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 of NOV 24 Proposed Alternative Method Permit or Closure Plan Application 11 36

Existing BGT Closur BGT1	t of a pit, closed-loop system, below-grade tank, or re of a pit, closed-loop system, below-grade tank, of fication to an existing permit re plan only submitted for an existing permitted or sed alternative method	or proposed alternative method
		m balance de de de de
Please be advised that approval of this request does no environment. Nor does approval relieve the operator	ntion (Form C-144) per individual pit, closed-loop system of relieve the operator of liability should operations result in of its responsibility to comply with any other applicable gov	pollution of curface water around water or the
I.		
Operator: XIO Energy, Inc.	OGRID #:	5380
Address: #382 County Road 3100, Aztec, N		
Facility or well name:BELL JF #6		
API Number: <u>30-045-32328</u>	OCD Permit Number:	
U/L or Qtr/Qtr _P Section 10 To	wnship30N Range13W County:	San Juan
Center of Proposed Design: Latitude 36.82281	Longitude108.18713	NAD: □1927 ⊠ 1983
Surface Owner: Federal State Private	Tribal Trust or Indian Allotment	
2.		
Pit: Subsection F or G of 19.15.17.11 NMA	AC .	
Temporary: Drilling Workover		
☐ Permanent ☐ Emergency ☐ Cavitation ☐	P&A	
	mil	er
☐ String-Reinforced		
_	bbi	Dimensional I w W D
3.	Totalicbu	Differsions, L x w x D
Closed-loop System: Subsection H of 19.15	.17.11 NMAC	-
Type of Operation: ☐ P&A ☐ Drilling a new wintent)	vell Workover or Drilling (Applies to activities which	h require prior approval of a permit or notice of
☐ Drying Pad ☐ Above Ground Steel Tanks	Haul-off Bins Other	
	mil LLDPE HDPE PVC	Other
Liner Seams: Welded Factory Other		
4.		
Below-grade tank: Subsection I of 19.15.17	11 NMAC	
Volume: 120 bbl Type of fl		M
Tank Construction material: Steel	uid. Froduced water	flow shut-off tic high-level shut off, no liner 70078
<u> </u>	7 Weith address to the control of th	20.66
	Visible sidewalls, liner, 6-inch lift and automatic over	tlow shut-off
	alls only Other Visible sidewalls, vaulted, automat	tic high-level shut off, no liner
Liner type: Thicknessmil	HDPE PVC Other	
(B)		-2/6
Alternative Method:		es.
Submittal of an exception request is required. Exc	ceptions must be submitted to the Santa Fe Environments	al Bureau office for consideration of approval.
Farm C 144	0110	
Form C-144	Oil Conservation Division	Page 1 of 5
i.i.		asea
Form C-144		Page 1 of 5

