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

State of New Mexico
Energy Minerals and Natural Resources
Department
Oil Conservation Division
1220 South St. Francis Dr.
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.

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

rioposed Atternative Method Fermit of	Closure Fran Application
BGT1 Modification to an existing permit	v-grade tank, or proposed alternative method ow-grade tank, or proposed alternative method ng permitted or non-permitted pit, closed-loop system,
Instructions: Please submit one application (Form C-144) per individual pit, of	closed-loop system, below-grade tank or alternative request
lease be advised that approval of this request does not relieve the operator of liability should onvironment. Nor does approval relieve the operator of its responsibility to comply with any of	
Operator: XTO Energy, Inc.	OGRID#: 5380
Address: #382 County Road 3100, Aztec, NM 87410	
Facility or well name: McGrady HB A #2	
API Number: 30-045-06402 OCD Permit N	
U/L or Qtr/Qtr E Section 23 Township 27N Range	
Center of Proposed Design: Latitude 36.56368 Longitude	
Surface Owner: S Federal State Private Tribal Trust or Indian Allotment	
2.	
Pit: Subsection F or G of 19.15.17.11 NMAC	
Temporary: Drilling Workover	
☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A	
☐ Lined ☐ Unlined Liner type: Thicknessmil ☐ LLDPE ☐ HDPE	PVC Other
☐ String-Reinforced	
Liner Seams: Welded Factory Other Volume:	bbl Dimensions: L x W x D
J. Closed-loop System: Subsection H of 19.15.17.11 NMAC	
Type of Operation: P&A Drilling a new well Workover or Drilling (Applies	to activities which require prior approval of a permit or notice of
intent)	to activities which require prior approval of a permit of nonee 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	MA A
Volume: 21bbl Type of fluid:Produced Water	
Tank Construction material: Steel	

5.

Liner type: Thickness

Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

☐ Secondary containment with leak detection ☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off

☐ Visible sidewalls and liner ☐ Visible sidewalls only ☒ Other <u>Visible sidewalls</u>, vaulted, automatic high-level shut off, no liner

mil HDPE PVC Other

6.				
	ng: Subsection D of 19.15.17.11 NMAC (Applies to permanent pits, temporary pits, and below-grade tanks)			
	ain link, six feet in height, two strands of barbed wire at top (Required if located within 1000 feet of a permanent residence, school, tion or church)	hospii	tal,	
	ur foot height, four strands of barbed wire evenly spaced between one and four feet			
⊠ Al	ernate. Please specify Four foot height, steel mesh field fence (hogwire) with pipe top railing			
7. Nettin	g: Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks)			
	reen Netting Other Expanded metal or solid vaulted top			
□ Мо	onthly inspections (If netting or screening is not physically feasible)			
8. Signs:	Subsection C of 19.15.17.11 NMAC			
	'x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers			
⊠ Sig	aned in compliance with 19.15.3.103 NMAC			
9. Admi	nistrative Approvals and Exceptions:			_
Justifi	cations and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.			
	check a box if one or more of the following is requested, if not leave blank: Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau of	office	for	
consid	eration of approval. Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.			
to.				=
Instru materi office	Criteria (regarding permitting): 19.15.17.10 NMAC ctions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptal are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the approper or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of a sant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to dryi	priate pprov	distric al.	ť
	grade tanks associated with a closed-loop system.	_		
Groun	d water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells		Yes 🛚	No
	a 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa neasured from the ordinary high-water mark). Topographic map; Visual inspection (certification) of the proposed site		Yes 🛚	No
	a 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. ses to temporary, emergency, or cavitation pits and below-grade tanks) Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	=	Yes ⊠ NA	No
	1 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.		Yes 🗌 NA	No
	Visual inspection (certification) of the proposed site; Aerial photo; Satellite image 1 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock ng purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site		Yes 🛚	No
	incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance of pursuant to NMSA 1978, Section 3-27-3, as amended. Written confirmation or verification from the municipality; Written approval obtained from the municipality		Yes 🛚	Ne
Within -	s 500 feet of a wetland. US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site		Yes 🛚	N.G.
Withir -	the area overlying a subsurface mine. Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division		Yes 🛚	N
- Within	an unstable area. Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map		Yes 🛚	N. 11/1
Withir	a 100-year floodplain. FEMA map		Yes 🛭	N
•				

