C-144

Permanent Pit

Closure Plan Approval

API # 30-025-39794

Larson & Associates, Inc.
Environmental Consultants

RECEIVED
2008 DEC 26 PM 1 28

December 23, 2008

Mr. Wayne Price, Chief
Environmental Bureau
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Permanent Pit Closure Plan
XTO Energy, Inc., North Vacuum Unit South Water Station
Unit G (SW/4, NE/4), Section 26, Township 17 South, Range 34 East
Lea County, New Mexico

Dear Mr. Price:
Form C-144 and corresponding closure plan is submitted to the New Mexico Oil Conservation Division (NMOCD) Santa Fe office on behalf of XTO Energy, Inc. (XTO) by Larson & Associates, Inc. (LAI), it's consultant, for closure of a permanent pit at the XTO North Vacuum Unit South Water Station (Facility) located in Unit G (SW/4, NE/4), Section 26, Township 17 South and Range 34 East in Lea County, New Mexico. This closure plan has been prepared in conformance with 19.15.17 NMAC and template approved by the OCD on November 24, 2008. If you have any questions or concerns, please call me at 432.687.0901 to discuss.
Sincerely,
LARSON & ASSOCIATES, INC.

Mark J. Larson, P.G., C.P.G.
Certified Professional Geologist #10490
mark@laenvironmental.com

Cc: File
Mr. Larry Johnson, NMOCD District 1
Mr. Guy Haykus, XTO, Midland
Mr. Dudley McMinn, XTO, Midland
Mr. Jerry Parker, XTO, SE New Mexico

PERMANENT PIT CLOSURE PLAN
XTO ENERGY, INC.
NORTH VACUUM ABO UNIT
SOUTH WATER STATION
LEA COUNTY, NEW MEXICO

Prepared for:

XTO Energy, Inc.
200 N. Loraine Street, Suite 800
Midland, Texas 79701

Prepared by:

Mark J. Larson, P.G.
Larson & Associates, Inc.
507 North Marienfeld Street, Suite 200
Midland, Texas 79701

December 23, 2008

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

Form C-144
July 21, 2008

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

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

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

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

1.
Operator: XTO ENERGY, INC. OGRID #: 5380
Address: PERMIAN DIVISION – SE NEW MEXICO, P.O. BOX 700, EUNICE, NM 88231
Facility or well name: NORTH VACUUM ABO UNIT SOUTH WATER STATION / ABO WELL NO. 305 (NEAREST WELL)
API Number: 30-025-37971 OCD Permit Number:
U/L or Qtr/Qtr G Section 26 Township 17S Range 34E County: LEA
Center of Proposed Design: Latitude 32° 48' 24.9" Longitude 103° 31' 43.5" NAD: ☐ 1927 ☒ 1983
Surface Owner: ☐ Federal ☒ State ☐ Private ☐ Tribal Trust or Indian Allotment

2.
☒ **Pit:** Subsection F or G of 19.15.17.11 NMAC
Temporary: ☐ Drilling ☐ Workover
☒ Permanent ☐ Emergency ☐ Cavitation ☐ P&A
☒ Lined ☐ Unlined Liner type: Thickness 6 inches ☐ LLDPE ☐ HDPE ☐ PVC ☒ Other CONCRETE
☐ String-Reinforced
Liner Seams: ☐ Welded ☐ Factory ☐ Other Volume: 3,470 bbl Dimensions: L 65' x W 60' x D 5'

3.
☐ **Closed-loop System:** Subsection H of 19.15.17.11 NMAC
Type of Operation: ☐ P&A ☐ Drilling a new well ☐ Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent)
☐ Drying Pad ☐ Above Ground Steel Tanks ☐ Haul-off Bins ☐ Other
☐ Lined ☐ Unlined Liner type: Thickness mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other
Liner Seams: ☐ Welded ☐ Factory ☐ Other

4.
☐ **Below-grade tank:** Subsection I of 19.15.17.11 NMAC
Volume: bbl Type of fluid:
Tank Construction material:
☐ Secondary containment with leak detection ☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off
☐ Visible sidewalls and liner ☐ Visible sidewalls only ☐ Other
Liner type: Thickness mil ☐ HDPE ☐ PVC ☐ Other

5.

☐ **Alternative Method:**

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

6.

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, hospital, institution or church)*

☐ Four foot height, four strands of barbed wire evenly spaced between one and four feet

☐ Alternate. Please specify_____

7.

Netting: Subsection E of 19.15.17.11 NMAC *(Applies to permanent pits and permanent open top tanks)*

☐ Screen ☐ Netting ☐ Other_____

☐ 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 Bureau office for consideration of approval.

☐ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

10.

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. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. **Siting criteria does not apply to drying pads or above-grade tanks associated with a closed-loop system.**

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 ☐ No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☐ Yes ☐ No
Within a 100-year floodplain.	

- FEMA map	☐ Yes ☐ No

11.
Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

☐ Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
☐ Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC
☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

☐ Previously Approved Design (attach copy of design) API Number: _____ or Permit Number: _____

12.
Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

☐ Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9
☐ Siting Criteria Compliance Demonstrations (only for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC
☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

☐ Previously Approved Design (attach copy of design) API Number: _____

☐ Previously Approved Operating and Maintenance Plan API Number: _____ *(Applies only to closed-loop system that use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)*

13.
Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC
☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
☐ Climatological Factors Assessment
☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Quality Control/Quality Assurance Construction and Installation Plan
☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Nuisance or Hazardous Odors, including H_2S, Prevention Plan
☐ Emergency Response Plan
☐ Oil Field Waste Stream Characterization
☐ Monitoring and Inspection Plan
☐ Erosion Control Plan
☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

14.
Proposed Closure: 19.15.17.13 NMAC
Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.

Type: ☐ Drilling ☐ Workover ☐ Emergency ☐ Cavitation ☐ P&A ☒ Permanent Pit ☐ Below-grade Tank ☐ Closed-loop System ☐ Alternative

Proposed Closure Method: ☒ Waste Excavation and Removal
☐ Waste Removal (Closed-loop systems only)
☐ On-site Closure Method (Only for temporary pits and closed-loop systems)
☐ In-place Burial ☐ On-site Trench Burial
☐ Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)

15.
Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) ***Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.***

- [X] Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
- [X] Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
- [X] Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)
- [X] Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- [X] Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
- [X] Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

16.
Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: (19.15.17.13.D NMAC)
Instructions: Please indentify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Will any of the proposed closed-loop system operations and associated activities occur on or in areas that *will not* be used for future service and operations?
☐ 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 NMAC
- ☐ 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

17.
Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC
Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.

