

**C-144**

**Permanent  
Pit**

**Closure  
Report**

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

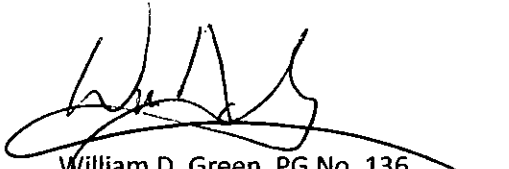
Dear Mr. Jones:

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.

Sincerely,

**LARSON & ASSOCIATES, INC.**



William D. Green, PG No. 136  
Texas Licensed Professional Geologist  
[wgreen@laenvironmental.com](mailto:wgreen@laenvironmental.com)

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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

# **Permanent Pit Closure Report**

**XTO Energy, Inc.  
North Vacuum Abo Unit, South Water Station  
Unit G (SW/4, NE/4), Section 26, T17S, R34E  
Lea County, NM**

Project No. 8-0165

Prepared by:

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

October 23, 2009

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## 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 South Water Station (Site) located in Lea County, New Mexico. The legal description of the Site is Unit G (SW/4, NE/4), Section 26, Township 17 South, Range 34 East (Figure 1). The geodetic location is N32° 48' 24.9", W103° 31' 43.5".

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 revegetation 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° 48' 24.9", W103° 31' 43.5", and is located in rural Lea County about 14 miles west-southwest of Lovington, New Mexico. The approximately 0.83 acre Site consisted of four 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 120 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.
- No fresh water wells or springs are located within approximately 1000 horizontal feet of the 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 and 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 closure activities, notification of closure was sent 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 February 23, 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 18 cubic yards of concrete and 252 cubic yards of excavated soil were disposed at Controlled Recovery, Inc. (OCD Permit R9166).

On February 26, 2009, Larson & Associates, Inc. (LAI) personnel collected 5-part composite soil samples from the bottom (BC-1) and sidewalls (SC-1, EC-1, WC-1 and NC-1) of the pit following removal of the concrete and two discrete samples (B-6 and B-7) from the bottom of the excavation where staining was observed. 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. Copies of laboratory analytical reports are attached in Appendix C.

No benzene, BTEX or chlorides were reported above OCD reporting limits (0.2 milligrams per kilogram [mg/Kg] for benzene; 50 mg/Kg for BTEX; and 250 mg/Kg for chlorides). TPH was detected above the OCD limit (100 mg/Kg) in the discrete sample B-7 (19,600 mg/Kg).

An initial C-141 was submitted to the OCD District 1, Hobbs office on March 2, 2009, and remediation activities were conducted. The OCD District 1 office issued remediation project number 1RP-09-3-2115.

### **3.5 Remedial Investigation**

XTO delineated the extent of the TPH and excavated the impacted soils beginning March 3, 2009. On March 4, 2009, LAI collected four additional discrete samples to confirm field delineation. Xenco laboratory analyzed the additional samples, but no TPH was reported above the method detection limits. Table 1 presents a summary of the laboratory analysis.

Based on the soil sample results, XTO requested approval from OCD District 1 to close the excavation according to the requirements of the closure plan approved by the OCD Santa Fe office. Approval was granted. An additional 192 cubic yards of soil was excavated and disposed at the CRI facility. Appendix D presents photo-documentation.

### **3.6 *Pit Backfilling***

Pit backfilling consisted of compacting six- to eight-inch lifts of clean soil purchased from surface lease owner, Mr. Tom Pearce, 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.

## **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.

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

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

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

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

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

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

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

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

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

5.  
☐ **Alternative Method:**  
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.



6.

**Fencing:** Subsection D of 19.15.17.11 NMAC (*Applies to permanent pits, temporary pits, and below-grade tanks*)

- ☐ Chain link, six feet in height, two strands of barbed wire at top (*Required if located within 1000 feet of a permanent residence, school, hospital, institution or church*)
- ☐ Four foot height, four strands of barbed wire evenly spaced between one and four feet
- ☐ Alternate. Please specify \_\_\_\_\_

7.

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

- ☐ Screen ☐ Netting ☐ Other \_\_\_\_\_
- ☐ Monthly inspections (If netting or screening is not physically feasible)

8.

**Signs:** Subsection C of 19.15.17.11 NMAC

- ☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers
- ☐ Signed in compliance with 19.15.3.103 NMAC

9.

**Administrative Approvals and Exceptions:**

Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.

**Please check a box if one or more of the following is requested, if not leave blank:**

- ☐ Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau office for consideration of approval.
- ☐ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

10.

**Siting Criteria (regarding permitting):** 19.15.17.10 NMAC

**Instructions:** *The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above-grade tanks associated with a closed-loop system.*

Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within a 100-year floodplain. - FEMA map	<input type="checkbox"/> Yes <input type="checkbox"/> 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<sub>2</sub>S, 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 identify 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	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within a 100-year floodplain. - FEMA map	<input type="checkbox"/> Yes <input type="checkbox"/> 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 20, 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: 32° 48' 24.9" Longitude 103° 31' 43.5" 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:  Date: 10/26/09

e-mail address: William\_Haykus@xtocenergy.com Telephone: (432) 682-8873

Table 1  
Soil Analytical Data Summary  
XTO Energy, Inc.  
North Vacuum Abo Lease - South Water Station  
Unit G (SW/4, NE/4) Sec 26, T17S, R34E  
Lea County, New Mexico  
LAI Project No.: 8-0165

Sample ID	Date	Status	Depth (Ft)	Benzene	Toluene	Ethyl benzene	Total Xylenes	Total BTEX	TPH C6-C28	Chlorides
RRAL:				0.2				50	5000	
BC-1	2/26/2009	In-Situ	5	<0.0012	<0.0023	<0.0012	<0.0012	<0.0012	454	241
SC-1	2/26/2009	In-Situ	3	<0.0011	<0.0022	<0.0011	<0.0011	<0.0011	43.8	41.6
EC-1	2/26/2009	In-Situ	3	<0.0011	<0.0022	<0.0011	<0.0011	<0.0011	283	92.6
WC-1	2/26/2009	In-Situ	3	<0.0011	<0.0021	<0.0011	<0.0011	<0.0011	460	8.75
NC-1	2/26/2009	In-Situ	3	<0.0011	<0.0023	<0.0011	<0.0011	<0.0011	873	72.9
B-6	2/26/2009	Excavated	5	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	2,730	120
B-7	2/26/2009	Excavated	5	<0.0013	<0.0025	<b>0.0017</b>	<b>0.0037</b>	<b>0.0054</b>	19,600	23.4
B-8	3/4/2009	In-Situ	6	--	--	--	--	--	<23.1	--
B-9	3/4/2009	In-Situ	6	--	--	--	--	--	<23.8	--
B-10	3/4/2009	In-Situ	10	--	--	--	--	--	<30.2	--
B-11	3/4/2009	In-Situ	10	--	--	--	--	--	<26.2	--

**Notes**

RRAL - Recommended Remediation Action Level

BTEX analyzed via EPA SW Method 8021B.

Total Petroleum Hydrocarbons analyzed via EPA Method 418.1.

Chlorides analyzed via EPA Method 300.

