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

AM 87505

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

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.

For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

## Proposed Alternative Method Permit or Closure Plan Application

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

Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tank or alternative request

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1.	
Operator: XTO Energy, Inc.	OGRID #: 5380
Address: #382 County Road 3100, Aztec, NM 87410	
Facility or well name: Gardner # 8A	
API Number: 30-045-33054 OCD Permit N	lumber:
U/L or Qtr/Qtr C Section 31 Township 32N Range	09W County: San Juan
Center of Proposed Design: Latitude 36.945313 Longitude	107.717401 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	8
☐ Lined ☐ Unlined Liner type: Thicknessmil ☐ LLDPE ☐ HDPE	□ PVC □ Other
String-Reinforced	
Liner Seams:  Welded Factory Other Volume:	bbl Dimensions: L x W x D
3.	
Closed-loop System: Subsection H of 19.15.17.11 NMAC	
Type of Operation: ☐ P&A ☐ Drilling a new well ☐ Workover or Drilling (Applies intent)	to activities which require prior approval of a permit or notice of
☐ Drying Pad ☐ Above Ground Steel Tanks ☐ Haul-off Bins ☐ Other	
☐ Lined ☐ Unlined Liner type: Thicknessmil ☐ LLDPE ☐ HD	PE PVC Other
Liner Seams:  Welded  Factory  Other	
4.	
Below-grade tank: Subsection I of 19.15.17.11 NMAC	
Volume: 286 bbl Type of fluid: Produced Water	
Tank Construction material: Steel	
Secondary containment with leak detection   Visible sidewalls, liner, 6-inch lift a	and automatic overflow shut-off
☐ Visible sidewalls and liner ☐ Visible sidewalls only ☒ Other <u>Visible sidewall</u>	s, vaulted, automatic high-level shut off, no liner
Liner type: Thicknessmil	
5.	
☐ <u>Alternative Method</u> :	
Submittal of an exception request is required. Exceptions must be submitted to the Sant	a Fe Environmental Bureau office for consideration of approval.
h-74	

1,20		
Fencing: Subsection D of 19.15.17.11 NMAC (A	pplies to permanent pits, temporary pits, and below-grade t	(anks)
50	rbed wire at top (Required if located within 1000 feet of a p	·
Four foot height, four strands of barbed wire ex	venly spaced between one and four feet	
☐ Alternate. Please specify Four foot height, ste	eel mesh field fence (hogwire) with pipe top railing	
7.		
	oplies to permanent pits and permanent open top tanks)	
☐ Screen ☐ Netting ☒ Other Expanded meta		
Monthly inspections (If netting or screening is	not physically feasible)	
8.		
Signs: Subsection C of 19.15.17.11 NMAC	me, site location, and emergency telephone numbers	
✓ Signed in compliance with 19.15.3.103 NMAC		
23 signed in compliance with 15.15.5.105 Printer	•	
9. Administrative Approvals and Exceptions:		
	y are required. Please refer to 19.15.17 NMAC for guidance	e.
Please check a box if one or more of the followin.  Administrative approval(s): Requests must	g is requested, if not leave blank: t be submitted to the appropriate division district or the Sant	ta Fe Environmental Bureau office for
consideration of approval.  Exception(s): Requests must be submitted	to the Santa Fe Environmental Bureau office for considera	tion of approval.
material are provided below. Requests regarding office or may be considered an exception which n	ompliance for each siting criteria below in the application. I changes to certain siting criteria may require administrat Must be submitted to the Santa Fe Environmental Bureau Please refer to 19.15.17.10 NMAC for guidance. Siting cri	tive approval from the appropriate district office for consideration of approval. iteria does not apply to drying pads or
	n of the temporary pit, permanent pit, or below-grade tank. ERS database search; USGS; Data obtained from nearby well	
Within 300 feet of a continuously flowing waterco lake (measured from the ordinary high-water mark - Topographic map; Visual inspection (certi		ebed, sinkhole, or playa
Within 300 feet from a permanent residence, school (Applies to temporary, emergency, or cavitation pit - Visual inspection (certification) of the pro		initial application. ☐ Yes ☑ No ☐ NA
Within 1000 feet from a permanent residence, scho (Applies to permanent pits)  - Visual inspection (certification) of the projection	ool, hospital, institution, or church in existence at the time o	of initial application.
Within 500 horizontal feet of a private, domestic fi watering purposes, or within 1000 horizontal feet of	resh water well or spring that less than five households use of any other fresh water well or spring, in existence at the tiers. Satisfaction (certification) of the	me of initial application.
adopted pursuant to NMSA 1978, Section 3-27-3,	in a defined municipal fresh water well field covered under as amended. the municipality; Written approval obtained from the munic	
Within 500 feet of a wetland.	on map; Topographic map; Visual inspection (certification)	
Within the area overlying a subsurface mine.	p from the NM EMNRD-Mining and Mineral Division	☐ Yes ⊠ No
Written confirmation or verification or ma     Within an unstable area.     Engineering measures incorporated into th Society; Topographic map	e design; NM Bureau of Geology & Mineral Resources; US	GGS; NM Geological
Within a 100-year floodplain FEMA map		☐ Yes ⊠ No
Within a 100-year floodplain FEMA map  Form C-144		Yes No  Yes No  Page 2 of 5
₹ Form C-144	Oil Conservation Division	Page 2 of 5