Ground 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 ☐ NA
Ground 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 ☐ NA
Ground 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 ☐ NA
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. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☒ No
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; 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 ☒ No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☒ No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☐ Yes ☒ No
Within a 100-year floodplain. - FEMA map	☐ Yes ☒ No

18.
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) ***Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.***

- [X] Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- [ ] Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
- [ ] Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.11 NMAC

- ☐ Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☒ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☒ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
- ☒ Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
- ☒ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)
- ☒ Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☒ 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

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): Guy Haykus Title: Superintendent

Signature: Date: December 23, 2008

e-mail address: William_Haykus@xtoenergy.com Telephone: (432) 682-8873

20.

OCD Approval: ☐ Permit Application (including closure plan) ☒ Closure Plan (only) ☐ OCD Conditions (see attachment)

OCD Representative Signature: **Approval Date:** 2/4/09

Title: Environmental Engineer **OCD Permit Number:**

21.

Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC

Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.

☐ **Closure Completion Date:**

22.

Closure Method:

☐ Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alternative Closure Method ☐ Waste Removal (Closed-loop systems only)

☐ If different from approved plan, please explain.

23.

Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:

Instructions: Please indentify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.

Disposal Facility Name: Disposal Facility Permit Number:

Disposal Facility Name: Disposal Facility Permit Number:

Were the closed-loop system operations and associated activities performed on or in areas that *will not* be used for future service and operations?

☐ Yes (If yes, please demonstrate compliance to the items below) ☐ No

Required for impacted areas which will not be used for future service and operations:

- ☐ Site Reclamation (Photo Documentation)
- ☐ Soil Backfilling and Cover Installation
- ☐ Re-vegetation Application Rates and Seeding Technique

24.

Closure Report Attachment Checklist: ***Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached.***

- ☐ Proof of Closure Notice (surface owner and division)
- ☐ Proof of Deed Notice (required for on-site closure)
- ☐ Plot Plan (for on-site closures and temporary pits)
- ☐ Confirmation Sampling Analytical Results (if applicable)
- ☐ Waste Material Sampling Analytical Results (required for on-site closure)
- ☐ Disposal Facility Name and Permit Number
- ☐ Soil Backfilling and Cover Installation
- ☐ Re-vegetation Application Rates and Seeding Technique
- ☐ Site Reclamation (Photo Documentation)

On-site Closure Location: Latitude Longitude NAD: ☐ 1927 ☐ 1983

25.

Operator Closure Certification:

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

Name (Print): _____ Title: _____

Signature: _____ Date: _____

e-mail address: _____ Telephone: _____

1.0 INTRODUCTION

Larson & Associates, Inc (LAI), on behalf of XTO Energy, Inc. (XTO), submits this plan to the New Mexico Oil Conservation Division (NMOCD) Santa Fe office for closure of an unpermitted and unregistered concrete-lined permanent pit at its North Vacuum ABO Unit South Water Station (Facility) located in Unit G (SW/4, NE/4), Section 26, Township 17 South and Range 34 East in Lea County, New Mexico. The Facility is a tank battery for subsurface reinjection of water produced from oil and gas extraction operations. This closure plan has been prepared in conformance with 19.15.17 NMAC and template approved by the NMOCD on November 24, 2008. Appendix A presents the NMOCD approval correspondence.

2.0 Operator

XTO Energy Inc.
Permian Division-SE New Mexico
P.O. Box 700
Eunice, New Mexico 88231

Contact Person: Jerry Parker
Phone Number: (575) 394-0542

XTO Energy Inc.
Midland Office
200 N. Loraine Street, Suite 800
Midland, Texas 79701

Contact Person: Guy Haykus
Phone Number: (432) 682-8873

3.0 Proposed Application

The proposed application is for closure of an unpermitted and unregistered concrete-lined permanent pit that does not meet the requirements of Paragraphs (1) through (7) of Subsection G of 19.15.17.11 NMAC. Figure 1 presents a location and topographic map. Figure 2 presents an aerial photograph. Figure 3 presents a scaled drawing that depicts the location of the pit near the northwest corner of the Facility. Appendix A presents photographs.

4.0 Facility Description, Location, and Siting Criteria

The Facility encompasses a tract of land approximately 0.83 acres in size that is covered with crushed caliche rock and is flat to very gently sloping (Figure 1). The GPS coordinates (NAD 1983) near the pit are 32° 48' 24.9" north and 103° 31' 43.5" west. The North Vacuum Abo Lease Well #305, with API #30-025-37971, is the nearest producing oil well, and is located south of the Facility in Unit J (NW/4, SE/4), Section 26, Township 17 South and Range 34 East.

The Facility is located in west-central Lea County, New Mexico, an area referred to as the Pecos Valley, a part of the Great Plains physiographic province. The land surface is an irregular erosional surface that generally slopes to the west and south towards the Pecos River. This area includes large areas of stabilized and drifting sand dunes and drainage areas created by solution deep-seated collapse. The Facility's siting criteria includes the following:

1) Groundwater is about 120 feet below ground surface. Figure 1 shows the approximate location domestic and stock wells and depth-to-groundwater based on records from the New Mexico State Engineer (NMSE).

2) No continuously flowing watercourse is within 300 horizontal feet of the Facility (Figure 1).

3) No surface water features, including lakes, rivers, ponds, arroyos, lakebed, sinkhole, or playa lake is located within 200 horizontal feet of Facility (Figure 1).

4) No permanent residence, school, hospital, institution, or church is within 300 horizontal feet of Facility (Figure 1).

5) No private, domestic fresh water well or spring that less than five households use for domestic or stock water purposes are within 500 horizontal feet of Facility (Figure 1).

6) No other fresh water wells or springs are within 1000 horizontal feet of Facility (Figure 1).