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

**Bold** indicates the analyte was detected.

**Bold and blue** indicates the value exceeds NMOCD requirements.

TABLES



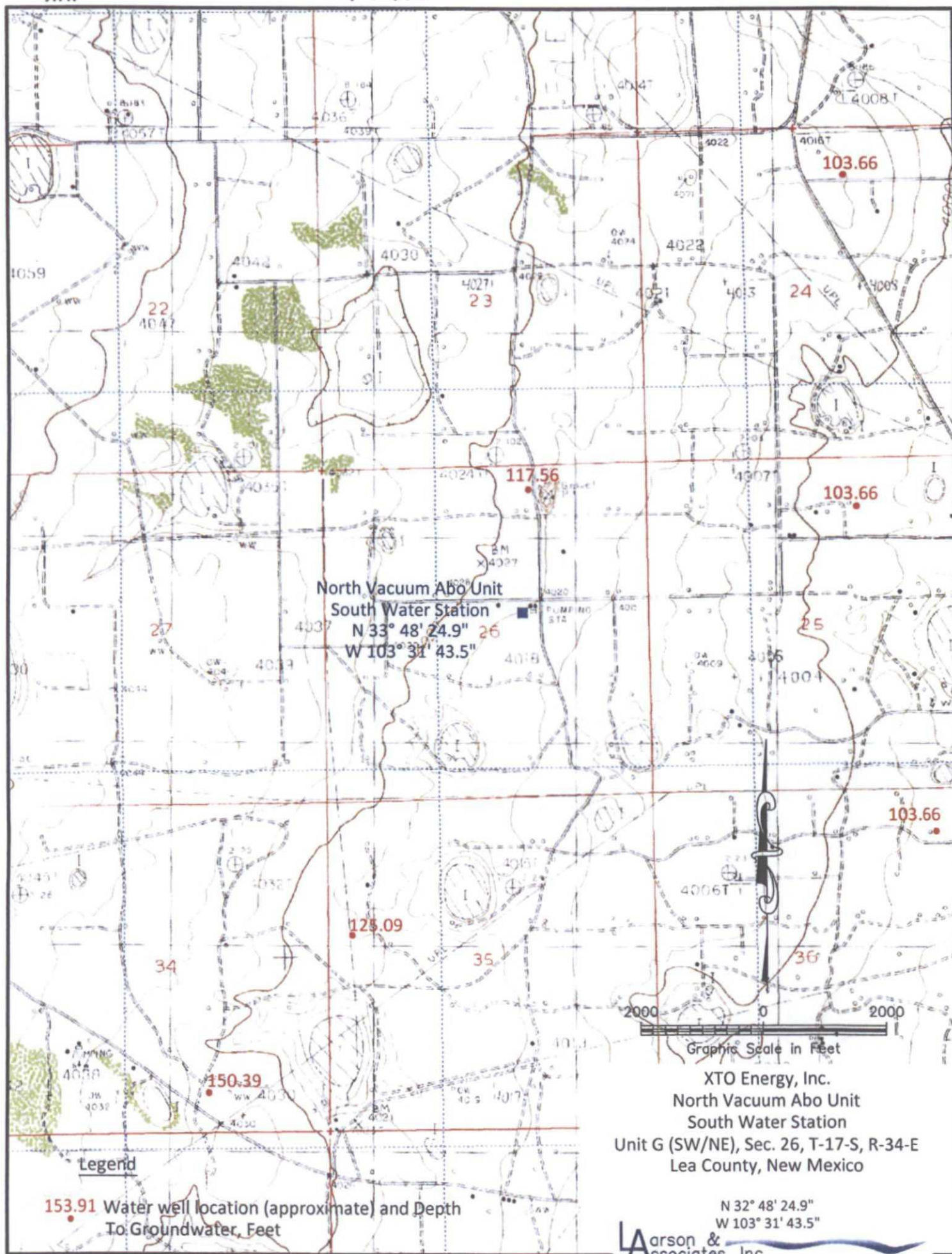


Figure 1 - Topographic Map



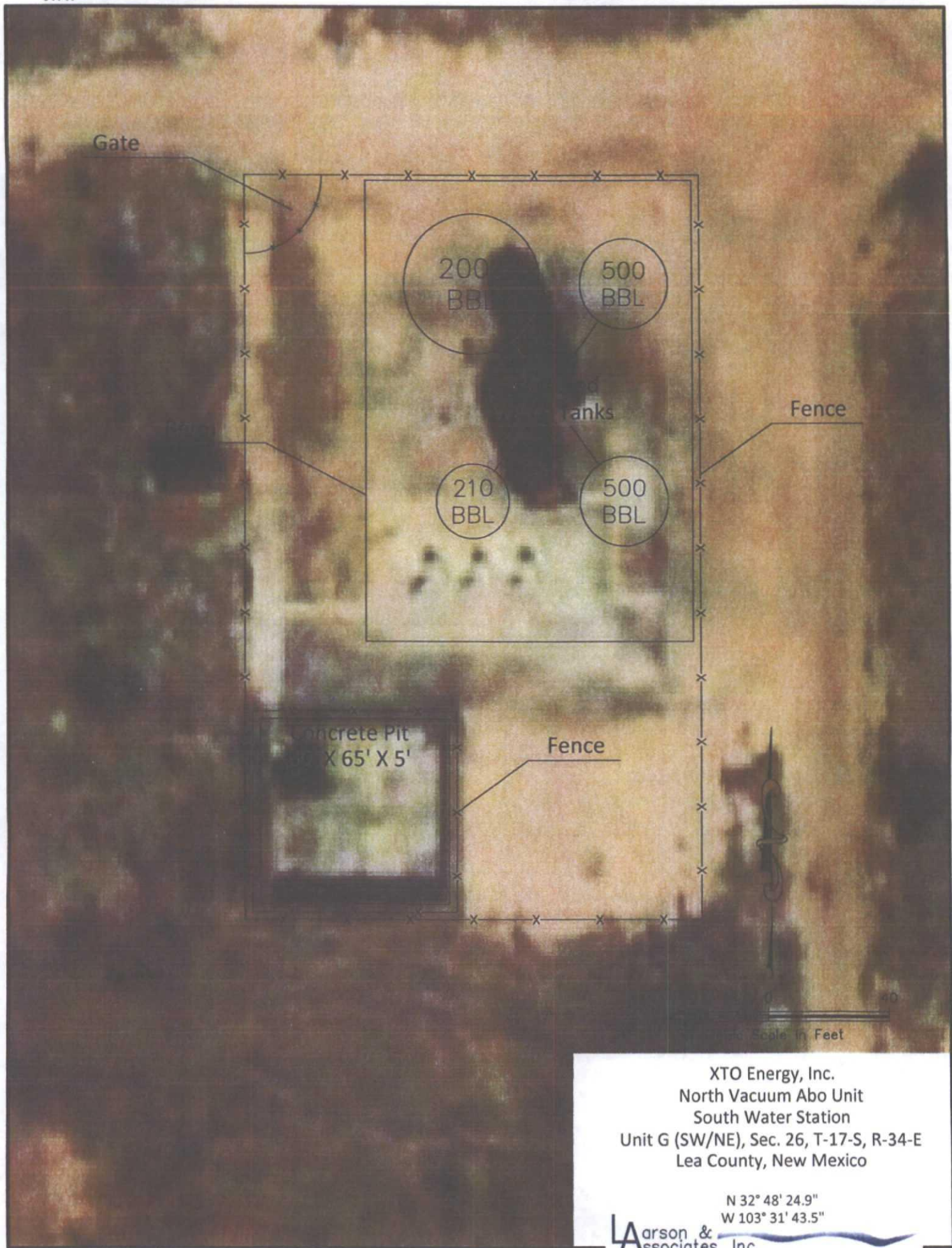
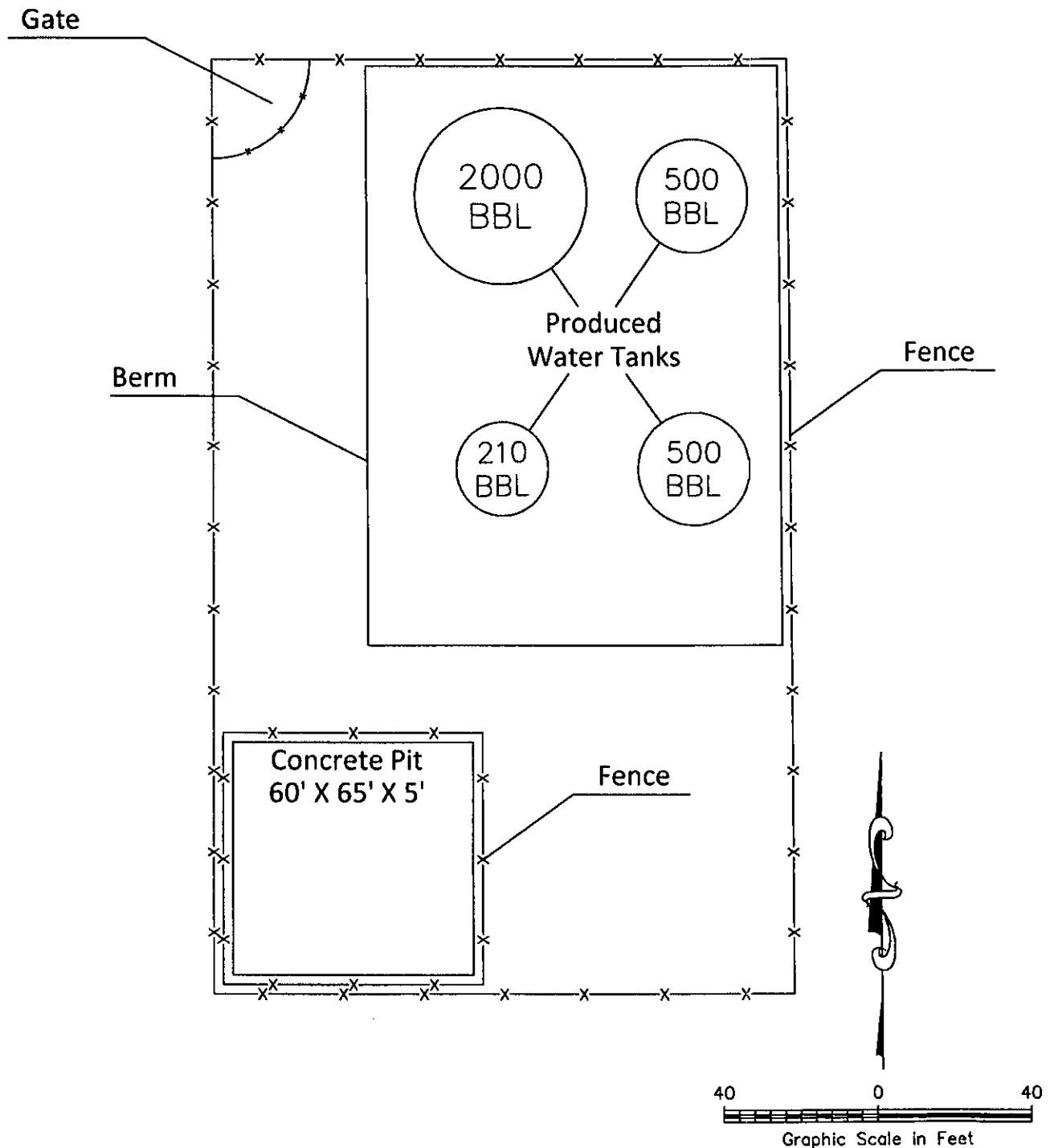