30		
Instructions: Each of the following items must be	ade Tanks Permit Application Attachment Check e attached to the application. Please indicate, by a	
Hydrogeologic Data (Temporary and Emerge Siting Criteria Compliance Demonstrations - Design Plan - based upon the appropriate req Operating and Maintenance Plan - based upon	- based upon the requirements of Paragraph (4) of S ency Pits) - based upon the requirements of Paragraph based upon the appropriate requirements of 19.15.1 juirements of 19.15.17.11 NMAC on the appropriate requirements of 19.15.17.12 NMA bugh 18, if applicable) - based upon the appropriate requirements of 19.15.17.12 NMA bugh 18, if applicable) - based upon the appropriate requirements of 19.15.17.12 NMA bugh 18, if applicable) - based upon the appropriate requirements of 19.15.17.12 NMA bugh 18, if applicable) - based upon the appropriate requirements of 19.15.17.12 NMA bugh 18, if applicable) - based upon the appropriate requirements of 19.15.17.12 NMA bugh 18, if applicable) - based upon the appropriate requirements of 19.15.17.12 NMA bugh 18, if applicable) - based upon the appropriate requirements of 19.15.17.12 NMA bugh 18, if applicable) - based upon the appropriate requirements of 19.15.17.12 NMA bugh 18, if applicable) - based upon the appropriate requirements of 19.15.17.12 NMA bugh 18, if applicable) - based upon the appropriate requirements of 19.15.17.12 NMA bugh 18, if applicable) - based upon the appropriate requirements of 19.15.17.12 NMA bugh 18, if applicable) - based upon the appropriate requirements of 19.15.17.12 NMA bugh 18, if applicable) - based upon the appropriate requirements of 19.15.17.12 NMA bugh 18, if applicable) - based upon the appropriate requirements of 19.15.17.12 NMA bugh 18, if applicable)	oh (2) of Subsection B of 19.15.17.9 NMAC 7.10 NMAC
Previously Approved Design (attach copy of de	esign) API Number:	or Permit Number:
Instructions: Each of the following items must be attached.	ment Checklist: Subsection B of 19.15.17.9 NMA e attached to the application. Please indicate, by a	check mark in the box, that the documents are
Siting Criteria Compliance Demonstrations  Design Plan - based upon the appropriate recompliance Plan - based upon Depending and Maintenance Plan - based upon	on the appropriate requirements of 19.15.17.12 NMA	te requirements of 19.15.17.10 NMAC
☐ Previously Approved Design (attach copy of d	esign) API Number:	_
☐ Previously Approved Operating and Maintenan	nce Plan API Number:	(Applies only to closed-loop system that use
above ground steel tanks or haul-off bins and prop	ose to implement waste removal for closure)	
Siting Criteria Compliance Demonstrations Climatological Factors Assessment Certified Engineering Design Plans - based Dike Protection and Structural Integrity Des Leak Detection Design - based upon the app Liner Specifications and Compatibility Asse Quality Control/Quality Assurance Construct Operating and Maintenance Plan - based upon Freeboard and Overtopping Prevention Plan Nuisance or Hazardous Odors, including H <sub>2</sub> Emergency Response Plan Oil Field Waste Stream Characterization Monitoring and Inspection Plan Erosion Control Plan Closure Plan - based upon the appropriate re	on the appropriate requirements of 19.15.17.12 NM/ - based upon the appropriate requirements of 19.15.	17.10 NMAC MAC .15.17.11 NMAC f 19.15.17.11 NMAC AC .17.11 NMAC
Proposed Closure: 19.15.17.13 NMAC Instructions: Please complete the applicable box	es, Boxes 14 through 18, in regards to the proposed	l closure plan.
☐ Alternative Proposed Closure Method: ☐ Waste Excavation ☐ Waste Removal ( ☐ On-site Closure M ☐ In-place	☐ Cavitation ☐ P&A ☐ Permanent Pit ☒ Bel and Removal Closed-loop systems only) lethod (Only for temporary pits and closed-loop systems Burial ☐ On-site Trench Burial te Method (Exceptions must be submitted to the Sant	ow-grade Tank
Waste Excavation and Removal Closure Plan C  closure plan. Please indicate, by a check mark in  ☐ Protocols and Procedures - based upon the a  ☐ Confirmation Sampling Plan (if applicable)  ☐ Disposal Facility Name and Permit Number  ☐ Soil Backfill and Cover Design Specification  ☐ Re-vegetation Plan - based upon the appropri	hecklist: (19.15.17.13 NMAC) Instructions: Each	ction F of 19.15.17.13 NMAC section H of 19.15.17.13 NMAC
Form C-144	Oil Conservation Division	Page 3 of 5