7) The Facility is not located within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance.

8) The Facility is not within 500 feet an area designated as wetlands as defined by EPA Regulation listed at 40 CFR 230.3(t) of the Clean Water Act of 1977 (Figure 4).

9) The Facility is not within an area overlying a subsurface mine (Figure 5).

10) The Facility is not within an unstable area.

11) The Facility is not within a 100-year flood plain (Figure 6).

5.0 Identification of Soil and Subsoils

The Facility is underlain by soil of the Kimbrough - Lea complex (0 to 3 percent slopes) consisting of approximately 50 percent Kimbrough gravelly loam, 25 percent Lea loam and 20 to 25 percent Stegall, Arvanna, Slaughter and Sharvana soils. The Kimbrough soil is gently sloping and occurs on tops and sides of low ridges. The Lea soil occurs in nearly

level areas and swales between ridges. The Kimbrough-Lea complex is mainly used for range, wildlife habitat and recreational purposes.

The Eocene-age Ogallala formation is the uppermost geologic unit and is composed of unconsolidated or poorly cemented clay, sand and gravel, and unconformably overlies the Triassic-age Chinle formation of the Dockum group. The Chinle formation is composed chiefly of interbedded mudstone, shale and sand. The Ogallala formation is overlain by windblown sand deposited in dunes. A layer of caliche commonly referred to as "cap rock" occurs in the shallow subsurface. Groundwater occurs in the Ogallala formation about 120 feet below ground surface.

6.0 Land Ownership

The Facility is located on New Mexico State Trust Lands as determined from 2008 tax records at the Lea County Appraisal District located in Lovington, New Mexico. Pearce Trust, located at 1717 Jackson Street, in Pecos, Texas, leases the surface for grazing. Figure 7 presents New Mexico State Land Office Trust Land image.

7.0 Permanent Pit Description and Construction

The pit capacity is approximately 3,470 barrel (bbl) and is for emergency containment of produced water. The pit is constructed of concrete with walls approximately 6 inches thick with vertical sides and bottom. There is no leak detection system or secondary liner. Ancillary equipment includes fencing, pump controls and netting to prevent migratory bird intrusion.

8.0 Permanent Pit Closure Protocols and Procedures

1. In accordance with Agreed Scheduling Order dated October 15, 2008, a Closure Plan application shall be submitted to NMOCD Santa Fe office environmental staff prior to December 31, 2008. An extension to the Agreed Scheduling Order was granted by the OCD on December 4, 2008, with a revised due date of March 14, 2009. Upon Closure Plan approval by the OCD, XTO shall close the permanent pit no later than June 30, 2009. However, an earlier date may be required because of imminent danger to fresh water, public health, or the environment.

2. As required by Paragraph (3) of Subsection J of 19.15.17.13 NMAC, an operator of a permanent pit shall notify the environmental bureau in the division's Santa Fe office at least 60 days prior to cessation of operations and provide a proposed schedule for closure. Upon receipt of the notice and proposed schedule, the environmental bureau in the division's Santa Fe office shall review the current closure plan for adequacy and insect the site. Written notification shall be provided to the NMOCD District 1 office located in Hobbs, New Mexico, no less than 72 hours and no greater than one (1) week prior to pit closure. Written notification will include the following:

Operator Name:
Facility Name:
Legal Description:
Nearest Well & API Number:
County Name:
Date & Time:

3. As required by Paragraph (1) of Subsection J of 19.15.17.13 NMAC, the operator shall notify the surface owner by certified mail return receipt requested prior to closing the permanent pit. The surface owner shall be notified via certified mail with return receipt requested using the address shown in the county tax records at least one (1) week prior to commencing pit closure. Evidence of the notification mailing shall be submitted as a closure report attachment.

4. Liquids and sludge shall be removed from the pit prior to implementing closure. Liquids, consisting chiefly of rain water, shall be disposed in the North Vacuum ABO Unit North Injection Station wells. Sludge, concrete and contaminated soil shall be disposed at Lea Land Landfill, Inc. or Controlled Recovery, Inc., which are approved by the NMOCD and operate under NMOCD permits NM-1-035 and R9166, respectively, as required in 19.15.17.13 Subsection C Paragraph (1) NMAC.

5. Prior to removal of the pit, ancillary equipment shall be removed for recycling, salvaged or disposed at the NMOCD approved disposal facilities listed in Item 4.

6. The concrete forming the sides and bottom of the pit will be removed and disposed at Lea Land Landfill, Inc. or Controlled Recovery, Inc. Following removal and disposal of the concrete, five (5) point composite samples will be collected directly below the pit and side-walls. Discrete samples will be collected from any wet or discolored areas or areas beneath the pit showing other evidence of a release. All samples will be analyzed for benzene, toluene, ethylbenzene, xylene (BTEX) using EPA Method 8021B, total petroleum hydrocarbons (TPH) using EPA Method 418.1, and chloride using EPA Method 300.1, as required by 19.15.17.13 Subsection C Paragraph (3) NMAC.

7. As required by Paragraph (3) of Subsection C of 19.15.17.13 NMAC, the environmental bureau at the division's Santa Fe office shall be notified of the sample results from Item 6 on form C-141. Additional delineation shall be conducted for compliance with 19.15.3.116 NMAC and 19.15.1.19 NMAC, as appropriate, if determined that a release has occurred by the operator or staff of the environmental bureau in the division's Santa Fe office.

8. Backfill excavation with non-waste containing, earthen material, in accordance with Paragraph (5) of Subsection C of 19.15.17.13 NMAC, should laboratory results verify that constituents do not exceed the concentrations specified in Paragraph (3) of Subsection C of 19.15.17.13 NMAC.

