C-144

Permanent Pit

Closure Report

Larson & Associates, Inc.
Environmental Consultants

API # 30-025-35791

October 27, 2009

Mr. Brad A. Jones, Environmental Engineer
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

RE: Two Closure Reports, XTO Energy, Inc. North Vacuum Unit, ~~North Water Station~~ and Vacuum Unit, South Water Station, Lea County, New Mexico

Dear Mr. Jones:

Please find enclosed two Closure Reports, one for each of the above referenced sites.

If you have any questions or concerns, please call me at 432.687.0901 to discuss.

RECEIVED OCD
2009 OCT 28 P 12:55

Sincerely,

LARSON & ASSOCIATES, INC.

William D. Green, PG No. 136
Texas Licensed Professional Geologist
wgreen@laenvironmental.com

Enclosure Two Permanent Pit Closure Reports

CC Mr. Larry Johnson, NM Oil Conservation Division, Hobbs
Mr. Patrick Lyons, NM State Land Office, Santa Fe
Mr. Guy Haykus, XTO Energy, Midland
Mr. Jerry Parker, XTO Energy, SE New Mexico

API # 30-025-29607

Permanent Pit Closure Report

XTO Energy, Inc.
North Vacuum Abo Unit, North Water Station
Unit F (SE/4, NW/4), Section 14, T17S, R34E
Lea County, NM

Project No. 8-0164

Prepared by:

Larson and Associates, Inc.
507 North Marienfeld Street
Suite 200
Midland, Texas 79701
432.687.0901

October 22, 2009

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1.0 Executive Summary

The following report documents the closure of the permanent pit associated with the XTO Energy (XTO) North Vacuum Abo Unit North Water Station (Site) located in Lea County, New Mexico. The legal description of the Site is Unit F (SE/4, NW/4), Section 14, Township 17 South, Range 34 East (Figure 1). The geodetic location is N32° 50' 08.7", W103° 31' 54.3".

Closure activities consisted of notifications to the New Mexico Oil Conservation Division (OCD) and the landowner of record (New Mexico State Land Office), removal and disposal of concrete and soil, the collection of soil samples, OCD issuance of a remediation case number and the subsequent investigation, backfilling and closure of the former pit. Activities were performed in conformance with New Mexico Administrative Code Rule 19.15.17 as amended June 16, 2008 and June 18, 2009.

2.0 Operator Information

Primary Contact:	Mr. Jerry Parker
Address:	XTO Energy Inc., Permian Division – SE New Mexico
	PO Box 700
	Eunice, New Mexico 88231
Office:	575.394.2089
Cell:	575.441.1628
Secondary Contact:	Guy Haykus
Address:	XTO Energy Inc.
	Midland Office
	200 N. Loraine Street, Suite 800
	Midland, Texas 79701
Office:	432.682.8873

3.0 Closure Actions

3.1 Location and Siting Description

The Site has a geodetic location of N32° 50' 08.7", W103° 31' 54.3", and is located in rural Lea County about 13 miles west-southwest of Lovington, New Mexico. The approximately 1.6 acre Site consisted of five above-ground storage tanks, and a concrete-lined permanent pit with an approximate capacity of 3,300 barrels. The Facility is covered with crushed caliche rock and is flat to very gently sloping (Figures 2 and 3).

The Facility's siting criteria presented the following findings:

- Groundwater is about 110 feet below ground surface based on records from the New Mexico State Engineer (NMSE).
- No continuously flowing watercourse is within 300 horizontal feet of the Facility.
- No surface water features, including lakes, rivers, ponds, arroyos, lakebed, sinkhole, or playa lake, are located within 200 horizontal feet of Facility.
- No permanent residence, school, hospital, institution, or church is within 300 horizontal feet of Facility.

- No private, domestic fresh-water well or spring are within 500 horizontal feet of Facility.
- A fresh water well is located within approximately 1000 horizontal feet of the Facility, however, no springs are located within 1000 horizontal feet of Facility.
- The Facility is not located within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance.
- The Facility is not within 500 feet an area designated as wetlands.
- The Facility is not within an area overlying a subsurface mine.
- The Facility is not within an unstable area.
- The Facility is not within a 100-year flood plain.

3.2 Closure Plan and Approval

On December 23, 2008, Larson & Associates, Inc. (LAI), on behalf of XTO, submitted a pit closure plan to the OCD in Santa Fe and Hobbs, New Mexico, in accordance with an Agreed Scheduling Order (ASO-008) between XTO and OCD. The Closure Plan was approved and signed by the OCD representative Mr. Brad Jones on February 4, 2009. A copy of the signed C-144 closure plan is provided in Appendix A.

3.3 Landowner and OCD Notifications

In accordance with the approved closure plan and prior to commencing work, notification of closure was sent by XTO to the New Mexico State Land Office (the surface owner) and the OCD. Copies of the notification letters are provided in Appendix B.

3.4 Pit Closure Activities

On March 9, 2009, XTO removed ancillary equipment (i.e. fencing, netting, etc.) for salvage or scrap metal. A track-mounted hammer hoe was used to remove the concrete lining from the pit. Approximately 240 barrels of tank bottoms and 272 cubic yards of concrete and excavated soil were disposed at Controlled Recovery, Inc. (CRI, OCD Permit R9166).

On March 11 – 12, 2009, Larson & Associates, Inc. (LAI) personnel collected 5-part composite soil samples from the bottom (1BC) and sidewalls (2NC, 3WC, 4EC and 5SC) of the pit excavation following removal of the concrete. Xenco Laboratories analyzed the samples for benzene, toluene, ethylbenzene, xylenes (BTEX) by method 8021B, total petroleum hydrocarbons (TPH) by method 418.1 and chloride by method 300.1. Appendix C contains laboratory analytical reports for this project.

No benzene or BTEX was reported above OCD limits (0.2 milligrams per kilogram [mg/Kg] for benzene and 50 mg/Kg for BTEX). TPH was detected above the OCD reporting limit (100 mg/kg) in the following composite samples:

- north wall (2NC) – 344 mg/Kg,
- west wall (3WC) – 3,200 mg/Kg,
- east wall (4EC) – 973 mg/Kg, and
- south wall (5SC) – 4,500 mg/Kg.

Chloride exceeded the OCD limit in all samples except 2NC (Table 1). An initial C-141 was submitted to the OCD District 1, Hobbs office on March 17, 2009, and remediation activities were conducted. The OCD District 1 office issued remediation project number 1RP-09-3-2126.

3.5 Remedial Investigation

XTO delineated the extent of the TPH and excavated the impacted soils beginning March 17, 2009. Between March 19 and 23, 2009, LAI collected additional samples to confirm field delineation. On April 8, 2009, Scarborough Drilling, Inc. installed a soil boring near the bottom center of the pit excavation. Samples were collected using a jam tube sampler and analyzed for TPH (5, 10, 15 and 20 feet) using methods 418.1 and 8015. The laboratory analyzed all samples for chloride. No TPH was reported in the 418.1 samples above the method detection limits. The highest TPH (8015) concentration was 17.7 mg/Kg in the sample from 10 feet. Chloride decreased to 120 mg/Kg in the sample from 50 feet. Table 1 presents a summary of the laboratory analysis.

Based on the soil sample results, XTO requested approval from OCD District 1 to install a 20 mil thick high density polyethylene (HDPE) liner in the bottom of the pit and close the excavation according to the requirements of the closure plan approved by the OCD Santa Fe office. Approval was granted on March 18, 2009. An additional 16 cubic yards of soil was removed from the excavation and disposed at CRI. The excavation was closed prior to the final C-141 expiration date (May 18, 2009).

3.6 Pit Backfilling

Pit backfilling consisted of compacting six- to eight-inch lifts of clean soil purchased from the State Caliche pit, a nearby supply, and compacting each lift with heavy equipment. The uppermost 18-inches consisted of topsoil purchased from the surface lease owner, Mr. Tom Pearce. The topsoil was graded to level with the surrounding surface.

Since the former pit was located within an active oilfield tank battery, the site was not drilled and reseeded. See Appendix D for photographs of the entire closure process, and addendum photographs added at the request of OCD representative Mr. Brad Jones.

4.0 Conclusion and Recommendation

Based on the documented activities performed in conformance with the permanent pit closure plan, LAI requests approval of closure for this Site.

&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 NORTH WATER STATION / ABO WELL NO. 297 (NEAREST WELL)
API Number: 30-025-29607 OCD Permit Number:
U/L or Qtr/Qtr F Section 14 Township 17S Range 34E County: LEA
Center of Proposed Design: Latitude 32° 50' 08.7" Longitude 103° 31' 54.3" 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: 3,300 bbl Dimensions: L 62' 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.***

- ☐ 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
- ☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)
- ☐ 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

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.***

☐ 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): _____ Title: _____

Signature: _____ Date: _____

e-mail address: _____ Telephone: _____

20.
OCD Approval: ☐ Permit Application (including closure plan) ☐ Closure Plan (only) ☐ OCD Conditions (see attachment)

OCD Representative Signature: _____ **Approval Date:** _____

Title: _____ **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:** March 27, 2009

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 Controlled Recovery, Inc Permit Number R9166,

☐ Soil Backfilling and Cover Installation

☐ Re-vegetation Application Rates and Seeding Technique

☒ Site Reclamation (Photo Documentation)

On-site Closure Location: Latitude 32° 50' 08.7" Longitude 103° 31' 54.3" 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): Guy Haykus Title: Superintendent

Signature: W. Haykus Date: 10/26/09

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

Table 1
Soil Analytical Data Summary
XTO Energy, Inc.
North Vacuum Abo Lease - North Water Station
Unit F (SE/4, NW/4) Sec 14, T17S, R34E
Lea County, New Mexico

Sample ID	Date	Status	Depth (Ft)	Benzene	Toluene	Ethyl benzene	Total Xylenes	Total BTEX	TPH C6-C35	TPH 418.1	Chlorides
Reporting Level:				0.2				50		100	250
1BC	3/12/2009	In-Situ	0 (7)	<0.0011	**0.0034**	**0.0111**	**0.0163**	**0.0308**	--	**1,470**	**947**
	3/19/2009	In-Situ	1 (8)	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010	--	**708**	**1,150**
	3/23/2009	In-Situ	5 (13)	--	--	--	--	--	--	--	**943**
	3/23/2009	In-Situ	10 (18)	--	--	--	--	--	--	--	**1,390**
	3/23/2009	In-Situ	15 (23)	--	--	--	--	--	--	--	**446**
	4/2/2009	In-Situ	20 (28)	--	--	--	--	--	--	--	**772**
2NC	3/11/2009	In-Situ	0 - 1	<0.0011	<0.0022	<0.0011	<0.0011	<0.0011	--	**344**	**70.1**
3WC	3/12/2009	Excavated	0 - 1	**0.0020**	**0.0090**	**0.0217**	**0.0329**	**0.0656**	--	**3,200**	**349**
	3/19/2009	In-Situ	2 - 5	<0.0010	<0.0020	<0.0010	**0.0036**	**0.0036**	--	**4,320**	**419**
4EC	3/11/2009	In-Situ	0 - 1	<0.0011	<0.0021	<0.0011	**0.0024**	**0.0024**	--	**973**	**337**
5SC	3/12/2009	Excavated	0 - 1	<0.0011	<0.0022	**0.0039**	**0.0161**	**0.02**	--	**4,500**	**445**
	3/19/2009	In-Situ	2 - 5	<0.0010	<0.0020	**0.0017**	**0.0029**	**0.0046**	--	**3,200**	**305**
Release Investigation:											
BH-1	4/8/2009	--	5 (13)	--	--	--	--	--	**16.9**	**<11.1**	**2,370**
	4/8/2009	--	10 (18)	--	--	--	--	--	**17.7**	**<10.7**	**111**
	4/8/2009	--	15 (23)	--	--	--	--	--	**16.5**	**<10.4**	**78**
	4/8/2009	--	20 (28)	--	--	--	--	--	**<16.0**	**<10.7**	**428**
	4/8/2009	--	25 (33)	--	--	--	--	--	--	--	**2,190**
	4/8/2009	--	30 (38)	--	--	--	--	--	--	--	**1,720**
	4/8/2009	--	40 (48)	--	--	--	--	--	--	--	**330**
	4/8/2009	--	50 (58)	--	--	--	--	--	--	--	**120**
Replacement Soil:											
SS-1	5/4/2009	--	--	--	--	--	--	--	--	--	**48.8**
SS-2	5/4/2009	--	--	--	--	--	--	--	--	--	**11.4**

TABLES

Notes

RRAL - Recommended Remediation Action Level

BTEX analyzed via EPA SW Method 8021B.

Total Petroleum Hydrocarbons analyzed via EPA Method 418.1.

All values reported in Milligrams per Kilogram - dry (mg/Kg, parts per million).

Chlorides analyzed via EPA Method 300.

Bold indicates the analyte was detected.

FIGURES

JWW

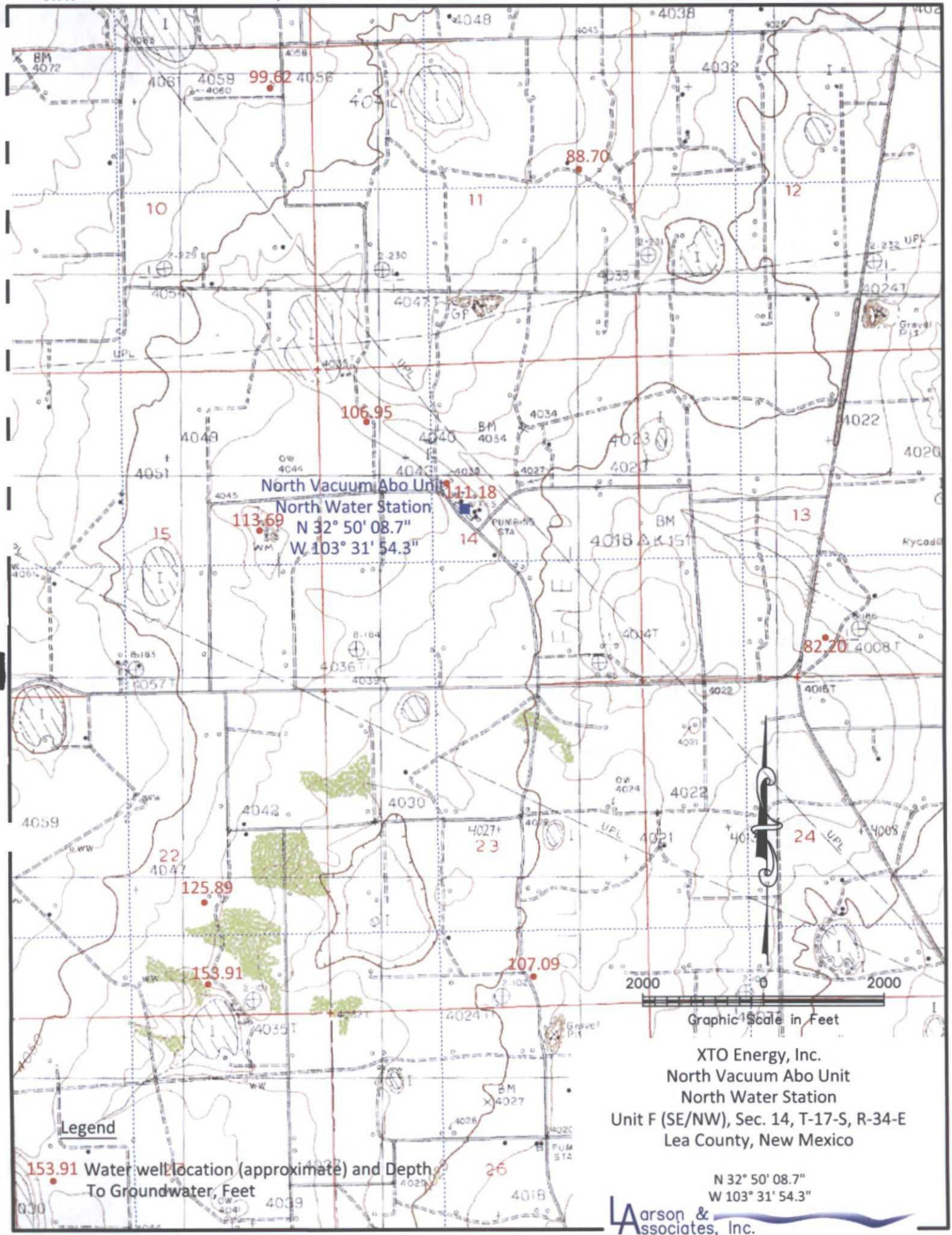


Figure 1 - Topographic Map

JWW

Y:\PROJECTS\XTO ENERGY\8-0164\8-0164\8-0164 NORTH VACUUM ABO NORTH UNIT.dwg, 9/23/2009 11:05:47 AM

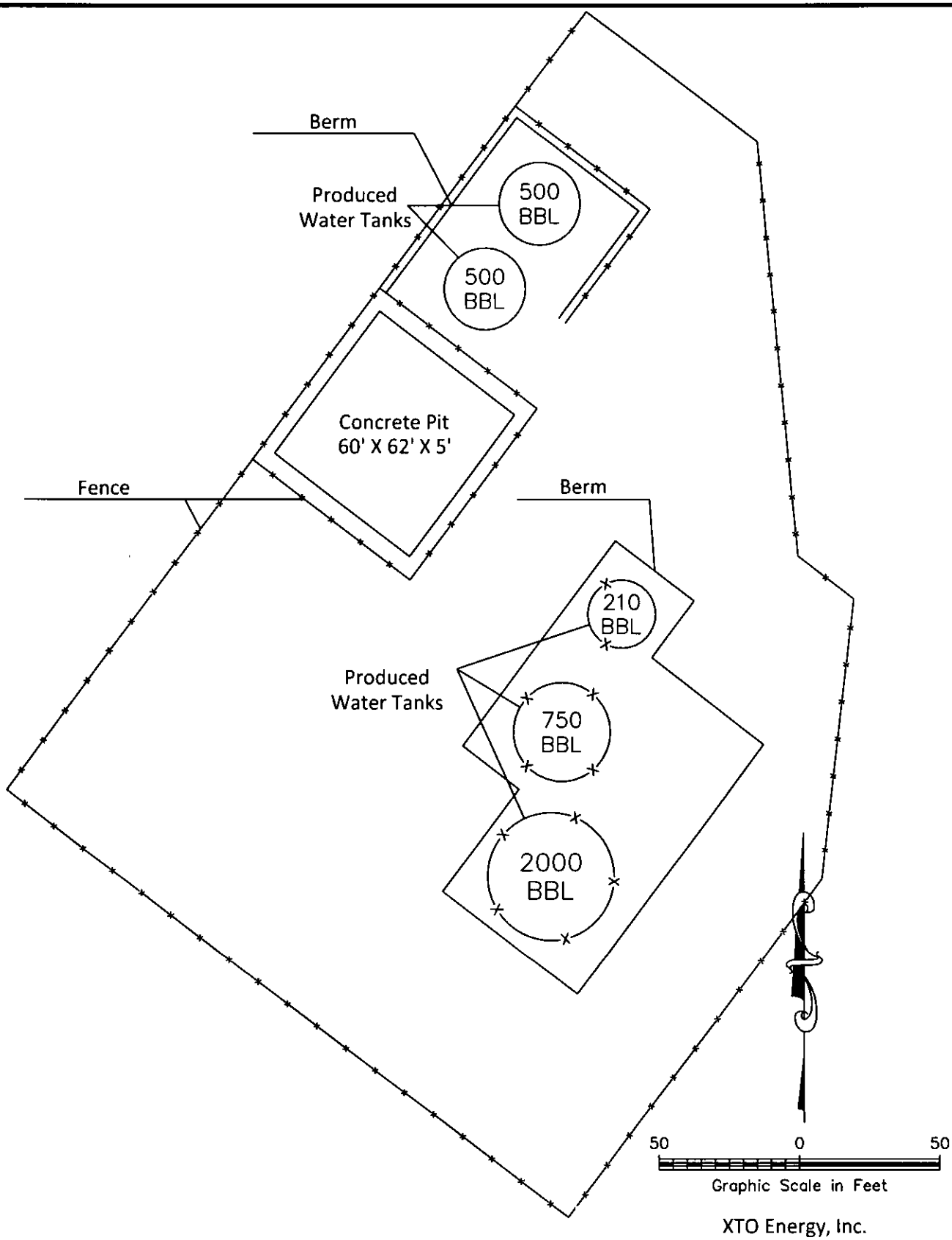
XTO Energy, Inc.
North Vacuum Abo Unit
North Water Station
Unit F (SW/NW), Sec. 14, T-17-S, R-34-E
Lea County, New Mexico

N 32° 50' 08.7"
W 103° 31' 54.3"