Instructions: E		ks Permit Application Attachment Checkled to the application. Please indicate, by a continuous	ist: Subsection B of 19.15.17.9 NMAC heck mark in the box, that the documents are
☐ Hydrogeo ☐ Siting Cri ☐ Design Pl	logic Data (Temporary and Emergency Pitateria Compliance Demonstrations - based user an - based upon the appropriate requirement	upon the requirements of Paragraph (4) of Sus) - based upon the requirements of Paragraph pon the appropriate requirements of 19.15.17 ats of 19.15.17.11 NMAC propriate requirements of 19.15.17.12 NMAC	(2) of Subsection B of 19.15.17.9 NMAC .10 NMAC
	lan (Please complete Boxes 14 through 18,		quirements of Subsection C of 19.15.17.9 NMAC
Previously	Approved Design (attach copy of design)	API Number:	or Permit Number:
Closed-loop Sy Instructions: E	stems Permit Application Attachment C Each of the following items must be attache	hecklist: Subsection B of 19.15.17.9 NMAC	heck mark in the box, that the documents are
Geologic Siting Cri Design Pl Operating	iteria Compliance Demonstrations (only for lan - based upon the appropriate requirement g and Maintenance Plan - based upon the ap Plan (Please complete Boxes 14 through 18,	propriate requirements of 19.15.17.12 NMA	e requirements of 19.15.17.10 NMAC
_	Approved Design (attach copy of design)	API Number:	-
	Approved Operating and Maintenance Plan teel tanks or haul-off bins and propose to in		_ (Applies only to closed-loop system that use
13.	eer tanks or naut-off ours and propose to in	ipiemeni wasie removal jor ciosare)	
Climatolo Certified Dike Prot Leak Det Liner Spe Quality C Operating Freeboard Nuisance Emergend Oil Field Monitorin Erosion C Closure F	ogical Factors Assessment Engineering Design Plans - based upon the tection and Structural Integrity Design - base ection Design - based upon the appropriate ectifications and Compatibility Assessment Control/Quality Assurance Construction and g and Maintenance Plan - based upon the ap d and Overtopping Prevention Plan - based or Hazardous Odors, including H ₂ S, Preve ecy Response Plan Waste Stream Characterization ng and Inspection Plan Control Plan	 based upon the appropriate requirements of I Installation Plan opropriate requirements of 19.15.17.12 NMA0 upon the appropriate requirements of 19.15.1 	IAC 5.17.11 NMAC 19.15.17.11 NMAC C 7.11 NMAC
		s 14 through 18, in regards to the proposed o	closure plan.
	ing Workover Emergency Cavi	tation 🗌 P&A 📋 Permanent Pit 🛛 Belo	w-grade Tank Closed-loop System
	re Method: Waste Excavation and Ren Waste Removal (Closed-le On-site Closure Method (C	oop systems only) Only for temporary pits and closed-loop syster	ns)
		 On-site Trench Burial d (Exceptions must be submitted to the Santa 	Fe Environmental Bureau for consideration)
closure plan. P Protocols Confirma Disposal Soil Back Re-vegeti	Please indicate, by a check mark in the box and Procedures - based upon the appropria ation Sampling Plan (if applicable) - based of Facility Name and Permit Number (for lique fill and Cover Design Specifications - base ation Plan - based upon the appropriate requestions.	that the documents are attached. Ite requirements of 19.15.17.13 NMAC Ite appropriate requirements of Subsection	ection H of 19.15.17.13 NMAC
	Form C-144	Oil Conservation Division	Page 3 of 5