Figure 2 - Aerial



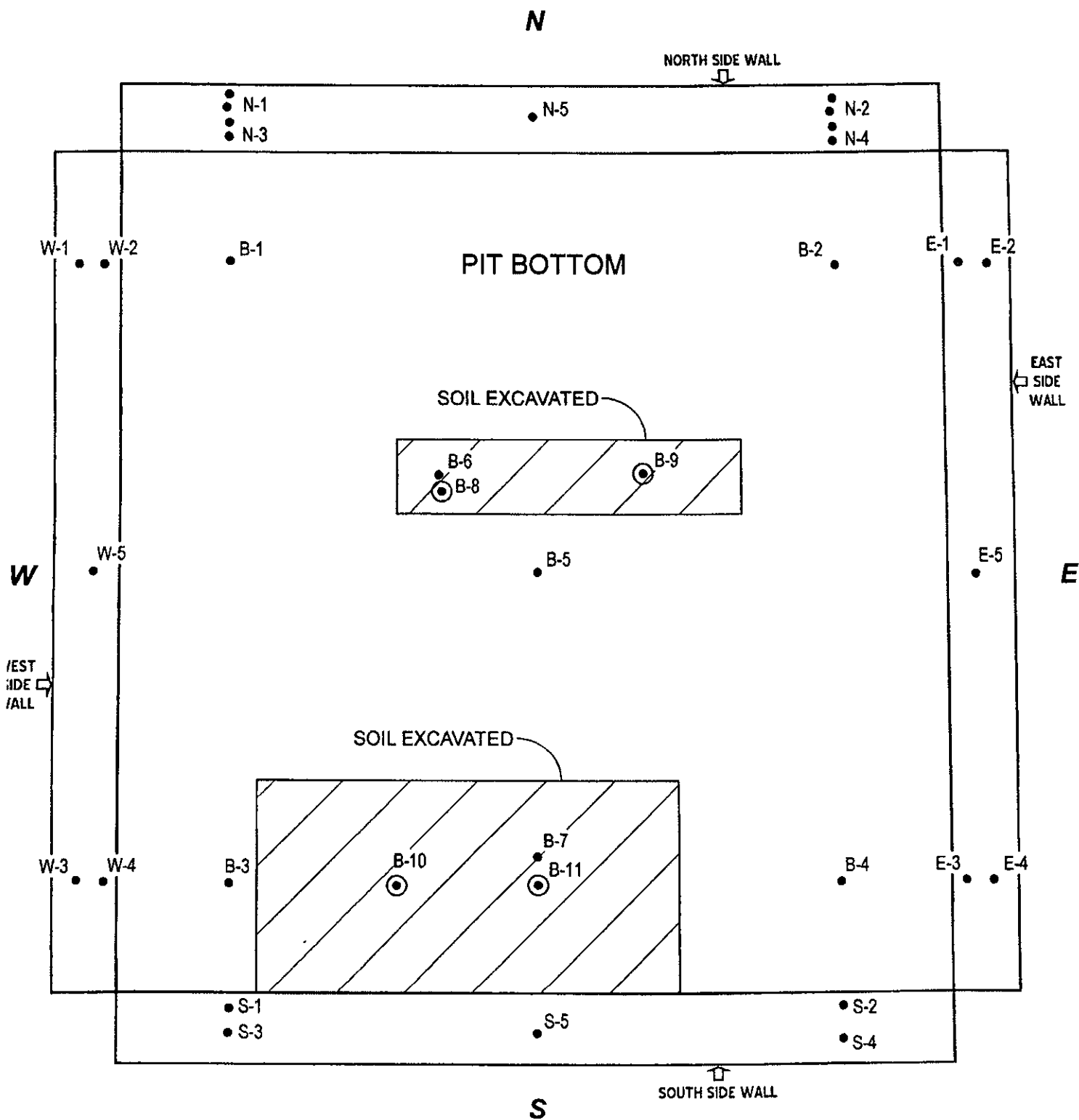
XTO Energy, Inc.  
North Vacuum Abo Unit  
South Water Station  
Unit G (SW/NE), Sec. 26, T-17-S, R-34-E  
Lea County, New Mexico

N 32° 48' 24.9"  
W 103° 31' 43.5"

Larson &  
Associates, Inc.  
Environmental Consultants

Figure 3 - Site Drawing





**LEGEND**

• B-5 SOIL SAMPLE LOCATION, MARCH 1, 2009

• B-8 SOIL SAMPLE LOCATION, MARCH 5, 2009

SCALE: 1"=10'

DATE: 03-14-09  
NAME:  
FILE: 8-0165

**FIGURE #1**

LEA COUNTY, NEW MEXICO

**XTO ENERGY, INC.**

**NORTH VACUUM ABO LEASE**  
SECTION 28, T-17-S, R-34-E,

**SOUTH WATER STATION**  
UNIT "G" (SW 1/4, NE 1/4)

**Larson & Associates, Inc.**  
Environmental Consultants

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
301 W. Grand Avenue, Artesia, NM 88210  
District III  
000 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

APPD-A-

Form C-144  
July 21, 2008

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOC District Office.  
For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOC 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.