of 30	
Fencing: Subsection D of 19.15.17.11 NMAC (Applies to permanent pits, temporary pits, and below-grade tanks) Chain link, six feet in height, two strands of barbed wire at top (Required if located within 1000 feet of a permanent residence, school institution or church) Four foot height, four strands of barbed wire evenly spaced between one and four feet Alternate. Please specify Four foot height, steel mesh field fence (hogwire) with pipe top railing	l, hospital,
7. Netting: Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks) □ Screen □ Netting ☑ Other <u>Expanded metal or solid vaulted top</u> □ Monthly inspections (If netting or screening is not physically feasible)	
8. Signs: Subsection C of 19.15.17.11 NMAC	
☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers ☑ Signed in compliance with 19.15.3.103 NMAC	
9. Administrative Approvals and Exceptions: Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance. Please check a box if one or more of the following is requested, if not leave blank: Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Burea consideration of approval. Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.	u office for
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 accommaterial are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the application of the considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drabove-grade tanks associated with a closed-loop system.	ropriate district approval
Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ⊠ No
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ⊠ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to temporary, emergency, or cavitation pits and below-grade tanks) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ⊠ No ☐ NA
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to permanent pits) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No ☑ NA
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☑ No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ⊠ No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☒ №
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☑ 1%
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☐ Yes 🖾 1900
Within a 100-year floodplain. - FEMA map	☐ Yes ☑ 18
Form C-144 Oil Conservation Division Page 2 of	Released to Imaging:
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attached. ☐ Hydrogeologic Report (Below-grade Tanks) ☐ Hydrogeologic Data (Temporary and Emery Siting Criteria Compliance Demonstrations) ☐ Design Plan - based upon the appropriate re Operating and Maintenance Plan - based upon the second properties of the second prope	be attached to) - based upon equirements of on the approx	on the application. Please indicate, by the requirements of Paragraph (4) of the based upon the requirements of Paragraph the appropriate requirements of 19.1 f 19.15.17.11 NMAC printer requirements of 19.15.17.12 NI	f Subsection B of 19.15,17.9 NMAC graph (2) of Subsection B of 19.15.17.9 NMAC start (2) of Subsection B of 19.15.17,9 NMAC 5,17.10 NMAC
Previously Approved Design (attach copy of	design) AP	l Number:	or Permit Number:
attached. Geologic and Hydrogeologic Data (only fo Siting Criteria Compliance Demonstrations Design Plan - based upon the appropriate romagnetic Design Plan - based upon the appropriate romagnetic Design Plan (Please complete Boxes 14 th and 19.15.17.13 NMAC Previously Approved Design (attach copy of Previously Approved Operating and Maintenance Plan - based upon the appropriate romagnetic Plan - based upon the appropria	r on-site closus (only for on-equirements of cont the approprough 18, if a design)	the application. Please indicate, by the application. Please indicate, by the property of 19.15.17.11 NMAC priate requirements of 19.15.17.12 Nupplicable) - based upon the appropriate requirements. API Number:	Paragraph (3) of Subsection B of 19.15.17.9 riate requirements of 19.15.17.10 NMAC MAC tte requirements of Subsection C of 19.15.17.9 NMAC
above ground steel tanks or haul-off bins and pro	pose to imple	ment waste removal for closure)	
Hydrogeologic Report - based upon the requirements of Siting Criteria Compliance Demonstrations Climatological Factors Assessment Certified Engineering Design Plans - based Dike Protection and Structural Integrity De Leak Detection Design - based upon the ap Liner Specifications and Compatibility Ass Quality Control/Quality Assurance Constrution Operating and Maintenance Plan - based upon Freeboard and Overtopping Prevention Plan Nuisance or Hazardous Odors, including HEmergency Response Plan Oil Field Waste Stream Characterization Monitoring and Inspection Plan Erosion Control Plan Closure Plan - based upon the appropriate response Plan - based upon the appropr	uirements of a based upon upon the appsign - based upor propriate requessment - based upon the appropriate requessment and Institute appropriate representation and Institute appropriate - based upor 2S, Preventior	Paragraph (1) of Subsection B of 19. In the appropriate requirements of 19.15.17.11 apon the appropriate requirements of irements of 19.15.17.11 NMAC and upon the appropriate requirements of irements of 19.15.17.11 NMAC and upon the appropriate requirements tallation Plan priate requirements of 19.15.17.12 Nm the appropriate requirements of 19.15.17.12 Nm the appropriate requirements of 19. In Plan	5.17.10 NMAC NMAC 19.15.17.11 NMAC s of 19.15.17.11 NMAC MAC 15.17.11 NMAC
Proposed Closure: 19.15.17.13 NMAC			
☐ In-pla	Cavitation and Remova Closed-loop s fethod (Only ce Burial	n P&A Permanent Pit E E l systems only) for temporary pits and closed-loop sy On-site Trench Burial	selow-grade Tank
Waste Excavation and Removal Closure Plan 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 approp ☐ Site Reclamation Plan - based upon the app	Checklist: (19 a the box, than appropriate re - based upon (for liquids, ons - based up riate requirem	9.15.17.13 NMAC) Instructions: East the documents are attached. equirements of 19.15.17.13 NMAC the appropriate requirements of Subsdrilling fluids and drill cuttings) on the appropriate requirements of Subsection I of 19.15.17.13 is rements of Subsection G of 19.15.17	ch of the following items must be attached to the section F of 19.15.17.13 NMAC absection H of 19.15.17.13 NMAC NMAC 13 NMAC
Received by Port C-144		Oil Conservation Division	Page 3 of 5