6. Vaste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: (19.15.17.13 Instructions: Please indentify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment is acilities are required.	.D NMAC) f more than two
Disposal Facility Name: Disposal Facility Permit Number:	
Disposal Facility Name: Disposal Facility Permit Number:	
Vill any of the proposed closed-loop system operations and associated activities occur on or in areas that will not be used for future so Yes (If yes, please provide the information below) No Required for impacted areas which will not be used for future service and operations: Soil Backfill and Cover Design Specifications based upon the appropriate requirements of Subsection H of 19.15.17.13 NM. Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC	
Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC The structure of Subsection G of 19.15.17.13 NMAC The structions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable so the rovided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate disconsidered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justien of Santa Fe Environmental Bureau office for consideration of approval. Justien of Santa Fe Environmental Bureau office for consideration of sapproval. Justien of Santa Fe Environmental Bureau office for consideration of sapproval.	strict office or may
Fround water is less than 50 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Yes No
round water is between 50 and 100 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Yes No
iround water is more than 100 feet below the bottom of the buried waste. NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Yes No
Vithin 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa ake (measured from the ordinary high-water mark).	Yes No
 Topographic map; Visual inspection (certification) of the proposed site Vithin 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. Visual inspection (certification) of the proposed site; Aerial photo; Satellite image 	☐ Yes ☐ No
Vithin 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock vatering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Vithin incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance dopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	Yes No
Vithin 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Vithin the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	Yes No
 Vithin an unstable area. Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map 	☐ Yes ☐ No
Vithin a 100-year floodplain. - FEMA map	Yes No
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure of the closure of the following items must be attached to the closure of the closure of the following items must be attached to the closure of the components of the following items must be attached to the closure of the components of the following items must be attached to the closure of the closure of the components of the following items must be attached to the closure of the closure of the components of the closure the c	9.15.17.11 NMAC
Form C-144 Oil Conservation Division Page 4	of 5

19.		
Operator Application Certification: I hereby certify that the information submitted with this	s application is true, accurate and complete to t	the best of my knowledge and belief.
Name (Print): Kim Champlin	Title:	Environmental Representative
Signature: Kim Champlin		
e-mail address: kim_champlin@xtoenergy.com	Telephone:	(505) 333-3100
20. OCD Approval: Permit Application (including clo	osure plan) Closure Plan (only) OCE	Conditions (see attachment)
OCD Representative Signature: Jaclyn Buro	dine	Approval Date: 08/11/2022
Title: Environmental Specialist-A	OCD Permit Num	nber:_BGT1
21. Closure Report (required within 60 days of closure co Instructions: Operators are required to obtain an appor The closure report is required to be submitted to the div section of the form until an approved closure plan has	roved closure plan prior to implementing any ivision within 60 days of the completion of the	closure activities and submitting the closure rep e closure activities. Please do not complete this e been completed.
22.		
Closure Method: Waste Excavation and Removal On-Site Closu If different from approved plan, please explain.	ure Method	i ☐ Waste Removal (Closed-loop systems only
23. Closure Report Regarding Waste Removal Closure F Instructions: Please indentify the facility or facilities f two facilities were utilized.	For Closed-loop Systems That Utilize Above for where the liquids, drilling fluids and drill	Ground Steel Tanks or Haul-off Bins Only: cuttings were disposed. Use attachment if more t
Disposal Facility Name:	Disposal Facility F	Permit Number:
Disposal Facility Name:		Permit Number:
Were the closed-loop system operations and associated a		t be used for future service and operations?
Required for impacted areas which will not be used for j Site Reclamation (Photo Documentation) Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Tec	5 (MICA) ADMINISTRAÇÃO (MICA)	W.Sh.Ri
Closure Report Attachment Checklist: Instructions: mark in the box, that the documents are attached. Proof of Closure Notice (surface owner and divisi Proof of Deed Notice (required for on-site closure Plot Plan (for on-site closures and temporary pits) Confirmation Sampling Analytical Results (if app Waste Material Sampling Analytical Results (required Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Tect	sion) e) c) plicable) quired for on-site closure)	d to the closure report. Please indicate, by a chec
On-site Closure Location: Latitude	Longitude	NAD: □1927 □ 1983
25.		
Operator Closure Certification:	hmitted with this closure report is true, accurat	e and complete to the best of my knowledge and
hereby certify that the information and attachments sub	PP	
I hereby certify that the information and attachments subbelief. I also certify that the closure complies with all appropriate the control of		
I hereby certify that the information and attachments subbelief. I also certify that the closure complies with all appared (Print):	Title:	
I hereby certify that the information and attachments subbelief. I also certify that the closure complies with all appears (Print):	Title: Date:	
I hereby certify that the information and attachments subbelief. I also certify that the closure complies with all appared (Print):	Title: Date:	