Larson & Associates, Inc.
Environmental Consultants

Figure 2 - Aerial

JWW

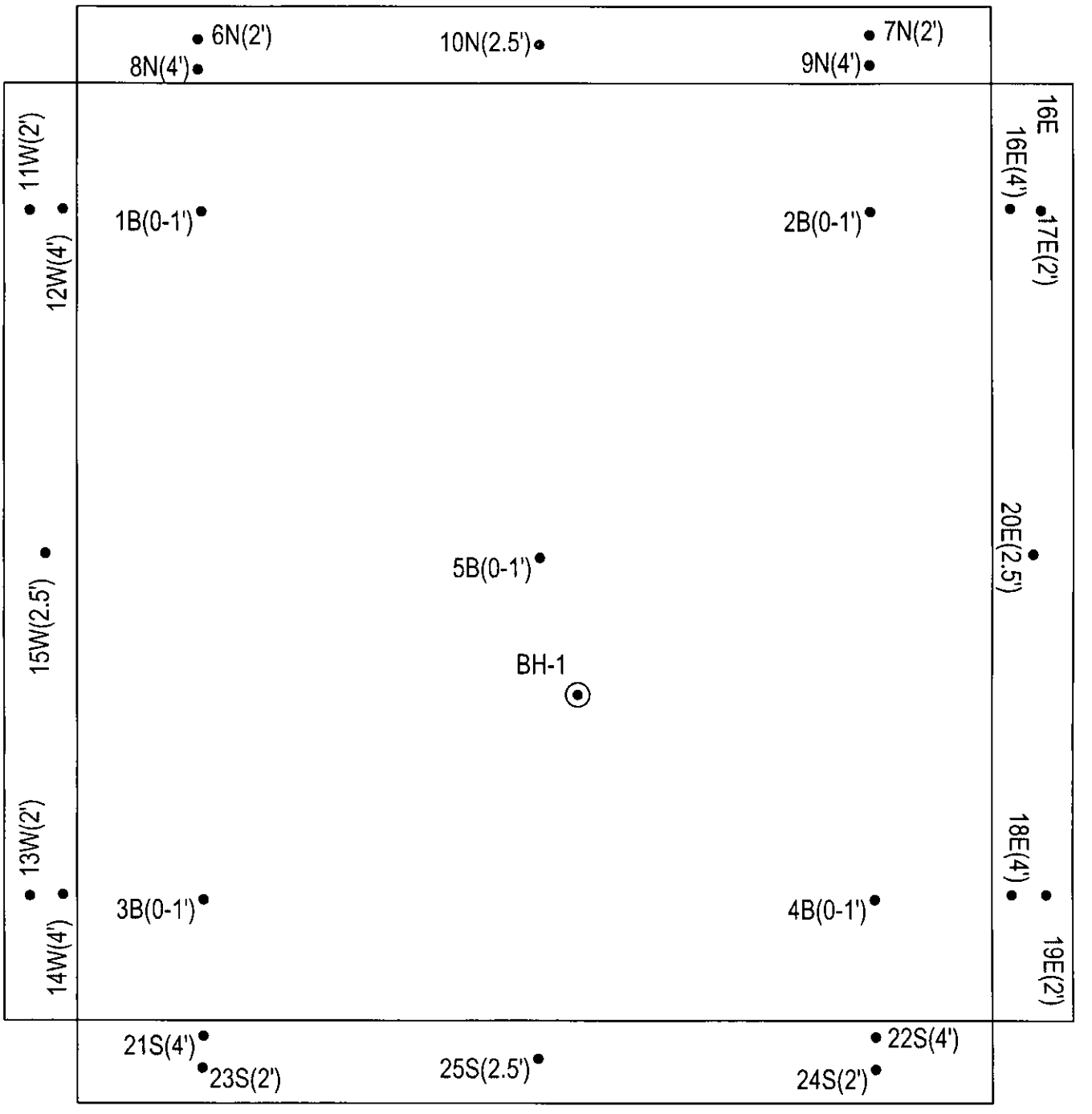


XTO Energy, Inc.
North Vacuum Abo Unit
North Water Station
Unit F (SE/NW), Sec. 14, T-17-S, R-34-E
Lea County, New Mexico

N 32° 50' 08.7"
W 103° 31' 54.3"

Larson & Associates, Inc.
Environmental Consultants

Figure 3 - Site Drawing



Legend

5B(0-1') - Soil Sample Location And Depth, Feet

BH-1 - Soil Boring Location

XTO Energy, Inc.
North Vacuum Abo Unit
North Water Station
Unit F (SE/NW), Sec. 14, T-17-S, R-34-E
Lea County, New Mexico

N 32° 50' 08.7"
W 103° 31' 54.3"

Larson & Associates, Inc.
Environmental Consultants

Figure 4 - Site Drawing

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

APD-A-

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 NORTH WATER STATION / ABO WELL NO. 297 (NEAREST WELL)
API Number: 30-025-29607 OCD Permit Number:
U/L or Qtr/Qtr F Section 14 Township 17S Range 34E County: LEA
Center of Proposed Design: Latitude 32° 50' 08.7" Longitude 103° 31' 54.3" 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: 3,300 bbl Dimensions: L 62' 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: [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: [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: _____

APD- B-

XTO ENERGY
200 N. Loraine, Ste. 800
Midland, TX 79701

February 18, 2009

Mr. Larry Hill
District Supervisor
New Mexico Oil Conservation Division
1625 N. French Drive
Hobbs, New Mexico 88240

Re: Notice of Pit Closure
XTO Energy, Inc.
North Vacuum Abo Lease – North Water Station
Unit F (SE/4, NW/4), Section 14
Township 17 South, Range 34 East
Lea County, New Mexico

Dear Mr. Hill,

Pursuant to paragraph (3) of Subsection J of 19.15.17.13 NMAC, notice is hereby given to the New Mexico Oil Conservation Division (OCD) by XTO Energy, Inc. (XTO) of its intent to close a permanent pit at the North Vacuum Abo Lease, North Water Station (Facility) beginning on March 9, 2009. The Facility is located in Unit F (SE/4, NW/4), Section 14, Township 17 South, Range 34 East in Lea County, New Mexico. The latitude and longitude is 32° 50' 08.7" north and 103° 31' 54.3" west, respectively. The nearest well is the North Vacuum Abo Lease Well #297 with API #30-025-29607. The closure will be in accordance with a plan meeting the requirements of Paragraphs (1) through (7) of Subsection G of 19.15.17.11 NMAC that was approved by the OCD Environmental Bureau in Santa Fe, New Mexico, on February 4, 2009. Please contact myself at (432) 682-8873 or Mark Larson with Larson & Associates, Inc. at (432) 687-0901, if you have questions.

Sincerely,

XTO Energy, Inc.
Guy Haykus
Production Superintendent

Cc: Mark Larson/Larson & Associates, Inc.
DeeAnn Kemp/XTO Energy Inc/Regulatory and Production Mgr. – Midland
Kristy Ward/XTO Energy Inc/Regulatory Analyst – Midland

XTO ENERGY
200 N. Loraine, Ste. 800
Midland, TX 79701

March 2, 2009

Mr. Patrick Lyons, Commissioner
New Mexico State Land Office
310 Old Santa Fe Trail
Santa Fe, New Mexico 87501

Re: Notice of Pit Closure
XTO Energy, Inc.
North Vacuum Abo Lease – North Water Station
Unit F (SE/4, NW/4), Section 14
Township 17 South, Range 34 East
Lea County, New Mexico

Dear Commissioner Lyons,

Pursuant to paragraph (1) of Subsection J of 19.15.17.13 NMAC, notice is hereby given to the New Mexico State Land Office (SLO), as surface owner of record, by XTO Energy, Inc. (XTO) of its intent to close a permanent pit located at the North Vacuum Abo Lease – North Water Station (Facility) beginning March 9, 2009. The Facility is located in Unit F (SE/4, NW/4), Section 14, Township 17 South, Range 34 East in Lea County, New Mexico. The latitude and longitude is 32° 50' 08.7" north and 103° 31' 54.3" west, respectively. The closure will be performed according to a plan meeting the requirements of Paragraphs (1) through (7) of Subsection G of 19.15.17.11 NMAC that was approved by the New Mexico Oil Conservation Division (OCD) on February 4, 2009. The closure plan may be viewed at the OCD District 1 office located in Hobbs, New Mexico or with the OCD Environmental Bureau in Santa Fe, New Mexico. Please contact myself at (432) 682-8873 or Mark Larson with Larson & Associates, Inc. at (432) 687-0901, if you have questions.

Sincerely,

XTO Energy, Inc.
Guy Haykus
Production Superintendent

Cc: Myra Meyers/SLO Hobbs District
Mark Larson/Larson & Associates, Inc.
DeeAnn Kemp/XTO Energy Inc/Regulatory and Production Mgr. – Midland
Kristy Ward/XTO Energy Inc/Regulatory Analyst - Midland

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Larry Hill
Oil Conservation Division
1625 N. French Dr.
Hobbs, NM 88240

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X ☐ Agent ☐ Addressee

B. Received by (Printed Name) | C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☑ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from) 7007 0220 0002 5082 4221

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Patrick Lyons, Commissioner
New Mexico State Land Office
310 Old Santa Fe Trail
Santa Fe, NM 87501

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X ☐ Agent ☐ Addressee

B. Received by (Printed Name) | C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☑ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from sen) 7007 0220 0002 5082 4214

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

New Mexico State Land Office
Myra Meyers
2102 N. Grimes, Ste. D
Hobbs, NM 88240

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X ☐ Agent ☐ Addressee

B. Received by (Printed Name) | C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☑ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

APP-C

Analytical Report 327344

for

Larson & Associates

Project Manager: Michelle Green

Midland/Odessa Standard List of Methods

8-0164

16-MAR-09

12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:
Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX

Florida certification numbers:
Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675
Miramar, FL E86349
Norcross(Atlanta), GA E87429

South Carolina certification numbers:
Norcross(Atlanta), GA 98015

North Carolina certification numbers:
Norcross(Atlanta), GA 483

Houston - Dallas - San Antonio - Tampa - Miami - Latin America
Midland - Corpus Christi - Atlanta

XENCO Laboratories

16-MAR-09

Project Manager: **Michelle Green**
Larson & Associates
P.O. Box 50685
Midland, TX 79710

Reference: XENCO Report No: **327344**
Midland/Odessa Standard List of Methods
Project Address:

Michelle Green:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 327344. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 327344 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

XENCO Laboratories

Sample Cross Reference 327344

Larson & Associates, Midland, TX

Midland/Odessa Standard List of Methods

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
1 BC	S	Mar-12-09 10:40		327344-001
2 NC	S	Mar-11-09 16:40		327344-002
3 WC	S	Mar-12-09 11:00		327344-003
4 EC	S	Mar-11-09 17:12		327344-004
5 SC	S	Mar-12-09 11:30		327344-005

Project Id: 8-0164
Contact: Michelle Green
Project Location:

Project Name: [illegible]

Date Received in Lab: Thu Mar-12-09 03:15 pm
Report Date: 16-MAR-09
Project Manager: Brent Barron, II

Analysis Requested		Lab Id:	327344-001		327344-002		327344-003		327344-004		327344-005	
		Field Id:	1 BC		2 NC		3 WC		4 EC		5 SC	
		Depth:										
		Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
		Sampled:	Mar-12-09 10:40		Mar-11-09 16:40		Mar-12-09 11:00		Mar-11-09 17:12		Mar-12-09 11:30	
Anions by EPA 300		Extracted:										
		Analyzed:	Mar-13-09 09:45		Mar-13-09 09:45		Mar-13-09 09:45		Mar-13-09 09:45		Mar-13-09 09:45	
		Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride			947	21.5	70.1	5.46	349	10.9	337	21.5	445	11.0
BTEX by EPA 8021B		Extracted:	Mar-14-09 09:00		Mar-14-09 09:00		Mar-14-09 09:00		Mar-14-09 09:00		Mar-14-09 09:00	
		Analyzed:	Mar-14-09 12:48		Mar-14-09 13:09		Mar-14-09 13:29		Mar-14-09 13:50		Mar-14-09 14:51	
		Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene			ND	0.0011	ND	0.0011	0.0020	0.0011	ND	0.0011	ND	0.0011
Toluene			0.0034	0.0022	ND	0.0022	0.0090	0.0022	ND	0.0022	ND	0.0022
Ethylbenzene			0.0111	0.0011	ND	0.0011	0.0217	0.0011	ND	0.0011	0.0039	0.0011
m,p-Xylenes			0.0109	0.0022	ND	0.0022	0.0228	0.0022	ND	0.0022	0.0120	0.0022
o-Xylene			0.0054	0.0011	ND	0.0011	0.0101	0.0011	0.0024	0.0011	0.0041	0.0011
Total Xylenes			0.0163	0.0011	ND	0.0011	0.0329	0.0011	0.0024	0.0011	0.0161	0.0011
Total BTEX			0.0308	0.0011	ND	0.0011	0.0656	0.0011	0.0024	0.0011	0.02	0.0011
Percent Moisture		Extracted:										
		Analyzed:	Mar-13-09 17:00		Mar-13-09 17:00		Mar-13-09 17:00		Mar-13-09 17:00		Mar-13-09 17:00	
		Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture			6.96	1.00	8.50	1.00	8.54	1.00	6.96	1.00	9.03	1.00
TPH by EPA 418.1		Extracted:										
		Analyzed:	Mar-13-09 10:18		Mar-13-09 10:18		Mar-13-09 10:18		Mar-13-09 10:18		Mar-13-09 10:18	
		Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
TPH, Total Petroleum Hydrocarbons			1470	10.7	344	10.9	3200	10.9	973	10.7	4500	11.0

Brent Barron
Odessa Laboratory Director

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

* Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Midland/Odessa Standard List of Methods

Work Orders : 327344,

Project ID: 8-0164

Lab Batch #: 752563 **Sample:** 526389-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 03/14/09 09:24

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0313	0.0300	104	80-120	

Lab Batch #: 752563 **Sample:** 526389-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 03/14/09 09:44

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0300	0.0300	100	80-120	
4-Bromofluorobenzene	0.0307	0.0300	102	80-120	

Lab Batch #: 752563 **Sample:** 526389-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 03/14/09 10:25

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0256	0.0300	85	80-120	
4-Bromofluorobenzene	0.0299	0.0300	100	80-120	

Lab Batch #: 752563 **Sample:** 327344-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/14/09 12:48

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0247	0.0300	82	80-120	
4-Bromofluorobenzene	0.0317	0.0300	106	80-120	

Lab Batch #: 752563 **Sample:** 327344-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/14/09 13:09

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0254	0.0300	85	80-120	
4-Bromofluorobenzene	0.0320	0.0300	107	80-120	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Midland/Odessa Standard List of Methods

Work Orders : 327344,

Project ID: 8-0164

Lab Batch #: 752563 **Sample:** 327344-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/14/09 13:29

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0230	0.0300	77	80-120	**
4-Bromofluorobenzene	0.0326	0.0300	109	80-120	

Lab Batch #: 752563 **Sample:** 327344-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/14/09 13:50

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0255	0.0300	85	80-120	
4-Bromofluorobenzene	0.0317	0.0300	106	80-120	

Lab Batch #: 752563 **Sample:** 327344-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/14/09 14:51

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0228	0.0300	76	80-120	**
4-Bromofluorobenzene	0.0301	0.0300	100	80-120	

Lab Batch #: 752563 **Sample:** 327400-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/14/09 15:12

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0328	0.0300	109	80-120	

Lab Batch #: 752563 **Sample:** 327400-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/14/09 15:32

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0303	0.0300	101	80-120	
4-Bromofluorobenzene	0.0336	0.0300	112	80-120	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Xenco Laboratories

Blank Spike Recovery

Project Name: Midland/Odessa Standard List of Methods

Work Order #: 327344 **Project ID:** 8-0164

Lab Batch #: 752554 **Sample:** 752554-1-BKS **Matrix:** Solid

Date Analyzed: 03/13/2009 **Date Prepared:** 03/13/2009 **Analyst:** LATCOR

Reporting Units: mg/kg **Batch #:** 1

	BLANK /BLANK SPIKE RECOVERY STUDY					
Anions by EPA 300 **Analytes**	**Blank Result [A]**	**Spike Added [B]**	**Blank Spike Result [C]**	**Blank Spike %R [D]**	**Control Limits %R**	**Flags**
Chloride	ND	10.0	10.4	104	90-110	

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.

XENCO Laboratories

BS / BSD Recoveries

Project Name: Midland/Odessa Standard List of Methods

Work Order #: 327344 **Project ID:** 8-0164

Analyst: ASA **Date Prepared:** 03/14/2009 **Date Analyzed:** 03/14/2009

Lab Batch ID: 752563 **Sample:** 526389-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.0957	96	0.1	0.0913	91	5	70-130	35	
Toluene	ND	0.1000	0.0970	97	0.1	0.0926	93	5	70-130	35	
Ethylbenzene	ND	0.1000	0.0961	96	0.1	0.0921	92	4	71-129	35	
m,p-Xylenes	ND	0.2000	0.2094	105	0.2	0.2008	100	4	70-135	35	
o-Xylene	ND	0.1000	0.1025	103	0.1	0.0987	99	4	71-133	35	

Analyst: LATCOR **Date Prepared:** 03/13/2009 **Date Analyzed:** 03/13/2009

Lab Batch ID: 752551 **Sample:** 752551-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

TPH by EPA 418.1	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
TPH, Total Petroleum Hydrocarbons	ND	2500	2180	87	2500	2220	89	2	65-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS Recoveries

Project Name: Midland/Odessa Standard List of Methods

Work Order #: 327344
Lab Batch #: 752554
Date Analyzed: 03/13/2009
QC- Sample ID: 327343-001 S
Reporting Units: mg/kg

Project ID: 8-0164
Date Prepared: 03/13/2009
Analyst: LATCOR
Batch #: 1
Matrix: Soil

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	14700	4260	18800	96	80-120	

atrix Spike Percent Recovery [D] = 100*(C-A)/B
lative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Midland/Odessa Standard List of Methods

Work Order # : 327344 **Project ID:** 8-0164

Lab Batch ID: 752563 **QC- Sample ID:** 327400-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 03/14/2009 **Date Prepared:** 03/14/2009 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1004	0.0772	77	0.1004	0.0794	79	3	70-130	35	
Toluene	ND	0.1004	0.0775	77	0.1004	0.0799	80	3	70-130	35	
Ethylbenzene	ND	0.1004	0.0745	74	0.1004	0.0776	77	4	71-129	35	
m,p-Xylenes	ND	0.2008	0.1628	81	0.2008	0.1697	85	4	70-135	35	
o-Xylene	ND	0.1004	0.0818	81	0.1004	0.0847	84	3	71-133	35	

Lab Batch ID: 752551 **QC- Sample ID:** 327344-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 03/13/2009 **Date Prepared:** 03/13/2009 **Analyst:** LATCOR

Reporting Units: mg/kg

TPH by EPA 418.1 Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
TPH, Total Petroleum Hydrocarbons	1470	2690	4250	103	2690	4360	107	3	65-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Sample Duplicate Recovery

Project Name: Midland/Odessa Standard List of Methods

Work Order #: 327344

Lab Batch #: 752554 **Project ID:** 8-0164

Date Analyzed: 03/13/2009 **Date Prepared:** 03/13/2009 **Analyst:** LATCOR

QC- Sample ID: 327343-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Anions by EPA 300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	14700	14800	1	20	

Lab Batch #: 752518

Date Analyzed: 03/13/2009 **Date Prepared:** 03/13/2009 **Analyst:** BEV

QC- Sample ID: 327343-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	6.08	5.76	5	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

Data Reported to:

DATE: 3-12-09 PAGE 1 OF 1
PO #: LAB WORK ORDER #: 327349
PROJECT LOCATION OR NAME:
LAI PROJECT #: 8-0164 COLLECTOR: RB

TRRP report? ☐ Yes ☐ No
TIME ZONE: Time zone/State: MST

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

	Field Sample I.D.	Lab #	Date (2009)	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	ANALYSES: BTEX ☐ MTBE ☐ 8021B	TRPH 418.1 ☒ TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☐	DIESEL - MOD 8015 ☐	VOC 8260 ☐	SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	8082 PCBS ☐	TCLP - METALS (RCRA) ☐ TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDE ☒ ANIONS ☐ 300.1 ALKALINITY ☐	FIELD NOTES
01	1BC		3-12	16:40	S	1				X		X	X															X	Composite
02	2NC		3-11	4:40																									
03	3WC		3-12	11:00																									
04	4EC		3-11	5:12																									
05	5SC		3-12	11:30																									
TOTAL						5				5		5	5															5	

RELINQUISHED BY:(Signature) T.W. Brook DATE/TIME 3-12-09 3:15 RECEIVED BY: (Signature)
RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)
RELINQUISHED BY:(Signature) DATE/TIME 3.17.09 15:15 RECEIVED BY: (Signature) Andrea Lam

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 2.5 THERM #:
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☒ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED 4 oz glass

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Larson & Assoc.