05 60			=•
Waste Removal Closure For Closed-loop Syste Instructions: Please indentify the facility or fac facilities are required.	ilities for the disposal of liquids, dri	eel Tanks or Haul-off Bins Only: (19.15.17.1 lling fluids and drill cuttings. Use attachment	3.D NMAC) if more than two
Disposal Facility Name:	Di	isposal Facility Permit Number:	
Disposal Facility Name:	Di	isposal Facility Permit Number:	
Will any of the proposed closed-loop system open Yes (If yes, please provide the information	rations and associated activities occu a below) \(\square\) No	r on or in areas that will not be used for future s	ervice and operations?
Required for impacted areas which will not be use Soil Backfill and Cover Design Specification Re-vegetation Plan - based upon the appropriate Site Reclamation Plan - based upon the appropriate Site Reclamatio	ons based upon the appropriate re priate requirements of Subsection I o	quirements of Subsection H of 19.15.17.13 NM f 19.15.17.13 NMAC	AC
17. Siting Criteria (regarding on-site closure meth Instructions: Each siting criteria requires a den provided below. Requests regarding changes to considered an exception which must be submitted demonstrations of equivalency are required. Ple	nonstration of compliance in the clo certain siting criteria may require a ed to the Santa Fe Environmental B	dministrative approval from the appropriate d ureau office for consideration of approval. Ju	strict office or may h
Ground water is less than 50 feet below the bottom - NM Office of the State Engineer - iWATI	m of the buried waste. ERS database search; USGS; Data ol	otained from nearby wells	Yes No
Ground water is between 50 and 100 feet below the NM Office of the State Engineer - iWAT	ERS database search; USGS; Data of	otained from nearby wells	Yes No
Ground water is more than 100 feet below the bot - NM Office of the State Engineer - iWATI	ERS database search; USGS; Data of	-	☐ Yes ☐ No ☐ NA
Within 300 feet of a continuously flowing waterco lake (measured from the ordinary high-water mark - Topographic map; Visual inspection (cert	k).	cant watercourse or lakebed, sinkhole, or playa	Yes No
Within 300 feet from a permanent residence, scho - Visual inspection (certification) of the pro-	ool, hospital, institution, or church in oposed site; Aerial photo; Satellite im	existence at the time of initial application.	☐ Yes ☐ No
Within 500 horizontal feet of a private, domestic f watering purposes, or within 1000 horizontal feet - NM Office of the State Engineer - iWATI	of any other fresh water well or sprin	ng, in existence at the time of initial application	☐ Yes ☐ No
Within incorporated municipal boundaries or with adopted pursuant to NMSA 1978, Section 3-27-3, - Written confirmation or verification from	as amended.	•	☐ Yes ☐ No
Within 500 feet of a wetland US Fish and Wildlife Wetland Identificati	ion map; Topographic map; Visual in	spection (certification) of the proposed site	☐ Yes ☐ No
Within the area overlying a subsurface mine Written confirmation or verification or ma	ap from the NM EMNRD-Mining and	d Mineral Division	☐ Yes ☐ No
Within an unstable area. - Engineering measures incorporated into the Society; Topographic map	ne design; NM Bureau of Geology &	Mineral Resources; USGS; NM Geological	Yes No
Within a 100-year floodplain FEMA map			☐ Yes ☐ No
☐ Protocols and Procedures - based upon the a ☐ Confirmation Sampling Plan (if applicable) ☐ Waste Material Sampling Plan - based upon	are attached. - based upon the appropriate require in the appropriate requirements of Sul (if applicable) based upon the appropriate for in-place burial of a drying pad) appropriate requirements of 19.15.17 - based upon the appropriate requirements of Subra (for liquids, drilling fluids and drill that requirements of Subsection Holoriate requirements of Subsection I of	ments of 19.15.17.10 NMAC bsection F of 19.15.17.13 NMAC priate requirements of 19.15.17.11 NMAC - based upon the appropriate requirements of 19. 13 NMAC ments of Subsection F of 19.15.17.13 NMAC section F of 19.15.17.13 NMAC cuttings or in case on-site closure standards can f 19.15.17.13 NMAC	.15.17.11 NMAC 05:65
Form C-144	Oil Conservation Div	ision Page 4	of 5 of 5
			Relea

of 30		
19. Operator Application Certification:		
I hereby certify that the information submitted with this	application is true, accurate and complete to	the best of my knowledge and belief.
Name (Print): Kim Champlin		Environmental Representative
Signature: Kim Champlin		
e-mail address: kim champlin@xtoenergy.com		11/17/08
20.		
OCD Approval: X Permit Application (including clos	ure plan) 🗌 Closure Plan (only) 🔲 OC	D Conditions (see attachment)
OCD Representative Signature: Jackyn Burd	ine	Approval Date: 09/21/2022
Title: Environmental Specialist-A	OCD Permit Nu	mber: BGT1
21. Closure Report (required within 60 days of closure co Instructions: Operators are required to obtain an appro The closure report is required to be submitted to the divi section of the form until an approved closure plan has b	wed closure plan prior to implementing an ision within 60 days of the completion of th een obtained and the closure activities hav	y closure activities and submitting the closure report. e closure activities. Please do not complete this e been completed.
22.	Closure Cor	npletion Date:
Closure Method: ☐ Waste Excavation and Removal ☐ On-Site Closur ☐ If different from approved plan, please explain.	re Method	d Waste Removal (Closed-loop systems only)
23. Closure Report Regarding Waste Removal Closure For Instructions: Please indentify the facility or facilities for two facilities were utilized.	or Closed-loop Systems That Utilize Abover where the liquids, drilling fluids and drill	e Ground Steel Tanks or Haul-off Bins Only: cuttings were disposed. Use attachment if more than
Disposal Facility Name:	Disposal Facility	Permit Number:
Disposal Facility Name:	Disposal Facility	Permit Number:
Were the closed-loop system operations and associated ac Yes (If yes, please demonstrate compliance to the i	tivities performed on or in areas that will no tems below) \(\subseteq\) No	ot be used for future service and operations?
Required for impacted areas which will not be used for fu Site Reclamation (Photo Documentation) Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Tech	ture service and operations:	di .
Closure Report Attachment Checklist: Instructions: I mark in the box, that the documents are attached. Proof of Closure Notice (surface owner and divisio Proof of Deed Notice (required for on-site closure) Plot Plan (for on-site closures and temporary pits) Confirmation Sampling Analytical Results (if appli Waste Material Sampling Analytical Results (required Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technical Site Reclamation (Photo Documentation) On-site Closure Location: Latitude	n) cable) red for on-site closure) nique	ed to the closure report. Please indicate, by a check NAD: []1927 [] 1983
25.		
Operator Closure Certification: I hereby certify that the information and attachments submelief. I also certify that the closure complies with all app	nitted with this closure report is true, accurate licable closure requirements and conditions	te and complete to the best of my knowledge and specified in the approved closure plan.
Name (Print):	Title:	
Signature:	Date:	72.29
-mail address:		21/20
Form C-144	Oil Conservation Division	Page 5 of 5
4		No.

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

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

DISTRICT III 1000 Rio Brozos Rd., Aztec, N.M. 87410 State of New Mexico Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION 1220 South St. Francis Dr.