- 「あたれます - 1つかつ - ウェニー・ウェニー TOO - 10 (2019)	s ME'M Lide Sores
HAMIE OF FINGERING FORMATION DAKOTA	
1. Is the Operator the only owner in the deficulty the reache busined by the glar rooms.	
2. If the answer to question one is "no" have the discrete of all the orders are removed the parameters of the content of the	
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DIST. 3

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This is to tend to that the information in back was above is the and complete to the beautifuly know a ge and belief.

PAN AMERICAN PETROLEUM CORP.

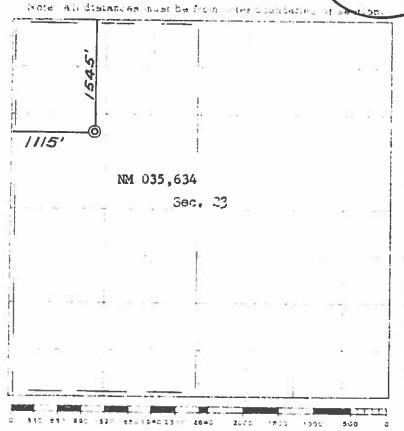
F. H. Hollingsworth

2. O. Box 480

4 10 594

Farmington, New Mexico

Ref: GLO plat dated 19 July 1915



Scale 4 inches equal I mile

This is to recall the the doors plan was prepared to a field notes of actual surveys made by no, or under my supervision and that the same are true only correct to the best of my knowledge and besief

James P. Leerc, L. lex. leg. 0. 14

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hool, hospital, No	Permanent residence,
hool, hospital, No	
	school, hospital, institution or church within 300'
Annual Precipitation: 8.71 inches average	
l Precipitationi	Domestic fresh water well or spring within 500'
	Any other fresh water well or spring within 1000'
pal boundaries NO Documents:	Within incorporated municipal boundaries
	Within defined municipal fresh water well field
nd within 500' No Mining Activity: No	Wetland within 500'
unstable area No	Within unstable area
100 year flood Zone X plain	Within 100 year flood plain
ditional Notes:	

Client:

Project:

Revised:

USPLSS:

Lat/Long:

Geologic

formation: Nacimiento Formation

Prepared by:

Pit Permit

Siting Criteria

Information Sheet

30-045-06402

McGrady HB A #2

between 50 and 100 feet

8.73 miles south of the San Juan

River

Lodestar Services, Inc.

API#:

Name:

Depth to groundwater:

Distance to closest

watercourse:

continuously flowing

XTO Energy

Pit Permits

12/24/2008

Daniel Newman

T27N,R12W,23E

36.56368 / -108.08543

McGrady HB A #2 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

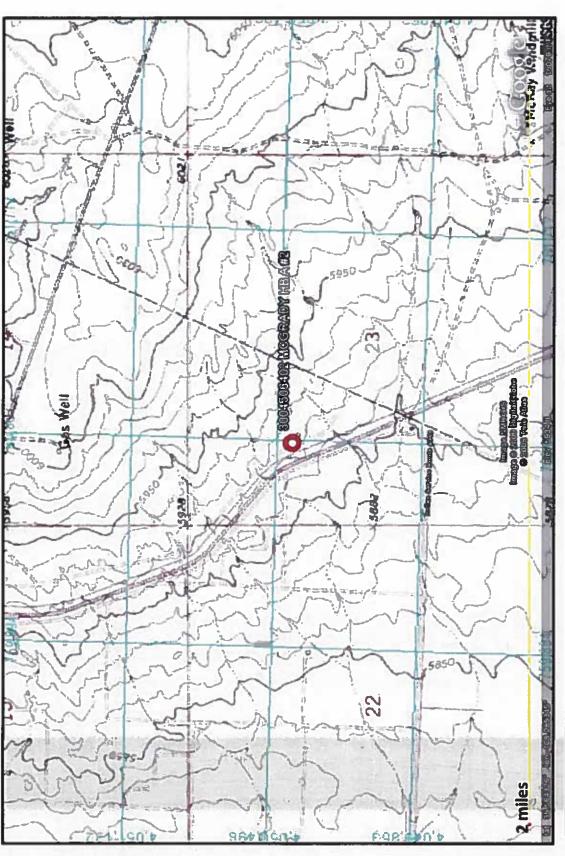
Depth to groundwater is estimated to be between 50 and 100 feet. This estimation is based on data from Stone and others (1983), the USGS Groundwater Atlas of the United States and depth to groundwater data published on the New Mexico State Engineer's iWaters Database website. Local topography and proximity 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).