acilities are required.			
Disposal Facility Name:			_
Disposal Facility Name:			
Yes (If yes, please provide the information		not be used for future ser	vice and operations
Re-vegetation Plan - based upon the approp	and for future service and operations: ons based upon the appropriate requirements of Subsection oriate requirements of Subsection I of 19.15.17.13 NMAC propriate requirements of Subsection G of 19.15.17.13 NMAC		С
rovided below. Requests regarding changes to o	onstration of compliance in the closure plan. Recommend certain siting criteria may require administrative approval j d to the Santa Fe Environmental Bureau office for conside	from the appropriate dist	rict office or may b
Fround water is less than 50 feet below the bottom - NM Office of the State Engineer - iWATE	n of the buried waste. ERS database search; USGS; Data obtained from nearby wel	ls	Yes No
round water is between 50 and 100 feet below th - NM Office of the State Engineer - iWATE	ne bottom of the buried waste ERS database search; USGS; Data obtained from nearby wel	ls	☐ Yes ☐ No ☐ NA
round water is more than 100 feet below the bott - NM Office of the State Engineer - iWATE	tom of the buried waste. ERS database search; USGS; Data obtained from nearby wel	ls	Yes No
Vithin 300 feet of a continuously flowing watercocke (measured from the ordinary high-water mark - Topographic map; Visual inspection (certification)		ebed, sinkhole, or playa	Yes No
/ithin 300 feet from a permanent residence, scho - Visual inspection (certification) of the pro	ol, hospital, institution, or church in existence at the time of posed site; Aerial photo; Satellite image	initial application.	☐ Yes ☐ No
atering purposes, or within 1000 horizontal feet	fresh water well or spring that less than five households use for any other fresh water well or spring, in existence at the tire ERS database; Visual inspection (certification) of the propose	ne of initial application.	Yes No
dopted pursuant to NMSA 1978, Section 3-27-3,	in a defined municipal fresh water well field covered under as amended. the municipality; Written approval obtained from the municipality		Yes No
/ithin 500 feet of a wetland.  - US Fish and Wildlife Wetland Identificati	on map; Topographic map; Visual inspection (certification)	of the proposed site	Yes No
/ithin the area overlying a subsurface mine.  - Written confirmation or verification or ma	up from the NM EMNRD-Mining and Mineral Division		Yes No
<ul> <li>Vithin an unstable area.</li> <li>Engineering measures incorporated into the Society; Topographic map</li> </ul>	ne design; NM Bureau of Geology & Mineral Resources; US	GS; NM Geological	☐ Yes ☐ No
Vithin a 100-year floodplain.  - FEMA map			Yes No
y a check mark in the box, that the documents a  Siting Criteria Compliance Demonstrations  Proof of Surface Owner Notice - based upo  Construction/Design Plan of Burial Trench  Construction/Design Plan of Temporary Pit  Protocols and Procedures - based upon the a  Confirmation Sampling Plan (if applicable)  Waste Material Sampling Plan - based upon  Disposal Facility Name and Permit Number  Soil Cover Design - based upon the approp	IMAC) Instructions: Each of the following items must be a tre attached.  - based upon the appropriate requirements of 19.15.17.10 N in the appropriate requirements of Subsection F of 19.15.17.1 (if applicable) based upon the appropriate requirements of 1 (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 19.15.17.1 (for liquids, drilling fluids and drill cuttings or in case on-signate requirements of Subsection H of 19.15.17.13 NMAC originate requirements of Subsection I of 19.15.17.13 NMAC originate requirements of Subsecti	MAC 13 NMAC 19.15.17.11 NMAC oriate requirements of 19. of 19.15.17.13 NMAC 3 NMAC ite closure standards cann	15.17.11 NMAC
Form C-144	Oil Conservation Division	Page 4 o	

lame (Print): Kim Champlin	Title:	Environmental Representative
ignature: Kim Champlin	Date: 03/	09/2009
-mail address: kim_champlin@xtoenergy.com		(505) 333-3100
DCD Approval: X Permit Application (including closure plan)	☐ Closure Plan (only) ☐ OCD Co	nditions (see attachment)
OCD Representative Signature: Jaclyn Burdine		Approval Date: 10/17/2022
Title: Environmental Specialist-A	OCD Permit Number	BGT1
the control of the form of the following the completion of the completion of the completion of the completion of the closure completion of the closure report is required to be submitted to the division with the closure report is required to be submitted to the division with the completion of the form until an approved closure plan has been obtained.	ure plan prior to implementing any clos hin 60 days of the completion of the clos ined and the closure activities have bee	ture activities and submitting the closure report. Sure activities. Please do not complete this n completed.
	☐ Closure Complet	ion Date:
2.  Closure Method:  Waste Excavation and Removal On-Site Closure Metho  If different from approved plan, please explain.	d Alternative Closure Method	] Waste Removal (Closed-loop systems only)
Closure Report Regarding Waste Removal Closure For Closed Instructions: Please indentify the facility or facilities for where two facilities were utilized.  Disposal Facility Name:  Disposal Facility Name:  Vere the closed-loop system operations and associated activities processed.	the liquids, drilling fluids and drill cutti  Disposal Facility Perm Disposal Facility Perm	ings were disposed. Use attachment if more that it Number: it Number:
Yes (If yes, please demonstrate compliance to the items bel required for impacted areas which will not be used for future served. Site Reclamation (Photo Documentation) Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique	. —	
Closure Report Attachment Checklist: Instructions: Each of the lark 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 one 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	on-site closure)	the closure report. Please indicate, by a check  NAD: 1927 1983
On-site Closure Location. Latitude	roughade	NAD. [1927 [ 1963
Derator Closure Certification: hereby certify that the information and attachments submitted wi elief. I also certify that the closure complies with all applicable of	closure requirements and conditions spec	ified in the approved closure plan.
lame (Print):		<del>,</del>
ignature:	Date:	
-mail address:	mm s s	