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

**☒ Pit:** Subsection F or G of 19.15.17.11 NMAC

Temporary: ☐ Drilling ☐ Workover

☒ Permanent ☐ Emergency ☐ Cavitation ☐ P&A

☒ Lined ☐ Unlined Liner type: Thickness 6 inches ☐ LLDPE ☐ HDPE ☐ PVC ☒ Other CONCRETE

☐ String-Reinforced

Liner Seams: ☐ Welded ☐ Factory ☐ Other \_\_\_\_\_ Volume: 3,470 bbl Dimensions: L 65' x W 60' x D 5'

**☐ 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 \_\_\_\_\_

**☐ 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.

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: \_\_\_\_\_

**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<sub>2</sub>S, 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 identify 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): 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 identify 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

**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: \_\_\_\_\_

ADD-B-



200 N. Loraine, Ste. 800  
Midland, TX 79701  
432.682.8873

February 18, 2009

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

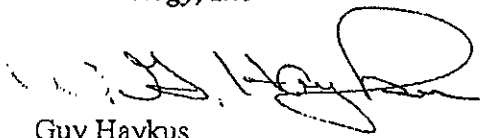
Re: Notice of Pit Closure  
XTO Energy, Inc.  
North Vacuum Abo Lease – South Water Station  
Unit G (SW/4, NE/4), Section 26  
Township 17 South, Range 34 East  
Lea County, New Mexico

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, South Water Station (Facility) beginning on February 23, 2009. The Facility is located in Unit G (SW/4, NE/4), Section 26, Township 17 South, Range 34 East in Lea County, New Mexico. The latitude and longitude is 32° 48' 24.9" north and 103° 31' 43.5" west, respectively. The nearest well is the North Vacuum Abo Lease Well #305 with API #30-025-37971. 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  
Direct Phone: 432.620.6705

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





200 N. Loraine, Ste. 800  
Midland, TX 79701  
432.682.8873

February 9, 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 – South Water Station  
Unit G (SW/4, NE/4), Section 26  
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 – South Water Station (Facility) beginning February 23, 2009. The Facility is located in Unit G (SW/4, NE/4), Section 26, Township 17 South, Range 34 East in Lea County, New Mexico. The latitude and longitude is 32° 48' 24.9" north and 103° 31' 43.5" 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.*

A handwritten signature in black ink, appearing to read "Guy Haykus", written over a horizontal line.

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

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 Patrick Lyons, Commissioner  
 NM State Land Office  
 Santa Fe, NM 87501

7007 0220 0002 5086 8607

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

7007 0220 0002 5086 8621

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Total Postage & Fees	\$	

Sent To  
 Mura Meyers - NM State Land Off.  
 2702 N. Grimes St. D  
 Hobbs NM 88240

# **Analytical Report 326072**

**for**

**Larson & Associates**

**Project Manager: Michelle Green**

**Vacuum Water Station South**

**27-FEB-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**



27-FEB-09

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

Reference: XENCO Report No: **326072**  
**Vacuum Water Station South**  
Project Address: 8-0165

**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 326072. 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. 326072 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

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## Sample Cross Reference 326072



**Larson & Associates, Midland, TX**

Vacuum Water Station South

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BC-1	S	Feb-26-09 13:55		326072-001
SC-1	S	Feb-26-09 11:00		326072-002
EC-1	S	Feb-26-09 11:30		326072-003
WC-1	S	Feb-26-09 11:00		326072-004
NC-1	S	Feb-26-09 13:45		326072-005
B-7	S	Feb-26-09 14:00		326072-006
B-6	S	Feb-26-09 14:15		326072-007

Project Id:  
Contact: Michelle Green  
Project Location: 8-0165

Project Name: Vacuum Strip Station South

Date Received in Lab: Thu Feb-26-09 05:37 pm


Report Date: 27-FEB-09

Project Manager: Brent Barron, II

<b>Analysis Requested</b>	<b>Lab Id:</b> <b>Field Id:</b> <b>Depth:</b> <b>Matrix:</b> <b>Sampled:</b>	326072-001 BC-1  SOIL Feb-26-09 13:55	326072-002 SC-1  SOIL Feb-26-09 11:00	326072-003 EC-1  SOIL Feb-26-09 11:30	326072-004 WC-1  SOIL Feb-26-09 11:00	326072-005 NC-1  SOIL Feb-26-09 13:45	326072-006 B-7  SOIL Feb-26-09 14:00
<b>Anions by EPA 300</b>	<b>Extracted:</b> <b>Analyzed:</b> <b>Units/RL:</b>	Feb-27-09 09:27 mg/kg RL 241 11.7	Feb-27-09 09:27 mg/kg RL 41.6 5.43	Feb-27-09 09:27 mg/kg RL 92.6 5.40	Feb-27-09 09:27 mg/kg RL 8.75 5.36	Feb-27-09 09:27 mg/kg RL 72.9 5.70	Feb-27-09 09:27 mg/kg RL 23.4 6.28
<b>BTEX by EPA 8021B</b>	<b>Extracted:</b> <b>Analyzed:</b> <b>Units/RL:</b>	Feb-27-09 08:00 Feb-27-09 10:18 mg/kg RL	Feb-27-09 08:00 Feb-27-09 10:39 mg/kg RL	Feb-27-09 08:00 Feb-27-09 10:59 mg/kg RL	Feb-27-09 08:00 Feb-27-09 11:20 mg/kg RL	Feb-27-09 08:00 Feb-27-09 11:40 mg/kg RL	Feb-27-09 08:00 Feb-27-09 12:01 mg/kg RL
Benzene		ND 0.0012	ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0013
Toluene		ND 0.0023	ND 0.0022	ND 0.0022	ND 0.0021	ND 0.0023	ND 0.0025
Ethylbenzene		ND 0.0012	ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0011	0.0017 0.0013
m,p-Xylenes		ND 0.0023	ND 0.0022	ND 0.0022	ND 0.0021	ND 0.0023	0.0037 0.0025
o-Xylene		ND 0.0012	ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0013
Total Xylenes		ND 0.0012	ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0011	0.0037 0.0013
Total BTEX		ND 0.0012	ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0011	0.0054 0.0013
<b>Percent Moisture</b>	<b>Extracted:</b> <b>Analyzed:</b> <b>Units/RL:</b>	Feb-27-09 12:02 % RL 14.37 1.00	Feb-27-09 12:02 % RL 7.89 1.00	Feb-27-09 12:02 % RL 7.40 1.00	Feb-27-09 12:02 % RL 6.76 1.00	Feb-27-09 12:02 % RL 12.24 1.00	Feb-27-09 12:02 % RL 20.39 1.00
<b>TPH by EPA 418.1</b>	<b>Extracted:</b> <b>Analyzed:</b> <b>Units/RL:</b>	Feb-27-09 08:47 mg/kg RL 454 11.7	Feb-27-09 08:47 mg/kg RL 43.8 10.9	Feb-27-09 08:47 mg/kg RL 283 10.8	Feb-27-09 08:47 mg/kg RL 460 10.7	Feb-27-09 08:47 mg/kg RL 873 11.4	Feb-27-09 08:47 mg/kg RL 19600 62.8
TPH, Total Petroleum Hydrocarbons							

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.  
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.  
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.  
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Since 1990 Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America - Atlanta - Corpus Christi

  
Brent Barron  
Odessa Laboratory Director

Project Id:  
Contact: Michelle Green  
Project Location: 8-0165

Project Name: Vacuum  
r-Station-South

Date Received in Lab: Thu Feb-26-09 05:37 pm


Report Date: 27-FEB-09

Project Manager: Brent Barron, II

<b>Analysis Requested</b>	<b>Lab Id:</b>	326072-007					
	<b>Field Id:</b>	B-6					
	<b>Depth:</b>						
	<b>Matrix:</b>	SOIL					
	<b>Sampled:</b>	Feb-26-09 14:15					
<b>Anions by EPA 300</b>	<b>Extracted:</b>						
	<b>Analyzed:</b>	Feb-27-09 09:27					
	<b>Units/RL:</b>	mg/kg RL					
Chloride		120 5.20					
<b>BTEX by EPA 8021B</b>	<b>Extracted:</b>	Feb-27-09 08:00					
	<b>Analyzed:</b>	Feb-27-09 12:21					
	<b>Units/RL:</b>	mg/kg RL					
Benzene		ND 0.0010					
Toluene		ND 0.0021					
Ethylbenzene		ND 0.0010					
m,p-Xylenes		ND 0.0021					
o-Xylene		ND 0.0010					
Total Xylenes		ND 0.0010					
Total BTEX		ND 0.0010					
<b>Percent Moisture</b>	<b>Extracted:</b>						
	<b>Analyzed:</b>	Feb-27-09 12:02					
	<b>Units/RL:</b>	% RL					
Percent Moisture		3.80 1.00					
<b>TPH by EPA 418.1</b>	<b>Extracted:</b>						
	<b>Analyzed:</b>	Feb-27-09 08:47					
	<b>Units/RL:</b>	mg/kg RL					
TPH, Total Petroleum Hydrocarbons		2730 10.4					

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.  
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.  
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.  
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Brent Barron  
Odessa Laboratory Director

- 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.