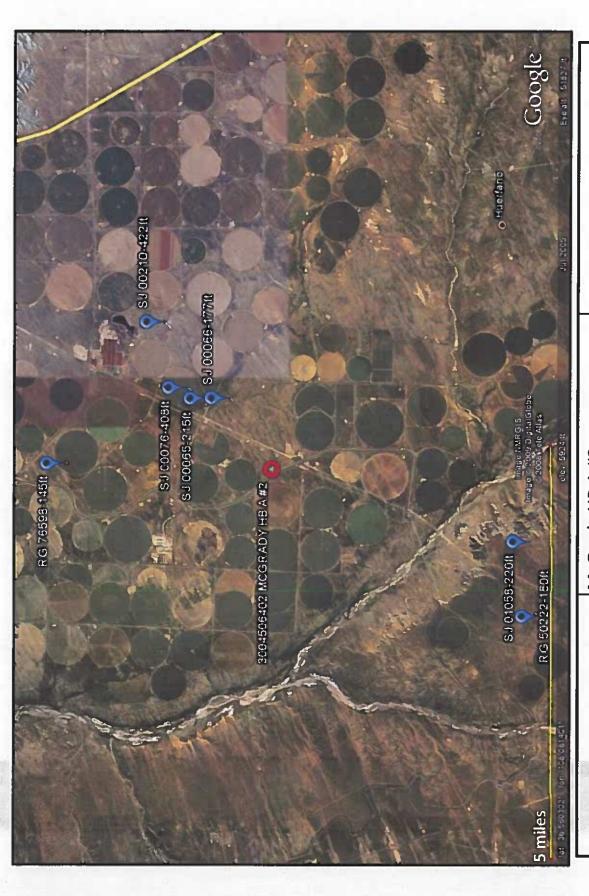
The site in question is located on the relatively flat mesa top at an elevation of approximately 5,925 feet and approximately 2.67 miles east of Gallegos Canyon. Broad shalely hills are interspersed with occasional sandstone outcrops, and systems of dry washes and their tributaries are evident on the attached aerial image. Groundwater is expected to be shallow within Gallegos Canyon. The floor of Gallegos Canyon sits at 5,713 feet, an elevation difference of approximately 210 feet exists between the site and the floor of Gallegos Canyon. The significant distance of 2.67 miles between Gallegos Canyon and the site, as well as an elevation difference of almost 210 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 6,034 feet and is located 1.08 miles to the northeast this well puts groundwater at 177 feet below the surface. This data however places groundwater between 50 and 100 feet at the proposed site. The observations made within this report suggest that groundwater is between 50 and 100 feet deep at the proposed location.



TOPOGRAPHIC MAP San Juan County, NM McGrady HB A #2 T27N,R12W,23E Lodestar Services, Inc PO Box 4465 Durango, CO 81302



Мар San Juan County, NM McGrady HB A #2 T27N,R12W,23E Lodestar Services, Inc Durango, CO 81302 PO Box 4465

i-Waters Ground Water Data Man

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New Mexico Office of the State Engineer POD Reports and Downloads

	Feet)	Avg	550
	Water in	Max	
80	(Depth	Min	550
11/03/2008		Wells	-1
님		>1	
REPORT 1			
PATTE		×	
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DEPTH		Zone	
H		Sec	26
AVERAGE		Rod	11W
		TMS	27N
		Bsn	SJ