9. Site re-vegetation is not proposed. Crush caliche is proposed as an alternative and will cover the excavation and provide an elevated pad for installation of new above-

ground tanks (AST). A written document stating the proposed alternative shall be submitted to surface owner requesting signature approval. A copy of the signed document shall be submitted to the NMOCD Santa Fe office environmental staff as a closure report attachment. Should AST not be installed at the former pit location, XTO shall comply with the re-vegetation requirement of the New Mexico State Land Office, as surface owner of record, according to its Southeastern New Mexico Revegetation Handbook, including:

- Preparing seed bed by scarifying (ripping) or disc the upper 6 inches of top soil ;
- Drill seed according to SLO prescribed rate and type (i.e., Sandy with Tall Grass) recommended by the SLO for the specific soil type and Subsection I of Subsection I of 19.15.17.13 NMAC, including 70% of the native perennial vegetative cover (un-impacted by overgrazing, fire or other intrusion) consisting of at least three (3) native plant species, including at least one (1) grass, but not including noxious weeds;
- XTO shall notify the SLO District Resource Manager (DRM) at least 5 working days prior to the seeding date so that the SLO may be witness seeding;
- Evidence of seeding shall be documented and include original copies of seed tags and photo documentation;
- Revegetation shall be deemed successful after maintaining that cover through two (2) successive growing seasons with no artificial irrigation.

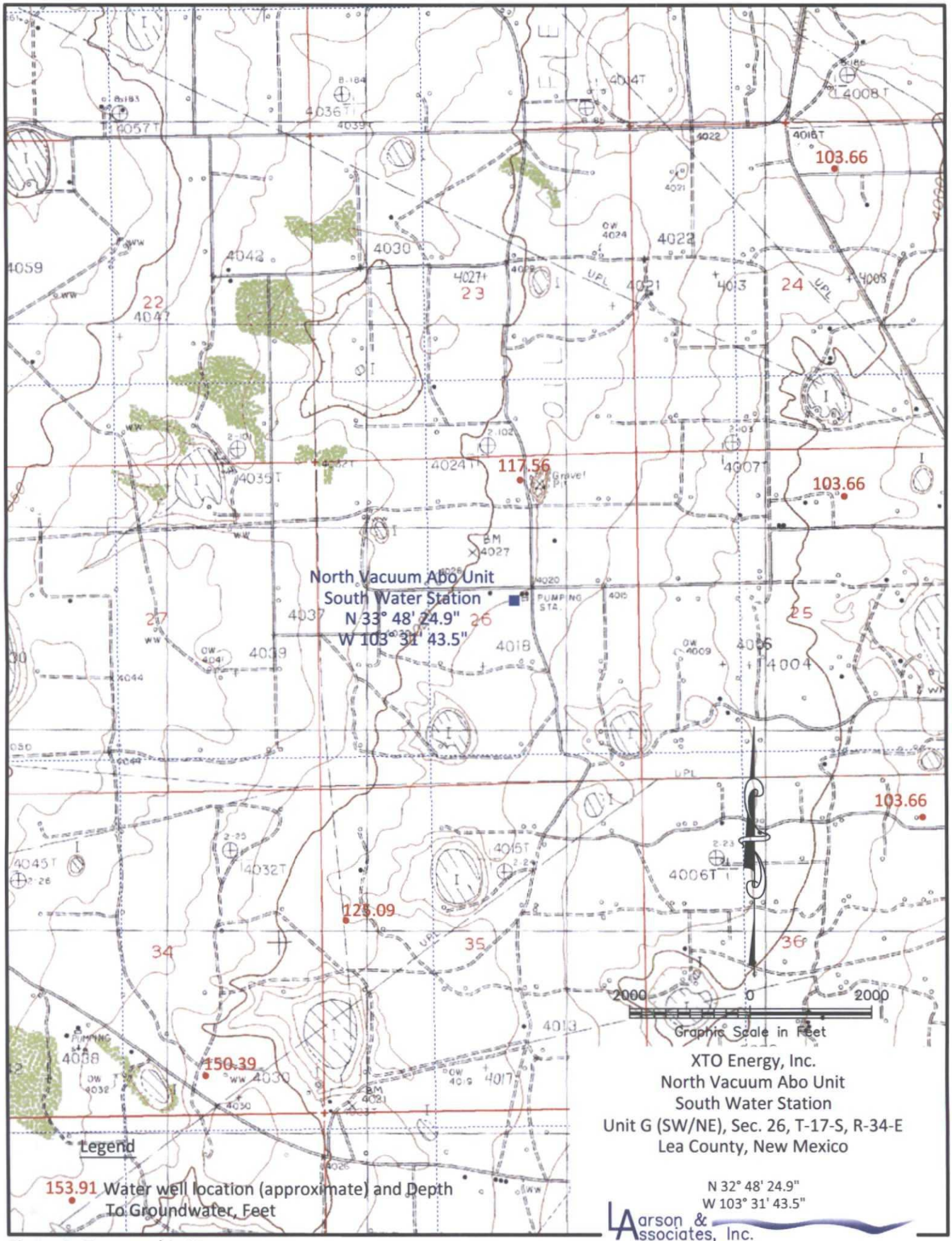
9.0 REPORTING

LAI, on behalf of XTO, shall prepare and submit a final closure report to the NMOCD Santa Fe office environmental staff within 60 days following the permanent pit closure, as required in Subsection K of 19.15.17.13 NMAC which will include the following: Form C-144 with all supporting data; form C-141; proof of surface owner and division closure notices; confirmation sampling analytical data; disposal facility names(s) and permit number(s); soil backfilling and cover installation; proposed alternative re-vegetation installation & surface owner signed written agreement; photo documentation of the site reclamation; and other pertinent information related to onsite activities.