DISTRICT L P.O. Box 1980, Hobbs, N.M. 88241—1950 DISTRICT II B11 South First, Artesia, N.M. 88210

1000 Rio Brazos Rd., Aztec, N.M. 67410

INPEU

2040 South Pacheco, Santa Fe, NM 87504-2088

DISTRICT III

DISTRICT IV

## State of New Mexico Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION P.O. Box 2088 Santa Fe, NM 87504-2088

Form C-102 Revised February 21, 1994 Instructions on back Submit to Appropriate District Office State Lease — 4 Copies Fee Lease — 3 Copies

AMENDED REPORT

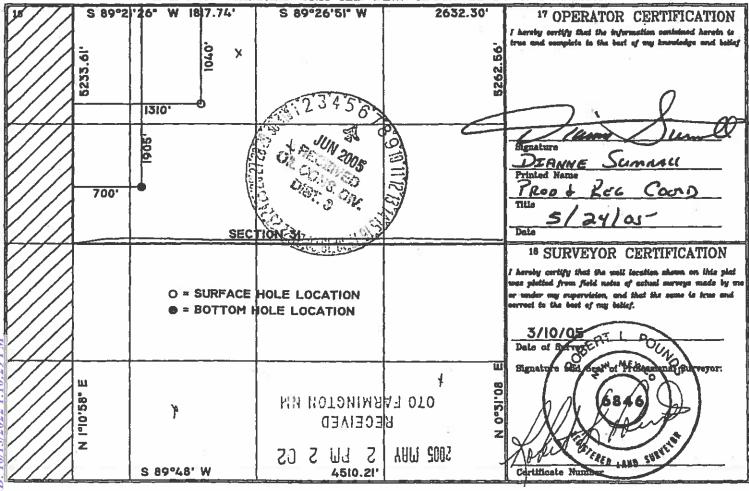
## WELL LOCATION AND ACREAGE DEDICATION PLAT

30-045-33054	Poel Code 72 319	BLANCO - MESA VERDE (	PRORATED GAS)
<sup>4</sup> Property Code	*P1	roperty Name	4 Well Number
0 333 62	GA	RDNER	A8
▼OGRID No.	•0	perator Name	* Elevation
225701	PEOPLES ENE	RGY PRODUCTION -Tx, C.P.	6660

10 Surface Location

- 1	UL or let no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West Hine	County
	С	31	32 N	8 W		1040	NORTH	1310	WEST	SAN JUAN
		_	<del>-</del>	11 Botte	om Hole	Location I	Different Fro	om Surface	_	
ĺ	UL er lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
	F	31	32 N	8 W		700	WEST	1905	NORTH	SAN JUAN
	<sup>13</sup> Dedicated Acres	Joint o	r Infill M	Consolidatio	n Code 150	rder No.				

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



Received by OCD: 10/13/2022 1:10:29 PM

			Client:	XTO Energy
Lodestar Service	s. Inc.	Pit Permit	Project:	Pit Permits
	.0081302	Siting Criteria	Revised:	6-Mar-09
V	ni an a same	Information Sheet	Prepared by:	Brooke Herb
API#:		30-045-33054	USPLSS:	T32N,R09W,S31C
Name:		Gardner #8A	Lat/Long:	36.945313, -107.717401
Depth to groundwater:		> 100'	Geologic formation:	San Jose Formation
Distance to closest continuously flowing watercourse:	5.85 mil	es W of Los Pinos River		
Distance to closest significant watercourse, lakebed, playa lake, or sinkhole:	Devils Poo order tribu	evaporation pond; 1488' E of ckets; 1715' W of a small 1st utary of Rattiesnake Canyon; W of Rattiesnake Canyon		
Permanent residence,			Soil Type:	Entisols
school, hospital, institution or church within 300'		No		
			Annual Precipitation:	12.95 inches (Navajo Dam)
Domestic fresh water well or spring within 500'		No	Precipitation Notes:	no significant precip events
Any other fresh water well or spring within 1000'		No		
Within incorporated municipal boundaries		No	Attached Documents:	Groundwater report and Data; FEMA Flood Zone Map
Within defined municipal fresh water well field		No		Aerial Photo, Topo Map, Mines Mills and Quarries Map
Wetland within 500'		No	Mining Activity:	
Within unstable area		No		None Near
Within 100 year flood plain	No - I	FEMA Flood Zone 'X'		
Additional Notes:				
	Gardner	#2A and #8A are at the same location		