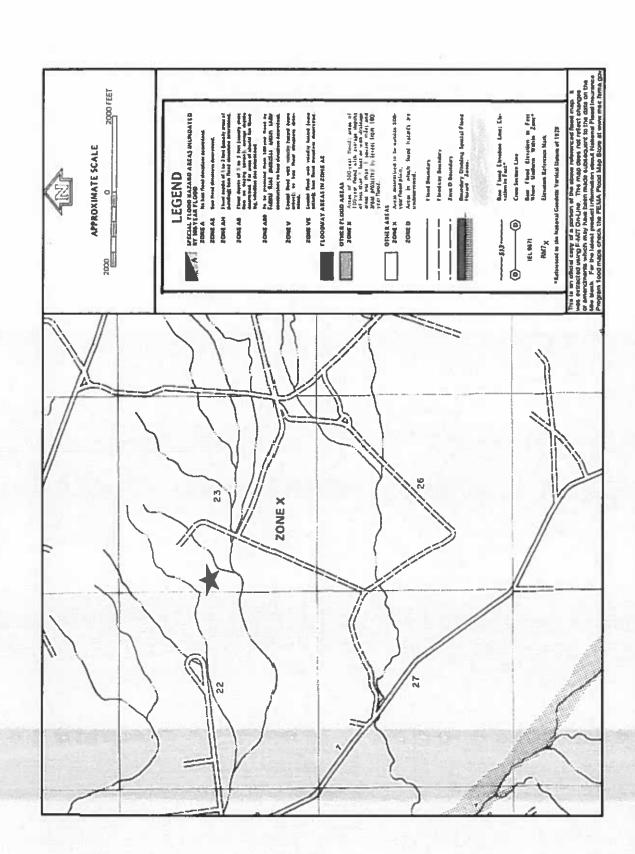
New Mexico Office of the State Engineer POD Reports and Downloads

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	in	×	Ŋ	61
	Water in	Ma	145	
m	Depth	Min	145	177
2008	E			
03/		Wells	-	4
11/		M		
OF WATER REPORT 11/03/2008		X		
WATER		×		
OF				
DEPTH		Zone		
VERAGE		Sec	02	13
AVER		Rng	12W	12W
		IMB	27N	27N
		Bsn	RG	37





Mines and Quarries Map San Juan County, NM McGrady HB A #2 T27N,R12W,23E Lodestar Services, Inc Durango, CO 81302 PO Box 4465