1220 South St. Francis (Santa Fe, NM B7505 Form C-102 Revised June 10, 2003

Submit to Appropriate District Office

State Lease — 4 Copies Fee Lease — 3 Copies

☐ AMENDED REPORT

DISTRICT IV 1220 South St. Francis Dr., Santa Fe, NM 87505 WELL LOCATION AND ACREAGE DEDICATION PLAT

'API	Number			*Pool Code			Pool Nam	•	
⁴ Property Co	ode				⁶ Property to	lame			Well Number
					J. F. B	ELL			6
OGRID No	i.				Operator F	lome			* Elevation
			XTO ENERGY INC. 5800			5800			
					10 Surface	Location			
Ut or lat na.	Section	Township	Range	Let Idn	Feet from the	North/South line	Feet from the	East/West line	County
Р	10	30-N	13-W		880	SOUTH	1020	EAST	SAN JUAN
-	*		"Bott	orn Hole	Location	lf Different Fr	orn Surface		
Ut. or lot no.	Section	Township	Ronge	Lat Idn	Feet from the	North/South line	Feet from the	Eost/West line	County
Designted Acre	•	<u></u>	12 Joint or I	a fill	¹⁴ Consolidation Co	nde	4 Order No.		l

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

16				17 OPERATOR CERTIFICATION I harsby certify that the information contained herein is true and complete to the best of my knowledge and before
	1	O	OTR. CORNER FD 3 1/4" BC BLM 1955 (NAD 27) 01-15-00 N (NAD 27) (W) .+8092	Signature Frinted Name Title Date 18 SURVEYOR CERTIFICATION I hereby cartify that the will location shown on this plot was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the bast-of my belief.
	OTR. CORNER FD STONE MOUND W/ BEAR, TREE'S	S 89-20-22 W 2639.6' (M)	SEC. CORNER FD 2 1/2" STEEL POST (CAP GONE)	Signature and Sea of Professional Surveyor: 14827 Certificate Mumber

Artic	1	Pit Permit	Cirent:	
Lodestar Service	CS, IIIC.		Project:	Pit Permits
PO Box 4465, Durang			Revised:	16-Sep-08
V		Information Shee	t Prepared by:	Brooke Herb
API#:	1	3004532328	USPLSS:	T30N,R13W,S10P
Name:	BELL JF # 6		Lat/Long:	36.82281, -108.18713
Depth to groundwater:	50 to 100 feet		Geologic formation:	Nacimiento Formation
Distance to closest continuously flowing watercourse:	1.6 m	iles to La Plata River		
Distance to closest significant watercourse, lakebed, playa lake, or sinkhole:		of S Twin Wash; 1.00 of Farmington Glade		
			Soil Type:	Entisols
Permanent residence, school, hospital, institution or church within 300'		No		
	0 10		Annual	8.21 inches average annual
Domestic fresh water well or spring within 500'		No	Precipitation: 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
W	į			
Wetland within 500'		No	Mining Activity:	3065' E of Kannard Richard Pit
Within unstable area		No		
Within 100 year flood plain	No - F	EMA Flood Zone 'X'		
Additional Notes:		11-31-11		

BELL JF #6 Below Ground Tank Siting Criteria and Closure Plan

Well Site Location

Legals: T30N, R13W, Section 10, Quarter Section P Latitude/Longitude: approximately 36.82281, -108.18713

County: San Juan County, NM General Description: near Glade Run

General Geology and Hydrology

The San Juan Basin is a typical Rocky Mountain basin with a gently dipping southern flank and a steeply dipping northern flank. Asymmetrically layered Tertiary sandstones and shales, along with Quaternary alluvial deposits dominate surficial geology (Dane and Bachman, 1965). The proposed below ground tank location will be located on the flanks of the Farmington Glade between Aztec and La Plata, New Mexico. Within the Farmington Glade, the Tertiary Nacimiento Formation is exposed, along with Quaternary alluvial and aeoloian sands surrounding the center of the wash.

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. 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 nearby San Juan River and its tributaries.

The prominent soil type at the proposed site is entisols, which are defined as soils that do not show any profile development. Soils are basically unaltered from their parent rock. Miles of arroyos, washes and intermittent streams exist as part of the drainage network towards the La Plata River (www.emnrd.state.nm.us). These features often cut into soil and other unconsolidated materials, contributing to sedimentation downstream. The sudden influx of water from storm events easily erodes 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).