Date/ Time: 3-12-09 15:15

Lab ID # : 327344

Initials: AL

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	(Yes)	No	2.5 °C	
#2	Shipping container in good condition?	(Yes)	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	(Not Present)	
#4	Custody Seals intact on sample bottles/ container?	Yes	No	(Not Present)	
#5	Chain of Custody present?	(Yes)	No		
#6	Sample instructions complete of Chain of Custody?	(Yes)	No		
#7	Chain of Custody signed when relinquished/ received?	(Yes)	No		
#8	Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	(Yes)	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#11	Containers supplied by ELOT?	(Yes)	No		
#12	Samples in proper container/ bottle?	(Yes)	No	See Below	
#13	Samples properly preserved?	(Yes)	No	See Below	
#14	Sample bottles intact?	(Yes)	No		
#15	Preservations documented on Chain of Custody?	(Yes)	No		
#16	Containers documented on Chain of Custody?	(Yes)	No		
#17	Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18	All samples received within sufficient hold time?	(Yes)	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	(Not Applicable)	
#20	VOC samples have zero headspace?	(Yes)	No	Not Applicable	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken:

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

Analytical Report 328020

for

Larson & Associates

Project Manager: Michelle Green

Midland/Odessa Standard List of Methods

8-0164

25-MAR-09

12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:
Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX

Florida certification numbers:
Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675
Miramar, FL E86349
Norcross(Atlanta), GA E87429

South Carolina certification numbers:
Norcross(Atlanta), GA 98015

North Carolina certification numbers:
Norcross(Atlanta), GA 483

Houston - Dallas - San Antonio - Tampa - Miami - Latin America
Midland - Corpus Christi - Atlanta

XENCO Laboratories

25-MAR-09

Project Manager: **Michelle Green**
Larson & Associates
P.O. Box 50685
Midland, TX 79710

Reference: XENCO Report No: **328020**
Midland/Odessa Standard List of Methods
Project Address:

Michelle Green:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 328020. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 328020 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

XENCO Laboratories

Samp e Cross Reference 328020

Larson & Associates, Midland, TX

Midland/Odessa Standard List of Methods

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
1 BC	S	Mar-19-09 13:25		328020-001
3 WC	S	Mar-19-09 14:20		328020-002
5 SC	S	Mar-19-09 15:15		328020-003

Project Id: 8-0164
Contact: Michelle Green
Project Location:

Project Name: [illegible]

Date Received in Lab: Fri Mar-20-09 08:36 am
Report Date: 25-MAR-09
Project Manager: Brent Barron, II

Analysis Requested											
	Lab Id:	328020-001		328020-002		328020-003					
	Field Id:	1 BC		3 WC		5 SC					
	Depth:										
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	Mar-19-09 13:25		Mar-19-09 14:20		Mar-19-09 15:15					
Anions by EPA 300	***Extracted:***										
	Analyzed:	Mar-20-09 21:49		Mar-20-09 21:49		Mar-20-09 21:49					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		1150	27.4	419	11.0	305	11.1				
BTEX by EPA 8021B	***Extracted:***	Mar-20-09 10:00		Mar-20-09 10:00		Mar-20-09 10:00					
	Analyzed:	Mar-20-09 15:25		Mar-20-09 16:06		Mar-20-09 15:46					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		ND	0.0010	ND	0.0010	ND	0.0010				
Toluene		ND	0.0020	ND	0.0020	ND	0.0020				
Ethylbenzene		ND	0.0010	ND	0.0010	0.0017	0.0010				
m,p-Xylenes		ND	0.0020	0.0036	0.0020	0.0029	0.0020				
o-Xylene		ND	0.0010	ND	0.0010	ND	0.0010				
Total Xylenes		ND	0.0010	0.0036	0.0010	0.0029	0.0010				
Total BTEX		ND	0.0010	0.0036	0.0010	0.0046	0.0010				
Percent Moisture	***Extracted:***										
	Analyzed:	Mar-20-09 17:00		Mar-20-09 17:00		Mar-20-09 17:00					
	Units/RL:	%	RL	%	RL	%	RL				
Percent Moisture		8.92	1.00	8.98	1.00	9.57	1.00				
TPH by EPA 418.1	***Extracted:***										
	Analyzed:	Mar-24-09 08:53		Mar-24-09 08:53		Mar-24-09 08:53					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
TPH, Total Petroleum Hydrocarbons		708	11.0	4320	11.0	3200	11.1				

Brent Barron
Odessa Laboratory Director

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

* Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Midland/Odessa Standard List of Methods

Work Orders : 328020,

Project ID: 8-0164

Lab Batch #: 753294 **Sample:** 526790-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 03/20/09 11:31

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0317	0.0300	106	80-120	
4-Bromofluorobenzene	0.0331	0.0300	110	80-120	

Lab Batch #: 753294 **Sample:** 526790-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 03/20/09 11:52

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0304	0.0300	101	80-120	
4-Bromofluorobenzene	0.0279	0.0300	93	80-120	

Lab Batch #: 753294 **Sample:** 526790-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 03/20/09 12:33

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0261	0.0300	87	80-120	
4-Bromofluorobenzene	0.0299	0.0300	100	80-120	

Lab Batch #: 753294 **Sample:** 328020-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/20/09 15:25

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0250	0.0300	83	80-120	
4-Bromofluorobenzene	0.0307	0.0300	102	80-120	

Lab Batch #: 753294 **Sample:** 328020-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/20/09 15:46

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0243	0.0300	81	80-120	
4-Bromofluorobenzene	0.0290	0.0300	97	80-120	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Midland/Odessa Standard List of Methods

Work Orders : 328020,

Project ID: 8-0164

Lab Batch #: 753294 **Sample:** 328020-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/20/09 16:06

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0261	0.0300	87	80-120	
4-Bromofluorobenzene	0.0320	0.0300	107	80-120	

Lab Batch #: 753294 **Sample:** 327939-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/20/09 16:27

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0306	0.0300	102	80-120	
4-Bromofluorobenzene	0.0315	0.0300	105	80-120	

Lab Batch #: 753294 **Sample:** 327939-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/20/09 16:47

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0303	0.0300	101	80-120	
4-Bromofluorobenzene	0.0318	0.0300	106	80-120	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Xenco Laboratories

Blank Spike Recovery

Project Name: Midland/Odessa Standard List of Methods

Work Order #: 328020 **Project ID:** 8-0164

Lab Batch #: 753357 **Sample:** 753357-1-BKS **Matrix:** Solid

Date Analyzed: 03/20/2009 **Date Prepared:** 03/20/2009 **Analyst:** LATCOR

Reporting Units: mg/kg **Batch #:** 1

Anions by EPA 300 Analytes	BLANK /BLANK SPIKE RECOVERY STUDY					
	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	10.3	103	90-110	

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.

XENCO Laboratories

BS / BSD Recoveries

Project Name: Midland/Odessa Standard List of Methods

Work Order #: 328020 **Project ID:** 8-0164

Analyst: ASA **Date Prepared:** 03/20/2009 **Date Analyzed:** 03/20/2009

Lab Batch ID: 753294 **Sample:** 526790-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1000	0.1049	105	0.1	0.0969	97	8	70-130	35	
Toluene	ND	0.1000	0.1065	107	0.1	0.0979	98	8	70-130	35	
Ethylbenzene	ND	0.1000	0.1068	107	0.1	0.0982	98	8	71-129	35	
m,p-Xylenes	ND	0.2000	0.2312	116	0.2	0.2134	107	8	70-135	35	
o-Xylene	ND	0.1000	0.1142	114	0.1	0.1048	105	9	71-133	35	

Analyst: LATCOR **Date Prepared:** 03/24/2009 **Date Analyzed:** 03/24/2009

Lab Batch ID: 753536 **Sample:** 753536-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by EPA 418.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
TPH, Total Petroleum Hydrocarbons	ND	2500	2330	93	2500	2320	93	0	65-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS Recoveries

Project Name: Midland/Odessa Standard List of Methods

/ork Order #: 328020
Lab Batch #: 753357
Date Analyzed: 03/20/2009
)C- Sample ID: 327896-101 S
Reporting Units: mg/kg

Project ID: 8-0164
Date Prepared: 03/20/2009
Analyst: LATCOR
Batch #: 1
Matrix: Soil

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
:hloride	242	206	455	103	80-120	

'atrix Spike Percent Recovery [D] = 100*(C-A)/B
:lative Percent Difference [E] = 200*(C-A)/(C+B)
.ll Results are based on MDL and Validated for QC Purposes

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Midland/Odessa Standard List of Methods

Work Order # : 328020 **Project ID:** 8-0164

Lab Batch ID: 753294 **QC- Sample ID:** 327939-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 03/20/2009 **Date Prepared:** 03/20/2009 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1019	0.0838	82	0.1019	0.0812	80	3	70-130	35	
Toluene	ND	0.1019	0.0834	82	0.1019	0.0802	79	4	70-130	35	
Ethylbenzene	ND	0.1019	0.0779	76	0.1019	0.0734	72	6	71-129	35	
m,p-Xylenes	ND	0.2038	0.1679	82	0.2038	0.1585	78	6	70-135	35	
o-Xylene	ND	0.1019	0.0845	83	0.1019	0.0798	78	6	71-133	35	

Lab Batch ID: 753536 **QC- Sample ID:** 328020-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 03/24/2009 **Date Prepared:** 03/24/2009 **Analyst:** LATCOR

Reporting Units: mg/kg

TPH by EPA 418.1 Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
TPH, Total Petroleum Hydrocarbons	708	2740	3470	101	2740	3590	105	3	65-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Midland/Odessa Standard List of Methods

Work Order #: 328020

Lab Batch #: 753357 **Project ID:** 8-0164

Date Analyzed: 03/20/2009 **Date Prepared:** 03/20/2009 **Analyst:** LATCOR

QC- Sample ID: 327896-101 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Anions by EPA 300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	242	244	1	20	

Lab Batch #: 753313

Date Analyzed: 03/20/2009 **Date Prepared:** 03/20/2009 **Analyst:** BEV

QC- Sample ID: 327990-002 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	10.0	9.59	4	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

Data Reported to:

DATE: 3-19-09 PAGE 1 OF 1
PO #: _____ LAB WORK ORDER #: 328020
PROJECT LOCATION OR NAME: _____
LAI PROJECT #: 2-0164 COLLECTOR: KB

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: NM

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

Field Sample I.D.	Lab #	Date (2009)	Time	Matrix	# of Containers 5oz 2g 4oz	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	ANALYSES: BTEX ☒ MTBE ☐	TRPH 418.1 ☐	GASOLINE MOD 8015 ☐	DIESEL - MOD 8015 ☐	VOC 8260 ☐	SVOC 8270 ☐	8081 PESTICIDES ☐	8082 PCBS ☐	TCLP - METALS (RCRA) ☐	TCLP - PEST ☐	TOTAL METALS (RCRA) ☐	LEAD - TOTAL ☐	RCI ☐	TDS ☐	pH ☐	EXPLOSIVES ☐	CHLORIDE ☒	FIELD NOTES
											8021B	TPH 1005 ☐	TPH 1006 ☐			PAH 8270 ☐	HOLDPAH ☐	8151 HERBICIDES ☐	TCLP VOC ☐	HERB ☐	Semi-VOC ☐	OTHER LIST ☐	TCLP ☐	D.W. 200.8 ☐	FLASHPOINT ☐	% MOISTURE ☐	CYANIDE ☐	
																							TOX ☐	TSS ☐		HEXAVALENT CHROMIUM ☐	PECHLORATE ☐	ANIONS ☐	ALKALINITY ☐
																											300.1	
1BC		3-19	1:25	S	1				X		X	X															X	Composite
3WC		3-19	2:20	S	1				X		X	X															X	Composite
5SC		3-19	3:15	S	1				X		X	X															X	Composite

TOTAL

RELINQUISHED BY:(Signature) — DATE/TIME: 3/20/09 8:36 — RECEIVED BY: (Signature) Jeanne Fitch 03-20-09 0836

RELINQUISHED BY:(Signature) — DATE/TIME — RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) — DATE/TIME — RECEIVED BY: (Signature)

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐ _____

LABORATORY USE ONLY:
RECEIVING TEMP: 4.0°C THERM #: _____
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☒ NOT USED
☐ CARRIER BILL # _____
☐ HAND DELIVERED

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Larson

Date/ Time: 03-20-09 @ 0836

Lab ID # : 328020

Initials: JMF

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	(Yes)	No	4.0 °C	
#2	Shipping container in good condition?	(Yes)	No		
#3	Custody Seals intact on shipping container/ cooler?	(Yes)	No	(Not Present)	
#4	Custody Seals intact on sample bottles/ container?	Yes	No	(Not Present)	
#5	Chain of Custody present?	(Yes)	No		
#6	Sample instructions complete of Chain of Custody?	(Yes)	No		
#7	Chain of Custody signed when relinquished/ received?	(Yes)	No		
#8	Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	(Yes)	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#11	Containers supplied by ELOT?	(Yes)	No		
#12	Samples in proper container/ bottle?	(Yes)	No	See Below	
#13	Samples properly preserved?	(Yes)	No	See Below	
#14	Sample bottles intact?	(Yes)	No		
#15	Preservations documented on Chain of Custody?	(Yes)	No		
#16	Containers documented on Chain of Custody?	(Yes)	No		
#17	Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18	All samples received within sufficient hold time?	(Yes)	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	(Not Applicable)	
#20	VOC samples have zero headspace?	(Yes)	No	Not Applicable	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken:

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

Analytical Report 328209

for

Larson & Associates

Project Manager: Michelle Green

Midland/Odessa Standard List of Methods

8-0164

31-MAR-09

12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:
Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX

Florida certification numbers:
Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675
Miramar, FL E86349
Norcross(Atlanta), GA E87429

South Carolina certification numbers:
Norcross(Atlanta), GA 98015

North Carolina certification numbers:
Norcross(Atlanta), GA 483

Houston - Dallas - San Antonio - Tampa - Miami - Latin America
Midland - Corpus Christi - Atlanta

XENCO Laboratories

31-MAR-09

Project Manager: **Michelle Green**
Larson & Associates
P.O. Box 50685
Midland, TX 79710

Reference: XENCO Report No: **328209**
Midland/Odessa Standard List of Methods
Project Address:

Michelle Green:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 328209. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 328209 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

XENCO Laboratories

Sample Cross Reference 328209

Larson & Associates, Midland, TX

Midland/Odessa Standard List of Methods

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS # 5 (13')	S	Mar-23-09 10:30	13 ft	328209-001
SS # 5 (18')	S	Mar-23-09 11:00	18 ft	328209-002
SS # 5 (23')	S	Mar-23-09 11:30	23 ft	328209-003

Project Id: 8-0164
Contact: Michelle Green
Project Location:

Date Received in Lab: Mon Mar-23-09 04:13 pm
Report Date: 31-MAR-09
Project Manager: Brent Barron, II

Analysis Requested											
	Lab Id:	328209-001		328209-002		328209-003					
	Field Id:	SS # 5 (13')		SS # 5 (18')		SS # 5 (23')					
	Depth:	13 ft		18 ft		23 ft					
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	Mar-23-09 10:30		Mar-23-09 11:00		Mar-23-09 11:30					
Anions by EPA 300	***Extracted:***										
	Analyzed:	Mar-26-09 16:30		Mar-26-09 16:30		Mar-30-09 14:43					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		943	10.8	1390	28.1	446	10.8				
Percent Moisture	***Extracted:***										
	Analyzed:	Mar-26-09 17:00		Mar-26-09 17:00		Mar-30-09 16:40					
	Units/RL:	%	RL	%	RL	%	RL				
Percent Moisture		7.11	1.00	11.03	1.00	7.44	1.00				

Brent Barron
Odessa Laboratory Director

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

* Outside XENCO's scope of NELAC Accreditation.

Xenco Laboratories

Blank Spike Recovery

Project Name: Midland/Odessa Standard List of Methods

Work Order #: 328209 **Project ID:** 8-0164

Lab Batch #: 753994 **Sample:** 753994-1-BKS **Matrix:** Solid

Date Analyzed: 03/26/2009 **Date Prepared:** 03/26/2009 **Analyst:** LATCOR

Reporting Units: mg/kg **Batch #:** 1

Anions by EPA 300 Analytes	Blank Result [A]	BLANK /BLANK SPIKE RECOVERY STUDY Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	10.6	106	90-110	

Lab Batch #: 754330 **Sample:** 754330-1-BKS **Matrix:** Solid

Date Analyzed: 03/30/2009 **Date Prepared:** 03/30/2009 **Analyst:** LATCOR

Reporting Units: mg/kg **Batch #:** 1

Anions by EPA 300 Analytes	Blank Result [A]	BLANK /BLANK SPIKE RECOVERY STUDY Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	10.8	108	90-110	

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.

Form 3 - MS Recoveries

Project Name: Midland/Odessa Standard List of Methods

Work Order #: 328209

Lab Batch #: 753994 **Project ID:** 8-0164

Date Analyzed: 03/26/2009 **Date Prepared:** 03/26/2009 **Analyst:** LATCOR

QC- Sample ID: 328209-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	943	215	504	0	80-120	X

Lab Batch #: 754330

Date Analyzed: 03/30/2009 **Date Prepared:** 03/30/2009 **Analyst:** LATCOR

QC- Sample ID: 328761-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	409	210	611	96	80-120	

atrix Spike Percent Recovery [D] = 100*(C-A)/B
ative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

XENCO Laboratories

Sample Duplicate Recovery

ACCREDITED IN ACCORDANCE WITH nelac

Project Name: Midland/Odessa Standard List of Methods

Work Order #: 328209

Lab Batch #: 753994 **Project ID:** 8-0164
Date Analyzed: 03/26/2009 **Date Prepared:** 03/26/2009 **Analyst:** LATCOR
QC- Sample ID: 328209-001 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: mg/kg

Anions by EPA 300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	943	939	0	20	

Lab Batch #: 754330
Date Analyzed: 03/30/2009 **Date Prepared:** 03/30/2009 **Analyst:** LATCOR
QC- Sample ID: 328761-001 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: mg/kg

Anions by EPA 300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	409	409	0	20	

Lab Batch #: 753990
Date Analyzed: 03/26/2009 **Date Prepared:** 03/26/2009 **Analyst:** BEV
QC- Sample ID: 328424-001 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	13.9	13.5	3	20	

Lab Batch #: 754344
Date Analyzed: 03/30/2009 **Date Prepared:** 03/30/2009 **Analyst:** BEV
QC- Sample ID: 328746-001 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	2.71	3.00	10	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.

HOLD

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

Data Reported to:

DATE: 3/23/09 PAGE 1 OF 1

PO #: LAB WORK ORDER #: 328209

PROJECT LOCATION OR NAME:

LAI PROJECT #: 8-0164 COLLECTOR: RB

TRRP report? ☐ Yes ☐ No

TIME ZONE: Time zone/State: MST

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

Field Sample I.D.	Lab #	Date (2009)	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	ANALYSES: BTEX ☐ MTBE ☐	TRPH 418.1 ☐ TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☐	DIESEL - MOD 8015 ☐	VOC 8260 ☐	SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	8082 PCBS ☐	TCLP - METALS (RCRA) ☐ TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDE ☐ ANIONS ☐ ALKALINITY ☐	300.1	FIELD NOTES
SS#5 (13')		3/23	10:30	S	1																						X		GRAB
SS#5 (R1)		3/23	11:00	S	1																						X		GRAB
SS#5 (23')		3/23	11:30	S	1																						X		GRAB
TOTAL					3																						3		3

RELINQUISHED BY:(Signature) R. W. Booth DATE/TIME 3/23/09 4:13 RECEIVED BY: (Signature) Andrea Sam 16:13 3-23-09

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

TURN AROUND TIME
NORMAL X
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 25.0 THERM #:
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☒ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED w/labels

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Larson & Assoc.

Date/ Time: 3·23·09 16:13

Lab ID #: 328209

Initials: aL

Sample Receipt Checklist

					Client Initials
1	Temperature of container/ cooler?	(Yes)	No	15.0 °C	
2	Shipping container in good condition?	(Yes)	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	~~Not Present~~	
4	Custody Seals intact on sample bottles/ container?	Yes	No	~~Not Present~~	
5	Chain of Custody present?	(Yes)	No		
#6	Sample instructions complete of Chain of Custody?	(Yes)	No		
7	Chain of Custody signed when relinquished/ received?	(Yes)	No		
8	Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	(Yes)	No	Not Applicable	
10	Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
11	Containers supplied by ELOT?	(Yes)	No		
#12	Samples in proper container/ bottle?	(Yes)	No	See Below	
13	Samples properly preserved?	(Yes)	No	See Below	
14	Sample bottles intact?	(Yes)	No		
#15	Preservations documented on Chain of Custody?	(Yes)	No		
16	Containers documented on Chain of Custody?	(Yes)	No		
17	Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18	All samples received within sufficient hold time?	(Yes)	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	~~Not Applicable~~	
#20	VOC samples have zero headspace?	Yes	No	~~Not Applicable~~	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

Gracie Avalos

From: Michelle Green [michelle@laenvironmental.com]
Sent: Wednesday, March 25, 2009 2:24 PM
To: Gracie Avalos
Subject: RE: WO 328020 / 8-0164

Gracie,

Please analyze (Chloride) the first two samples (13' and 18') that were collected March 23, 2009.

Thank you,

Michelle Green

From: Gracie Avalos [mailto:gracie.avalos@xenco.com]
Sent: Wednesday, March 25, 2009 2:01 PM
To: Michelle Green; Mark Larson
Subject: WO 328020 / 8-0164

Upon review, please let us know if you will be in need of us running either the 15 soil samples brought in Friday the 20th, or the 3 soil samples brought in Monday the 23rd as they're on hold.

We always appreciate the work you provide, have a good one!

Gracie Avalos
Project Assistant
Xenco Labs - Odessa
432-563-1800 Office
432-4563-1713 Fax
gracie.avalos@xenco.com

Gracie Avalos

From: Michelle Green [michelle@laenvironmental.com]
Sent: Monday, March 30, 2009 10:37 AM
To: Gracie Avalos
Subject: RE: WO 328209 / 8-0164

Gracie,

Can you please analyze sample SS #5 (23') for Chloride. Is it possible to have a result later this afternoon?

Thank you,

Michelle L. Green
Larson & Associates, Inc.
507 N Marienfeld, Suite 200
Midland, TX 79701

Office: 432.687.0901
Fax: 432.687.0789
Cell: 432.934.3231

Larson & Associates, Inc.
Environmental Consultants

From: Gracie Avalos [mailto:gracie.avalos@xenco.com]
Sent: Monday, March 30, 2009 10:30 AM
To: Michelle Green; Mark Larson
Subject: WO 328209 / 8-0164
Importance: High

Gracie Avalos
Project Assistant
Xenco Labs - Odessa
432-563-1800 Office
432-4563-1713 Fax
gracie.avalos@xenco.com

Analytical Report 329144

for

Larson & Associates

Project Manager: Mark Larson

XTO N. Vacuum-North St.

8-0164

06-APR-09

12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:
Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX

Florida certification numbers:
Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675
Miramar, FL E86349
Norcross(Atlanta), GA E87429

South Carolina certification numbers:
Norcross(Atlanta), GA 98015

North Carolina certification numbers:
Norcross(Atlanta), GA 483

Houston - Dallas - San Antonio - Tampa - Miami - Latin America
Midland - Corpus Christi - Atlanta

XENCO Laboratories

06-APR-09

Project Manager: **Mark Larson**
Larson & Associates
P.O. Box 50685
Midland, TX 79710

Reference: XENCO Report No: **329144**
XTO N. Vacuum-North St.
Project Address: Lea Co., NM

Mark Larson:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 329144. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 329144 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

Samp e Cross Reference 329144

Larson & Associates, Midland, TX

XTO N. Vacuum-North St.