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 2505 North Falkenburg Rd, Tampa, FL 33619  
 5757 NW 158th St, Miami Lakes, FL 33014  
 12600 West I-20 East, Odessa, TX 79765  
 842 Cantwell Lane, Corpus Christi, TX 78408

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(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(361) 884-0371	(361) 884-9116



**Form 2 - Surrogate Recoveries**

Project Name: Vacuum Water Station South

Work Orders : 326072,

Project ID:

Lab Batch #: 751059

Sample: 525549-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 02/27/09 08:56

**SURROGATE RECOVERY STUDY**

<b>BTEX by EPA 8021B</b>	<b>Amount Found [A]</b>	<b>True Amount [B]</b>	<b>Recovery %R [D]</b>	<b>Control Limits %R</b>	<b>Flags</b>
<b>Analytes</b>					
1,4-Difluorobenzene	0.0278	0.0300	93	80-120	
4-Bromofluorobenzene	0.0260	0.0300	87	80-120	

Lab Batch #: 751059

Sample: 525549-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 02/27/09 09:17

**SURROGATE RECOVERY STUDY**

<b>BTEX by EPA 8021B</b>	<b>Amount Found [A]</b>	<b>True Amount [B]</b>	<b>Recovery %R [D]</b>	<b>Control Limits %R</b>	<b>Flags</b>
<b>Analytes</b>					
1,4-Difluorobenzene	0.0279	0.0300	93	80-120	
4-Bromofluorobenzene	0.0265	0.0300	88	80-120	

Lab Batch #: 751059

Sample: 525549-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 02/27/09 09:58

**SURROGATE RECOVERY STUDY**

<b>BTEX by EPA 8021B</b>	<b>Amount Found [A]</b>	<b>True Amount [B]</b>	<b>Recovery %R [D]</b>	<b>Control Limits %R</b>	<b>Flags</b>
<b>Analytes</b>					
1,4-Difluorobenzene	0.0314	0.0300	105	80-120	
4-Bromofluorobenzene	0.0279	0.0300	93	80-120	

Lab Batch #: 751059

Sample: 326072-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 02/27/09 10:18

**SURROGATE RECOVERY STUDY**

<b>BTEX by EPA 8021B</b>	<b>Amount Found [A]</b>	<b>True Amount [B]</b>	<b>Recovery %R [D]</b>	<b>Control Limits %R</b>	<b>Flags</b>
<b>Analytes</b>					
1,4-Difluorobenzene	0.0306	0.0300	102	80-120	
4-Bromofluorobenzene	0.0276	0.0300	92	80-120	

Lab Batch #: 751059

Sample: 326072-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 02/27/09 10:39

**SURROGATE RECOVERY STUDY**

<b>BTEX by EPA 8021B</b>	<b>Amount Found [A]</b>	<b>True Amount [B]</b>	<b>Recovery %R [D]</b>	<b>Control Limits %R</b>	<b>Flags</b>
<b>Analytes</b>					
1,4-Difluorobenzene	0.0309	0.0300	103	80-120	
4-Bromofluorobenzene	0.0285	0.0300	95	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.



## Form 2 - Surrogate Recoveries

Project Name: Vacuum Water Station South

Work Orders : 326072,

Project ID:

Lab Batch #: 751059

Sample: 326072-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 02/27/09 10:59

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0313	0.0300	104	80-120	
4-Bromofluorobenzene	0.0281	0.0300	94	80-120	

Lab Batch #: 751059

Sample: 326072-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 02/27/09 11:20

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	80-120	
4-Bromofluorobenzene	0.0293	0.0300	98	80-120	

Lab Batch #: 751059

Sample: 326072-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 02/27/09 11:40

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0310	0.0300	103	80-120	
4-Bromofluorobenzene	0.0293	0.0300	98	80-120	

Lab Batch #: 751059

Sample: 326072-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 02/27/09 12:01

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0326	0.0300	109	80-120	
4-Bromofluorobenzene	0.0236	0.0300	79	80-120	**

Lab Batch #: 751059

Sample: 326072-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 02/27/09 12:21

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0312	0.0300	104	80-120	
4-Bromofluorobenzene	0.0267	0.0300	89	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.



## Form 2 - Surrogate Recoveries

Project Name: Vacuum Water Station South

Work Orders : 326072,

Project ID:

Lab Batch #: 751059

Sample: 326072-002 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 02/27/09 12:42

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0283	0.0300	94	80-120	
4-Bromofluorobenzene	0.0271	0.0300	90	80-120	

Lab Batch #: 751059

Sample: 326072-002 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 02/27/09 13:02

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0266	0.0300	89	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.

**Project Name: Vacuum Water Station South**

**Work Order #: 326072**

**Project ID:**

**Lab Batch #: 751054**

**Sample: 751054-1-BKS**

**Matrix: Solid**

**Date Analyzed: 02/27/2009**

**Date Prepared: 02/27/2009**

**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.



## BS / BSD Recoveries



**Project Name:** Vacuum Water Station South

**Work Order #:** 326072

**Analyst:** ASA

**Date Prepared:** 02/27/2009

**Project ID:**

**Date Analyzed:** 02/27/2009

**Lab Batch ID:** 751059

**Sample:** 525549-1-BKS

**Batch #:** 1

**Matrix:** Solid

**Units:** mg/kg

### BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

<b>BTEX by EPA 8021B</b>	<b>Blank Sample Result [A]</b>	<b>Spike Added [B]</b>	<b>Blank Spike Result [C]</b>	<b>Blank Spike %R [D]</b>	<b>Spike Added [E]</b>	<b>Blank Spike Duplicate Result [F]</b>	<b>Blk. Spk Dup. %R [G]</b>	<b>RPD %</b>	<b>Control Limits %R</b>	<b>Control Limits %RPD</b>	<b>Flag</b>
<b>Analytes</b>											
Benzene	ND	0.1000	0.1025	103	0.1	0.1038	104	1	70-130	35	
Toluene	ND	0.1000	0.1030	103	0.1	0.1045	105	1	70-130	35	
Ethylbenzene	ND	0.1000	0.1010	101	0.1	0.1027	103	2	71-129	35	
m,p-Xylenes	ND	0.2000	0.2112	106	0.2	0.2145	107	2	70-135	35	
o-Xylene	ND	0.1000	0.1030	103	0.1	0.1050	105	2	71-133	35	

**Analyst:** ASA

**Date Prepared:** 02/27/2009

**Date Analyzed:** 02/27/2009

**Lab Batch ID:** 751012

**Sample:** 751012-1-BKS

**Batch #:** 1

**Matrix:** Solid

**Units:** mg/kg

### BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

<b>TPH by EPA 418.1</b>	<b>Blank Sample Result [A]</b>	<b>Spike Added [B]</b>	<b>Blank Spike Result [C]</b>	<b>Blank Spike %R [D]</b>	<b>Spike Added [E]</b>	<b>Blank Spike Duplicate Result [F]</b>	<b>Blk. Spk Dup. %R [G]</b>	<b>RPD %</b>	<b>Control Limits %R</b>	<b>Control Limits %RPD</b>	<b>Flag</b>
<b>Analytes</b>											
TPH, Total Petroleum Hydrocarbons	ND	2500	2080	83	2500	2080	83	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: Vacuum Water Station South

Vork Order #: 326072

Lab Batch #: 751054

Date Analyzed: 02/27/2009

Date Prepared: 02/27/2009

Project ID:

Analyst: LATCOR

QC- Sample ID: 325914-001 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

## MATRIX / MATRIX SPIKE RECOVERY STUDY

### Inorganic Anions by EPA 300

#### Analytes

	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	92.6	114	210	103	80-120	

Matrix Spike Percent Recovery [D] =  $100 \times (C-A)/B$

Relative Percent Difference [E] =  $200 \times (C-A)/(C+B)$

II Results are based on MDL and Validated for QC Purposes



# Form 3 - MS / MSD Recoveries



Project Name: Vacuum Water Station South

Work Order #: 326072

Project ID:

Lab Batch ID: 751059

QC- Sample ID: 326072-002 S

Batch #: 1 Matrix: Soil

Date Analyzed: 02/27/2009

Date Prepared: 02/27/2009

Analyst: ASA

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	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	0.1086	0.0847	78	0.1086	0.0888	82	5	70-130	35	
Toluene	ND	0.1086	0.0791	73	0.1086	0.0830	76	5	70-130	35	
Ethylbenzene	ND	0.1086	0.0692	64	0.1086	0.0725	67	5	71-129	35	X
m,p-Xylenes	ND	0.2171	0.1443	66	0.2171	0.1518	70	5	70-135	35	X
o-Xylene	ND	0.1086	0.0691	64	0.1086	0.0730	67	5	71-133	35	X

Lab Batch ID: 751012

QC- Sample ID: 326072-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 02/27/2009

Date Prepared: 02/27/2009

Analyst: ASA

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by EPA 418.1 Analytes	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	454	2920	2770	79	2920	2960	86	7	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 Applicable  
N = See Narrative, EQL = Estimated Quantitation Limit



# Sample Duplicate Recovery



Project Name: Vacuum Water Station South

Work Order #: 326072

Lab Batch #: 751054

Project ID:

Date Analyzed: 02/27/2009

Date Prepared: 02/27/2009

Analyst: LATCOR

QC- Sample ID: 325914-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

## SAMPLE / SAMPLE DUPLICATE RECOVERY

Anions by EPA 300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	92.6	95.9	4	20	

Lab Batch #: 751040

Date Analyzed: 02/27/2009

Date Prepared: 02/27/2009

Analyst: BEV

QC- Sample ID: 326072-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

## SAMPLE / SAMPLE DUPLICATE RECOVERY

Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	14.4	16.0	11	20	

Spike Relative Difference RPD  $200 * |(B-A)/(B+A)|$

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



[illegible]

# Environmental Lab of Texas

## Variance/ Corrective Action Report- Sample Log-In

Client: Larson + Associates  
 Date/ Time: 02-26-09 @ 1737  
 Lab ID #: 326072  
 Initials: JMF

### Sample Receipt Checklist

Client Initials

#1	Temperature of container/ cooler?	<u>Yes</u>	No	5.5 °C	
#2	Shipping container in good condition?	<u>Yes</u>	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	<u>Not Present</u>	
#4	Custody Seals intact on sample bottles/ container?	Yes	No	<u>Not Present</u>	
#5	Chain of Custody present?	<u>Yes</u>	No		
#6	Sample instructions complete of Chain of Custody?	<u>Yes</u>	No		
#7	Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No		
#8	Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No		
#11	Containers supplied by ELOT?	<u>Yes</u>	No		
#12	Samples in proper container/ bottle?	<u>Yes</u>	No	See Below	
#13	Samples properly preserved?	<u>Yes</u>	No	See Below	
#14	Sample bottles intact?	<u>Yes</u>	No		
#15	Preservations documented on Chain of Custody?	<u>Yes</u>	No		
#16	Containers documented on Chain of Custody?	<u>Yes</u>	No		
#17	Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below	
#18	All samples received within sufficient hold time?	<u>Yes</u>	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	<u>Not Applicable</u>	
#20	VOC samples have zero headspace?	<u>Yes</u>	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 326564**

**for**

**Larson & Associates**

**Project Manager: Michelle Green**

**Midland/Odessa Standard List of Methods**

**8-0165**

**10-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**



10-MAR-09

Project Manager: **Michelle Green**

**Larson & Associates**

P.O. Box 50685

Midland, TX 79710

Reference: XENCO Report No: **326564**

**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 326564. 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. 326564 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

*Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.*

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

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## Sample Cross Reference 326564



**Larson & Associates, Midland, TX**  
Midland/Odessa Standard List of Methods

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
B-8 (0-1')	S	Mar-04-09 14:30	0 - 1 ft	326564-001
B-9 (0-1')	S	Mar-04-09 14:40	0 - 1 ft	326564-002
B-10 (5')	S	Mar-04-09 14:50	5 ft	326564-003
B-11 (5')	S	Mar-04-09 15:00	5 ft	326564-004

Project Id: 8-0165

Contact: Michelle Green

Project Name: Regular

Essential

Location

Date Received in Lab: Thu Mar-05-09 08:37 am

Report Date: 10-MAR-09


Project Location:

Project Manager: Brent Barron, II

<b>Analysis Requested</b>	<b>Lab Id:</b>	326564-001	326564-002	326564-003	326564-004		
	<b>Field Id:</b>	B-8 (0-1')	B-9 (0-1')	B-10 (5')	B-11 (5')		
	<b>Depth:</b>	0-1 ft	0-1 ft	5 ft	5 ft		
	<b>Matrix:</b>	SOIL	SOIL	SOIL	SOIL		
	<b>Sampled:</b>	Mar-04-09 14:30	Mar-04-09 14:40	Mar-04-09 14:50	Mar-04-09 15:00		
<b>Percent Moisture</b>	<b>Extracted:</b>						
	<b>Analyzed:</b>	Mar-10-09 17:00	Mar-10-09 17:00	Mar-10-09 17:00	Mar-10-09 17:00		
	<b>Units/RL:</b>	% RL	% RL	% RL	% RL		
Percent Moisture		13.56 1.00	15.99 1.00	33.72 1.00	23.75 1.00		
<b>TPH by EPA 418.1</b>	<b>Extracted:</b>						
	<b>Analyzed:</b>	Mar-10-09 11:15	Mar-10-09 11:15	Mar-10-09 11:15	Mar-10-09 11:15		
	<b>Units/RL:</b>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
TPH, Total Petroleum Hydrocarbons		ND 23.1	ND 23.8	ND 30.2	ND 26.2		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.  
 The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.  
 XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.  
 Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Since 1990 Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America - Atlanta - Corpus Christi

  
 Brent Barron  
 Odessa Laboratory Director

- 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.

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 9701 Harry Hines Blvd , Dallas, TX 75220  
 5332 Blackberry Drive, San Antonio TX 78238  
 2505 North Falkenburg Rd, Tampa, FL 33619  
 5757 NW 158th St, Miami Lakes, FL 33014  
 12600 West I-20 East, Odessa, TX 79765  
 842 Cantwell Lane, Corpus Christi, TX 78408

Phone	Fax
(281) 240-4200	(281) 240-4280
(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(361) 884-0371	(361) 884-9116



## BS / BSD Recoveries



**Project Name: Midland/Odessa Standard List of Methods**

**Work Order #: 326564**

**Analyst: ASA**

**Date Prepared: 03/10/2009**

**Project ID: 8-0165**

**Date Analyzed: 03/10/2009**

**Lab Batch ID: 752019**

**Sample: 752019-1-BKS**

**Batch #: 1**

**Matrix: Solid**

**Units: mg/kg**

### BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by EPA 418.1	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
Analytes											
TPH, Total Petroleum Hydrocarbons	ND	2500	1830	73	2500	1840	74	1	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 5 - MS / MSD Recoveries



Project Name: Midland/Odessa Standard List of Methods

Work Order #: 326564

Project ID: 8-0165

Lab Batch ID: 752019

QC- Sample ID: 326564-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 03/10/2009

Date Prepared: 03/10/2009

Analyst: ASA

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by EPA 418.1  Analytes	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	2890	2820	98	2890	2190	76	25	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 Applicable  
N = See Narrative, EQL = Estimated Quantitation Limit



## Sample Duplicate Recovery



Project Name: Midland/Odessa Standard List of Methods

Work Order #: 326564

Lab Batch #: 752072

Project ID: 8-0165

Date Analyzed: 03/10/2009

Date Prepared: 03/10/2009

Analyst: BEV

QC- Sample ID: 326967-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

### SAMPLE / SAMPLE DUPLICATE RECOVERY

Percent Moisture  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	1.18	ND	NC	20	