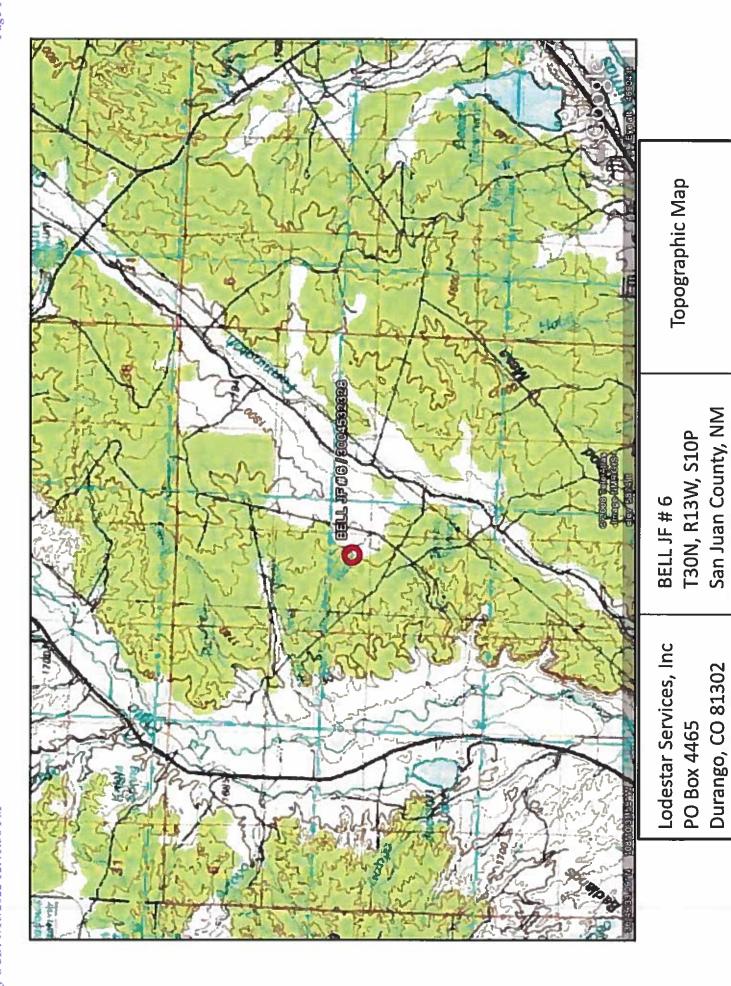
The predominant vegetation is sagebrush and grasses with a more restricted pinon-juniper association (Dick-Peddie, 1993).

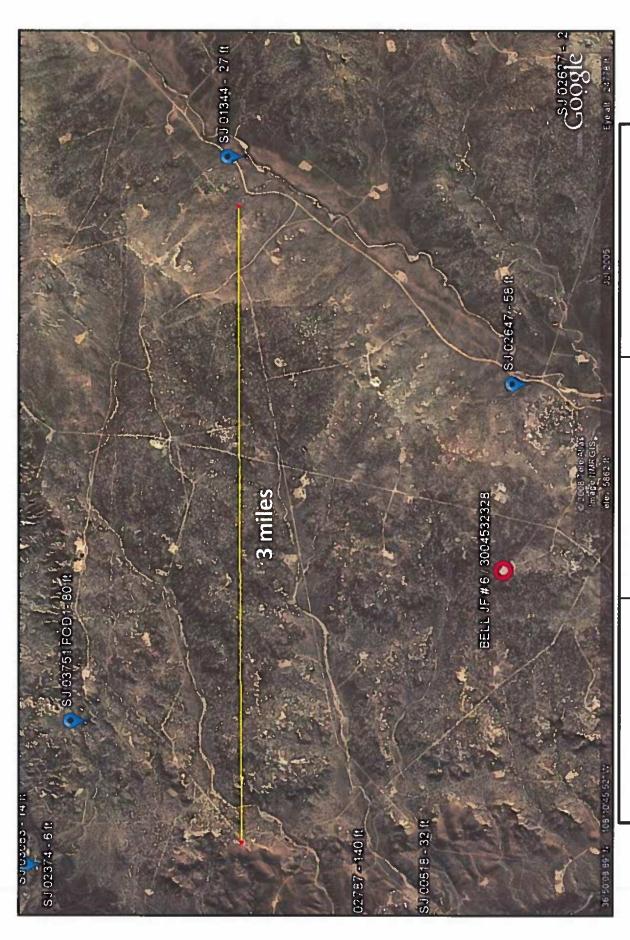
Site Specific Hydrogeology

Depth to groundwater is estimated to be between 50 and 100 feet. This estimation is based on data from Stone and others, 1983 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.

Local aquifers include sandstones within the Nacimiento Formation, which ranges from 0 to 1000 feet deep in this area, as well as shallow aquifers within Quaternary alluvial deposits (Stone et al., 1983). The 1000-foot depth range for Nacimiento aquifers covers an area over 20 miles wide, and depth decreases towards the margin of the San Juan Basin. The site in question is more centrally located, and depth to the aquifer is expected to be closer to 100 feet. It is well known that groundwater close to the La Plata River can be shallow, as the Quaternary deposits near the river itself form shallow aquifers. The proposed site is situated over a mile to the east and is approximately 385 feet higher in elevation from the La Plata River (Google Earth).