## Gardner #8A Below Ground Tank Siting Criteria and Closure Plan

## General Geology and Hydrology

The San Juan Basin is a typical Rocky Mountain basin with a gently dipping southern flank and a steeply dipping northern flank. Asymmetrically layered Tertiary sandstones and shales, along with Quaternary alluvial deposits, dominate surficial geology (Dane and Bachman, 1965). The proposed pit location will be located in the north central San Juan Basin near Navajo Lake. 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 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 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 aquifers flows southwest, toward the San Juan River. Little specific hydrogeologic data is available for the San Jose Formation system, but "numerous wells and springs used for stock and domestic supplies" draw their water from the San Jose Formation (Stone et al, 1983).

The prominent soil type(s) at the proposed site are entisols and aridisols, which are defined as soils exhibiting little to no 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 aquifers.

Regional weather further prohibit active recharge. The climate is arid, averaging just over 11 inches of rainfall annually. As is typical of the southwestern United States monsoonal weather patterns, most precipitation falls from July through September. The heaviest rainfall occurs in the summer in isolated, intense cloudbursts. September through June is relatively dry. Snow generally falls from December to mid-February and averages less than one-half inch in depth. However, most recharge occurs during the winter months during snowmelt periods from the upper elevations (Western Regional Climate Center www.wrcc.dri.edu).

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

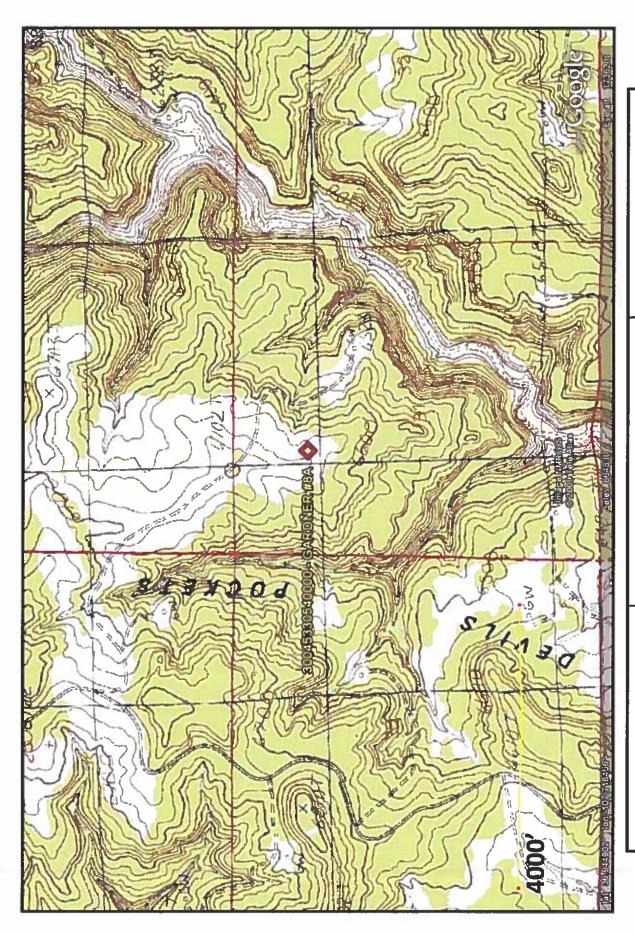
## Site Specific Hydrogeology

Depth to groundwater is estimated to be greater than 100 feet. This estimation is based on data from Stone and others (1983), the USGS Groundwater Atlas of the United States and depth to groundwater data published on the New Mexico State Engineer's iWaters Database website. Local topography, proximity to adjacent channels & spring features at similar elevations nearby are also taken into consideration. Groundwater data is extremely limited in this region; the nearest iWaters data point lies 550 feet to the north (SP 04523); this source is an evaporation pond. The closest water well is 3.41 miles to the northwest (SJ 03131).

Beds of water-yielding sandstone are present in the San Jose Formation, which are fluvial in origin and are interbedded with mudstone, siltstone & 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).

A site visit to this location determined that there is a playa lake approximately 2.67 miles to the northwest of the site. Within the cleared area of the playa lake, there are vegetated patches and some man-made berms for stock ponds. Approximately 2.42 miles to the west of the below grade tank site there is an area cleared for agriculture or livestock. Approximately 1.72 miles to the northwest is a drainage basin named Devil's Washpan. This topographic depression can fill with rainwater.