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS 5 (28')	S	Apr-02-09 13:40		329144-001

Project Id: 8-0164
Contact: Mark Larson
Project Location: Lea Co., NM

Project Name: [illegible]

Date Received in Lab: Thu Apr-02-09 05:35 pm
Report Date: 06-APR-09
Project Manager: Brent Barron, II

Analysis Requested								
	Lab Id:	329144-001						
	Field Id:	SS 5 (28')						
	Depth:							
	Matrix:	SOIL						
	Sampled:	Apr-02-09 13:40						
Anions by EPA 300	***Extracted:***							
	Analyzed:	Apr-03-09 15:45						
	Units/RL:	mg/kg	RL					
Chloride		772	10.7					
Percent Moisture	***Extracted:***							
	Analyzed:	Apr-03-09 12:15						
	Units/RL:	%	RL					
Percent Moisture		6.62	1.00					

Brent Barron
Odessa Laboratory Director

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

* Outside XENCO's scope of NELAC Accreditation.

Xenco Laboratories

Blank Spike Recovery

Project Name: XTO N. Vacuum-North St.

Work Order #: 329144 **Project ID:** 8-0164

Lab Batch #: 754827 **Sample:** 754827-1-BKS **Matrix:** Solid

Date Analyzed: 04/03/2009 **Date Prepared:** 04/03/2009 **Analyst:** LATCOR

Reporting Units: mg/kg **Batch #:** 1

Anions by EPA 300 Analytes	BLANK /BLANK SPIKE RECOVERY STUDY					
	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	11.1	111	80-120	

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.

Form 3 - MS Recoveries

Project Name: XTO N. Vacuum-North St.

Work Order #: 329144
Lab Batch #: 754827
Project ID: 8-0164
Date Analyzed: 04/03/2009
Date Prepared: 04/03/2009
Analyst: LATCOR
QC- Sample ID: 329144-001 S
Batch #: 1
Matrix: Soil
Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	772	214	951	84	80-120	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

Sample Duplicate Recovery

Project Name: XTO N. Vacuum-North St.

Work Order #: 329144

Lab Batch #: 754827 **Project ID:** 8-0164
Date Analyzed: 04/03/2009 **Date Prepared:** 04/03/2009 **Analyst:** LATCOR
QC- Sample ID: 329144-001 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: mg/kg

Anions by EPA 300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	772	777	1	20	

Lab Batch #: 754812
Date Analyzed: 04/03/2009 **Date Prepared:** 04/03/2009 **Analyst:** BEV
QC- Sample ID: 329144-001 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	6.62	6.54	1	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.

Xenco Laboratories

The Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: M. Larson

Company Name: Larson & Associates, Inc.

Company Address: 507 N. Marienfeld #200

City/State/Zip: Midland, TX 79701

Telephone No: (432) 687-0901 Fax No: (432) 687-0456

Sampler Signature:

e-mail: markelaenvironmental.com

Project Name: XTO N. Vacuum - North St

Project #: 8-0164

Project Loc: Lea Co., NM

PO #:

Report Format: ☑ Standard ☐ TRRP ☐ NPDES

(lab use only)

ORDER #: 329144

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge	GW=Groundwater S=Soil/Solid	NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 8015B	8015M	TPH: TX 1005 TX 1006	TOTAL: Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
01	SS5(28')			4-2-09	13:40		2						✓			S						✓									X	

Special Instructions: Rush analysis - Report to Michelle Green (michelle@laenvironmental.com) + Copy markel@laenvironmental.com

Relinquished by:	Date	Time	Received by:	Date	Time
	4/2/09	1735			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT: Andrea Sam	4-2-09	17:35

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered	Y	N

by Sampler/Client Rep. ?

by Courier? UPS DHL FedEx Lone Star

2-902 glass

Temperature Upon Receipt: 23.5 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Larson & Assoc

Date/ Time: 4.2.09 17:35

Lab ID # : 329144

Initials: AL

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	(Yes)	No	23.5 °C	
#2	Shipping container in good condition?	(Yes)	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	(Not Present)	
#4	Custody Seals intact on sample bottles/ container?	Yes	No	(Not Present)	
#5	Chain of Custody present?	(Yes)	No		
#6	Sample instructions complete of Chain of Custody?	(Yes)	No		
#7	Chain of Custody signed when relinquished/ received?	(Yes)	No		
#8	Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	(Yes)	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#11	Containers supplied by ELOT?	(Yes)	No		
#12	Samples in proper container/ bottle?	(Yes)	No	See Below	
#13	Samples properly preserved?	(Yes)	No	See Below	
#14	Sample bottles intact?	(Yes)	No		
#15	Preservations documented on Chain of Custody?	(Yes)	No		
#16	Containers documented on Chain of Custody?	(Yes)	No		
#17	Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18	All samples received within sufficient hold time?	(Yes)	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	(Not Applicable)	
#20	VOC samples have zero headspace?	Yes	No	(Not Applicable)	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

Analytical Report 329622

for

Larson & Associates

Project Manager: Michelle Green

XTO Vacuum North

8-0164

20-APR-09

12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:
Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX

Florida certification numbers:
Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675
Miramar, FL E86349
Norcross(Atlanta), GA E87429

South Carolina certification numbers:
Norcross(Atlanta), GA 98015

North Carolina certification numbers:
Norcross(Atlanta), GA 483

Houston - Dallas - San Antonio - Tampa - Miami - Latin America
Midland - Corpus Christi - Atlanta

20-APR-09

Project Manager: **Michelle Green**
Larson & Associates
P.O. Box 50685
Midland, TX 79710

Reference: XENCO Report No: **329622**
XTO Vacuum North
Project Address:

Michelle Green:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 329622. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 329622 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

Sample Cross Reference 329622

Larson & Associates, Midland, TX

XTO Vacuum North

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH-1,5' (13'BGS)	S	Apr-08-09 09:00		329622-001
BH-1,10' (18'BGS)	S	Apr-08-09 09:05		329622-002
BH-1,15' (23'BGS)	S	Apr-08-09 09:10		329622-003
BH-1,20' (28'BGS)	S	Apr-08-09 09:15		329622-004
BH-1,25' (33'BGS)	S	Apr-08-09 09:25		329622-005
BH-1,30' (38'BGS)	S	Apr-08-09 09:35		329622-006
BH-1,40' (48'BGS)	S	Apr-08-09 09:45		329622-007
BH-1,50' (58'BGS)	S	Apr-08-09 10:00		329622-008

Certificate of Analysis Summary 329622

Larson & Associates, Midland, TX

Project Name: XTO Vacuum North

Project Id: 8-0164
Contact: Michelle Green
Project Location:

Date Received in Lab: Apr-08-09 05:20 pm
Report Date: 20-APR-09
Project Manager: Brent Barron, II

Analysis Requested	*Lab Id:*	329622-001		329622-002		329622-003		329622-004	
	Field Id:	BH-1,5' (13'BGS)		BH-1,10' (18'BGS)		BH-1,15' (23'BGS)		BH-1,20' (28'BGS)	
	Depth:								
	Matrix:	SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-08-09 09:00		Apr-08-09 09:05		Apr-08-09 09:10		Apr-08-09 09:15	
Anions by EPA 300	*Extracted:*								
	Analyzed:	Apr-09-09 10:41		Apr-09-09 10:41		Apr-09-09 10:41		Apr-09-09 10:41	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		2370	55.3	111	10.7	77.8	10.4	428	10.7
Percent Moisture	*Extracted:*								
	Analyzed:	Apr-09-09 08:45		Apr-09-09 08:45		Apr-09-09 08:45		Apr-09-09 08:45	
	Units/RL:	%	RL	%	RL	%	RL	%	RL
Percent Moisture		9.54	1.00	6.73	1.00	4.17	1.00	6.35	1.00
TPH By SW8015 Mod	*Extracted:*	Apr-10-09 16:35		Apr-10-09 16:35		Apr-10-09 16:35		Apr-10-09 16:35	
	Analyzed:	Apr-11-09 12:45		Apr-11-09 13:10		Apr-11-09 13:35		Apr-11-09 14:00	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	16.6	ND	16.1	ND	15.7	ND	16.0
C12-C28 Diesel Range Hydrocarbons		16.9	16.6	17.7	16.1	16.5	15.7	ND	16.0
C28-C35 Oil Range Hydrocarbons		ND	16.6	ND	16.1	ND	15.7	ND	16.0
Total TPH		16.9	16.6	17.7	16.1	16.5	15.7	ND	16.0
TPH by EPA 418.1	*Extracted:*								
	Analyzed:	Apr-09-09 14:32		Apr-09-09 14:32		Apr-09-09 14:32		Apr-09-09 14:32	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
TPH, Total Petroleum Hydrocarbons		ND	11.1	ND	10.7	ND	10.4	ND	10.7

Brent Barron
Odessa Laboratory Director

Certificate of Analysis Summary 329622

Larson & Associates, Midland, TX

Project Name: XTO Vacuum North

Project Id: 8-0164
Contact: Michelle Green
Project Location:

Date Received in Lab: Apr-08-09 05:20 pm
Report Date: 20-APR-09
Project Manager: Brent Barron, II

Analysis Requested		*Lab Id:*	329622-005		329622-006		329622-007		329622-008	
		Field Id:	BH-1,25' (33'BGS)		BH-1,30' (38'BGS)		BH-1,40' (48'BGS)		BH-1,50' (58'BGS)	
		Depth:								
		Matrix:	SOIL		SOIL		SOIL		SOIL	
		Sampled:	Apr-08-09 09:25		Apr-08-09 09:35		Apr-08-09 09:45		Apr-08-09 10:00	
Anions by EPA 300	*Extracted:*									
	Analyzed:		Apr-09-09 10:41		Apr-09-09 10:41		Apr-09-09 10:41		Apr-14-09 10:04	
	Units/RL:		mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride			2190	53.4	1720	26.3	330	10.7	120	10.6
Percent Moisture	*Extracted:*									
	Analyzed:		Apr-09-09 08:45		Apr-09-09 08:45		Apr-09-09 08:45		Apr-14-09 20:02	
	Units/RL:		%	RL	%	RL	%	RL	%	RL
Percent Moisture			6.30	1.00	5.09	1.00	6.94	1.00	5.99	1.00

Brent Barron
Odessa Laboratory Director

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

* Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: XTO Vacuum North

Work Orders : 329622,

Project ID: 8-0164

Lab Batch #: 755565 **Sample:** 528142-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/11/09 06:50

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.6	100	100	70-135	
o-Terphenyl	45.2	50.0	90	70-135	

Lab Batch #: 755565 **Sample:** 528142-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/11/09 07:15

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.4	100	99	70-135	
o-Terphenyl	45.7	50.0	91	70-135	

Lab Batch #: 755565 **Sample:** 528142-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/11/09 07:40

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.8	100	88	70-135	
o-Terphenyl	50.2	50.0	100	70-135	

Lab Batch #: 755565 **Sample:** 329622-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/11/09 12:45

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.2	100	87	70-135	
o-Terphenyl	49.7	50.0	99	70-135	

Lab Batch #: 755565 **Sample:** 329622-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/11/09 13:10

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.6	100	86	70-135	
o-Terphenyl	48.8	50.0	98	70-135	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: XTO Vacuum North

Work Orders : 329622,

Project ID: 8-0164

Lab Batch #: 755565 **Sample:** 329622-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/11/09 13:35

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	83.0	100	83	70-135	
o-Terphenyl	47.1	50.0	94	70-135	

Lab Batch #: 755565 **Sample:** 329622-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/11/09 14:00

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.5	100	86	70-135	
o-Terphenyl	48.7	50.0	97	70-135	

Lab Batch #: 755565 **Sample:** 329622-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/11/09 16:52

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	46.5	50.0	93	70-135	

Lab Batch #: 755565 **Sample:** 329622-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/11/09 17:17

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	47.4	50.0	95	70-135	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Xenco Laboratories

Blank Spike Recovery

Project Name: XTO Vacuum North

Work Order #: 329622 **Project ID:** 8-0164

Lab Batch #: 755399 **Sample:** 755399-1-BKS **Matrix:** Solid

Date Analyzed: 04/09/2009 **Date Prepared:** 04/09/2009 **Analyst:** LATCOR

Reporting Units: mg/kg **Batch #:** 1

Anions by EPA 300 Analytes	Blank Result [A]	BLANK /BLANK SPIKE RECOVERY STUDY Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	10.6	106	80-120	

Lab Batch #: 755901 **Sample:** 755901-1-BKS **Matrix:** Solid

Date Analyzed: 04/14/2009 **Date Prepared:** 04/14/2009 **Analyst:** LATCOR

Reporting Units: mg/kg **Batch #:** 1

Anions by EPA 300 Analytes	Blank Result [A]	BLANK /BLANK SPIKE RECOVERY STUDY Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	10.1	101	80-120	

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: XTO Vacuum North

Work Order #: 329622 **Project ID:** 8-0164

Analyst: BEV **Date Prepared:** 04/09/2009 **Date Analyzed:** 04/09/2009

Lab Batch ID: 755401 **Sample:** 755401-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by EPA 418.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
TPH, Total Petroleum Hydrocarbons	ND	2500	2180	87	2500	2210	88	1	65-135	35	

Analyst: BHW **Date Prepared:** 04/10/2009 **Date Analyzed:** 04/11/2009

Lab Batch ID: 755565 **Sample:** 528142-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1000	995	100	1000	980	98	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	950	95	1000	937	94	1	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS Recoveries

Project Name: XTO Vacuum North

Work Order #: 329622
Lab Batch #: 755399
Project ID: 8-0164
Date Analyzed: 04/09/2009
Date Prepared: 04/09/2009
Analyst: LATCOR
QC- Sample ID: 329622-001 S
Batch #: 1
Matrix: Soil
Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	2370	1110	3590	110	80-120	

Lab Batch #: 755901
Date Analyzed: 04/14/2009
Date Prepared: 04/14/2009
Analyst: LATCOR
QC- Sample ID: 330010-001 S
Batch #: 1
Matrix: Soil
Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	709	207	868	77	80-120	X

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: XTO Vacuum North

Work Order # : 329622 **Project ID:** 8-0164

Lab Batch ID: 755401 **QC- Sample ID:** 329622-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/09/2009 **Date Prepared:** 04/09/2009 **Analyst:** BEV

Reporting Units: mg/kg

TPH by EPA 418.1 Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
TPH, Total Petroleum Hydrocarbons	ND	2760	2510	91	2760	2500	91	0	65-135	35	

Lab Batch ID: 755565 **QC- Sample ID:** 329622-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/11/2009 **Date Prepared:** 04/10/2009 **Analyst:** BHW

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1110	1110	100	1110	1120	101	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	16.9	1110	1060	94	1110	1070	95	1	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Sample Duplicate Recovery

Project Name: XTO Vacuum North

Work Order #: 329622

Lab Batch #: 755399 **Project ID:** 8-0164
Date Analyzed: 04/09/2009 **Date Prepared:** 04/09/2009 **Analyst:** LATCOR
QC- Sample ID: 329622-001 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: mg/kg

Anions by EPA 300 Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	2370	2320	2	20	

Lab Batch #: 755901
Date Analyzed: 04/14/2009 **Date Prepared:** 04/14/2009 **Analyst:** LATCOR
QC- Sample ID: 330010-001 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: mg/kg

Anions by EPA 300 Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	709	690	3	20	

Lab Batch #: 755304
Date Analyzed: 04/09/2009 **Date Prepared:** 04/09/2009 **Analyst:** BEV
QC- Sample ID: 329619-001 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	8.51	8.67	2	20	

Lab Batch #: 755862
Date Analyzed: 04/14/2009 **Date Prepared:** 04/14/2009 **Analyst:** BEV
QC- Sample ID: 330010-001 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	3.55	3.48	2	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 4-8-09 PAGE 1 OF 1
PO #: _____ LAB WORK ORDER #: 329622
PROJECT LOCATION OR NAME: XTO VACUUM NORTH
LAI PROJECT #: 8-0164 COLLECTOR: ML & RB
Data Reported to: MICHELLE GREEN

TRRP report? ☐ Yes ☐ No
TIME ZONE: Time zone/State: MST

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

Field Sample I.D.	Lab #	2009 Date	Time	Matrix	# of Containers	PRESERVATION HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	ANALYSES: BTEX ☐ MTBE ☐	TRPH 418.1 ☐ TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☐	DIESEL - MOD 8015 ☐	VOC 8260 ☐	SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	8082 PCBS ☐	TCLP - METALS (RCRA) ☐ TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDE ☐ ANIONS ☐ ALKALINITY ☐	(300.0)	HOLD	FIELD NOTES
01 BH-1, 5' (13' BGS)		4-8	09:00	S	2				X		X	X	X	X													X		GRAB	
02 BH-1, 10' (18' BGS)			0905						X		X	X	X														X			
03 BH-1, 15' (23' BGS)			0910						X		X	X	X														X			
04 BH-1, 20' (28' BGS)			0915						X		X	X	X														X			
05 BH-1, 25' (33' BGS)			0925						X																		X			
06 BH-1, 30' (38' BGS)			0935						X																		X			
07 BH-1, 40' (48' BGS)			0945						X																		X			
08 BH-1, 50' (58' BGS)			1000						X																			X		
09 BH-1, 60' (68' BGS)			1012						X																			X		
10 BH-1, 70' (78' BGS)			1035						X																			X		
11 BH-1, 80' (88' BGS)			1055						X																			X		
TOTAL																														

RELINQUISHED BY:(Signature) Ken Brook DATE/TIME 4/8/09 5:20P RECEIVED BY: (Signature) Christian Llano 4-9-09 17:20
RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)
RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐ _____

LABORATORY USE ONLY:
RECEIVING TEMP: 4.0 THERM #: _____
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☒ NOT USED
☐ CARRIER BILL # _____
☒ HAND DELIVERED 4oz glass

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Larson & Associates

Date/ Time: 04-08-09 @ 1720

Lab ID # : 329622

Initials: AL

Sample Receipt Checklist

					Client Initials
1	Temperature of container/ cooler?	(Yes)	No	4.0 °C	
2	Shipping container in good condition?	(Yes)	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	(Not Present)	
4	Custody Seals intact on sample bottles/ container?	Yes	No	(Not Present)	
5	Chain of Custody present?	(Yes)	No		
#6	Sample instructions complete of Chain of Custody?	(Yes)	No		
7	Chain of Custody signed when relinquished/ received?	(Yes)	No		
8	Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	(Yes)	No	Not Applicable	
10	Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
11	Containers supplied by ELOT?	(Yes)	No		
#12	Samples in proper container/ bottle?	(Yes)	No	See Below	
#13	Samples properly preserved?	(Yes)	No	See Below	
#14	Sample bottles intact?	(Yes)	No		
#15	Preservations documented on Chain of Custody?	(Yes)	No		
#16	Containers documented on Chain of Custody?	(Yes)	No		
#17	Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18	All samples received within sufficient hold time?	(Yes)	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	(Not Applicable)	
#20	VOC samples have zero headspace?	(Yes)	No	Not Applicable	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

Gracie Avalos

From: Mark Larson [Mark@laenvironmental.com]
Sent: Tuesday, April 14, 2009 9:00 AM
To: Gracie Avalos
Cc: Michelle Green
Subject: Re: Analytical Report #329622

Gracie,
Please run the 50' sample for chloride.
Thanks,

Mark J. Larson
Sr. Project Manager / President
507 N. Marienfeld St., Ste. 202
Midland, Texas 79701
(432) 687-0901 (office)
(432) 687-0456 (fax)
(432) 556-8656 (cell)
mark@laenvironmental.com

Larson & Associates, Inc.
Environmental Consultants

Analytical Report 329622

for

Larson & Associates

Project Manager: Michelle Green

XTO Vacuum North

8-0164

13-APR-09

12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:
Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX

Florida certification numbers:
Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675
Miramar, FL E86349
Norcross(Atlanta), GA E87429

South Carolina certification numbers:
Norcross(Atlanta), GA 98015

North Carolina certification numbers:
Norcross(Atlanta), GA 483

Houston - Dallas - San Antonio - Tampa - Miami - Latin America
Midland - Corpus Christi - Atlanta

XENCO Laboratories

13-APR-09

Project Manager: **Michelle Green**
Larson & Associates
P.O. Box 50685
Midland, TX 79710

Reference: XENCO Report No: **329622**
XTO Vacuum North
Project Address:

Michelle Green:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 329622. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 329622 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

Sample Cross Reference 329622

Larson & Associates, Midland, TX

XTO Vacuum North

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH-1,5' (13'BGS)	S	Apr-08-09 09:00		329622-001
BH-1,10' (18'BGS)	S	Apr-08-09 09:05		329622-002
BH-1,15' (23'BGS)	S	Apr-08-09 09:10		329622-003
BH-1,20' (28'BGS)	S	Apr-08-09 09:15		329622-004
BH-1,25' (33'BGS)	S	Apr-08-09 09:25		329622-005
BH-1,30' (38'BGS)	S	Apr-08-09 09:35		329622-006
BH-1,40' (48'BGS)	S	Apr-08-09 09:45		329622-007

Project Id: 8-0164
Contact: Michelle Green
Project Location:

Project Name: [illegible]

Date Received in Lab: Wed Apr-08-09 05:20 pm
Report Date: 13-APR-09
Project Manager: Brent Barron, II