FIGURES

JWW

Y:\PROJECTS\XTO ENERGY\8-01\8-0165\8-0165 South Vacuum Abo Unit.dwg, 12/22/2008 3:55:16 PM



XTO Energy, Inc.
North Vacuum Abo Unit
South Water Station
Unit G (SW/NE), Sec. 26, T-17-S, R-34-E
Lea County, New Mexico

N 32° 48' 24.9"
W 103° 31' 43.5"

Larson & Associates, Inc.
Environmental Consultants

Figure 1 - Topographic Map

JWW

Y:\PROJECTS\XTO ENERGY\8-01\8-0165\8-0165 South Vacuum Abo Unit.dwg, 12/22/2008 3:04:09 PM

XTO Energy, Inc.
North Vacuum Abo Unit
South Water Station
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Lea County, New Mexico

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Larson & Associates, Inc.
Environmental Consultants

Figure 2 - Aerial

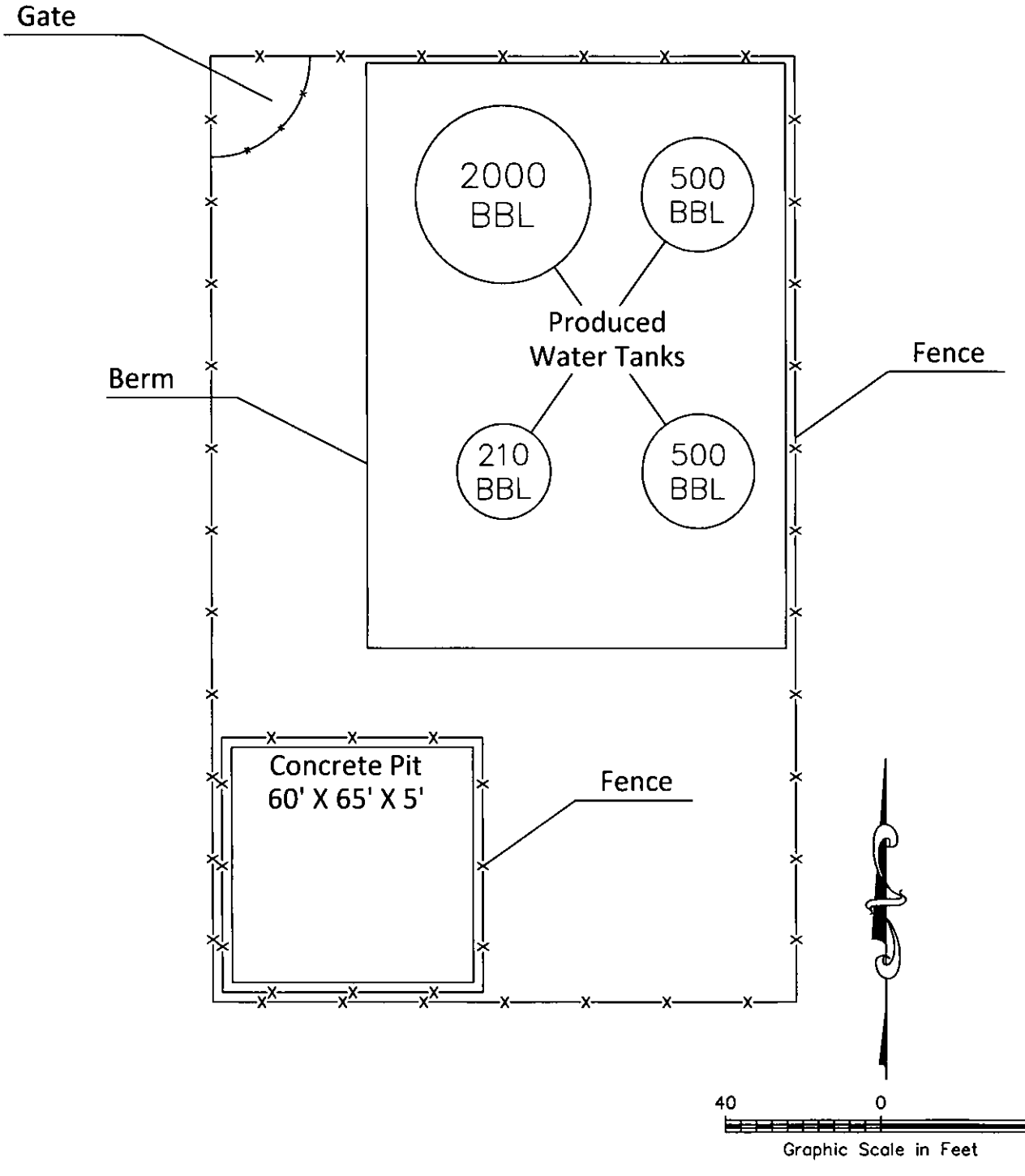

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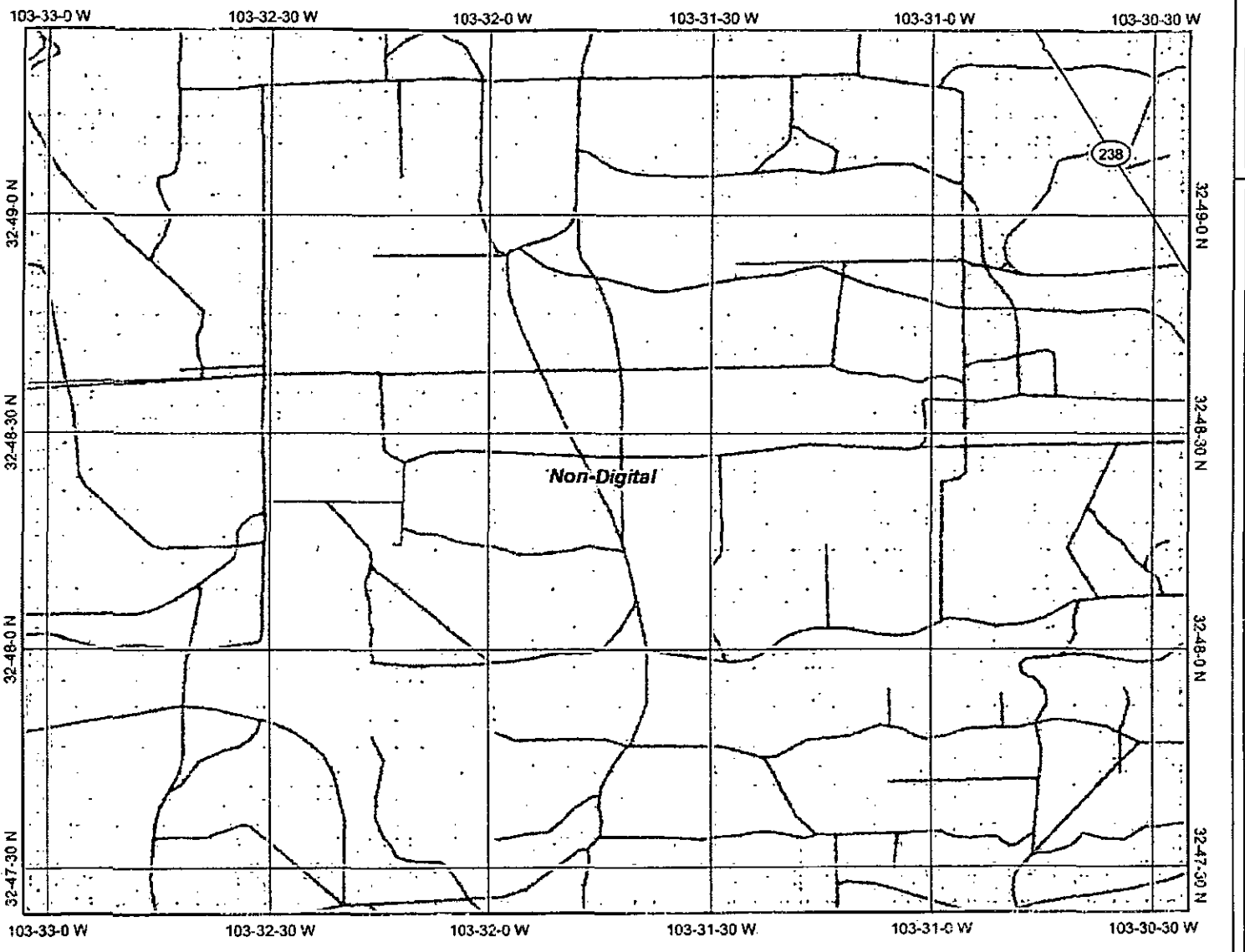
Figure 3 - SIte Drawing