Groundwater data available from the NM State Engineer's iWaters Database for wells near the existing below grade tank are attached. A water well to the northwest is approximately 39 feet lower in elevation then the proposed site. Depth to groundwater within the well is 580 feet below ground surface. Distance to groundwater at the site is estimated to be greater than 100 feet below the ground surface.



	iopogiapine iviap	
Gardner #8A	T32N, R09W, S31C	San Juan County, NM
Lodestar Services, Inc	PO Box 4465	Durango, CO 81302



Lodestar Services, Inc PO Box 4465 Durango, CO 81302 San Juan County, NM

| iWaters Groundwater | Data Map





New Mexico Office of the State Engineer

## Water Column/Average Depth to Water

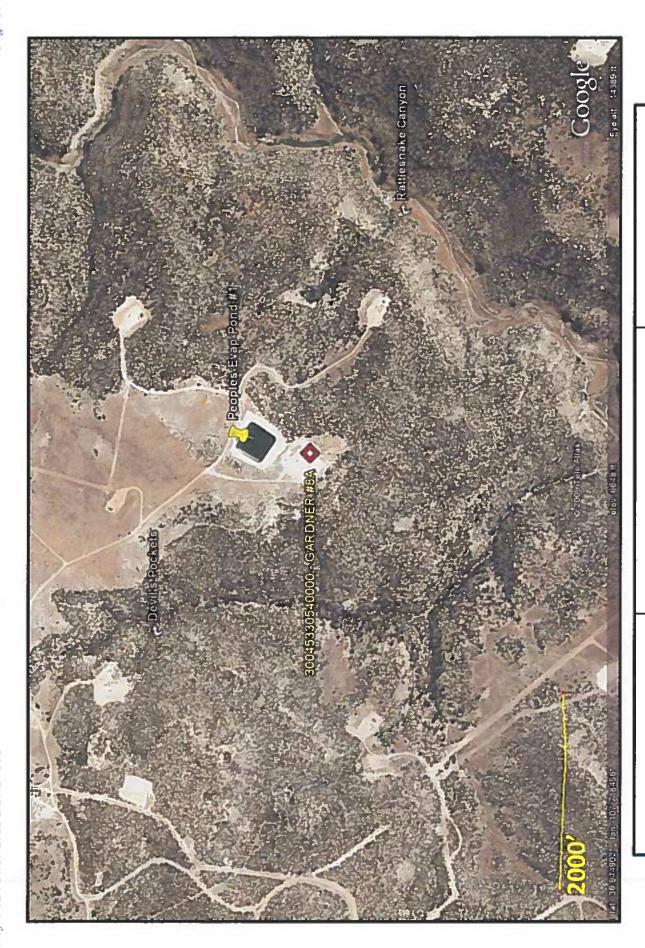
POD Number	County	0 0 0 6416 4 Sec Tws	Sec	Tws	Rng	×	Y De	pthWellDe	Water Y DepthWellDepthWater Column	Water
SJ 03131	San Juan	3 3 3	22	32N	22 32N 09W	252963	252963 4094453	843	580	263
Record 1 Count:						7	Average Depth to Water. Minimum Depth	Depth to Water. Minimum Depth:	580 feet 580 feet	
							Maximum Depth:	a Depth:	580 feet	

# New Mexico Office of the State Engineer

Water Column/Average Depth to

## Water

POD Number	County	Q Q Q County 6416 4 SecTws Rng	X	Water YDepthWellDepthWaterColumn	Water hWaterColum	ter
SJ 02816	San Juan	1 4 1 34 32N08W2626094091861	609409186	100		
SJ 03259	Rio Arriba	3 2 1 34 32N08W2626194092063	6194092063	3 550	200	50
Record 2			Averag	Average Depth to Water:	500 feet	
Count			Z	Minimum Depth:	500 feet	
			Max	Maximum Depth:	500 feet	



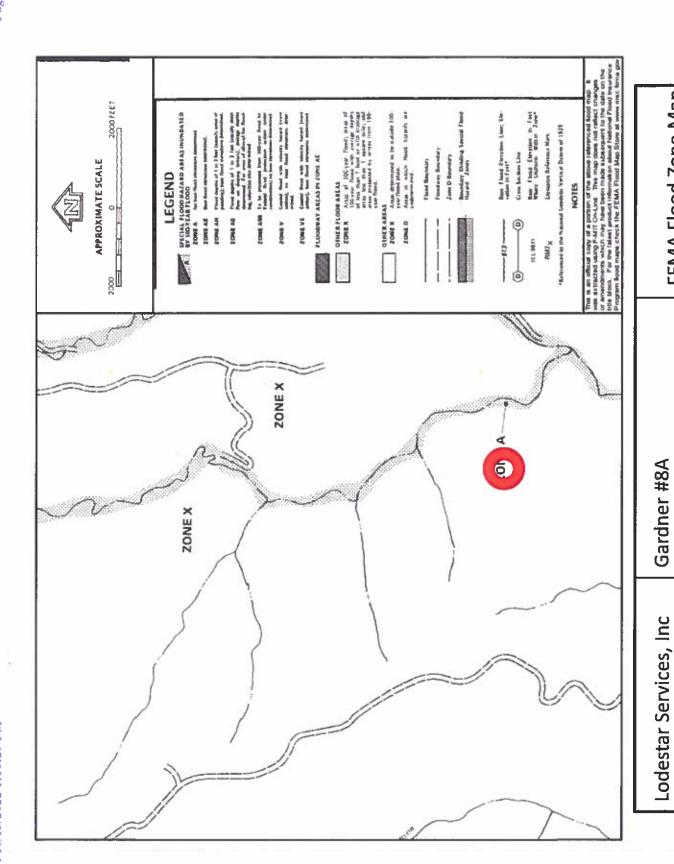
Lodestar Services, Inc
PO Box 4465
Durango, CO 81302
San Juan County, NM