Analysis Requested													
	Lab Id:	329622-001		329622-002		329622-003		329622-004		329622-005		329622-006	
	Field Id:	BH-1,5' (13'BGS)		BH-1,10' (18'BGS)		BH-1,15' (23'BGS)		BH-1,20' (28'BGS)		BH-1,25' (33'BGS)		BH-1,30' (38'BGS)	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-08-09 09:00		Apr-08-09 09:05		Apr-08-09 09:10		Apr-08-09 09:15		Apr-08-09 09:25		Apr-08-09 09:35	
Anions by EPA 300	*Extracted:*												
	Analyzed:	Apr-09-09 10:41		Apr-09-09 10:41		Apr-09-09 10:41		Apr-09-09 10:41		Apr-09-09 10:41		Apr-09-09 10:41	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		2370	55.3	111	10.7	77.8	10.4	428	10.7	2190	53.4	1720	26.3
Percent Moisture	*Extracted:*												
	Analyzed:	Apr-09-09 08:45		Apr-09-09 08:45		Apr-09-09 08:45		Apr-09-09 08:45		Apr-09-09 08:45		Apr-09-09 08:45	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		9.54	1.00	6.73	1.00	4.17	1.00	6.35	1.00	6.30	1.00	5.09	1.00
TPH By SW8015 Mod	*Extracted:*	Apr-10-09 16:35		Apr-10-09 16:35		Apr-10-09 16:35		Apr-10-09 16:35					
	Analyzed:	Apr-11-09 12:45		Apr-11-09 13:10		Apr-11-09 13:35		Apr-11-09 14:00					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		ND	16.6	ND	16.1	ND	15.7	ND	16.0				
C12-C28 Diesel Range Hydrocarbons		16.9	16.6	17.7	16.1	16.5	15.7	ND	16.0				
C28-C35 Oil Range Hydrocarbons		ND	16.6	ND	16.1	ND	15.7	ND	16.0				
Total TPH		16.9	16.6	17.7	16.1	16.5	15.7	ND	16.0				
TPH by EPA 418.1	*Extracted:*												
	Analyzed:	Apr-09-09 14:32		Apr-09-09 14:32		Apr-09-09 14:32		Apr-09-09 14:32					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
TPH, Total Petroleum Hydrocarbons		ND	11.1	ND	10.7	ND	10.4	ND	10.7				

Brent Barron
Odessa Laboratory Director

Project Id: 8-0164
Contact: Michelle Green
Project Location:

Project Name: XTO Pecos North

Date Received in Lab: Wed Apr-08-09 05:20 pm
Report Date: 13-APR-09
Project Manager: Brent Barron, II

Analysis Requested							
	Lab Id:	329622-007					
	Field Id:	BH-1,40' (48'BGS)					
	Depth:						
	Matrix:	SOIL					
	Sampled:	Apr-08-09 09:45					
Anions by EPA 300	***Extracted:***						
	Analyzed:	Apr-09-09 10:41					
	Units/RL:	mg/kg	RL				
Chloride		330	10.7				
Percent Moisture	***Extracted:***						
	Analyzed:	Apr-09-09 08:45					
	Units/RL:	%	RL				
Percent Moisture		6.94	1.00				

Brent Barron
Odessa Laboratory Director

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

* Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: XTO Vacuum North

Work Orders : 329622,

Project ID: 8-0164

Lab Batch #: 755565 **Sample:** 528142-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/11/09 06:50

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.6	100	100	70-135	
o-Terphenyl	45.2	50.0	90	70-135	

Lab Batch #: 755565 **Sample:** 528142-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/11/09 07:15

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.4	100	99	70-135	
o-Terphenyl	45.7	50.0	91	70-135	

Lab Batch #: 755565 **Sample:** 528142-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/11/09 07:40

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.8	100	88	70-135	
o-Terphenyl	50.2	50.0	100	70-135	

Lab Batch #: 755565 **Sample:** 329622-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/11/09 12:45

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.2	100	87	70-135	
o-Terphenyl	49.7	50.0	99	70-135	

Lab Batch #: 755565 **Sample:** 329622-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/11/09 13:10

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.6	100	86	70-135	
o-Terphenyl	48.8	50.0	98	70-135	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: XTO Vacuum North

Work Orders : 329622,

Project ID: 8-0164

Lab Batch #: 755565 **Sample:** 329622-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/11/09 13:35

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	83.0	100	83	70-135	
o-Terphenyl	47.1	50.0	94	70-135	

Lab Batch #: 755565 **Sample:** 329622-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/11/09 14:00

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.5	100	86	70-135	
o-Terphenyl	48.7	50.0	97	70-135	

Lab Batch #: 755565 **Sample:** 329622-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/11/09 16:52

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	46.5	50.0	93	70-135	

Lab Batch #: 755565 **Sample:** 329622-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/11/09 17:17

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	47.4	50.0	95	70-135	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Xenco Laboratories

Blank Spike Recovery

Project Name: XTO Vacuum North

Work Order #: 329622 **Project ID:** 8-0164

Lab Batch #: 755399 **Sample:** 755399-1-BKS **Matrix:** Solid

Date Analyzed: 04/09/2009 **Date Prepared:** 04/09/2009 **Analyst:** LATCOR

Reporting Units: mg/kg **Batch #:** 1

	BLANK /BLANK SPIKE RECOVERY STUDY					
Anions by EPA 300 **Analytes**	**Blank Result [A]**	**Spike Added [B]**	**Blank Spike Result [C]**	**Blank Spike %R [D]**	**Control Limits %R**	**Flags**
Chloride	ND	10.0	10.6	106	80-120	

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.

XENCO Laboratories

BS / BSD Recoveries

Project Name: XTO Vacuum North

Work Order #: 329622 **Project ID:** 8-0164

Analyst: BEV **Date Prepared:** 04/09/2009 **Date Analyzed:** 04/09/2009

Lab Batch ID: 755401 **Sample:** 755401-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

TPH by EPA 418.1	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
TPH, Total Petroleum Hydrocarbons	ND	2500	2180	87	2500	2210	88	1	65-135	35	

Analyst: BHW **Date Prepared:** 04/10/2009 **Date Analyzed:** 04/11/2009

Lab Batch ID: 755565 **Sample:** 528142-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

TPH By SW8015 Mod	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1000	995	100	1000	980	98	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	950	95	1000	937	94	1	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

XENCO Laboratories

Form 3 - MS Recoveries

Project Name: XTO Vacuum North

Work Order #: 329622
Lab Batch #: 755399
Date Analyzed: 04/09/2009
QC- Sample ID: 329622-001 S
Reporting Units: mg/kg

Project ID: 8-0164
Date Prepared: 04/09/2009
Analyst: LATCOR
Batch #: 1
Matrix: Soil

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	2370	1110	3590	110	80-120	

atrix Spike Percent Recovery [D] = 100*(C-A)/B
lative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: XTO Vacuum North

Work Order # : 329622 **Project ID:** 8-0164

Lab Batch ID: 755401 **QC- Sample ID:** 329622-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/09/2009 **Date Prepared:** 04/09/2009 **Analyst:** BEV

Reporting Units: mg/kg

TPH by EPA 418.1 Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
TPH, Total Petroleum Hydrocarbons	ND	2760	2510	91	2760	2500	91	0	65-135	35	

Lab Batch ID: 755565 **QC- Sample ID:** 329622-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/11/2009 **Date Prepared:** 04/10/2009 **Analyst:** BHW

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1110	1110	100	1110	1120	101	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	16.9	1110	1060	94	1110	1070	95	1	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Sample Duplicate Recovery

Project Name: XTO Vacuum North

Work Order #: 329622

Lab Batch #: 755399 **Project ID:** 8-0164
Date Analyzed: 04/09/2009 **Date Prepared:** 04/09/2009 **Analyst:** LATCOR
QC- Sample ID: 329622-001 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: mg/kg

Anions by EPA 300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	2370	2320	2	20	

Lab Batch #: 755304
Date Analyzed: 04/09/2009 **Date Prepared:** 04/09/2009 **Analyst:** BEV
QC- Sample ID: 329619-001 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	8.51	8.67	2	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

Data Reported to: MICHELLE GREEN

DATE: 4-8-09 PAGE 1 OF 1
PO #: ______ LAB WORK ORDER #: 329622
PROJECT LOCATION OR NAME: XTO VACUUM NORTH
LAI PROJECT #: 8-0164 COLLECTOR: ML + RB

TRRP report? ☐ Yes ☐ No

TIME ZONE: Time zone/State: MST

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

PRESERVATION: HCl | HNO_3 | H_2SO_4 ☐ NaOH ☐ | ICE | UNPRESERVED

ANALYSES: (1) BTEX ☐ MTBE ☐; (2) TRPH 418.1 ☒ TPH 1005 ☐ TPH 1006 ☐; (3) GASOLINE MOD 8015 ☒; (4) DIESEL - MOD 8015 ☒; (5) VOC 8260 ☐; (6) SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐; (7) 8081 PESTICIDES ☐ 8151 HERBICIDES ☐; (8) 8082 PCBS ☐; (9) TCLP - METALS (RCRA) ☐ TCLP VOC ☐; (10) TCLP - PEST ☐ HERB ☐ Semi-VOC ☐; (11) TOTAL METALS (RCRA) ☐ OTHER LIST ☐; (12) LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐; (13) RCI ☐ TOX ☐ FLASHPOINT ☐; (14) TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐; (15) pH ☐ HEXAVALENT CHROMIUM ☐; (16) EXPLOSIVES ☐ PECHLORATE ☐; (17) CHLORIDE ☒ (300.1) ANIONS ☐ ALKALINITY ☐; (18) [blank]; (19) HOLD

	Field Sample I.D.	Lab #	Date (2009)	Time	Matrix	# of Containers	HCl	HNO_3	H_2SO_4/NaOH	ICE	UNPRESERVED	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19) HOLD	FIELD NOTES
01	BH-1, 5' (13' BGS)		4-8	09:00	S	2				X		X	X	X	[scribble]												X				GRAB
02	BH-1, 10' (18' BGS)		↓	0905	↓	↓				X		X	X	X													X				↓
03	BH-1, 15' (23' BGS)		↓	0910	↓	↓				X		X	X	X													X				↓
04	BH-1, 20' (28' BGS)		↓	0915	↓	↓				X		X	X	X													X				↓
05	BH-1, 25' (33' BGS)		↓	0925	↓	↓				X																	X	[scribble]			↓
06	BH-1, 30' (38' BGS)		↓	0935	↓	↓				X																	X				↓
07	BH-1, 40' (48' BGS)		↓	0945	↓	↓				X																	X				↓
08	BH-1, 50' (58' BGS)		↓	1000	↓	↓				X																				X	↓
09	BH-1, 60' (68' BGS)		↓	1012	↓	↓				X																				X	↓
10	BH-1, 70' (78' BGS)		↓	1035	↓	↓				X																				X	↓
11	BH-1, 80' (88' BGS)		↓	1055	↓	↓				X																				X	↓

TOTAL

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
[signature]	4/8/09 5:20P	[signature]	4-8-09 17:20

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 4.0 THERM #: ______
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☒ NOT USED
☐ CARRIER BILL # ______
☒ HAND DELIVERED 4 oz glass

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

ient: Larson & Associates

Date/ Time: 04-08-09 @ 1720

ab ID # : 329622

Initials: AL

Sample Receipt Checklist

				Client Initials
1 Temperature of container/ cooler?	(Yes)	No	4.0 °C	
2 Shipping container in good condition?	(Yes)	No		
#3 Custody Seals intact on shipping container/ cooler?	Yes	No	(Not Present)	
4 Custody Seals intact on sample bottles/ container?	Yes	No	(Not Present)	
5 Chain of Custody present?	(Yes)	No		
#6 Sample instructions complete of Chain of Custody?	(Yes)	No		
7 Chain of Custody signed when relinquished/ received?	(Yes)	No		
8 Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9 Container label(s) legible and intact?	(Yes)	No	Not Applicable	
10 Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
11 Containers supplied by ELOT?	(Yes)	No		
#12 Samples in proper container/ bottle?	(Yes)	No	See Below	
13 Samples properly preserved?	(Yes)	No	See Below	
14 Sample bottles intact?	(Yes)	No		
#15 Preservations documented on Chain of Custody?	(Yes)	No		
16 Containers documented on Chain of Custody?	(Yes)	No		
#17 Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18 All samples received within sufficient hold time?	(Yes)	No	See Below	
#19 Subcontract of sample(s)?	Yes	No	(Not Applicable)	
#20 VOC samples have zero headspace?	(Yes)	No	Not Applicable	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken:

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

Analytical Report 331806

for

Larson & Associates

Project Manager: Michelle Green

XTO-North Vacuum

8-0164

07-MAY-09

12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:
Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX

Florida certification numbers:
Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675
Miramar, FL E86349
Norcross(Atlanta), GA E87429

South Carolina certification numbers:
Norcross(Atlanta), GA 98015

North Carolina certification numbers:
Norcross(Atlanta), GA 483

Houston - Dallas - San Antonio - Tampa - Miami - Latin America
Midland - Corpus Christi - Atlanta

07-MAY-09

Project Manager: **Michelle Green**
Larson & Associates
P.O. Box 50685
Midland, TX 79710

Reference: XENCO Report No: **331806**
XTO-North Vacuum
Project Address: North Water Station

Michelle Green:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 331806. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 331806 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

XENCO Laboratories

Sample Cross Reference 331806

Larson & Associates, Midland, TX

XTO-North Vacuum

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS # 1	S	May-04-09 11:00		331806-001
SS # 2	S	May-04-09 11:15		331806-002

Project Id: 8-0164
Contact: Michelle Green
Project Location: North Water Station

Project Name: TG ...h V ... m

Date Received in Lab: Wed May-06-09 09:40 am
Report Date: 07-MAY-09
Project Manager: Brent Barron, II

Analysis Requested									
	Lab Id:	331806-001		331806-002					
	Field Id:	SS # 1		SS # 2					
	Depth:								
	Matrix:	SOIL		SOIL					
	Sampled:	May-04-09 11:00		May-04-09 11:15					
Anions by EPA 300	***Extracted:***								
	Analyzed:	May-06-09 10:25		May-06-09 10:25					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		48.8	10.4	11.4	5.17				
Percent Moisture	***Extracted:***								
	Analyzed:	May-07-09 08:59		May-07-09 08:59					
	Units/RL:	%	RL	%	RL				
Percent Moisture		4.03	1.00	3.21	1.00				

Brent Barron
Odessa Laboratory Director

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

Xenco Laboratories

Blank Spike Recovery

Project Name: XTO-North Vacuum

Work Order #: 331806 **Project ID:** 8-0164

Lab Batch #: 758095 **Sample:** 758095-1-BKS **Matrix:** Solid

Date Analyzed: 05/06/2009 **Date Prepared:** 05/06/2009 **Analyst:** LATCOR

Reporting Units: mg/kg **Batch #:** 1

	BLANK /BLANK SPIKE RECOVERY STUDY					
Anions by EPA 300 **Analytes**	**Blank Result [A]**	**Spike Added [B]**	**Blank Spike Result [C]**	**Blank Spike %R [D]**	**Control Limits %R**	**Flags**
Chloride	ND	10.0	9.06	91	80-120	

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 3 - MS Recoveries

Project Name: XTO-North Vacuum

Work Order #: 331806
Lab Batch #: 758095
Project ID: 8-0164
Date Analyzed: 05/06/2009
Date Prepared: 05/06/2009
Analyst: LATCOR
QC- Sample ID: 331800-001 S
Batch #: 1
Matrix: Soil
Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	872	1230	2020	93	80-120	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

Sample Duplicate Recovery

Project Name: XTO-North Vacuum

Work Order #: 331806

Lab Batch #: 758095 **Project ID:** 8-0164
Date Analyzed: 05/06/2009 **Date Prepared:** 05/06/2009 **Analyst:** LATCOR
QC- Sample ID: 331800-001 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: mg/kg

Anions by EPA 300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	872	851	2	20	

Lab Batch #: 758121
Date Analyzed: 05/07/2009 **Date Prepared:** 05/07/2009 **Analyst:** BEV
QC- Sample ID: 331800-001 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	18.4	19.6	6	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

Data Reported to: Michelle Green

DATE: 5-6-09 PAGE 1 OF 1
PO #:
LAB WORK ORDER #:
PROJECT LOCATION OR NAME: XTO - North Vacuum North Water Station
LAI PROJECT #: 8-0164 COLLECTOR: RB

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

PRESERVATION: HCl, HNO_3, H_2SO_4 ☐ NaOH ☐, ICE, UNPRESERVED

ANALYSES: BTEX ☐ MTBE ☐ / TRPH 418.1 ☐ TPH 1005 ☐ TPH 1006 ☐ / GASOLINE MOD 8015 ☐ / DIESEL - MOD 8015 ☐ / VOC 8260 ☐ / SVOC 8270 ☐ PAH 8270 ☐ HOLOPAH ☐ / 8081 PESTICIDES ☐ 8151 HERBICIDES ☐ / 8082 PCBS ☐ / TCLP - METALS (RCRA) ☐ TCLP VOC ☐ / TCLP - PEST ☐ HERB ☐ Semi-VOC ☐ / TOTAL METALS (RCRA) ☐ OTHER LIST ☐ / LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐ / RCI ☐ TOX ☐ FLASHPOINT ☐ / TDS ☐ TSS ☐ % MOISTURE ☒ CYANIDE ☐ / pH ☐ HEXAVALENT CHROMIUM ☐ / EXPLOSIVES ☐ PECHLORATE ☐ / CHLORIDE ☒ ANIONS ☐ ALKALINITY ☐

FIELD NOTES: 331806

	Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	Unpreserved	% Moisture	Chloride	Field Notes
01	SS #1		5-4-09	11:00	S	1	X	X	X	Chloride: 300
02	SS #2		1	11:15	S	1	X	X	X	

TOTAL

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	
[signature]	5/6/09 9:40	Andrea Ham	5/6/09 9:40
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 21.5 THERM #:
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☒ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED Ziplock Bag

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Larson & Assoc.

Date/ Time: 5.6.09 . 9:40

Lab ID # : 331806

Initials: AL

Sample Receipt Checklist

				Client Initials
#1	Temperature of container/ cooler?	(Yes)	No	21.5 °C	
#2	Shipping container in good condition?	(Yes)	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	(Not Present)	
#4	Custody Seals intact on sample bottles/ container?	Yes	No	(Not Present)	
#5	Chain of Custody present?	(Yes)	No		
#6	Sample instructions complete of Chain of Custody?	(Yes)	No		
#7	Chain of Custody signed when relinquished/ received?	(Yes)	No		
#8	Chain of Custody agrees with sample label(s)?	Yes	No	(ID written on Cont./ Lid)	
#9	Container label(s) legible and intact?	Yes	No	(Not Applicable)	
#10	Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#11	Containers supplied by ELOT?	Yes	(No)		
#12	Samples in proper container/ bottle?	(Yes)	No	See Below	
#13	Samples properly preserved?	(Yes)	No	See Below	
#14	Sample bottles intact?	(Yes)	No		
#15	Preservations documented on Chain of Custody?	(Yes)	No		
#16	Containers documented on Chain of Custody?	(Yes)	No		
#17	Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18	All samples received within sufficient hold time?	(Yes)	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	(Not Applicable)	
#20	VOC samples have zero headspace?	Yes	No	(Not Applicable)	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken:

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

APP-D-

Facility Sign

Permanent Pit Prior to Closure Activities

Pit Closure Following Concrete Removal

Another View of Pit Closure Following Concrete Removal

Pit Prepared for Liner Installation

Seaming Liner for Installation

Liner Being Placed into Pit

Backfilling Excavation

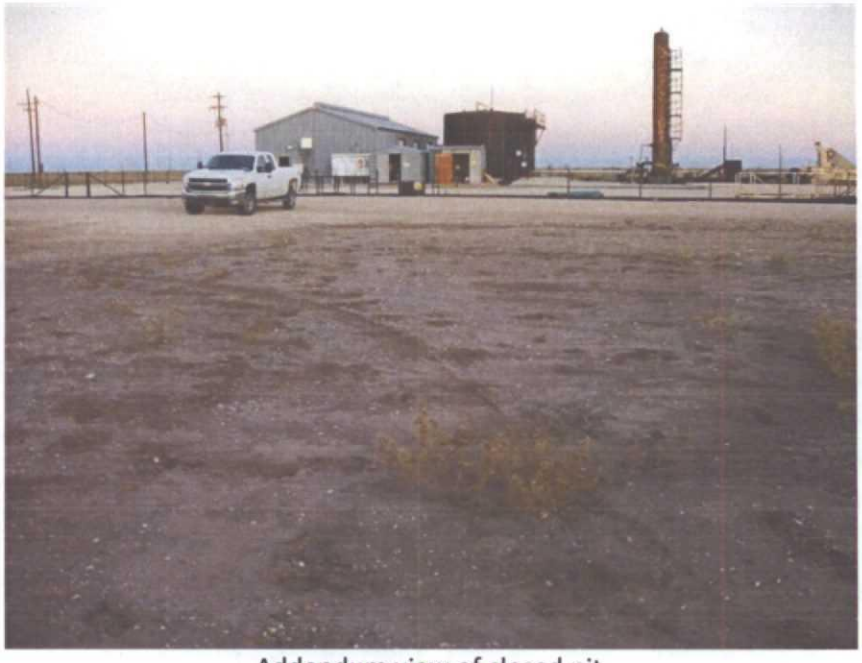
Terraforming Excavation

Growth on Site

Addendum view of closed pit

Addendum view of closed pit

Addendum view of closed pit



Addendum view of closed pit

30-025-29607

Larson & Associates, Inc.
Environmental Consultants

October 9, 2009

Mr. Brad A. Jones, Environmental Engineer
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

RE: Two Final Closure Reports, XTO Energy, Inc. North Vacuum Unit, North Water Station and Vacuum Unit, South Water Station, Lea County, New Mexico

Dear Mr. Jones:

Please find enclosed two Final Closure Reports, one for each of the above referenced sites.

If you have any questions or concerns, please call me at 432.687.0901 to discuss.

Sincerely,

LARSON & ASSOCIATES, INC.

William D. Green, PG No. 136
Texas Licensed Professional Geologist
wgreen@laenvironmental.com

RECEIVED OCD
2009 OCT 13 P 1:17

Enclosure Two Final Closure Reports

CC Mr. Larry Johnson, NM Oil Conservation Division, Hobbs
Mr. Patrick Lyons, NM State Land Office, Santa Fe
Mr. Dudley McMinn, XTO Energy, Midland
Mr. Jerry Parker, XTO Energy, SE New Mexico

Final Closure Report

XTO Energy, Inc.
North Vacuum Abo Unit, North Water Station
Unit F (SE/4, NW/4), Section 14, T17S, R34E
Lea County, NM

Project No. 8-0164

Prepared by:

Larson and Associates, Inc.
507 North Marienfeld Street
Suite 200
Midland, Texas 79701
432.687.0901

October 9, 2009

Table of Contents

Tables

Figures

Appendices

1.0 Executive Summary

The following report documents the final closure of the permanent pit associated with the XTO Energy (XTO) North Vacuum Abo Unit North Water Station (Site) located in Lea County, New Mexico. The legal description of the Site is Unit F (SE/4, NW/4), Section 14, Township 17 South, Range 34 East (Figure 1). The geodetic location is N32° 50' 08.7", W103° 31' 54.3".