Groundwater data available from the NM State Engineer's iWaters Database for wells near the proposed site are attached. A map showing the location of wells in reference to the proposed pit location is also included. Pinpoints show locations of wells and the labels for each pinpoint indicate depth to groundwater in feet. A well to the northwest has a depth to groundwater of 80 feet. The well is 50 feet lower in elevation then the proposed site. A well to the northeast has a depth to groundwater of 27 feet. This well is shallow due to its close proximity to the Glade Wash. A well to the east has a depth to groundwater of 58 feet below the ground surface. The well is approximately 50 feet lower in elevation then the proposed site.





iWaters Groundwater Data Map

Lodestar Services, Inc Po Po Box 4465
Durango, CO 81302

BELL JF # 6 T30N, R13W, S10P San Juan County, NM New Mexico Office of the State Engineer POD Reports and Downloads

Township: 300 Range: 130 Sections: 1

POD / Surface Data ReportAvg Depth to Water ReportWater Column Report

WATER COLUMN REPORT 09/09/2008

(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are biggest to smallest) Tws Rng Sec q q q Zone 30N 13W 01 4 1 2

Water (in feet) Column 15 Depth Water Depth Well 42

Record Count: 1

PCD Number SJ 01344

New Mexico Office of the State Engineer POD Reports and Downloads

Township: 300 Range: 130 Sections: 11

POD / Surface Data ReportAvg Depth to Water ReportWater Column Report

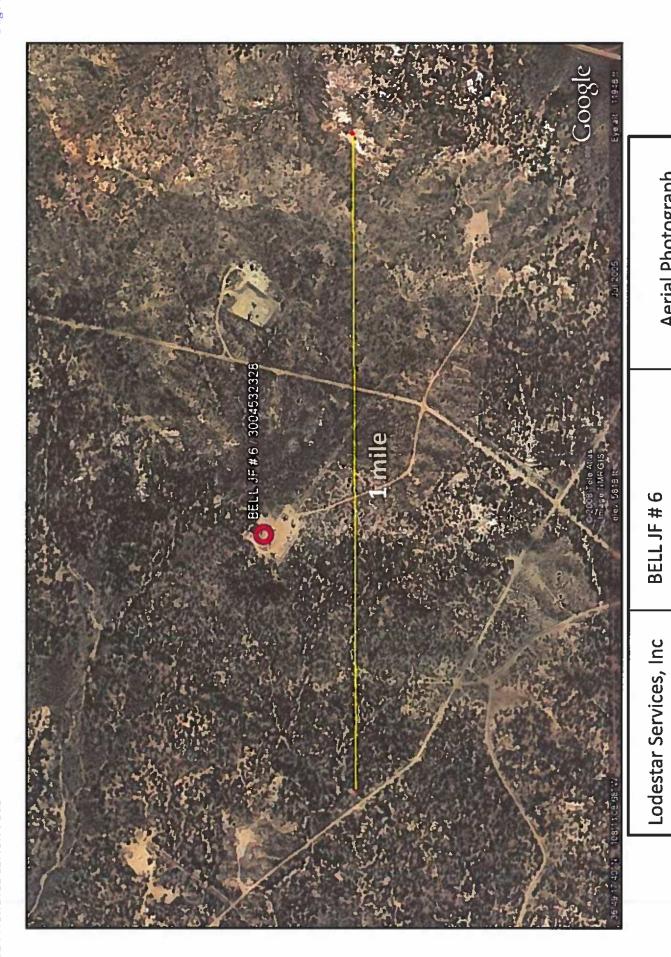
WATER COLUMN REPORT 09/09/2008

(quarters are 1=NW 2=NB 3=SW 4=SB)
(quarters are higgest to smallest)