Aerial Photograph



Lodestar Services, Inc
PO Box 4465
Durango, CO 81302
San Juan County, NM

Mines, Mills, and Quarries Map



San Juan County, NM T32N, R09W, S31C Gardner #8A **Durango, CO 81302** 

PO Box 4465

FEMA Flood Zone Map

## Received by OCD: 10/13/2022 1:10:29 PM

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

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

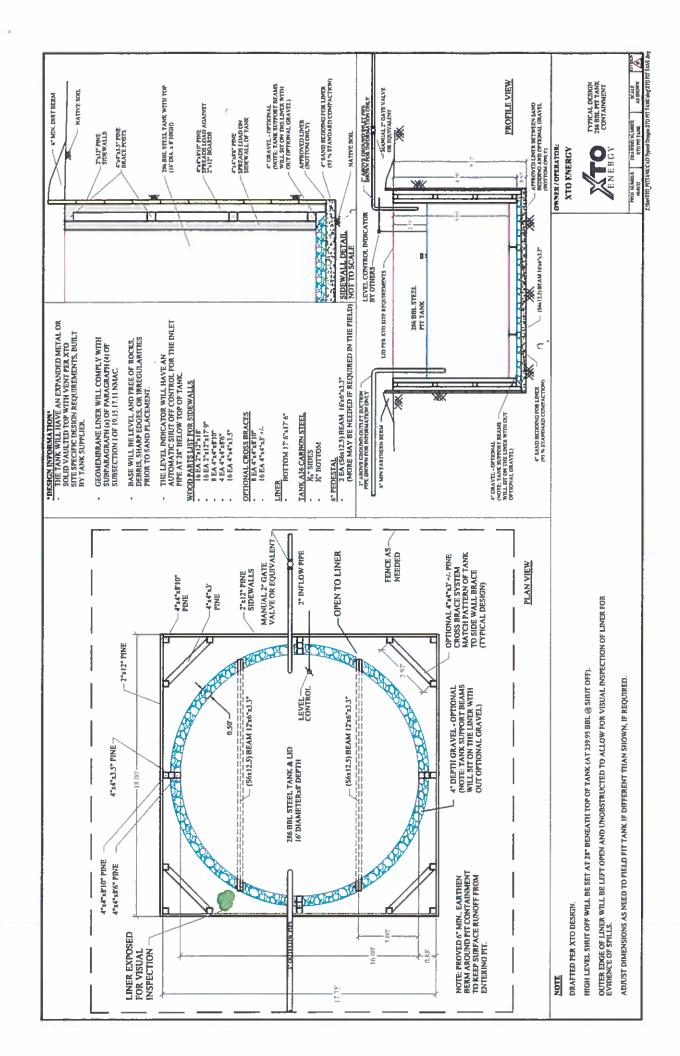
## General Plan

- 1. XTO will design and construct below-grade tanks to contain liquids and solids and prevent contamination of fresh water and protect public health and environment.
- 2. XTO will post a well sign, in compliance with 19.15.3.103 NMAC, on the existing well site operated by XTO where the existing below-grade tank is located. The sign will list the Operator on record as the operator, the location of the well site by unit letter, section, township, range, and emergency telephone numbers.
- 3. XTO is requesting approval of an alternative fencing to be used on below-grade tank locations. Below-grade tank locations will be fenced utilizing 48" steel mesh field-fence (hogwire) with pipe railing along the top. A 6' chain link fence will be utilized around the well pad if the well site is within a city limits or ¼ mile of a permanent residence, school, hospital, institution or church. Below-grade tanks located within 1000' of a permanent residence, school, hospital, institution or church will be fenced by 6' chain link fence with at least two strands of barbed wire at the top. All gates associated with below-grade tanks will remain closed and locked when responsible individuals are not on site.
- XTO shall construct below-grade tanks with an expanded metal covering or solid vaulted top on 4. the top of the below-grade tank.
- 5. XTO will ensure that below-grade tanks are constructed of materials resistant to the below-grade tank's particular contents and resistant to damage from sunlight. Tanks will be constructed of A36 carbon steel with 3/16" sides and 1/4" bottom. (See attached drawing).
- 6. The below-grade tank system will have a properly constructed foundation consisting of a level base free of rocks, debris, sharp edges or irregularities to prevent punctures, cracks or indentations of the liner or tank bottom. Sand bedding (4") will be placed on top of a level foundation to ensure prevention of punctures, cracks or indentations of the liner or tank bottom.
- 7. XTO will construct a berm and/or diversion ditch in a manner that prevents the collection of surface water run-on. Below-grade tanks will be equipped with automatic high level shut-off devices as well as manually operated shut-off valves. (See attached drawing).
- 8. XTO will construct and use below-grade tanks that do not have double walls. The below-grade tank sidewalls will be open for visual inspection for leaks. The sidewalls of the cellar will be constructed with 2" X 12" pine sidewalls and 4" X 4" pine brace posts. The below-grade tank