Spike Relative Difference RPD  $200 * |(B-A)/(B+A)|$

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

## CHAIN-OF-CUSTODY

**L**arson &  
ssociates, Inc.  
Environmental Consultants

507 N. Marienfeld, Ste. 200  
Midland, TX 79701  
432-687-0901

DATE: 03-04-09PAGE 1 OF 1

PO #: \_\_\_\_\_ LAB WORK ORDER #: \_\_\_\_\_

PROJECT LOCATION OR NAME: \_\_\_\_\_

LAI PROJECT #: 8-0165 COLLECTOR: R. Brooks

Data Reported to: \_\_\_\_\_

TRRP report? <input type="checkbox"/> Yes <input type="checkbox"/> No		S=SOIL W=WATER A=AIR		P=PAINT SL=SLUDGE OT=OTHER		PRESERVATION					ANALYSES															FIELD NOTES												
TIME ZONE: Time zone/State: <u>MST</u>		Lab #	Date	Time	Matrix	# of Containers	HCl	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> NaOH <input type="checkbox"/>	ICE	UNPRESERVED	BTEX <input type="checkbox"/> MTBE <input type="checkbox"/>	TPH 418 <input checked="" type="checkbox"/> TPH 1005 <input type="checkbox"/> TPH 1008 <input type="checkbox"/>	GASOLINE MOD 8015 <input type="checkbox"/>	DIESEL MOD 8015 <input type="checkbox"/>	VOC 8260 <input type="checkbox"/>	SVOC 8270 <input type="checkbox"/>	PAH 8270 <input type="checkbox"/>	8082 PESTICIDES <input type="checkbox"/>	8082 PCBS <input type="checkbox"/>	TCLP - METALS (RCRA) <input type="checkbox"/>	TCLP - PEST <input type="checkbox"/>	TOTAL METALS (RCRA) <input type="checkbox"/>	LEAD - TOTAL <input type="checkbox"/>	RCI <input type="checkbox"/>		TDS <input type="checkbox"/>	PH <input type="checkbox"/>	TOX <input type="checkbox"/>	FLASHPOINT <input type="checkbox"/>	DW 200.8 <input type="checkbox"/>	OTHER LIST <input type="checkbox"/>	EXPLOSIVES <input type="checkbox"/>	HEXAVALENT CHROMIUM <input type="checkbox"/>	CHLORIDE <input type="checkbox"/>	ANIONS <input type="checkbox"/>	ALKALINITY <input type="checkbox"/>	
B-8 (0-1')								03-04-09	2:36	S	1				X		X																					
B-9 (0-1')			↓	2:40	↓	↓				↓		↓																										-02
B-10 (5')			↓	2:50	↓	↓				↓		↓																										-03
B-11 (5')			↓	3:00	↓	↓				↓		↓																										-04
TOTAL						4				4		4																										
RELINQUISHED BY: (Signature) <u>R. Brooks</u>		DATE/TIME <u>3/5/09 8:32A</u>		RECEIVED BY: (Signature) <u>ANNAVAL</u>		DATE/TIME <u>03/05/09 8:37</u>		TURN AROUND TIME NORMAL <input checked="" type="checkbox"/> 1 DAY <input type="checkbox"/> 2 DAY <input type="checkbox"/> OTHER <input type="checkbox"/>		LABORATORY USE ONLY: RECEIVING TEMP: <u>-0.5</u> THERM #: <u>A7</u> CUSTODY SEALS - <input type="checkbox"/> BROKEN <input type="checkbox"/> INTACT <input checked="" type="checkbox"/> NOT USED <input type="checkbox"/> CARRIER BILL # _____ <input checked="" type="checkbox"/> HAND DELIVERED <u>4-902 g.c.</u> <u>No seals</u>																												
RELINQUISHED BY: (Signature)		DATE/TIME		RECEIVED BY: (Signature)		DATE/TIME																																
RELINQUISHED BY: (Signature)		DATE/TIME		RECEIVED BY: (Signature)		DATE/TIME																																

# Environmental Lab of Texas

## Variance/ Corrective Action Report- Sample Log-In

Client: Larson Assoc.  
 Date/ Time: 03/05/09 8:37  
 Lab ID #: 326564  
 Initials: gmb

### Sample Receipt Checklist

Client Initials

#1 Temperature of container/ cooler?	<u>Yes</u>	No	<u>-0.5 °C</u>	
#2 Shipping container in good condition?	<u>Yes</u>	No		
#3 Custody Seals intact on shipping container/ cooler?	Yes	No	<u>Not Present</u>	
#4 Custody Seals intact on sample bottles/ container?	Yes	No	<u>Not Present</u>	
#5 Chain of Custody present?	<u>Yes</u>	No		
#6 Sample instructions complete of Chain of Custody?	<u>Yes</u>	No		
#7 Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No		
#8 Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	ID written on Cont./ Lid	
#9 Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable	
#10 Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No		
#11 Containers supplied by ELOT?	<u>Yes</u>	No		
#12 Samples in proper container/ bottle?	<u>Yes</u>	No	See Below	
#13 Samples properly preserved?	<u>Yes</u>	No	See Below	
#14 Sample bottles intact?	<u>Yes</u>	No		
#15 Preservations documented on Chain of Custody?	<u>Yes</u>	No		
#16 Containers documented on Chain of Custody?	<u>Yes</u>	No		
#17 Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below	
#18 All samples received within sufficient hold time?	<u>Yes</u>	No	See Below	
#19 Subcontract of sample(s)?	Yes	No	<u>Not Applicable</u>	
#20 VOC samples have zero headspace?	Yes	No	<u>Not Applicable</u>	

### Variance Documentation

Contact: \_\_\_\_\_ Contacted by: \_\_\_\_\_ Date/ Time: \_\_\_\_\_

Regarding: \_\_\_\_\_

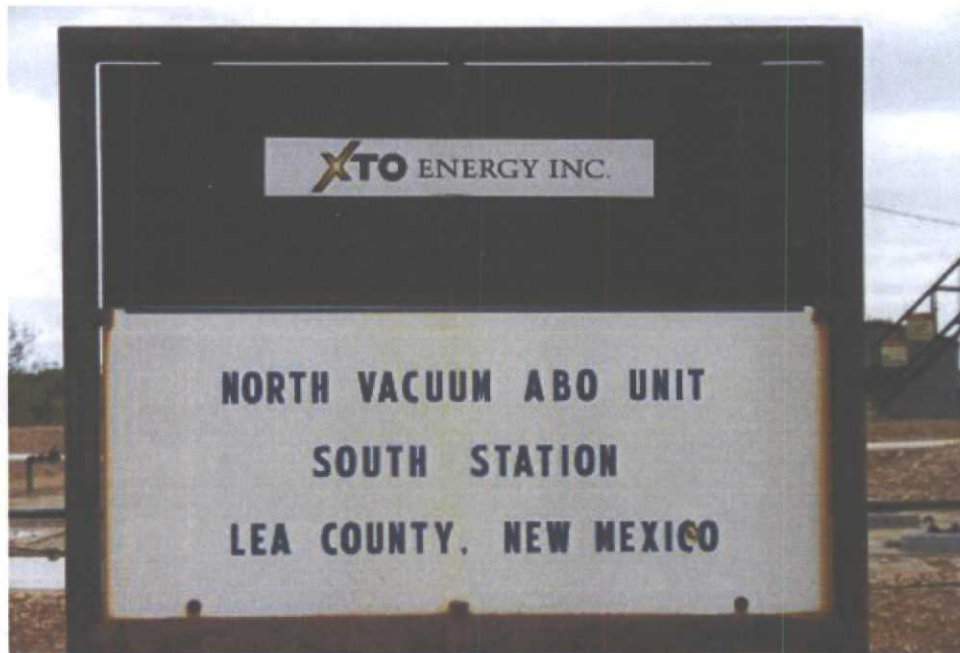
Corrective Action Taken: \_\_\_\_\_

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-

XTO Energy, Inc.  
N. Vacuum Abo Unit, S. Water Station  
Pit Closure Report



Facility Sign



Permanent Pit Prior to Closure Activities



Drained Pit Ready for Inspection and Closure



Concrete Removed and Vadoso Zone Exposed for Inspection





View of Native Soil in the Sidewall



Backfilled Pit Awaiting Reseeding

API# 30-025-3797/

## **Final Closure Report**

**XTO Energy, Inc.  
North Vacuum Abo Unit, South Water Station  
Unit G (SW/4, NE/4), Section 26, T17S, R34E  
Lea County, NM**

Project No. 8-0165

Prepared by:

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

October 9, 2009



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Appendix F	Contaminated Soil Manifests

## 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 South Water Station (Site) located in Lea County, New Mexico. The legal description of the Site is Unit G (SW/4, NE/4), Section 26, Township 17 South, Range 34 East (Figure 1). The geodetic location is N32° 48' 24.9", W103° 31' 43.5".