POD Number Tws Rug Sec q q g Zone X Y Well Water
SJ 02647 30N 13W 11 4 3 4 556

Water (in feet) Column 18

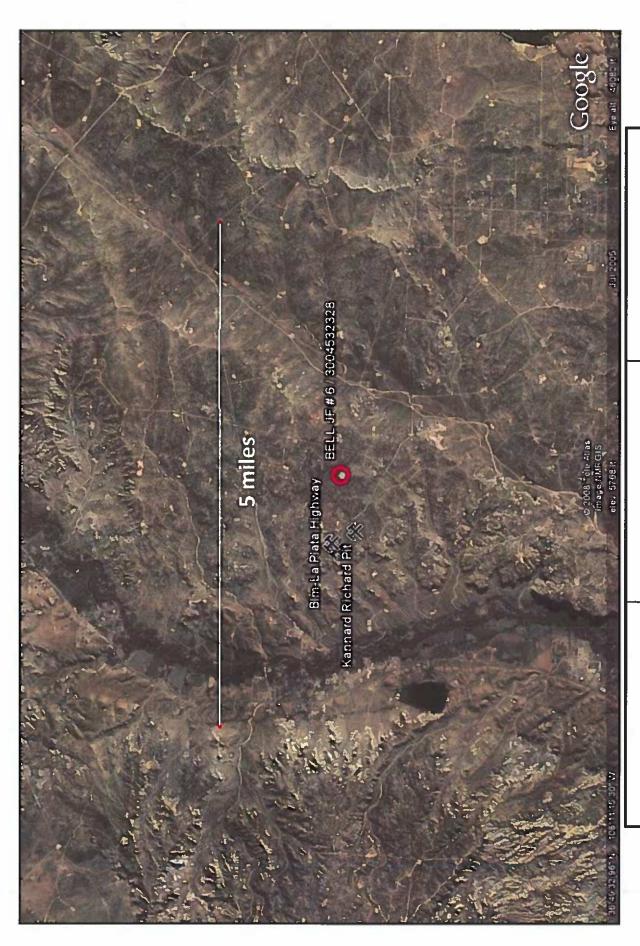
Record Count: 1



San Juan County, NM BELL JF # 6 T30N, R13W, S10P

PO Box 4465 Durango, CO 81302

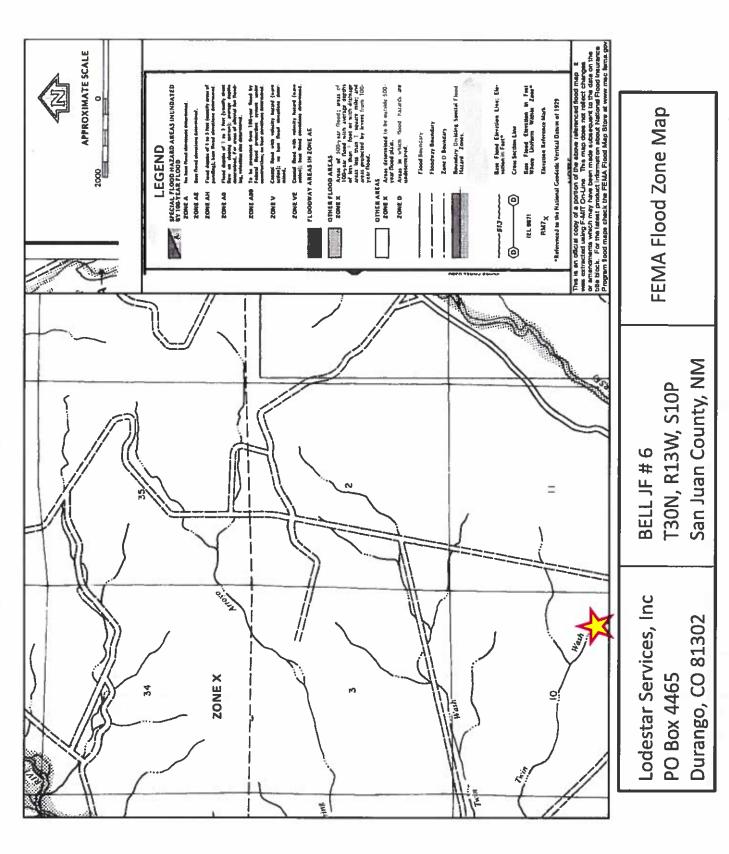
Aerial Photograph



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

BELL JF # 6 T30N, R13W, S10P San Juan County, NM

Mines, Mills, and Quarries Map



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

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

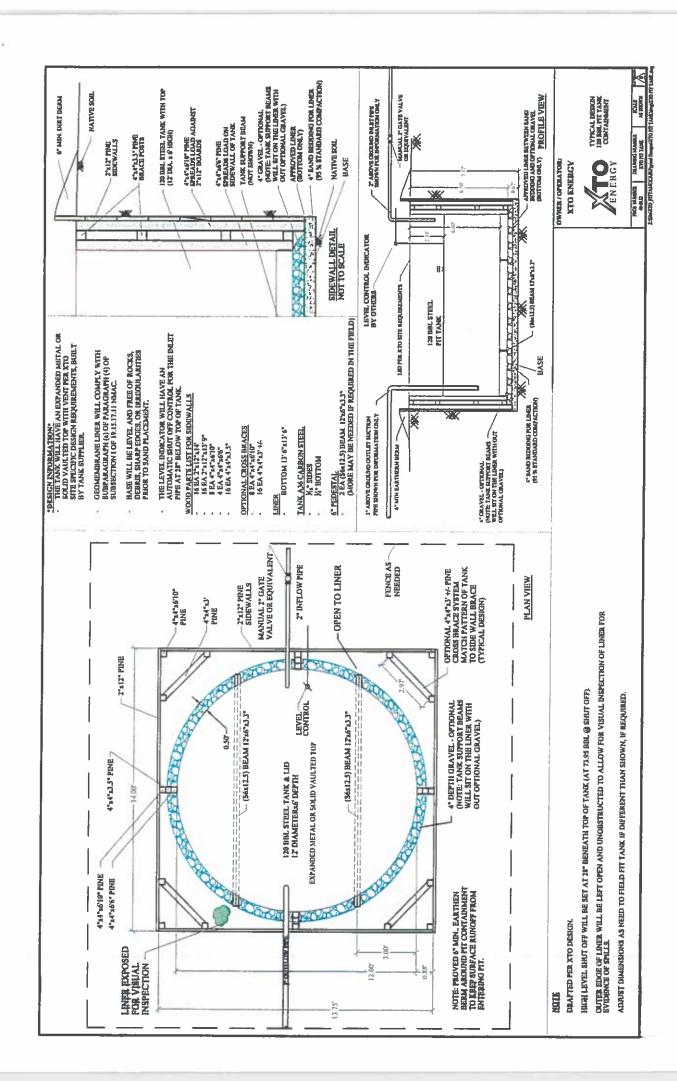
General Plan

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

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



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

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

General Plan

- XTO will operate and maintain below-grade tanks to contain liquids and solids, maintain the 1. 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