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

bottom will be elevated a minimum of 6" above the underlying ground surface and the 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).
- XTO will demonstrate to the OCD that the geomembrane liner complies with the specifications of Subparagraph (a) of Paragraph (4) of Subsection I of 19.15.17.11 NMAC and obtain approval from OCD prior to the installation of the design. The geomembrane liner shall have a hydraulic conductivity no greater than 1 x 10-9 cm/sec. The geomembrane liner shall be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts and acidics and alkaline solutions. The liner material shall be resistant to ultraviolet light. Liner compatibility shall comply with EPA SW-846 method 9090A. (See attached drawing).
- 11. The general specifications for design and construction are attached.



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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

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

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

Visible signs of tank leak

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

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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.

		MONTH	ILY BELO	MONTHLY BELOW GRADE TANK INSPECTION FORM	INSPECTION	N FORM		
Well Name:					API No.:			
								•
Legals	Sec:		Township:		Range:			
XTO Inspector's	Inspection	Inspection	Any visible liner	Any visible signs of	Collection of surface	Visible layer	Any visible signs	Freeboard
	086		ובפוס (ניווו)	LAHR OVEITIONS (T/N)	run on (T/N)	Of OII (Y/N)	or a tank leak (Y/N)	Est. (ft)
				3%				
Notes:	Provide De	Provide Detailed Description:	otion:					
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

- 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 division-approved methods. BLM or Forest Service stipulated seed mixes will be used on federal lands. Vegetative cover will equal 70% of the native perennial vegetative cover (un-impacted) consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintain that cover through two successive growing seasons. Repeat seeding or planting will be continued until successful vegetative growth occurs.

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

- 14. All closure activities will include proper documentation and be available for review upon request and will be submitted in closure report form to OCD within 60 days of closure of the below-grade tank. Closure report will be filed on form C-144 and incorporate the following:
  - i. Proof of closure notice to division and surface owner;
  - ii. Details on capping and covering, where applicable;
  - iii. Inspection reports;
  - iv. Confirmation sampling analytical results;
  - v. Disposal facility name(s) and permit number(s);
  - vi. Soil backfilling and cover installation;
  - vii. Re-vegetation application rates and seeding techniques, (or approved alternative to re-vegetation requirements if applicable);
  - viii. Photo documentation of the site reclamation.

<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 150768

## **QUESTIONS**

Operator:	OGRID:
HILCORP ENERGY COMPANY	372171
1111 Travis Street	Action Number:
Houston, TX 77002	150768
	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.		
Facility or Site Name	Gardner 8A	
Facility ID (f#), if known	Not answered.	
Facility Type	Below Grade Tank - (BGT)	
Well Name, include well number	Gardner 8A	
Well API, if associated with a well	3004533054	
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)	286
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.

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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

Action 150768

QUESTI	IONS (continued)
Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171 Action Number: 150768 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	ks)
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' 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 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):	

Not answered.

Not answered.

of approval. Exception(s):

consideration of approval

Requests must be submitted to the appropriate division district for consideration

Requests must be submitted to the Santa Fe Environmental Bureau office for

District I
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Phone: (575) 393-6161 Fax: (575) 393-0720 District II

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District III
1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170 **District IV** 

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

QUESTIONS, Page 3

Action 150768

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462	Fe, NIVI 8/505
QUESTI	ONS (continued)
Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171 Action Number: 150768 Action Type: [C-144] Legacy Below Grade Tank Plan (C-144LB)
QUESTIONS	[0, -1, -1, -1, -1, -1, -1, -1, -1, -1, -1
Siting Criteria (regarding permitting)	
19.15.17.10 NMAC	
Instructions: The applicant must demonstrate compliance for each siting criteria below. Siting criteria does not apply to drying pads or above-grade tanks.	below in the application. Recommendations of acceptable source material are provided
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
Proposed Closure Method	
Below-grade Tank	Below Grade Tank - (BGT)
Waste Excavation and Removal	True
Alternate Closure Method. Please specify (Variance Required)	Not answered.

03/09/2009

Operator Application Certification Registered / Signature Date

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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** 

ACKNOWLEDGMENTS

Action 150768

## **ACKNOWLEDGMENTS**

Operator:	OGRID:
HILCORP ENERGY COMPANY	372171
1111 Travis Street	Action Number:
Houston, TX 77002	150768
	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 150768

## **CONDITIONS**

Operator:	OGRID:
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1111 Travis Street	Action Number:
Houston, TX 77002	150768
	Action Type:
	[C-144] Legacy Below Grade Tank Plan (C-144LB)

## CONDITIONS

Created E	y Condition	Condition Date
jburdin	None	10/17/2022