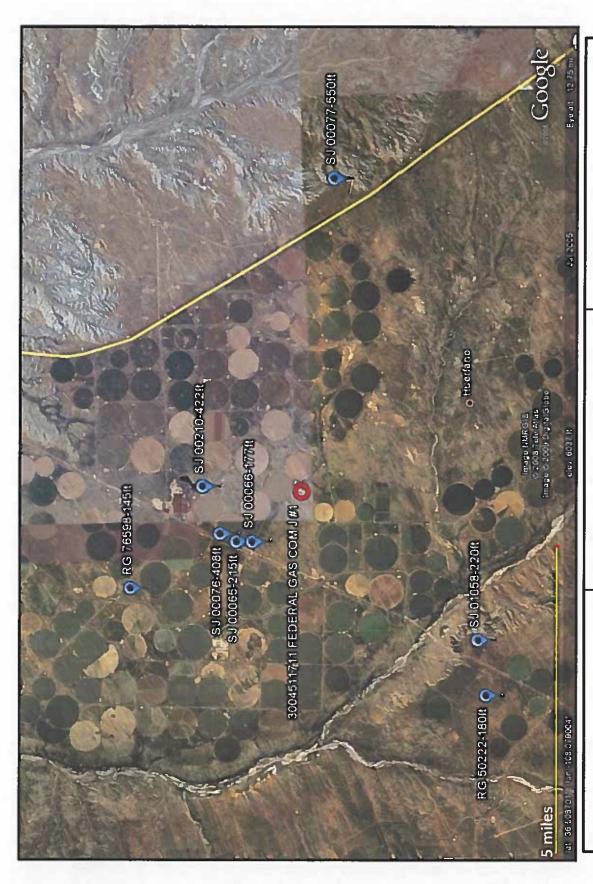
Beds of water-yielding sandstone are present in the Nacimiento Formation, which are fluvial in origin and are interbedded with siltstone, shale and coal. Porous sandstones form the principal aquifers, while relatively impermeable shales form confining units between the aquifers (Stone et al., 1983).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

The site in question is located on the relatively flat mesa top at an elevation of approximately 6,081 feet and approximately 4.27 miles east of Gallegos Canyon. Broad shalely hills are interspersed with occasional sandstone outcrops, and systems of dry washes and their tributaries are evident on the attached aerial image. Groundwater is expected to be shallow within Gallegos Canyon. The floor of Gallegos Canyon sits at 5,707 feet, an elevation difference of approximately 370 feet exists between the site and the floor of Gallegos Canyon. The significant distance between the Canyon and the site, as well as an elevation difference of almost 370 feet suggest groundwater is greater than 100 feet at the proposed site.

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

Groundwater data available from the NM State Engineer's iWaters Database for wells near the proposed site are attached. A map showing the locations of wells in reference to the proposed pit location is also attached. Water drops show locations of wells and the labels for each water drop indicate depth to groundwater in feet. The closest well to the site is an elevation of approximately of 6,031 feet and is located 5,014 feet to the northwest this well puts groundwater at 177 feet below the surface. This data further backs up the estimate of groundwater being greater than 100 feet at the proposed site. The observations made within this report suggest that groundwater is greater than 100 feet deep at the proposed location.





Lodestar Services, Inc Fe PO Box 4465 Durango, CO 81302 Sa

Federal gas Com J #1 T27N,R12W,24H San Juan County, NM

i-Waters Ground Water Data Map

## New Mexico Office of the State Engineer POD Reports and Downloads

/04/2008
11
REPORT
WATER
OF.
DEPTH
AVERAGE

Feet)	Avg	180	45	220
Water in	Max	180	45	220
(Depth	Min	180	45	220
	Wells	H	<del>-1</del>	<del>, -1</del>
	×			
	×			
	Zone			
	Sec	0.4	25	03
	Rng	12W	12W	12W
	IMS	26N	26N	26N
	Bsn	RG	RG	33