U.S. Fish & Wildlife Service Wetlands Online Mapper



Legend

- Interstate
- Major Roads
- Other Road
- Interstate
- State highway
- US highway
- Roads
- Cities

Lower 48 Wetland Polygons

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

Lower 48 Available Wetland Data

- Non-Digital
- Digital
- No Data
- Scan
- NHD Streams
- Counties 100K
- North America

XTO Energy, Inc.
North Vacuum Abo Unit
South Water Station
Unit G (SW/NE), Sec. 26,
T-17-S, R-34-E
Lea County, New Mexico

Scale: 1:26,280

Map center: 32° 48' 25" N, 103° 31' 44" W

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

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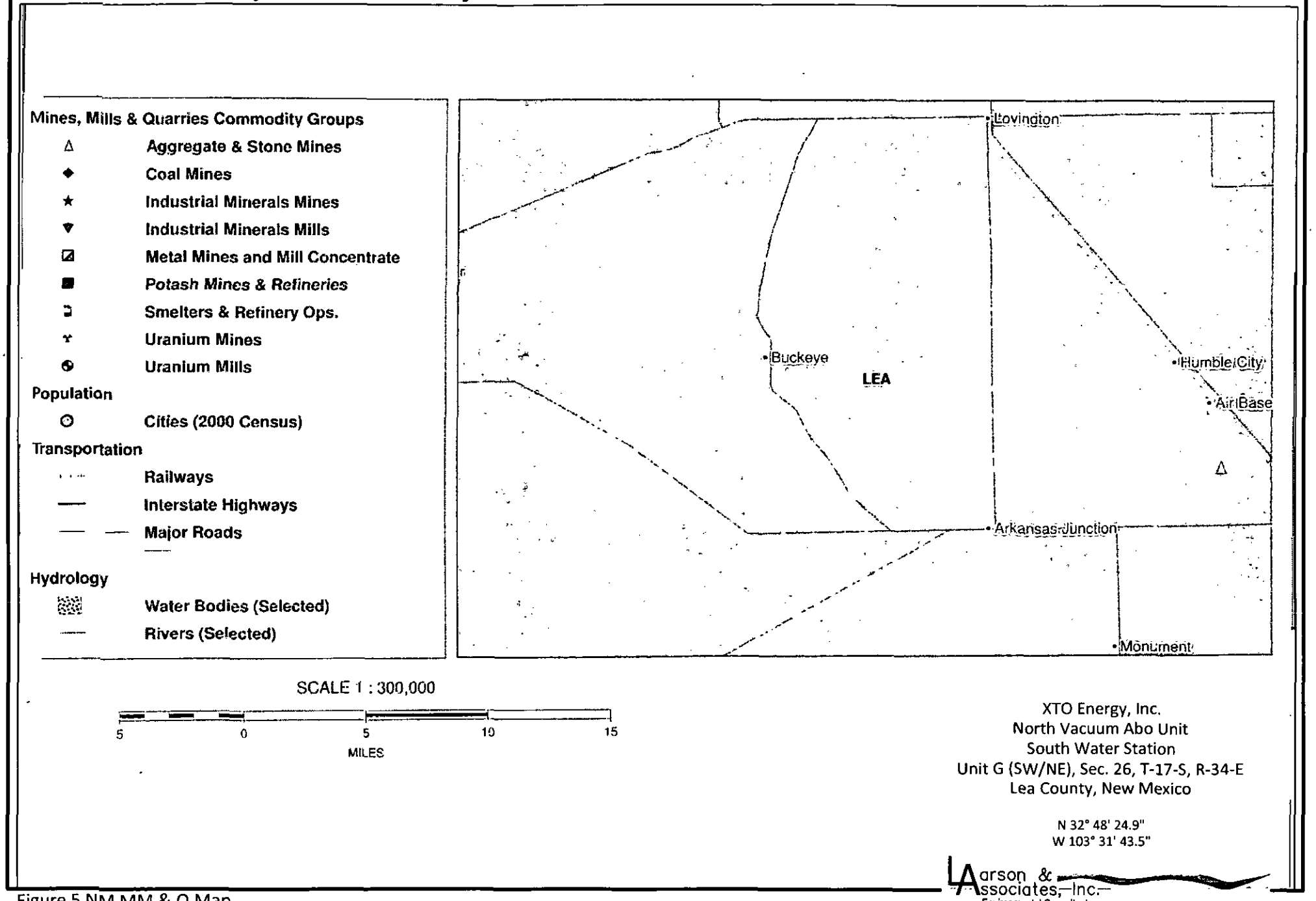
Figure 4 USF & WS Wetlands Map