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

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

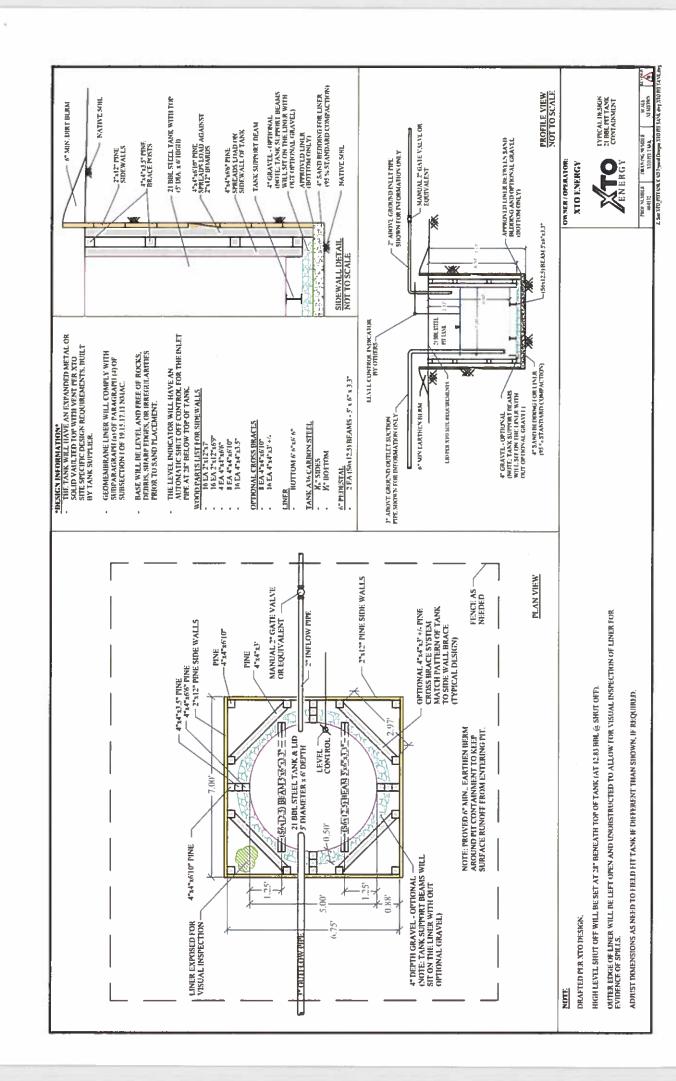
General Plan

- 1. XTO will design and construct below-grade tanks to contain liquids and solids and prevent contamination of fresh water and protect public health and environment.
- 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 ½ 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 \(\frac{1}{2} \) 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.



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.
 - 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	INSPECTIC	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
Name	Date	1	tears (Y/N)	tank overflows (Y/N)	run on (Y/N)	of oil (Y/N)	of a tank leak (Y/N)	Est. (ft)
						:		
					1			
Notes:	Provide De	Provide Detailed Description:	otion:					
1								
Misc.								
			:					
						1		

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.
- 3. XTO will close a permitted below-grade tank within 60 days of cessation of the below-grade tank's operation or as required by the transitional provisions of Subsection B of 19.15.17.17 NMAC in accordance with a closure plan that the appropriate division district office approves. The closure report will be filed on form C-144.
- 4. XTO will remove liquids and sludge from below-grade tanks prior to implementing a closure method and will dispose of the liquids and sludge in a division-approved facility. Approved facilities and waste streams include:

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

Soil contaminated by exempt petroleum hydrocarbons

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

Basin Disposal Permit No. NM01-005 Produced water

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

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

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

- If XTO or the division determines that a release has occurred, XTO will comply with 19.15.3.116
 NMAC and 19.15.1.19NMAC as appropriate.
- 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.

District I 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 108947

QUESTIONS

Operator:	OGRID:
HILCORP ENERGY COMPANY	372171
1111 Travis Street	Action Number:
Houston, TX 77002	108947
	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 inform	nation will help us identify the appropriate associations in the system.
Facility or Site Name	McGrady HB A 2
Facility ID (f#), if known	Not answered.
Facility Type	Below Grade Tank - (BGT)
Well Name, include well number	McGrady HB A 2
Well API, if associated with a well	30-045-06402
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)	21
Type of Fluid	Produced Water
Pit / Tank Construction Material	Not answered.
Secondary containment with leak detection	Not answered.
Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off	Not answered.
Visible sidewalls and liner	Not answered.
Visible sidewalls only	Not answered.
Tank installed prior to June 18. 2008	Not answered.
Other, Visible Notation. Please specify	visible sidewalls, vaulted automatic high-level shut off, no liner
Liner Thickness (mil)	Not answered.
HDPE (Liner Type)	Not answered.
PVC (Liner Type)	Not answered.
Other, Liner Type. Please specify (Variance Required)	Not answered.

Operator:

QUESTIONS

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QUESTIONS, Page 2

Action 108947

QUESTIONS (continued)	
	OGRID:
HILCORP ENERGY COMPANY	372171

1111 Travis Street Action Number: Houston, TX 77002 108947 Action Type: [C-144] Legacy Below Grade Tank Plan (C-144LB)

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 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	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 g Please check a box if one or more of the following is requested, if not leave blank:	quidance.
Variance(s): Requests must be submitted to the appropriate division district for consideration of approval.	Not answered.
Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval	Not answered.

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QUESTIONS, Page 3

Action 108947

QUESTIONS (continued)	
Operator: OGRID	RID:
HILCORP ENERGY COMPANY	372171
1111 Travis Street Action	ion Number:
Houston, TX 77002	108947

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

Proposed 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	Not answered.

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ACKNOWLEDGMENTS

Action 108947

ACKNOWLEDGMENTS

Operator:	OGRID:
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1111 Travis Street	Action Number:
Houston, TX 77002	108947
	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 108947

CONDITIONS

Operator:	OGRID:
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	Action Type:
	[C-144] Legacy Below Grade Tank Plan (C-144LB)

CONDITIONS

Created By	Condition	Condition Date
jburdine	None	8/11/2022