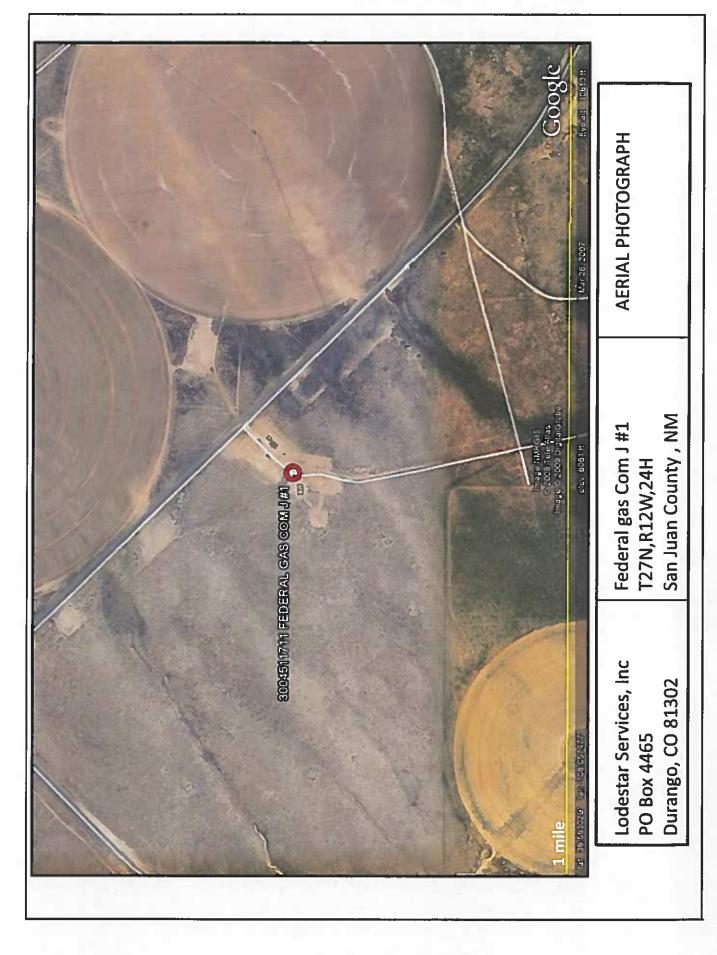
## New Mexico Office of the State Engineer POD Reports and Downloads

# AVERAGE DEPTH OF WATER REPORT 11/03/2008

	Feet)	Avg	550
	ater in	Max	550
	(Depth W	Min	550
07/00/11		Wells	H
DISTRICT THE IN A WHITE WIT TO 17 00/ 7000		×	
37756		×	
10 11 11		Zone	
1		Sec	26
		Rng	11W
		Tws	27N
		Bsn	SJ

New Mexico Office of the State Engineer POD Reports and Downloads

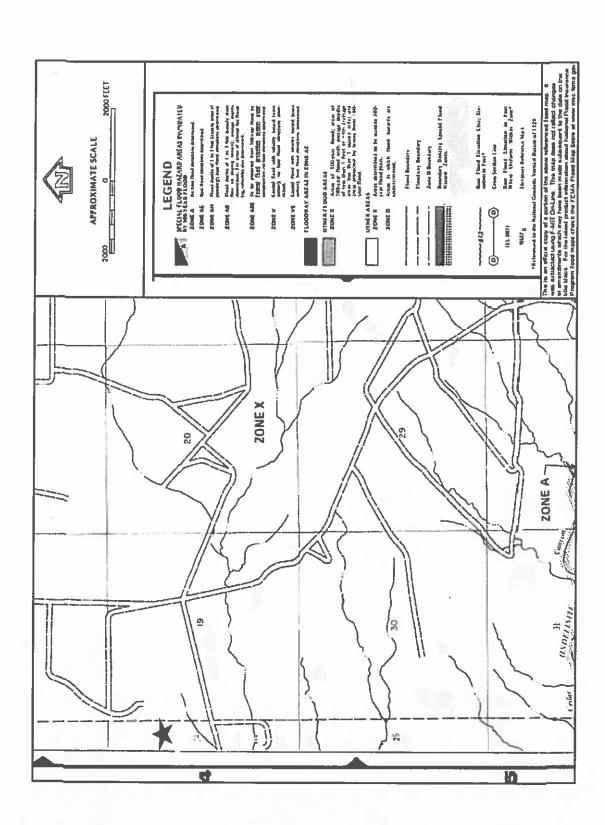
Feet)	Avg	145	306
in		_	625
Water	Max	145 1	422
(Depth	Min	145	177
	Wells	7	4,
	×		
	×		
	Zone		
	Sec	0.5	е Н
	Rng	12W	12W
	IMS	27N	27N
	Bsn	RG	8 D