MINES, MILLS, AND QUARRIES WEB MAP



XTO Energy, Inc.
North Vacuum Abo Unit
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Lea County, New Mexico

N 32° 48' 24.9"
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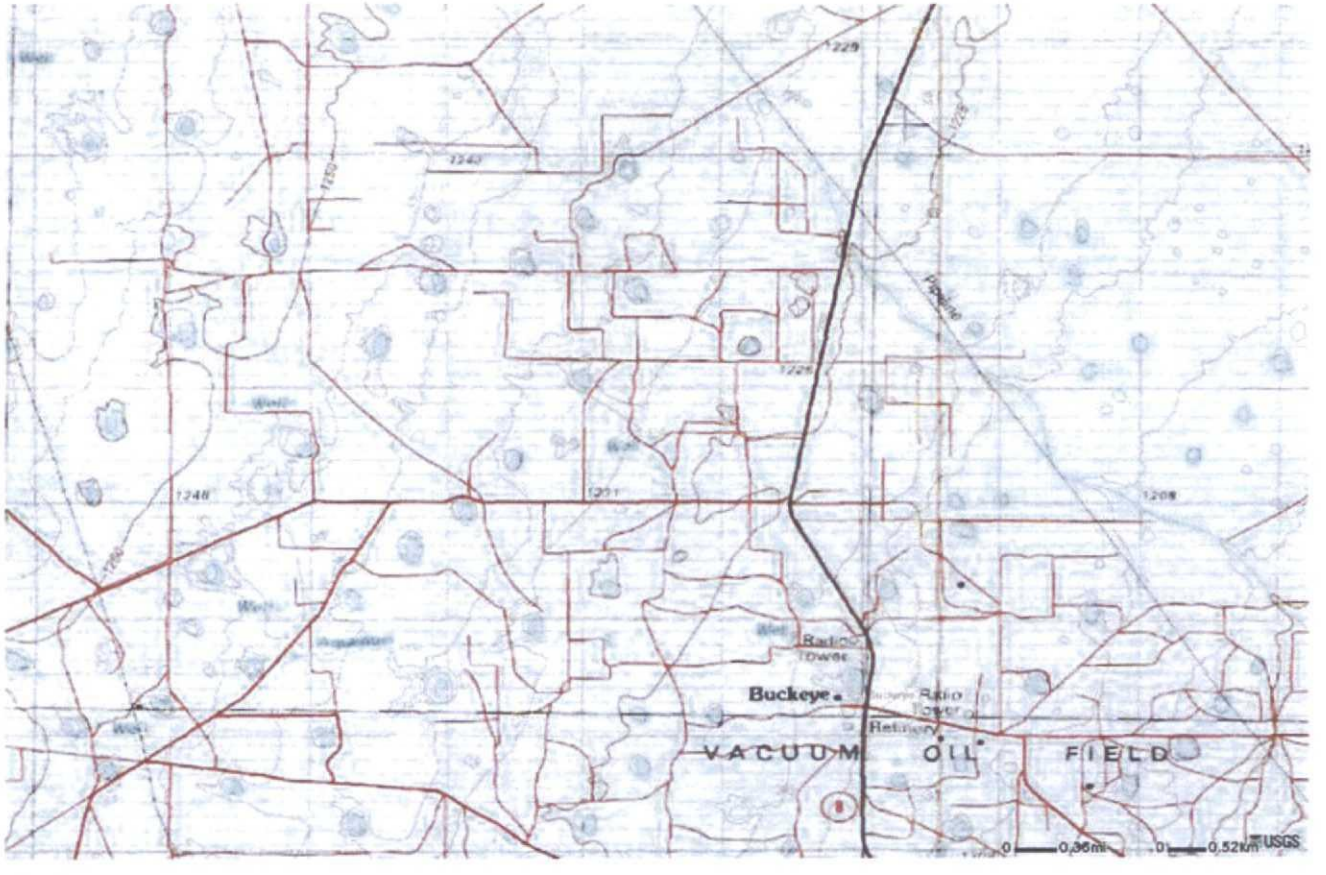
Figure 5 NM MM & Q Map



Mapping Information Platform

Abo Unit Flood Zone Areas

This Map Is For Advisory Purposes Only

N
W E
S

Friday, 19 December 2008 16:58

Legend

Cities
Other Places
Small Towns
Small Cities
State Largest Cities
Major Cities
Water Body
Floodways
Flood Hazard Zone Boundaries
Q3 Flood Hazards
Special Flood Hazard Areas
Flood Hazard Zones
Zone A
Zone AE
Zone AH
Zone AO
(cont)
Zone AR
Zone A99
Zone V
Zone VE
Zone D
0.2% Annual Chance Flood Hazard Zone
County Boundary
Highways
Major Highways
Highways
Major Roads
Major Roads
States
Parks
National Parks and Forests
State Parks and Forests
Local Parks
Lakes, Major Rivers
Land Areas
US
Other Countries

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Lea County, New Mexico

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FEMA

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Figure 6 FEMA Flood Map

Cartographic Features
- City, Town or Village
- County Seat
- County Boundary
- SLO District Office
- SLO District Boundary
- Land Grant
- Interstate Highway
- US Highway
- NM Highway
- Local Road or Street

Federal Surface Management
- Bureau of Land Management
- Bureau of Reclamation
- Department of Agriculture
- Department of Defense
- Department of Energy
- USDA Forest Service
- Fish and Wildlife Service
- Bureau Indian Affairs
- National Park Service
- Valles Caldera National Preserve

State Trust Lands
- Surface Estate
- Subsurface Estate
- Surface and Subsuface Estate

Lease Types
- Oil and Gas Lease
- Agricultural Lease
- Commercial Lease
- Minerals Lease

New Mexico State Land Office
Trust Land Status

0 0.0125 0.025 0.05 0.075 0.1 Miles

Universal Transverse Mercator Projection, Zone 13
1983 North American Datum

XTO Energy, Inc.
North Vacuum Abo Unit
South Water Station
Unit G (SW/NE), Sec. 26, T-17-S, R-34-E
Lea County, New Mexico