Closure activities consisted of notifications to the New Mexico Oil Conservation Division (OCD) and the landowner of record (New Mexico State Land Office), removal and disposal of concrete and soil, the collection of soil samples, OCD issuance of a remediation case number and the subsequent investigation, backfilling and closure of the former pit. Activities were performed in conformance with New Mexico Administrative Code Rule 19.15.17 as amended June 16, 2008 and June 18, 2009.

2.0 Operator Information

Primary Contact:	Mr. Jerry Parker
Address:	XTO Energy Inc., Permian Division – SE New Mexico
	PO Box 700
	Eunice, New Mexico 88231
Office:	575.394.2089
Cell:	575.441.1628
Secondary Contact:	Guy Haykus
Address:	XTO Energy Inc.
	Midland Office
	200 N. Loraine Street, Suite 800
	Midland, Texas 79701
Office:	432.682.8873

3.0 Closure Actions

3.1 Location and Siting Description

The Site has a geodetic location of N32° 50' 08.7", W103° 31' 54.3", and is located in rural Lea County about 13 miles west-southwest of Lovington, New Mexico. The approximately 1.6 acre Site consisted of five above-ground storage tanks, and a concrete-lined permanent pit with an approximate capacity of 3,300 barrels. The Facility is covered with crushed caliche rock and is flat to very gently sloping (Figures 2 and 3).

The Facility's siting criteria presented the following findings:

- Groundwater is about 110 feet below ground surface based on records from the New Mexico State Engineer (NMSE).
- No continuously flowing watercourse is within 300 horizontal feet of the Facility.
- No surface water features, including lakes, rivers, ponds, arroyos, lakebed, sinkhole, or playa lake, are located within 200 horizontal feet of Facility.
- No permanent residence, school, hospital, institution, or church is within 300 horizontal feet of Facility.

- No private, domestic fresh-water well or spring are within 500 horizontal feet of Facility.
- A fresh water well is located within approximately 1000 horizontal feet of the Facility, however, no springs are located within 1000 horizontal feet of Facility.
- The Facility is not located within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance.
- The Facility is not within 500 feet an area designated as wetlands.
- The Facility is not within an area overlying a subsurface mine.
- The Facility is not within an unstable area.
- The Facility is not within a 100-year flood plain.

3.2 Landowner and OCD notifications

A pit closure plan was submitted to the OCD in Santa Fe on December 23, 2008, and signed by the OCD February 4, 2009. A copy of the signed C-144 closure plan is provided in Appendix A. Upon approval of the closure plan and prior to commencing work, notification of closure was sent by XTO to the New Mexico State Land Office (the surface owner) and the OCD. Copies of the notification letters are provided in Appendix B.

3.3 Pit Closure Activities

On March 9, 2009, XTO removed ancillary equipment (i.e. fencing, netting, etc.) for salvage or scrap metal. A track-mounted hammer hoe was used to remove the concrete lining from the pit. Approximately 240 barrels of tank bottoms and 272 cubic yards of concrete and excavated soil were disposed at Controlled Recovery, Inc. (CRI, OCD Permit R9166). Appendix C contains waste manifests for this project.

On March 11 – 12, 2009, Larson & Associates, Inc. (LAI) personnel collected 5-part composite soil samples from the bottom (1BC) and sidewalls (2NC, 3WC, 4EC and 5SC) of the pit excavation following removal of the concrete. Xenco Laboratories analyzed the samples for benzene, toluene, ethylbenzene, xylenes (BTEX) by method 8021B, total petroleum hydrocarbons (TPH) by method 418.1 and chloride by method 300.1.

No benzene or BTEX was reported above OCD limits (0.2 milligrams per kilogram [mg/Kg] for benzene and 50 mg/Kg for BTEX). TPH was detected above the OCD reporting limit (100 mg/kg) in the following composite samples:

- north wall (2NC) – 344 mg/Kg,
- west wall (3WC) – 3,200 mg/Kg,
- east wall (4EC) – 973 mg/Kg, and
- south wall (5SC) – 4,500 mg/Kg.

Chloride exceeded the OCD limit in all samples except 2NC (Table 1). An initial C-141 was submitted to the OCD District 1, Hobbs office (Appendix D) on March 17, 2009, and remediation activities were conducted. The OCD District 1 office issued remediation project number 1RP-09-3-2126.

3.4 Remedial Investigation

XTO delineated the extent of the TPH and excavated the impacted soils beginning March 17, 2009. Between March 19 and 23, 2009, LAI collected additional samples to confirm field delineation. On April 8, 2009, Scarborough Drilling, Inc. installed a soil boring near the bottom center of the pit excavation

(Boring Log presented in Appendix E). Samples were collected using a jam tube sampler and analyzed for TPH (5, 10, 15 and 20 feet) using methods 418.1 and 8015. The laboratory analyzed all samples for chloride. No TPH was reported in the 418.1 samples above the method detection limits. The highest TPH (8015) concentration was 17.7 mg/Kg in the sample from 10 feet. Chloride decreased to 120 mg/Kg in the sample from 50 feet. Table 1 presents a summary of the laboratory analysis.

Based on the soil sample results, XTO requested approval from OCD District 1 to install a 20 mil thick high density polyethylene (HDPE) liner in the bottom of the pit and close the excavation according to the requirements of the closure plan approved by the OCD Santa Fe office. Approval was granted on April 28, 2009. Appendix E presents the initial and final C-141, and photo-documentation of liner installation. An additional 16 cubic yards of soil was removed from the excavation and disposed at CRI. The excavation was closed prior to the final C-141 expiration date (June 28, 2009). Manifests of contaminated soil disposal are presented in Appendix F.

4.0 Conclusion and Recommendation

Based on the documented activities performed in conformance with the permanent pit closure plan, LAI requests approval of final site closure for this Site.

Table 1
Soil Analytical Data Summary
XTO Energy, Inc.
North Vacuum Abo Lease - North Water Station
Unit F (SE/4, NW/4) Sec 14, T17S, R34E
Lea County, New Mexico

Sample ID	Date	Status	Depth (Ft)	Benzene	Toluene	Ethyl benzene	Total Xylenes	Total BTEX	TPH C6-C35	TPH 418.1	Chlorides
Reporting Level:				0.2				50		100	250
1BC	3/12/2009	In-Situ	0 (7)	<0.0011	**0.0034**	**0.0111**	**0.0163**	**0.0308**	--	**1,470**	**947**
	3/19/2009	In-Situ	1 (8)	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010	--	**708**	**1,150**
	3/23/2009	In-Situ	5 (13)	--	--	--	--	--	--	--	**943**
	3/23/2009	In-Situ	10 (18)	--	--	--	--	--	--	--	**1,390**
	3/23/2009	In-Situ	15 (23)	--	--	--	--	--	--	--	**446**
	4/2/2009	In-Situ	20 (28)	--	--	--	--	--	--	--	**772**
2NC	3/11/2009	In-Situ	0 - 1	<0.0011	<0.0022	<0.0011	<0.0011	<0.0011	--	**344**	**70.1**
3WC	3/12/2009	Excavated	0 - 1	**0.0020**	**0.0090**	**0.0217**	**0.0329**	**0.0656**	--	**3,200**	**349**
	3/19/2009	In-Situ	2 - 5	<0.0010	<0.0020	<0.0010	**0.0036**	**0.0036**	--	**4,320**	**419**
4EC	3/11/2009	In-Situ	0 - 1	<0.0011	<0.0021	<0.0011	**0.0024**	**0.0024**	--	**973**	**337**
5SC	3/12/2009	Excavated	0 - 1	<0.0011	<0.0022	**0.0039**	**0.0161**	**0.02**	--	**4,500**	**445**
	3/19/2009	In-Situ	2 - 5	<0.0010	<0.0020	**0.0017**	**0.0029**	**0.0046**	--	**3,200**	**305**
Release Investigation:											
BH-1	4/8/2009	--	5 (13)	--	--	--	--	--	**16.9**	**<11.1**	**2,370**
	4/8/2009	--	10 (18)	--	--	--	--	--	**17.7**	**<10.7**	**111**
	4/8/2009	--	15 (23)	--	--	--	--	--	**16.5**	**<10.4**	**78**
	4/8/2009	--	20 (28)	--	--	--	--	--	**<16.0**	**<10.7**	**428**
	4/8/2009	--	25 (33)	--	--	--	--	--	--	--	**2,190**
	4/8/2009	--	30 (38)	--	--	--	--	--	--	--	**1,720**
	4/8/2009	--	40 (48)	--	--	--	--	--	--	--	**330**
	4/8/2009	--	50 (58)	--	--	--	--	--	--	--	**120**
Replacement Soil:											
SS-1	5/4/2009	--	--	--	--	--	--	--	--	--	**48.8**
SS-2	5/4/2009	--	--	--	--	--	--	--	--	--	**11.4**

Notes

RRAL - Recommended Remediation Action Level

BTEX analyzed via EPA SW Method 8021B.

Total Petroleum Hydrocarbons analyzed via EPA Method 418.1.

All values reported in Milligrams per Kilogram - dry (mg/Kg, parts per million).

Chlorides analyzed via EPA Method 300.

Bold indicates the analyte was detected.

TABLES

FIGURES

JWW

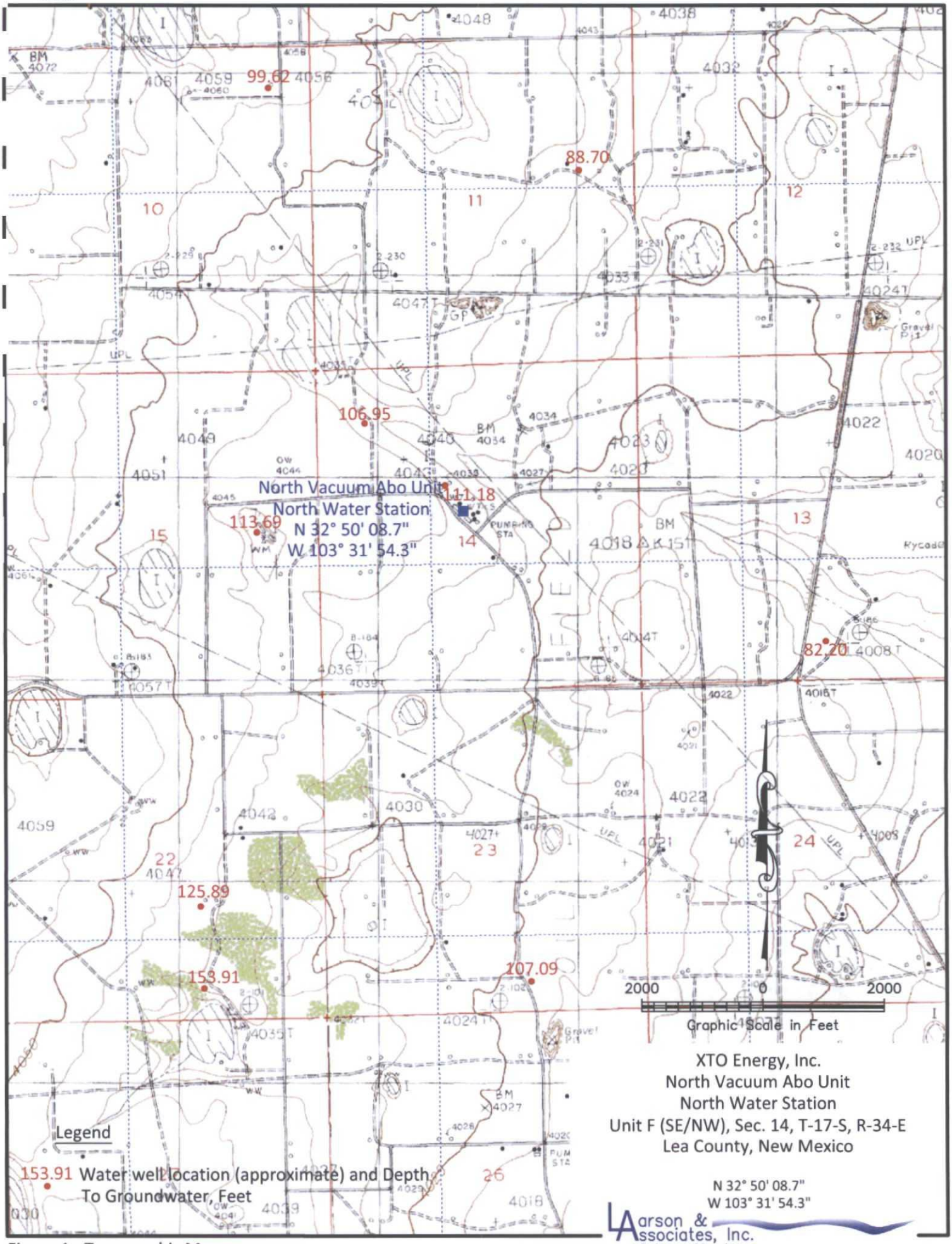


Figure 1 - Topographic Map

JWW

Y:\PROJECTS\XTO ENERGY\8-0164\8-0164\8-0164 NORTH VACUUM ABO NORTH UNIT.dwg, 9/23/2009 11:05:47 AM

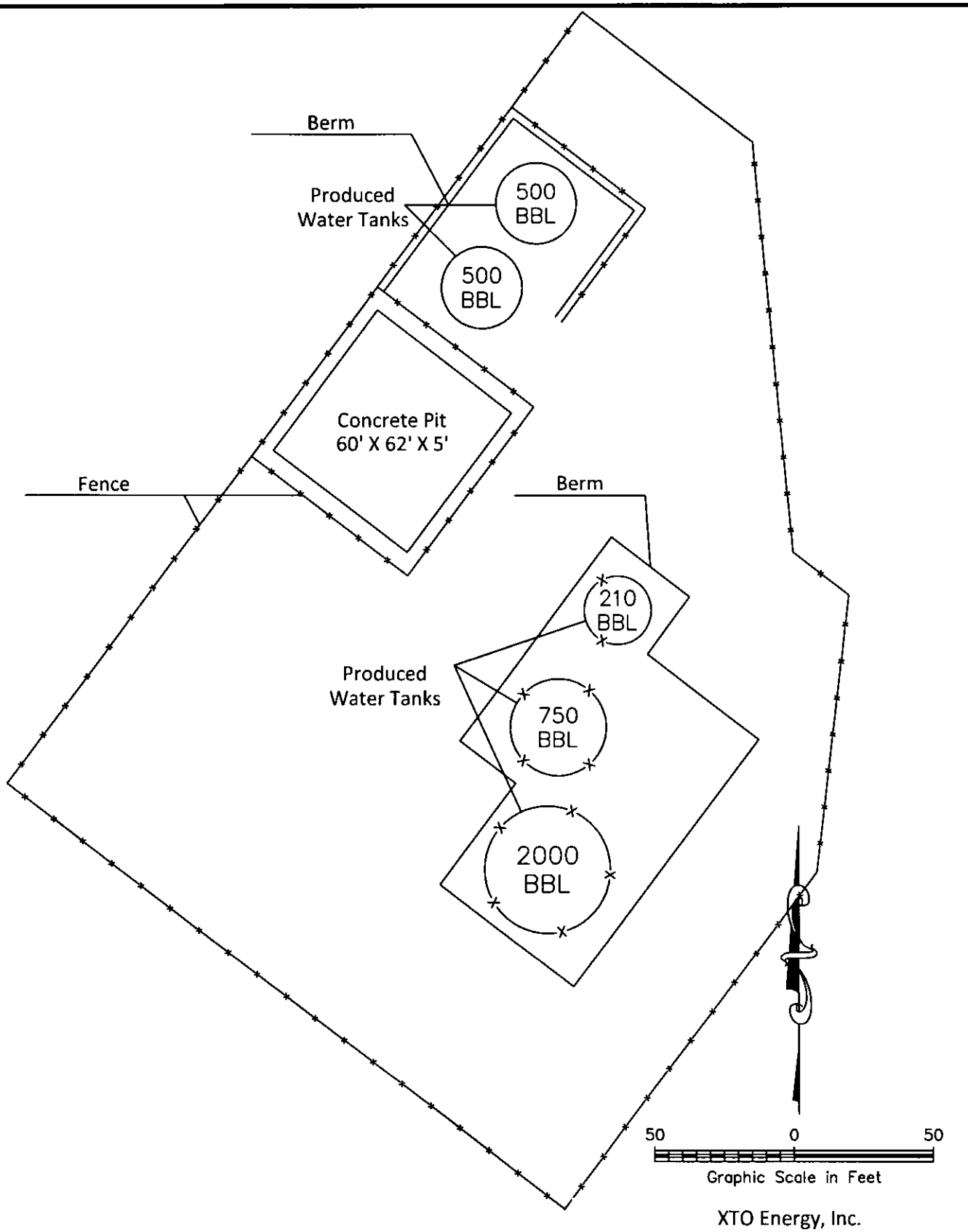
XTO Energy, Inc.
North Vacuum Abo Unit
North Water Station
Unit F (SW/NW), Sec. 14, T-17-S, R-34-E
Lea County, New Mexico

N 32° 50' 08.7"
W 103° 31' 54.3"

Larson & Associates, Inc.
Environmental Consultants

Figure 2 - Aerial

JWW

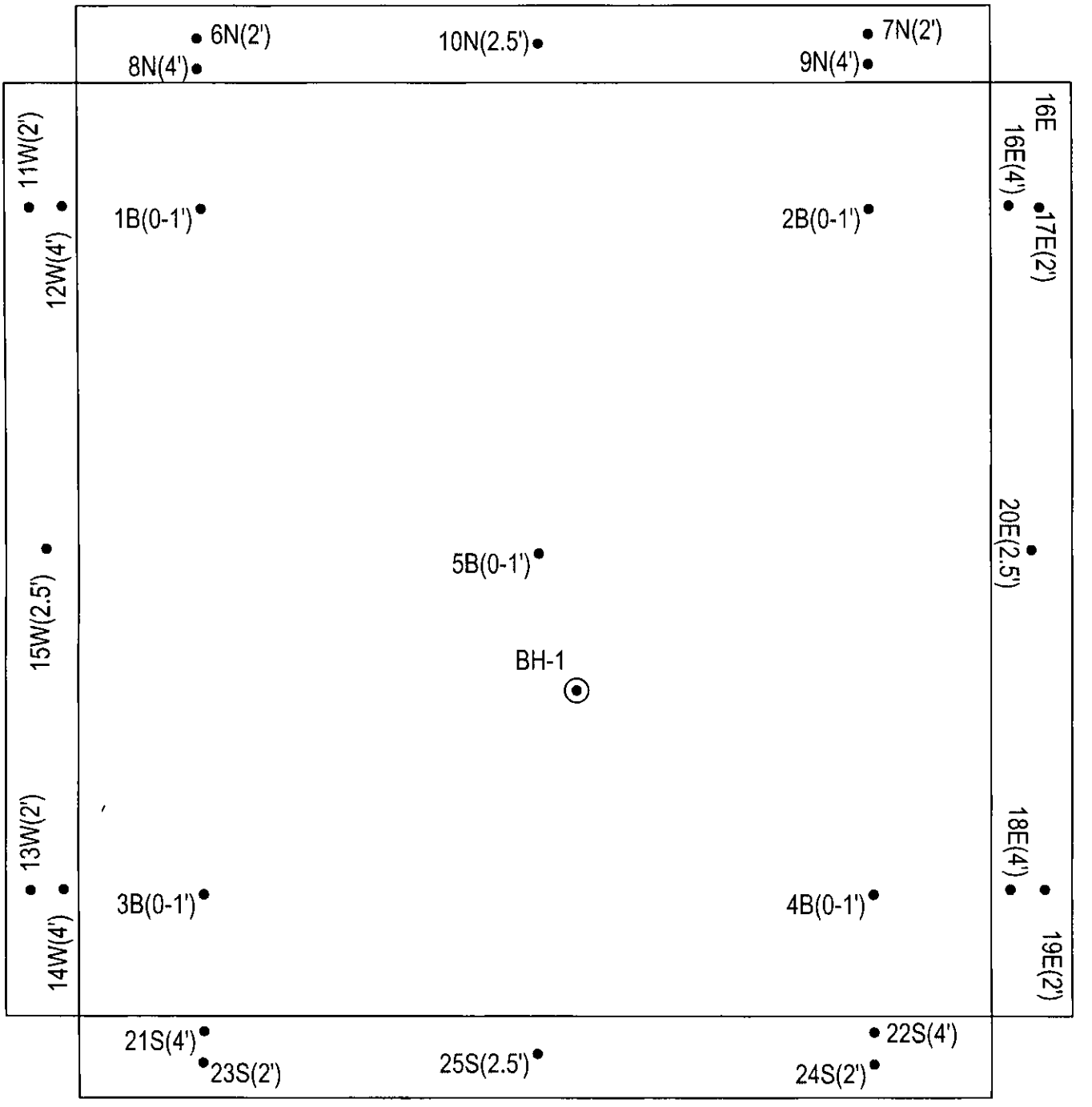


XTO Energy, Inc.
North Vacuum Abo Unit
North Water Station
Unit F (SE/NW), Sec. 14, T-17-S, R-34-E
Lea County, New Mexico

N 32° 50' 08.7"
W 103° 31' 54.3"

Larson & Associates, Inc.
Environmental Consultants

Figure 3 - Site Drawing



Legend

5B(0-1') - Soil Sample Location And Depth, Feet

BH-1 - Soil Boring Location

XTO Energy, Inc.
North Vacuum Abo Unit
North Water Station
Unit F (SE/NW), Sec. 14, T-17-S, R-34-E
Lea County, New Mexico

N 32° 50' 08.7"
W 103° 31' 54.3"

Larson & Associates, Inc.
Environmental Consultants

Figure 4 - Site Drawing

APD-A-

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

lease 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 nvironment. 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 NORTH WATER STATION / ABO WELL NO. 297 (NEAREST WELL)
API Number: 30-025-29607 OCD Permit Number:
U/L or Qtr/Qtr F Section 14 Township 17S Range 34E County: LEA
Center of Proposed Design: Latitude 32° 50' 08.7" Longitude 103° 31' 54.3" 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: 3,300 bbl Dimensions: L 62' 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: _____

APD-B

XTO ENERGY
200 N. Loraine, Ste. 800
Midland, TX 79701

February 18, 2009

Mr. Larry Hill
District Supervisor
New Mexico Oil Conservation Division
1625 N. French Drive
Hobbs, New Mexico 88240

Re: Notice of Pit Closure
XTO Energy, Inc.
North Vacuum Abo Lease – North Water Station
Unit F (SE/4, NW/4), Section 14
Township 17 South, Range 34 East
Lea County, New Mexico

Dear Mr. Hill,

Pursuant to paragraph (3) of Subsection J of 19.15.17.13 NMAC, notice is hereby given to the New Mexico Oil Conservation Division (OCD) by XTO Energy, Inc. (XTO) of its intent to close a permanent pit at the North Vacuum Abo Lease, North Water Station (Facility) beginning on March 9, 2009. The Facility is located in Unit F (SE/4, NW/4), Section 14, Township 17 South, Range 34 East in Lea County, New Mexico. The latitude and longitude is 32° 50' 08.7" north and 103° 31' 54.3" west, respectively. The nearest well is the North Vacuum Abo Lease Well #297 with API #30-025-29607. The closure will be in accordance with a plan meeting the requirements of Paragraphs (1) through (7) of Subsection G of 19.15.17.11 NMAC that was approved by the OCD Environmental Bureau in Santa Fe, New Mexico, on February 4, 2009. Please contact myself at (432) 682-8873 or Mark Larson with Larson & Associates, Inc. at (432) 687-0901, if you have questions.