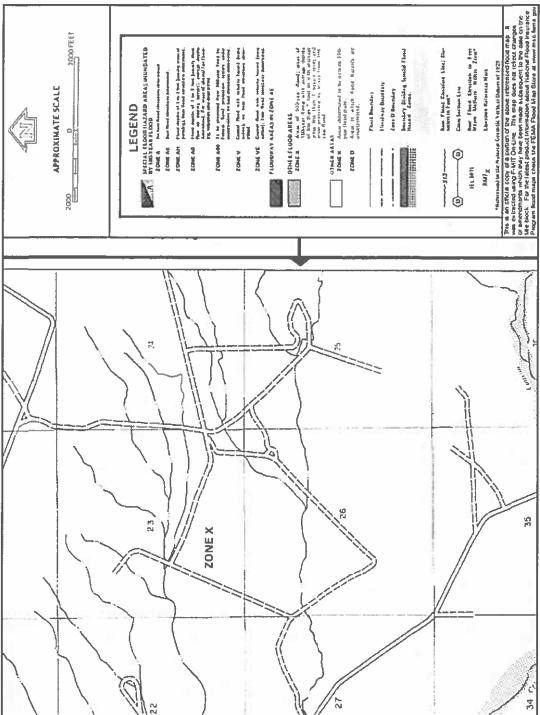


Lodestar Services, Inc PO Box 4465 Durango, CO 81302

Federal gas Com J #1 T27N,R12W,24H San Juan County , NM

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.
- 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 ½" 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

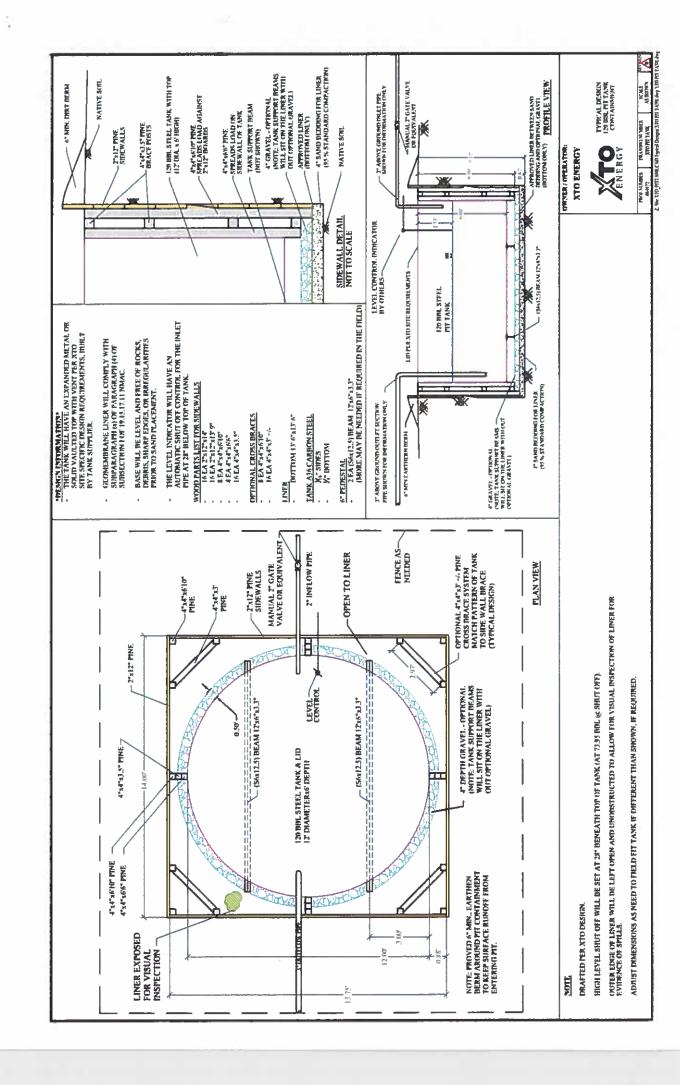
XTO Energy Inc.
San Juan Basin (Northwest New Mexico)
General Design and Construction Plan
For Below-Grade Tanks
Page 2

bottom will be elevated a minimum of 6" above the underlying ground surface and the below-grade tank will be underlain with a geomembrane liner to divert leaked liquid to a location that can be visually inspected. (See attached drawing).