N 32° 48' 24.9"
W 103° 31' 43.5"

Land Office Geographic Information Center
logic@slo.state.nm.us

Created On: 12/22/2008 8:28:05 AM

www.nmstatelands.org

Larson & Associates, Inc.
Environmental Consultants

Figure 7 NMSLO Trust Land Image

APPENDIX A

NMOCD Template Approval

Mark Larson

From: Jones, Brad A., EMNRD [brad.a.jones@state.nm.us]
Sent: Monday, November 24, 2008 2:46 PM
To: Mark Larson
Cc: Price, Wayne, EMNRD
Subject: RE: Revised XTO Permanent Pit Tank Closure Plan Template, November 24, 2008.pdf - Adobe Acrobat Standard

Mark,

Thanks for making the revision to the permanent pit closure plan template. The information provided in the template complies with the requirements of 19.15.17 NMAC. Please submit the permanent pit closure plan packets to Wayne Price at the OCD Santa Fe office. If you have any questions, please contact me.

Brad

Brad A. Jones
Environmental Engineer
Environmental Bureau
NM Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, New Mexico 87505
E-mail: brad.a.jones@state.nm.us
Office: (505) 476-3487
Fax: (505) 476-3462

From: Mark Larson [mailto:Mark@laenvironmental.com]
Sent: Monday, November 24, 2008 11:51 AM
To: Jones, Brad A., EMNRD
Subject: Revised XTO Permanent Pit Tank Closure Plan Template, November 24, 2008.pdf - Adobe Acrobat Standard

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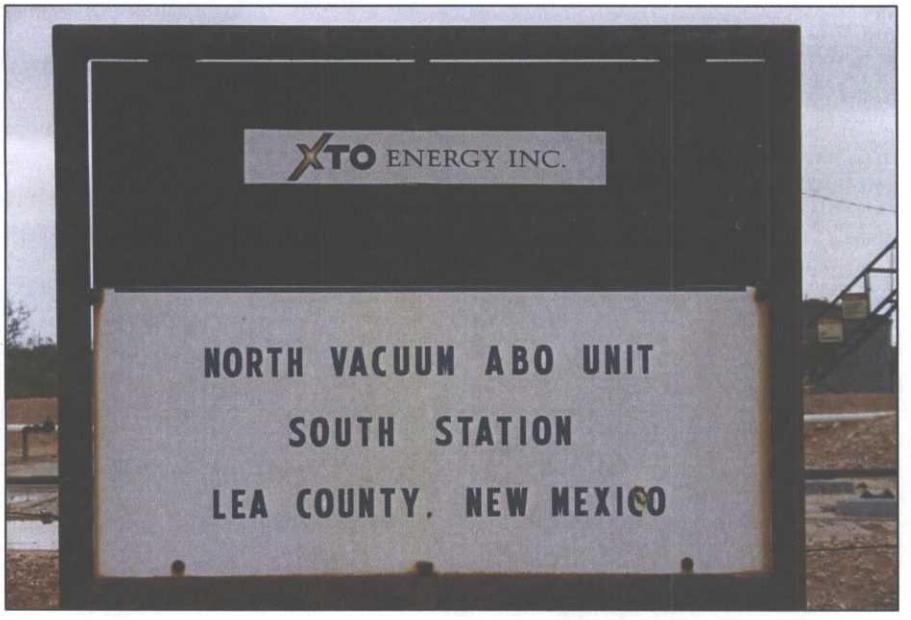
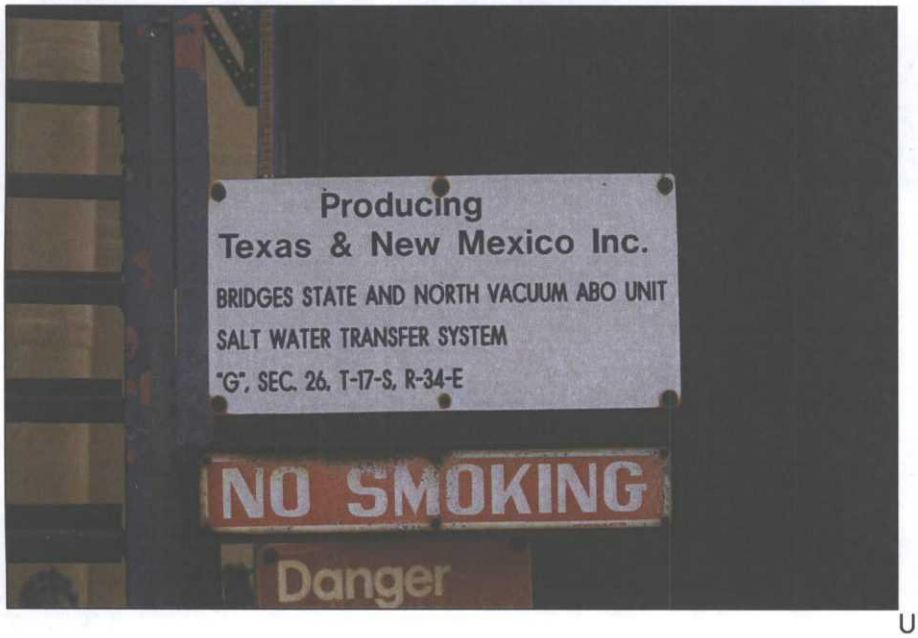
the intended recipient, please contact the sender and destroy all copies of this message. -- This email has been scanned by the Sybari - Antigen Email System.

APPENDIX B

Photographs



Facility Sign Looking West
September 3, 2008



Facility Sign Looking West
September 3, 2008

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Environmental Consultants

Emergency Pit
Looking Southwest
September 3, 2008

Emergency Pit
Looking Southeast
September 3, 2008

XTO Energy, Inc.
North Vacuum Abo Unit
South Water Station
Unit G (SW/NE), Sec. 26, T-17-S, R-34-E
Lea County, New Mexico

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Larson & Associates, Inc.
Environmental Consultants

Facility Photograph
Looking Southeast
September 3, 2008

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