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

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

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

		MONTH	1LY BELO	MONTHLY BELOW GRADE TANK INSPECTION FORM	NSPECTION	N FORM		
Well Name:					API No.:			
Legals	Sec		Township:		Range:			
XTO	Inspection	Inspection	Any visible liner	Anv visible signs of	Collection of surface	Visible laver		Freeboard
Name	Date		tears (Y/N)	tank overflows (Y/N)	run on (Y/N)	of oil (Y/N)	of a tank leak (Y/N)	Est. (ft)
							£.	
Notes:	Provide Del	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.
- 2. XTO will close a below-grade tank that does not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC or is not included in Paragraph (5) of Subsection I of 19.15.17.11 NMAC within five years after June 16, 2008, if not retrofitted to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC.
- 3. XTO will close a permitted below-grade tank within 60 days of cessation of the below-grade tank's operation or as required by the transitional provisions of Subsection B of 19.15.17.17 NMAC in accordance with a closure plan that the appropriate division district office approves. The closure report will be filed on form C-144.
- 4. XTO will remove liquids and sludge from below-grade tanks prior to implementing a closure method and will dispose of the liquids and sludge in a division-approved facility. Approved facilities and waste streams include:

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

Soil contaminated by exempt petroleum hydrocarbons

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

Basin Disposal Permit No. NM01-005 Produced water

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

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

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

- 8. If XTO or the division determines that a release has occurred, XTO will comply with 19.15.3.116 NMAC and 19.15.1.19NMAC as appropriate.
- 9. If the sampling program demonstrates that a release has not occurred or that any release does not exceed the concentrations specified in Paragraph (4) of Subsection E of 19.15.17.13 NMAC, XTO will backfill the excavation with compacted, non-waste containing, earthen material; construct a division prescribed soil cover; recontour and re-vegetate the site.
- 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:
 - Operator's name i.
 - ii. Well Name and API Number
 - 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.

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

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

- 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 **Oil Conservation Division** 1220 S. St Francis Dr. **Santa Fe, NM 87505**

QUESTIONS

Action 143766

QUESTIONS

State of New Mexico Energy, Minerals and Natural Resources

Operator:	OGRID:
HILCORP ENERGY COMPANY	372171
1111 Travis Street	Action Number:
Houston, TX 77002	143766
	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 ic	lentify the appropriate associations in the system.
Facility or Site Name	JFBELL 6
Facility ID (f#), if known	Not answered.
Facility Type	Below Grade Tank - (BGT)
Well Name, include well number	JFBELL 6
Well API, if associated with a well	3004532328
Pit / Tank Type	Not answered.
Pit / Tank Name or Identifier	Not answered.
Pit / Tank Opened Date, if known	Not answered.
Pit / Tank Dimensions, Length (ft)	Not answered.
Pit / Tank Dimensions, Width or Diameter (ft)	Not answered.
Pit / Tank Dimensions, Depth (ft)	Not answered.
Ground Water Depth (ft)	Not answered.
Ground Water Impact	Not answered.
Ground Water Quality (TDS)	Not answered.

Below-Grade Tank	
Subsection I of 19.15.17.11 NMAC	
Volume / Capacity (bbls)	120
Type of Fluid	Produced Water
Pit / Tank Construction Material	Steel
Secondary containment with leak detection	Not answered.
Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off	Not answered.
Visible sidewalls and liner	Not answered.
Visible sidewalls only	Not answered.
Tank installed prior to June 18. 2008	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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QUESTIONS (continued)

QUESTIONS, Page 2

Action	143766

Operator.	OGRID.
HILCORP ENERGY COMPANY	372171
1111 Travis Street	Action Number:
Houston, TX 77002	143766
	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	rs)
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 are if (Aming a May De Ney Let)	
Other, Netting. Please specify (Variance May Be Needed)	expanded metal top or solid vaulted top
Signs	
Subsection C of 19.15.17.11 NMAC (If there are multiple operators at a site, each operator must have	e their own sign in compliance with Subsection C of 19.15.17.11 NMAC.)
12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers	Not answered.
Signed in compliance with 19.15.16.8 NMAC	True
Variances and Exceptions	
Justifications and/or demonstrations ofequivalency are required. Please refer to 19.15.17 NMAC for Please check a box if one or more of the following is requested, if not leave blank:	guidance.
Variance(s):	
Requests must be submitted to the appropriate division district for consideration of approval.	Not answered.
Exception(s):	
Requests must be submitted to the Santa Fe Environmental Bureau office for	Not answered.
consideration of approval	

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

QUESTIONS, Page 3

Action 143766

	QUESTIONS (continued)	
perator:	C	OGRID:
HILCORP ENERGY COMPANY		372171
1111 Travia Street	_	N.C. M. I

Action Number: Houston, TX 77002 143766 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	11/17/2008

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ACKNOWLEDGMENTS

Action 143766

ACKNOWLEDGMENTS

Operator:	OGRID:
HILCORP ENERGY COMPANY	372171
1111 Travis Street	Action Number:
Houston, TX 77002	143766
	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.
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 143766

CONDITIONS

Operator:	OGRID:
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1111 Travis Street	Action Number:
Houston, TX 77002	143766
	Action Type:
	[C-144] Legacy Below Grade Tank Plan (C-144LB)

CONDITIONS

Created By		Condition Date
jburdine	None	9/21/2022