Sincerely,

XTO Energy, Inc.
Guy Haykus
Production Superintendent

Cc: Mark Larson/Larson & Associates, Inc.
DeeAnn Kemp/XTO Energy Inc/Regulatory and Production Mgr. – Midland
Kristy Ward/XTO Energy Inc/Regulatory Analyst – Midland

XTO ENERGY
200 N. Loraine, Ste. 800
Midland, TX 79701

March 2, 2009

Mr. Patrick Lyons, Commissioner
New Mexico State Land Office
310 Old Santa Fe Trail
Santa Fe, New Mexico 87501

Re: Notice of Pit Closure
XTO Energy, Inc.
North Vacuum Abo Lease – North Water Station
Unit F (SE/4, NW/4), Section 14
Township 17 South, Range 34 East
Lea County, New Mexico

Dear Commissioner Lyons,

Pursuant to paragraph (1) of Subsection J of 19.15.17.13 NMAC, notice is hereby given to the New Mexico State Land Office (SLO), as surface owner of record, by XTO Energy, Inc. (XTO) of its intent to close a permanent pit located at the North Vacuum Abo Lease – North Water Station (Facility) beginning March 9, 2009. The Facility is located in Unit F (SE/4, NW/4), Section 14, Township 17 South, Range 34 East in Lea County, New Mexico. The latitude and longitude is 32° 50' 08.7" north and 103° 31' 54.3" west, respectively. The closure will be performed according to a plan meeting the requirements of Paragraphs (1) through (7) of Subsection G of 19.15.17.11 NMAC that was approved by the New Mexico Oil Conservation Division (OCD) on February 4, 2009. The closure plan may be viewed at the OCD District 1 office located in Hobbs, New Mexico or with the OCD Environmental Bureau in Santa Fe, New Mexico. Please contact myself at (432) 682-8873 or Mark Larson with Larson & Associates, Inc. at (432) 687-0901, if you have questions.

Sincerely,

XTO Energy, Inc.
Guy Haykus
Production Superintendent

Cc: Myra Meyers/SLO Hobbs District
Mark Larson/Larson & Associates, Inc.
DeeAnn Kemp/XTO Energy Inc/Regulatory and Production Mgr. – Midland
Kristy Ward/XTO Energy Inc/Regulatory Analyst - Midland

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Larry Hill
Oil Conservation Division
1625 N. French Dr.
Hobbs, NM 88240

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X ☐ Agent ☐ Addressee

B. Received by (Printed Name) | C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☑ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from) 7007 0220 0002 5082 4221

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Patrick Lyons, Commissioner
New Mexico State Land Office
310 Old Santa Fe Trail
Santa Fe, NM 87501

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X ☐ Agent ☐ Addressee

B. Received by (Printed Name) | C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☑ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from sen 7007 0220 0002 5082 4214

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

New Mexico State Land Office
Myra Meyers
2102 N. Grimes, Ste. D
Hobbs, NM 88240

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X ☐ Agent ☐ Addressee

B. Received by (Printed Name) | C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☑ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

APD-C

P.O. Box Box 388
Hobbs, New Mexico 88241-0388

CONTROLLED RECOVERY, INC
NMOCD Order R9166

(575)393-1079
www.crihobbs.com

Ticket: 23358

Bill To: ~~M & S~~	Lease: NVAU
Company/Generator: XTO	Well: water station
Company Man: dan patmon	~~Rig: na~~
Trucking: M & S	PO: na
Date/Time: 8/25/2009 4:08:25 PM	Driver: rene
	Vehicle: 11

Comments

Type of Materials

Product	Quantity	Area	Description
Tank Bottoms	~~1230~~ 120 Bbls	7	

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

☑ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste.

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items):

☐ MSDS Information ☐ RCRA Hazardous Waste Analyis ☐ Process Knowledge ☐ Other (Provide description above)

Driver/Agent (signature)

CRI Rep (signature)

Tank Bottoms

	Feet	Inches			
1st Gauge			BS & W/BBLS Received	120	BS & W 100 %
2nd Gauge			Free Water		
Received			Total Received	120	

P.O. Box Box 388
Hobbs, New Mexico 88241-0388

CONTROLLED RECOVERY, INC
NMOCD Order R9166

(575)393-1079
www.crihobbs.com

Ticket: 23333

Bill To: ~~M & S~~	Lease: NVAU
Company/Generator: XTO	Well: north water station
Company Man: dan pattman	Rig: na
Trucking: M & S	PO: nana
Date/Time: 8/25/2009 2:35:10 PM	Driver: travis
	Vehicle: 9

Comments

Type of Materials

Product	Quantity		Area	Description
Tank Bottoms	120	Bbls	7	

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

☑ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste.

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. *The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items):*

☐ MSDS Information ☐ RCRA Hazardous Waste Analyis ☐ Process Knowledge ☐ Other (Provide description above)

Driver/Agent (signature) CRI Rep (signature)

Tank Bottoms

	Feet	Inches			
1st Gauge			BS & W/BBLS Received	120	BS & W 100 %
2nd Gauge			Free Water		
Received			Total Received	120	

V-11920

Invoice

Controlled Recovery Inc.
4507 W Carlsbad Highway
PO Box 388
Hobbs NM 88240
United States
505-393-1079

REC'D/MIDLAND
MAR 20 2009

Date	3/17/2009
Invoice #	64005
Terms	Net 30
Due Date	4/16/2009
PO #	
Generator	XTO
Memo	
Lease	BRIDGES STATE
Well	
Rig	
Company Man	D=3-16-09

Bill To
XTO ENERGY INC
200 N LORRAINE STREET
SUITE 800
MIDLAND TX 79701-4754
United States

Contaminated Soil	16	18.00	288.00	215313	3/11/2009	Ocotillo Environmental, LLC
Contaminated Soil	16	18.00	288.00	215263	3/11/2009	Ocotillo Environmental, LLC
Contaminated Soil	16	18.00	288.00	215300	3/11/2009	Ocotillo Environmental, LLC
Contaminated Soil	16	18.00	288.00	215314	3/11/2009	Ocotillo Environmental, LLC
Contaminated Soil	16	18.00	288.00	215455	3/12/2009	Ocotillo Environmental, LLC
Contaminated Soil	16	18.00	288.00	215457	3/12/2009	Ocotillo Environmental, LLC
Contaminated Soil	16	18.00	288.00	215456	3/12/2009	Ocotillo Environmental, LLC
Contaminated Soil	16	18.00	288.00	215491	3/12/2009	Ocotillo Environmental, LLC
Contaminated Soil	16	18.00	288.00	215626	3/13/2009	Ocotillo Environmental, LLC
Contaminated Soil	16	18.00	288.00	215624	3/13/2009	Ocotillo Environmental, LLC
Contaminated Soil	16	18.00	288.00	215625	3/13/2009	Ocotillo Environmental, LLC
Contaminated Soil	16	18.00	288.00	215627	3/13/2009	Ocotillo Environmental, LLC
Contaminated Soil	16	18.00	288.00	215694	3/13/2009	Ocotillo Environmental, LLC
Contaminated Soil	16	18.00	288.00	215918	3/16/2009	Ocotillo Environmental, LLC
Contaminated Soil	16	18.00	288.00	215924	3/16/2009	Ocotillo Environmental, LLC
Contaminated Soil	16	18.00	288.00	215950	3/16/2009	Ocotillo Environmental, LLC
Contaminated Soil	16	18.00	288.00	215936	3/19/2009	Ocotillo Environmental, LLC
Contaminated Soil	16	18.00	288.00	215963	3/19/2009	Ocotillo Environmental, LLC

Subtotal	5,184.00
Tax (NM Sales Tax 5.375%)	278.64
Total	$5,462.64

TOPAX

NVA NORTH WATER STATION
AFE # 900436-113253

ONTROLLED RECOVERY, IN

P.O. Box 388 • Hobbs, New Mexico 88241-0388 • (575) 393-1079 • www.crihobbs.com

NMOCD Order R9166

Bill to _____

Address _____

Company/Generator XTO

Lease Name Bridges State

Trucking Company	Vehicle Number	Driver (Print)
Crotillo	1109	EDMOND

Date 3-11-09 Time 1:15 a.m. / ~~p.m.~~

Type of Material

☐ Fluids ☐ Soils

☐ Tank Bottoms ☑ ~~Other~~ Material *(List Description Below)* Receiving Area SO-57

DESCRIPTION Soil - Caliche

Volume of Material ☐ Bbls. _____ ☑ ~~Yard~~ 16 ☐ Gallons _____

☐ Wash Out ☐ Call Out ☐ After Hours ☐ Debris Charge

GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☑ ~~RCRA~~ Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste.

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description above)

☐ CRI Approval # _____

Agent Edmond Ortiz
(Signature)

CRI Representative Ron Martinez
(Signature)

TANK BOTTOMS

	Feet	Inches			
1st Gauge			BS&W/BBLS Received		BS&W %
2nd Gauge			Free Water		
Received			Total Received		

215313

Form C138

White - CRI Canary - CRI Accounting Pink - CRI Plant Gold - Transporter

THE COLOR PRINTER - #7521

CONTROLLED RECOVERY, INC.

P.O. Box 388 • Hobbs, New Mexico 88241-0388 • (575) 393-1079 • www.crihobbs.com

NMOCD Order R9166

Bill to _____

Address _____

Company/Generator XTO

Lease Name Bridges STATE

Trucking Company Ocotillo | Vehicle Number 1109 | Driver (Print) Edmond

Date 3-11-09 | Time 10:12 a.m./p.m.

Type of Material

☐ Fluids ☐ Soils

☐ Tank Bottoms ☒ ~~Other~~ Material *(List Description Below)* Receiving Area 50-51

DESCRIPTION soil Caliche

Volume of Material ☐ Bbls. _____ ☑ Yard 16 ☐ Gallons _____

☐ Wash Out ☐ Call Out ☐ After Hours ☐ Debris Charge

GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☒ ~~RCRA~~ Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste.

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description above)

☐ CRI Approval # _____

Agent Edmond O Hay
(Signature)

CRI Representative _____
(Signature)

TANK BOTTOMS

	Feet	Inches			
1st Gauge			BS&W/BBLS Received		BS&W %
2nd Gauge			Free Water		
Received			Total Received		

215263

Form C138

White - CRI | Canary - CRI Accounting | Pink - CRI Plant | Gold - Transporter

THE COLOR PRINTER - #7521

ONTROLLED RECOVERY, IN

P.O. Box 388 • Hobbs, New Mexico 88241-0388 • (575) 393-1079 • www.crihobbs.com

NMOCD Order R9166

Bill to _____

Address _____

Company/Generator XTO

Lease Name Bridges St

Trucking Company Dot. Llo | Vehicle Number 1109 | Driver (Print) EDMOND

Date 3-11-08 | Time 11:45 (a.m.) p.m.

Type of Material

☐ Fluids ☐ Soils

☐ Tank Bottoms ☐ Other Material *(List Description Below)* Receiving Area 50-51

DESCRIPTION Soil - Concrete

Volume of Material ☐ Bbls. _____ ☐ Yard 15 ☐ Gallons _____

☐ Wash Out ☐ Call Out ☐ After Hours ☐ Debris Charge

GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste.

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261:21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description above)

☐ CRI Approval # _____

Agent Edmond Dyer (Signature)

CRI Representative _____ (Signature)

TANK BOTTOMS

	Feet	Inches				
1st Gauge			BS&W/BBLS Received		BS&W	%
2nd Gauge			Free Water			
Received			Total Received			

215300

Form C138

White - CRI | Canary - CRI Accounting | Pink - CRI Plant | Gold - Transporter

THE COLOR PRINTER - #7521

CONTROLLED RECOVERY, INC

P.O. Box 388 • Hobbs, New Mexico 88241-0388 • (575) 393-1079 • www.crihobbs.com

NMOCD Order R9166

Bill to _____

Address _____

Company/Generator XTO

Lease Name Bridges State

Trucking Company	Vehicle Number	Driver (Print)
Ocotillo	1109	Edmonds

Date 3-11-09 Time 300 a.m. / p.m.

Type of Material

☐ Fluids ☐ Soils

☐ Tank Bottoms ☒ ~~Other~~ Material *(List Description Below)* Receiving Area 50-51

DESCRIPTION Soil - Caliche

Volume of Material ☐ Bbls. _____ ☒ ~~Yard~~ 16 ☐ Gallons _____

☐ Wash Out ☐ Call Out ☐ After Hours ☐ Debris Charge

GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☑ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste.

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description above)

☐ CRI Approval # _____

Agent Edmond Odom (Signature)

RI Representative _____ (Signature)

TANK BOTTOMS

	Feet	Inches				
1st Gauge			BS&W/BBLS Received		BS&W	%
2nd Gauge			Free Water			
Received			Total Received			

215314

Form C138

White - CRI Canary - CRI Accounting Pink - CRI Plant Gold - Transporter

THE COLOR PRINTER - #7521

ONTROLLED RECOVERY, IN

P.O. Box 388 • Hobbs, New Mexico 88241-0388 • (575) 393-1079 • www.crihobbs.com

NMOCD Order R9166

Bill to _____

Address _____

Company/Generator XTO

Lease Name Bridges State

Trucking Company Ocotillo | Vehicle Number 1105 | Driver (Print) EDMOND

Date 3-12-09 | Time 8:03 a.m. / p.m.

Type of Material

☐ Fluids ☐ Soils

☐ Tank Bottoms ☐ Other Material *(List Description Below)* Receiving Area SO. ST

DESCRIPTION Cav/So. 1

Volume of Material ☐ Bbls. _____ ☑ Yard 16 ☐ Gallons _____

☐ Wash Out ☐ Call Out ☐ After Hours ☐ Debris Charge

GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☑ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste.

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description above)

☐ CRI Approval# _____

Agent Edmond Dixon (Signature)

CRI Representative _____ (Signature)

TANK BOTTOMS

	Feet	Inches			
1st Gauge			BS&W/BBLS Received		BS&W %
2nd Gauge			Free Water		
Received			Total Received		

215455

Form C138

White - CRI | Canary - CRI Accounting | Pink - CRI Plant | Gold - Transporter

THE COLOR PRINTER · #7521

CONTROLLED RECOVERY, INC.

P.O. Box 388 • Hobbs, New Mexico 88241-0388 • (575) 393-1079 • www.crihobbs.com

NMOCD Order R9166

Bill to _____

Address _____

Company/Generator XTO

Lease Name Bridges State

Trucking Company Scarbrough	Vehicle Number 1109	Driver (Print) EDMOND
Date 3-12-09	Time 4:00	a.m./p.m.

Type of Material

☐ Fluids ☐ Soils

☐ Tank Bottoms ☐ Other Material *(List Description Below)* Receiving Area SD-51

DESCRIPTION Tank Soil

Volume of Material ☐ Bbls. _____ ☐ Yard 16 ☐ Gallons _____

☐ Wash Out ☐ Call Out ☐ After Hours ☐ Debris Charge

GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☑ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste.

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description above)

☐ CRI Approval # _____

Agent Edmond Ortiz
(Signature)

CRI Representative _____
(Signature)

TANK BOTTOMS

	Feet	Inches			
1st Gauge			BS&W/BBLS Received		BS&W %
2nd Gauge			Free Water		
Received			Total Received		

215457

Form C138

White - CRI Canary - CRI Accounting Pink - CRI Plant Gold - Transporter

THE COLOR PRINTER - #7521

CONTROLLED RECOVERY, INC.

P.O. Box 388 • Hobbs, New Mexico 88241-0388 • (575) 393-1079 • www.crihobbs.com

NMOCD Order R9166

Bill to _____

Address _____

Company/Generator XTO

Lease Name Bridges STATE

Trucking Company	Vehicle Number	Driver (Print)
Dee-Hill	1109	EDMond

Date 5-12-09 Time 1:00 a.m./p.m.

Type of Material

☐ Fluids ☑ Soils

☐ Tank Bottoms ☐ Other Material *(List Description Below)* Receiving Area 50-51

DESCRIPTION East Soil

Volume of Material ☐ Bbls. _____ ☐ Yard 16 ☐ Gallons _____

☐ Wash Out ☐ Call Out ☐ After Hours ☐ Debris Charge

GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☑ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste.

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description above)

☐ CRI Approval # _____

Agent Edmond Dyson (Signature)

CRI Representative _____ (Signature)

TANK BOTTOMS

	Feet	Inches				
1st Gauge			BS&W/BBLS Received		BS&W	%
2nd Gauge			Free Water			
Received			Total Received			

215456

Form C138

White - CRI Canary - CRI Accounting Pink - CRI Plant Gold - Transporter

THE COLOR PRINTER - #7521

ONTROLLED RECOVERY, IN

P.O. Box 388 • Hobbs, New Mexico 88241-0388 • (575) 393-1079 • www.crihobbs.com

NMOCD Order R9166

Bill to _____

Address _____

Company/Generator XTO

Lease Name Bridges State

Trucking Company Octillo	Vehicle Number 1109	Driver (Print) EDMonds
Date 3-12-09	Time 11:20	a.m. p.m.

Type of Material

☐ Fluids ~~☐ Soils~~

☐ Tank Bottoms ☐ Other Material *(List Description Below)* Receiving Area 50-51

DESCRIPTION Cut. Soil

Volume of Material ☐ Bbls. _____ ☐ ~~Yard~~ 16 ☐ Gallons _____

☐ Wash Out ☐ Call Out ☐ After Hours ☐ Debris Charge

GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste.

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description above)

☐ CRI Approval # _____

Agent Edward Dalton
(Signature)

CRI Representative Dan Martinez
(Signature)

TANK BOTTOMS

	Feet	Inches			
1st Gauge			BS&W/BBLS Received		BS&W %
2nd Gauge			Free Water		
Received			Total Received		

215491

Form C138

White - CRI Canary - CRI Accounting Pink - CRI Plant Gold - Transporter

THE COLOR PRINTER - #7521

CONTROLLED RECOVERY, INC.

P.O. Box 388 • Hobbs, New Mexico 88241-0388 • (575) 393-1079 • www.crihobbs.com

NMOCD Order R9166

Bill to _____

Address _____

Company/Generator XTO

Lease Name Bridges State

Trucking Company Dcotello | Vehicle Number 1109 | Driver (Print) EDmond

Date 3-13-09 | Time 920 ~~a.m./~~ p.m.

Type of Material

☐ Fluids ☑ Soils

☐ Tank Bottoms ☐ Other Material *(List Description Below)* Receiving Area 50-51

DESCRIPTION Cont. Soil

Volume of Material ☐ Bbls. _____ ☑ Yard 16 ☐ Gallons _____

☐ Wash Out ☐ Call Out ☐ After Hours ☐ Debris Charge

GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ ~~RCRA~~ Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste.

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous: (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description above)

☐ CRI Approval # _____

Agent Edmond D Mon (Signature)

CRI Representative _____ (Signature)

TANK BOTTOMS

	Feet	Inches			
1st Gauge			BS&W/BBLS Received		BS&W %
2nd Gauge			Free Water		
Received			Total Received		

215626

Form C138

White - CRI Canary - CRI Accounting Pink - CRI Plant Gold - Transporter

THE COLOR PRINTER - #7521

CONTROLLED RECOVERY, INC.

P.O. Box 388 • Hobbs, New Mexico 88241-0388 • (575) 393-1079 • www.crihobbs.com

NMOCD Order R9166

Bill to ______

Address ______

Company/Generator XTO

Lease Name Bridges State

Trucking Company Ocotillo | Vehicle Number 1109 | Driver (Print) EDMOND

Date 3-13-09 | Time 8:00 a.m./p.m.

Type of Material

☐ Fluids ☑ Soils

☐ Tank Bottoms ☐ Other Material *(List Description Below)* Receiving Area 50-51

DESCRIPTION Cont Soil

Volume of Material ☐ Bbls. ______ ☑ Yard 10 ☐ Gallons ______

☐ Wash Out ☐ Call Out ☐ After Hours ☐ Debris Charge

GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☑ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste.