- 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.



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## 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.
- XTO will continuously remove any visible or measurable layer of oil from the fluid surface of below-grade tanks in order to prevent significant accumulation of oil.
  - 4. XTO will inspect the below-grade tank monthly and maintain written records for five years. Monthly inspections will consist of documenting the following: (see attached template),

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

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

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

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

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		MONTH	1LY BELO	MONTHLY BELOW GRADE TANK INSPECTION FORM	INSPECTION	N FORM		
Well Name:		1			API No.:			
			3					
Legals	Sec		Township:		Range:			
XTO	Inspection	Inspection	Any visible liner	Any visible signs of	Collection of surface	Visible laver	Anv visible signs	Freeboard
Мате	Date	Time	tears (Y/N)	tank overflows (Y/N)	run on (Y/N)	of oil (Y/N)	of a tank leak (Y/N)	Est. (ft)
						5 -		
					ı			
-								
					1	1		
Notes:	Provide De	Provide Detailed Description:	otion:	:				
					1			
			;					
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

- 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.
- 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.
- 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.
- 10. Notice of Closure operations will be given to the Aztec Division District III office between 72 hours and one week prior to the start of closure activities via email or verbally. The notification will include the following:
  - i. Operator's name
  - ii. Well Name and API Number
  - iii. Location by Unit Letter, Section, Township, and Range

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

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

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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:
  - 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);

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viii. Photo documentation of the site reclamation.

<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720

District II 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 109011

## **QUESTIONS**

Operator:	OGRID:
HILCORP ENERGY COMPANY	372171
1111 Travis Street	Action Number:
Houston, TX 77002	109011
	Action Type:
	[C-144] Legacy Below Grade Tank Plan (C-144LB)

### QUESTIONS

Facility and Ground Water	
ease answer as many of these questions as possible in this group. More information will help us identify the appropriate associations in the system.	
Facility or Site Name	Federal Gas Com J 1
Facility ID (f#), if known	Not answered.
Facility Type	Below Grade Tank - (BGT)
Well Name, include well number	Federal Gas Com J 1
Well API, if associated with a well	30-045-11711
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	True
Tank installed prior to June 18. 2008	True
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.

District I

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Energy, Minerals and Natural Resources
Oil Conservation Division
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QUESTIONS, Page 2

Action 109011

QUESTIONS (continued)	
Operator:	OGRID:
HILCORP ENERGY COMPANY	372171
1111 Travis Street	Action Number:
Houston, TX 77002	109011

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 tanks) Chain link, six feet in height, two strands of barbed wire at top (Required if located Not answered. 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 Not answered. feet Alternate, Fencing. Please specify (Variance Required) 4 hogwire 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 Signs Subsection C of 19.15.17.11 NMAC (If there are multiple operators at a site, each operator must have 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 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 guidance. Please check a box if one or more of the following is requested, if not leave blank Variance(s): Requests must be submitted to the appropriate division district for consideration Not answered. of approval. Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for Not answered.

consideration of approval

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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 109011

	QUESTIONS (continued)
Operator:	OGRID:
HILCORP ENERGY COMPANY	372171
1111 Travis Street	Action Number:
Houston, TX 77002	109011
	Action Type:
	[C-144] Legacy Below Grade Tank Plan (C-144LB)

### 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	No
NM Office of the State Engineer - iWATERS database search	True
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

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

Operator Application Certification	
Registered / Signature Date	01/05/2009

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ACKNOWLEDGMENTS

Action 109011

## **ACKNOWLEDGMENTS**

Operator:	OGRID:
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1111 Travis Street	Action Number:
Houston, TX 77002	109011
	Action Type:
	[C-144] Legacy Below Grade Tank Plan (C-144LB)

### **ACKNOWLEDGMENTS**

~	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.
$\overline{v}$	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 109011

## **CONDITIONS**

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1111 Travis Street	Action Number:
Houston, TX 77002	109011
	Action Type:
	[C-144] Legacy Below Grade Tank Plan (C-144LB)

### CONDITIONS

Created By		Condition Date
swells	None	8/12/2022