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☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description above)

☐ CRI Approval # ______

Agent Edmond O[illegible] (Signature)

CRI Representative [signature] (Signature)

TANK BOTTOMS

	Feet	Inches			
1st Gauge			BS&W/BBLS Received		BS&W %
2nd Gauge			Free Water		
Received			Total Received		

215624

Form C138

White - CRI Canary - CRI Accounting Pink - CRI Plant Gold - Transporter

THE COLOR PRINTER • #7521

CONTROLLED RECOVERY, INC.

P.O. Box 388 • Hobbs, New Mexico 88241-0388 • (575) 393-1079 • www.crihobbs.com

NMOCD Order R9166

Bill to
Address

Company/Generator XTO
Lease Name Bridges STATE
Trucking Company Ocotillo | Vehicle Number 1109 | Driver (Print) EDMOND
Date 3-13-09 | Time 11:41 a.m. / p.m.

Type of Material

☐ Fluids ☒ Soils
☐ Tank Bottoms ☐ Other Material *(List Description Below)* Receiving Area 50-51

DESCRIPTION Cont. Soil

Volume of Material ☐ Bbls. ☒ Yard 16 ☐ Gallons
☐ Wash Out ☐ Call Out ☐ After Hours ☐ Debris Charge

GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

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☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description above)

☐ CRI Approval #

Agent Edmond Dixon
(Signature)

CRI Representative [signature]
(Signature)

TANK BOTTOMS

	Feet	Inches			
1st Gauge			BS&W/BBLS Received		BS&W %
2nd Gauge			Free Water		
Received			Total Received		

215625

Form C138

White - CRI Canary - CRI Accounting Pink - CRI Plant Gold - Transporter

THE COLOR PRINTER - #7521

CONTROLLED RECOVERY, INC.

P.O. Box 388 • Hobbs, New Mexico 88241-0388 • (575) 393-1079 • www.crihobbs.com

NMOCD Order R9166

Bill to _____

Address _____

Company/Generator XTO

Lease Name Bridges State

Trucking Company Orotiko | Vehicle Number 1109 | Driver (Print) Edmond

Date 3-13-09 | Time 10:46 a.m. / p.m.

Type of Material

☐ Fluids ☐ Soils

☐ Tank Bottoms ☐ Other Material *(List Description Below)* Receiving Area 50-57

DESCRIPTION Cmp Sol

Volume of Material ☐ Bbls. _____ ☐ Yard 16 ☐ Gallons _____

☐ Wash Out ☐ Call Out ☐ After Hours ☐ Debris Charge

GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

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☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description above)

☐ CRI Approval # _____

Agent Edmond Dipon
(Signature)

CRI Representative Rene Martinez
(Signature)

TANK BOTTOMS

	Feet	Inches			
1st Gauge			BS&W/BBLS Received		BS&W %
2nd Gauge			Free Water		
Received			Total Received		

215627

Form C138

White - CRI Canary - CRI Accounting Pink - CRI Plant Gold - Transporter

THE COLOR PRINTER - #7521

CONTROLLED RECOVERY, INC.

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NMOCD Order R9166

Bill to _____

Address _____

Company/Generator XTO

Lease Name ~~WARREN~~ Bridges State

Trucking Company Ocotillo | Vehicle Number 1109 | Driver (Print) EDmund

Date 3-13-09 | Time 2:29 a.m./p.m.

Type of Material

☐ Fluids ☐ ~~Soils~~

☐ Tank Bottoms ☐ Other Material *(List Description Below)* Receiving Area 550-51

DESCRIPTION Cont. Soil

Volume of Material ☐ Bbls. _____ ☐ ~~Yard~~ 16 ☐ Gallons _____

☐ Wash Out ☐ Call Out ☐ After Hours ☐ Debris Charge

GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

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☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description above)

☐ CRI Approval # _____

Agent Edmond Dutton
(Signature)

CRI Representative Reno Martinez
(Signature)

TANK BOTTOMS

	Feet	Inches			
1st Gauge			BS&W/BBLS Received		BS&W %
2nd Gauge			Free Water		
Received			Total Received		

215694

Form C138

White - CRI | Canary - CRI Accounting | Pink - CRI Plant | Gold - Transporter

THE COLOR PRINTER - #7521

CONTROLLED RECOVERY, INC.

P.O. Box 388 • Hobbs, New Mexico 88241-0388 • (575) 393-1079 • www.crihobbs.com

NMOCD Order R9166

Bill to _____

Address _____

Company/Generator XTO

Lease Name BRIDGES STATE

Trucking Company OCOTILLO | Vehicle Number 1169 | Driver (Print) EDMUNDO

Date 3-16-09 | Time 8:05 a.m. / p.m.

Type of Material

☐ Fluids ☒ Soils

☐ Tank Bottoms ☐ Other Material *(List Description Below)* Receiving Area 50/67

DESCRIPTION

CONTRACT

Volume of Material ☐ Bbls. ☒ Yard 16 ☐ Gallons

☐ Wash Out ☐ Call Out ☐ After Hours ☐ Debris Charge

GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

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☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description above)

☐ CRI Approval # _____

Agent _____ (Signature) Edmundo Ugm

CRI Representative _____ (Signature)

TANK BOTTOMS

	Feet	Inches			
1st Gauge			BS&W/BBLS Received		BS&W %
2nd Gauge			Free Water		
Received			Total Received		

215918

Form C138

White - CRI | Canary - CRI Accounting | Pink - CRI Plant | Gold - Transporter

THE COLOR PRINTER - #7521

CONTROLLED RECOVERY, INC.

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NMOCD Order R9166

Bill to ______________________

Address ______________________

Company/Generator X · T O Stoon

Lease Name BRIDGES STATE

Trucking Company OCOTILLO | Vehicle Number 1109 | Driver (Print) EDMOND

Date 3-16-09 | Time 9:40 (a.m.) / p.m.

Type of Material

☐ Fluids ☒ Soils

☐ Tank Bottoms ☐ Other Material *(List Description Below)* *Receiving Area 50/57

DESCRIPTION

CEMENT

Volume of Material ☐ Bbls. ______ ☒ Yard 16 ______ ☐ Gallons ______

☐ Wash Out ☐ Call Out ☐ After Hours ☐ Debris Charge

GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

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☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description above)

☐ CRI Approval # ______

Agent Edmond Diaz (Signature)

CRI Representative [signature] (Signature)

TANK BOTTOMS

	Feet	Inches			
1st Gauge			BS&W/BBLS Received		BS&W %
2nd Gauge			Free Water		
Received			Total Received		

215924

Form C138

White - CRI Canary - CRI Accounting Pink - CRI Plant Gold - Transporter

THE COLOR PRINTER - #7521

CONTROLLED RECOVERY, INC.

P.O. Box 388 • Hobbs, New Mexico 88241-0388 • (575) 393-1079 • www.crihobbs.com

NMOCD Order R9166

Bill to _____

Address _____

Company/Generator XTO

Lease Name BRADLEY ST BRIDGES

Trucking Company OCOTILLO | Vehicle Number 1104 | Driver (Print) E DIMAS

Date 3-16-09 | Time 12:45 a.m. / p.m.

Type of Material

☐ Fluids ☒ Soils

☐ Tank Bottoms ☐ Other Material *(List Description Below)* Receiving Area 50/57

DESCRIPTION

CUTTINGS

Volume of Material ☐ Bbls. ☒ Yard 16 ☐ Gallons

☐ Wash Out ☐ Call Out ☐ After Hours ☐ Debris Charge

GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

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☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description above)

☐ CRI Approval # _____

Agent Edmond A Dimas
(Signature)

CRI Representative _____
(Signature)

TANK BOTTOMS

	Feet	Inches			
1st Gauge			BS&W/BBLS Received		BS&W %
2nd Gauge			Free Water		
Received			Total Received		

215950

Form C138

White - CRI | Canary - CRI Accounting | Pink - CRI Plant | Gold - Transporter

THE COLOR PRINTER - #7521

CONTROLLED RECOVERY, INC.

P.O. Box 388 • Hobbs, New Mexico 88241-0388 • (575) 393-1079 • www.crihobbs.com

NMOCD Order R9166

Bill to _____

Address _____

Company/Generator XTO

Lease Name BRADLEY ST DRAGES

Trucking Company OCOTILLO | Vehicle Number 1109 | Driver (Print) EDMUNDO

Date 3-16-09 | Time 2:20 a.m. / (p.m.)

Type of Material

☐ Fluids ☒ Soils

☐ Tank Bottoms ☐ Other Material *(List Description Below)* Receiving Area 50/57

DESCRIPTION

CONCRETE

Volume of Material ☐ Bbls. ☒ Yard 16 ☐ Gallons

☐ Wash Out ☐ Call Out ☐ After Hours ☐ Debris Charge

GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

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☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description above)

☐ CRI Approval # _____

Agent Edmundo Luna (Signature)

CRI Representative _____ (Signature)

TANK BOTTOMS

	Feet	Inches			
1st Gauge			BS&W/BBLS Received		BS&W %
2nd Gauge			Free Water		
Received			Total Received		

215963

Form C138

White - CRI | Canary - CRI Accounting | Pink - CRI Plant | Gold - Transporter

THE COLOR PRINTER - #7521

APD - D-

RECEIVED
APR 27 2009
HOBBSOCD

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

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: XTO Energy, Inc.	Contact Guy Haykus, Production Supervisor
Address: 200 N Loraine Street, Suite 800, Midland, TX 79701	Telephone No.: 432-682-8873
Facility Name: North Vacuum Abo Lease – North Water Station	Facility Type: Produced Water Injection Station

Surface Owner: NM State Land Office	Mineral Owner	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County:
F	14	17 S	34E					Lea

Latitude N32° 50' 08.7" Longitude 103° 3' 54.3"

NATURE OF RELEASE

Type of Release: Crude Oil	Volume of Release: Unknown	Volume Recovered: None
Source of Release: Permanent Pit (agreed scheduling order closure)	Date and Hour of Occurrence: Unknown	Date and Hour of Discovery: 03/16/09 3:00 pm CST
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Release from bottom of concrete-lined permanent pit discovered during closure in accordance with a plan approved by OCD Environmental Bureau personnel in Santa Fe on February 4, 2009. Removed concrete lining pit for disposal at OCD approved disposal facility (Controlled Recovery, Inc.). Propose to excavate contaminated soil for disposal at same disposal facility.

Describe Area Affected and Cleanup Action Taken.*
Contamination discovered in composite soil samples collected from five (5) areas showing staining on the side walls and below the pit. Contamination appears limited to immediate area of soil staining and will be excavated to delineate extent of release.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:

Printed Name: Michelle L Green

Title: Environmental Scientist

E-mail Address: michelle@laenvironmental.com

Date: 3/17/09 Phone: 432-687-0901

OIL CONSERVATION DIVISION

Approved by District Supervisor: ENVIRONMENTAL ENGINEER

Approval Date: 4-28-09 Expiration Date:

Conditions of Approval:

Attached ☐
1RP# 09-3-2126

APD - E -

RECEIVED
APR 27 2009
HOBBSOCD

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

ne of Company: XTO Energy, Inc.	Contact: Guy Haykus/Production Superintendent
lress: 200 N. Loraine St., Ste. 800, Midland, TX 79701	Telephone No.: (432) 682-8873
ility Name: th Vacuum Abo Lease - South Water Station	Facility Type: Produced Water Inj. Station – Nearest Producing Well is North Vacuum Unit Well #305 (API #30-025-3971)

face Owner: State of New Mexico	Mineral Owner	Lease No. 8055

LOCATION OF RELEASE

t Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County: Lea
F	14	17S	34E					

Latitude: N 32° 50' 08.7" Longitude: W 103° 31' 54.3"

NATURE OF RELEASE

e of Release: Produced Water	Volume of Release: Unknown	Volume Recovered: None
rce of Release: Permanent Pit Approved for Closure Under Agreed eduling Order (ASO – 008), February 4, 2009	Date and Hour of Occurrence: Unknown	Date and Hour of Discovery: 03/15/2009/3:00 pm CST
s Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
Whom?	Date and Hour	
s a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

Watercourse was Impacted, Describe Fully.*

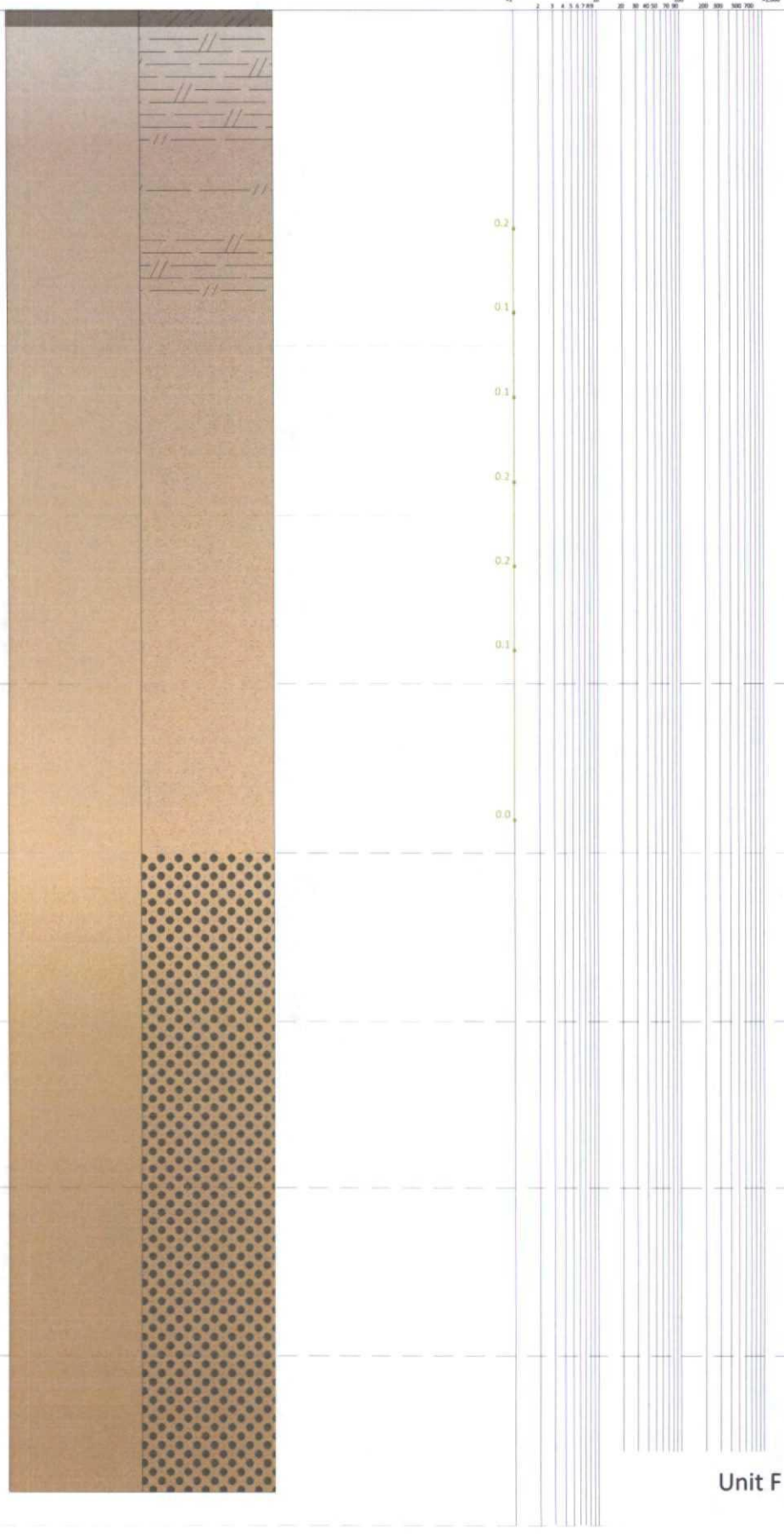
cribe Cause of Problem and Remedial Action Taken.* Leakage from lined concrete pit detected in composite samples from bottom of pit after removal disposal of concrete on March 11 – 12, 2009. Concentrations of benzene, BTEX and TPH below RRAL of 10 mg/Kg, 50 mg/Kg and 5,000 mg/Kg. oride decreases to 120 mg/Kg in sample from 50 feet below pit or 58 feet below ground in soil boring sample. Groundwater occurs at approximately feet below ground surface (102 feet below pit) and no receptors in vicinity of site. Concrete and contaminated soil disposed at Controlled Recovery,

cribe Area Affected and Cleanup Action Taken.* Impact limited to soil to approximately 30 feet below pit or approximately 38 feet below ground ace. Proposed installing 20-mill liner in bottom of excavation and filling per OCD approved closure plan on February 18, 2009.

reby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and ılations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger lic health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability uld their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health he environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other eral, state, or local laws and/or regulations.

nature:	OIL CONSERVATION DIVISION
ıted Name: Mark Larson, Larson & Associates, Inc. (Consultant)	Approved by District Supervisor: ENVIRONMENTAL ENGINEER
e: Sr. Project Manager / President	Approval Date: 4-28-09 Expiration Date: 6-28-09
ıail Address: mark@laenvironmental.com	Conditions of Approval: Attached ☐ IRP# 09-3-2126
e: 04/27/2009 Phone: (432) 687-0901	

ıch Additional Sheets If Necessary



Lithologic Well Log

Drilling started 9/25/2007, completed 9/25/2007.
Drilled with Direct Push by Larson And Associates.

CL - Brown (5YR 5/4) sandy loam
Caliche - White to Pinkish White (7.5YR 8/1 to 8/2) indurated, PIT Excavation bottom at 8'

Sand - Pink (7.5YR 7/3 to 8/4) very fine grained quartz sand, poorly sorted, moderately cemented with indurated caliche between 10' and 20'

Poorly to moderately cemented sandstone below 20'; very fine grained sand poorly sorted

Weakly cemented to loose below 40'

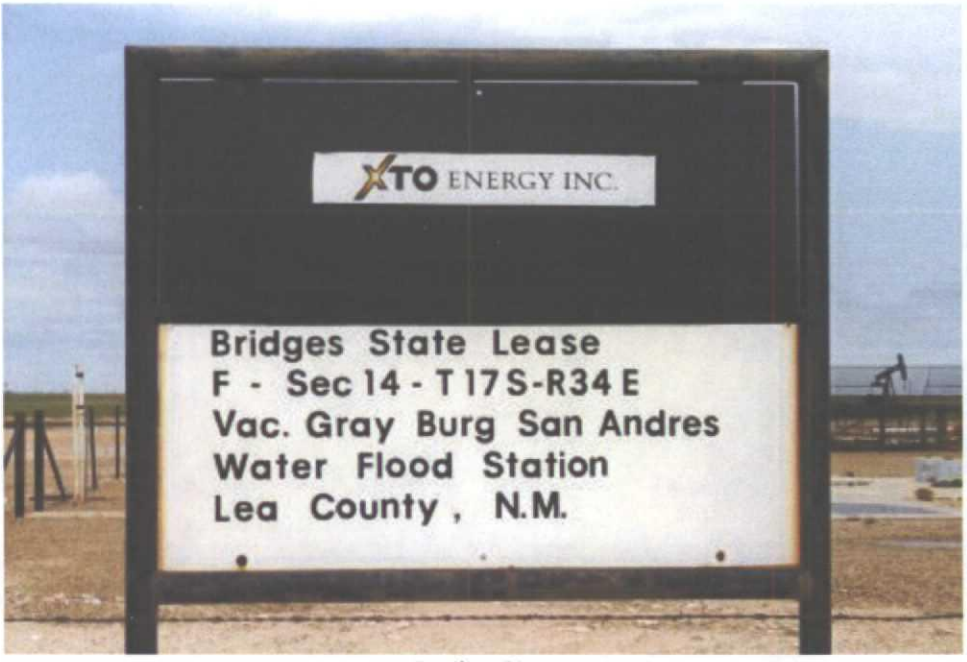
SP - Pink (7.5YR 7/4) below 50'

SP - Light Brown (7.5YR 6/4) below 60'

XTO Energy, Inc.
North Vacuum Abo Unit
North Water Station
Unit F (SE/NW), Sec. 14, T-17-S, R-34-E
Lea County, New Mexico

N 32° 50' 08.7"
W 103° 31' 54.3"

Larson & Associates, Inc.
Environmental Consultants



Facility Sign

Permanent Pit Prior to Closure Activities

Pit Closure Following Concrete Removal

Another View of Pit Closure Following Concrete Removal

Pit Prepared for Liner Installation

Seaming Liner for Installation

Liner Being Placed into Pit

Backfilling Excavation

Terraforming Excavation

Growth on Reseeded Site

APD-F

CONTROLLED RECOVERY, INC.

P.O. Box 388 • Hobbs, New Mexico 88241-0388 • (575) 393-1079 • www.crihobbs.com

NMOCD Order R9166

Bill to _____

Address _____

Company/Generator XTO

Lease Name BRADLEY ST DRICOES

Trucking Company OCOTILLO | Vehicle Number 1109 | Driver (Print) EDMUNDO

Date 3-19-09 | Time 11:15 (a.m) / p.m.

Type of Material

☐ Fluids ☒ Soils

☐ Tank Bottoms ☐ Other Material *(List Description Below)* Receiving Area 50/57

DESCRIPTION

CONCRETE

Volume of Material ☐ Bbls. ☒ Yard 16 ☐ Gallons

☐ Wash Out ☐ Call Out ☐ After Hours ☐ Debris Charge

GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste.

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description above)

☐ CRI Approval # _____

Agent _____ (Signature)

CRI Representative _____ (Signature)

TANK BOTTOMS

	Feet	Inches				
1st Gauge			BS&W/BBLS Received		BS&W	%
2nd Gauge			Free Water			
Received			Total Received			

215936

Form C138

White - CRI | Canary - CRI Accounting | Pink - CRI Plant | Gold - Transporter

THE COLOR PRINTER - #7521