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 revegetation 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° 48' 24.9", W103° 31' 43.5", and is located in rural Lea County about 14 miles west-southwest of Lovington, New Mexico. The approximately 0.83 acre Site consisted of four 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 120 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.
- No fresh water wells or springs are located within approximately 1000 horizontal feet of the 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 closure activities, notification of closure was sent 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 February 23, 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 18 cubic yards of concrete and 252 cubic yards of excavated soil were disposed at Controlled Recovery, Inc. (OCD Permit R9166). An Appendix C contains waste manifests for this project.

On February 26, 2009, Larson & Associates, Inc. (LAI) personnel collected 5-part composite soil samples from the bottom (BC-1) and sidewalls (SC-1, EC-1, WC-1 and NC-1) of the pit following removal of the concrete and two discrete samples (B-6 and B-7) from the bottom of the excavation where staining was observed. 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, BTEX or chlorides were reported above OCD reporting limits (0.2 milligrams per kilogram [mg/Kg] for benzene; 50 mg/Kg for BTEX; and 250 mg/Kg for chlorides). TPH was detected above the OCD limit (100 mg/Kg) in the discrete sample B-7 (19,600 mg/Kg).

An initial C-141 was submitted to the OCD District 1, Hobbs office (Appendix D) on March 2, 2009, and remediation activities were conducted. The OCD District 1 office issued remediation project number 1RP-09-3-2115.

### **3.4 Remedial Investigation**

XTO delineated the extent of the TPH and excavated the impacted soils beginning March 3, 2009. On March 4, 2009, LAI collected four additional discrete samples to confirm field delineation. Xenco laboratory analyzed the additional samples, but no TPH was reported above the method detection limits. Table 1 presents a summary of the laboratory analysis.

Based on the soil sample results, XTO requested approval from OCD District 1 to close the excavation according to the requirements of the closure plan approved by the OCD Santa Fe office. Approval was granted. An additional 192 cubic yards of soil was excavated and disposed at the CRI facility. Appendix E presents the final C-141 and photo-documentation. 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 - South Water Station  
Unit G (SW/4, NE/4) Sec 26, T17S, R34E  
Lea County, New Mexico  
LAI Project No.: 8-0165

Sample ID	Date	Status	Depth (Ft)	Benzene	Toluene	Ethyl benzene	Total Xylenes	Total BTEX	TPH C6-C28	Chlorides
RRAL:				0.2				50	5000	
BC-1	2/26/2009	In-Situ	5	<0.0012	<0.0023	<0.0012	<0.0012	<0.0012	454	241
SC-1	2/26/2009	In-Situ	3	<0.0011	<0.0022	<0.0011	<0.0011	<0.0011	43.8	41.6
EC-1	2/26/2009	In-Situ	3	<0.0011	<0.0022	<0.0011	<0.0011	<0.0011	283	92.6
WC-1	2/26/2009	In-Situ	3	<0.0011	<0.0021	<0.0011	<0.0011	<0.0011	460	8.75
NC-1	2/26/2009	In-Situ	3	<0.0011	<0.0023	<0.0011	<0.0011	<0.0011	873	72.9
B-6	2/26/2009	Excavated	5	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	2,730	120
B-7	2/26/2009	Excavated	5	<0.0013	<0.0025	0.0017	0.0037	0.0054	19,600	23.4
B-8	3/4/2009	In-Situ	6	--	--	--	--	--	<23.1	--
B-9	3/4/2009	In-Situ	6	--	--	--	--	--	<23.8	--
B-10	3/4/2009	In-Situ	10	--	--	--	--	--	<30.2	--
B-11	3/4/2009	In-Situ	10	--	--	--	--	--	<26.2	--

**Notes**

RRAL - Recommended Remediation Action Level

BTEX analyzed via EPA SW Method 8021B.

Total Petroleum Hydrocarbons analyzed via EPA Method 418.1.

Chlorides analyzed via EPA Method 300.

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

**Bold** indicates the analyte was detected.

**Bold and blue** indicates the value exceeds NMOCD requirements.

TABLES



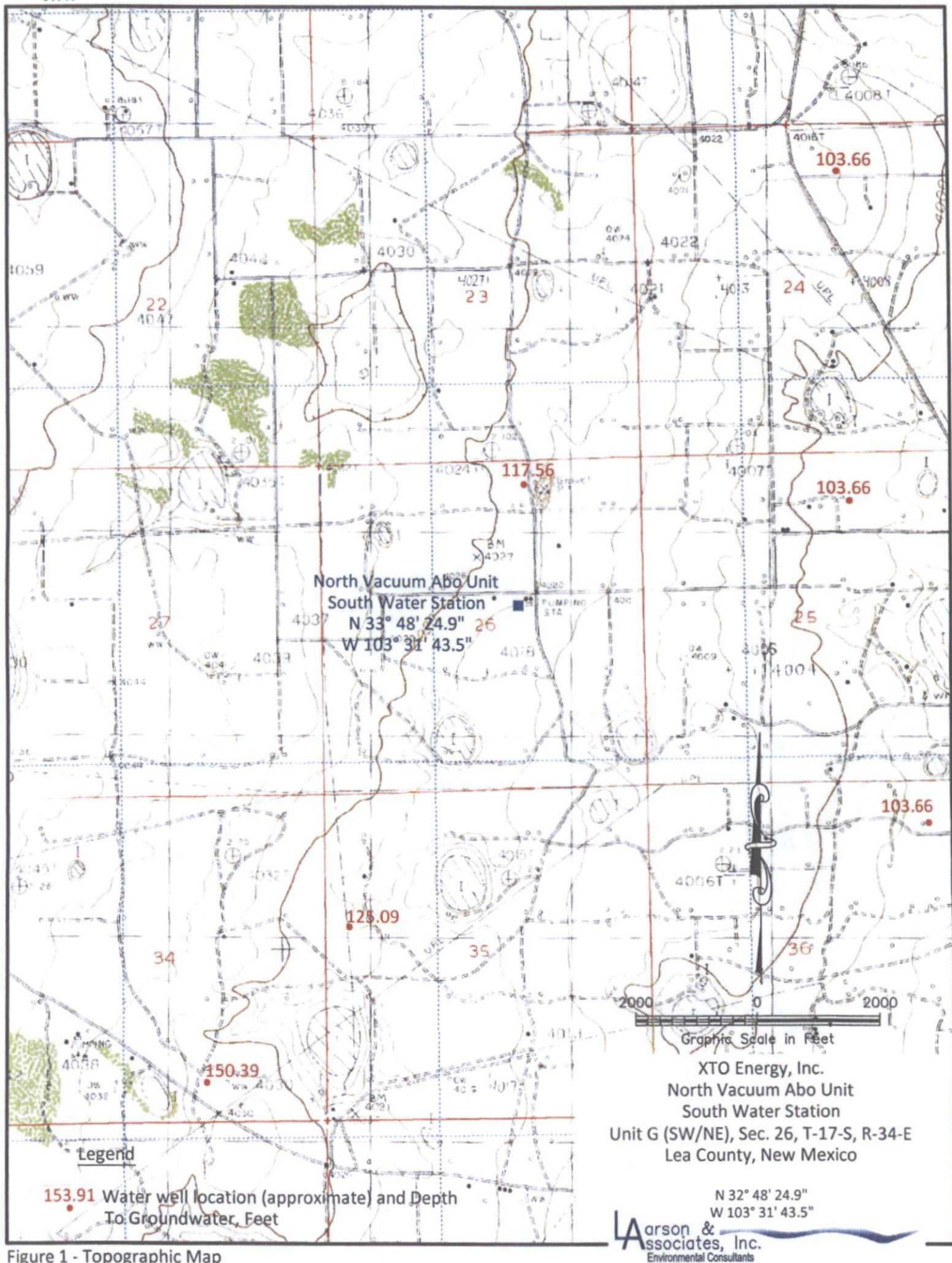
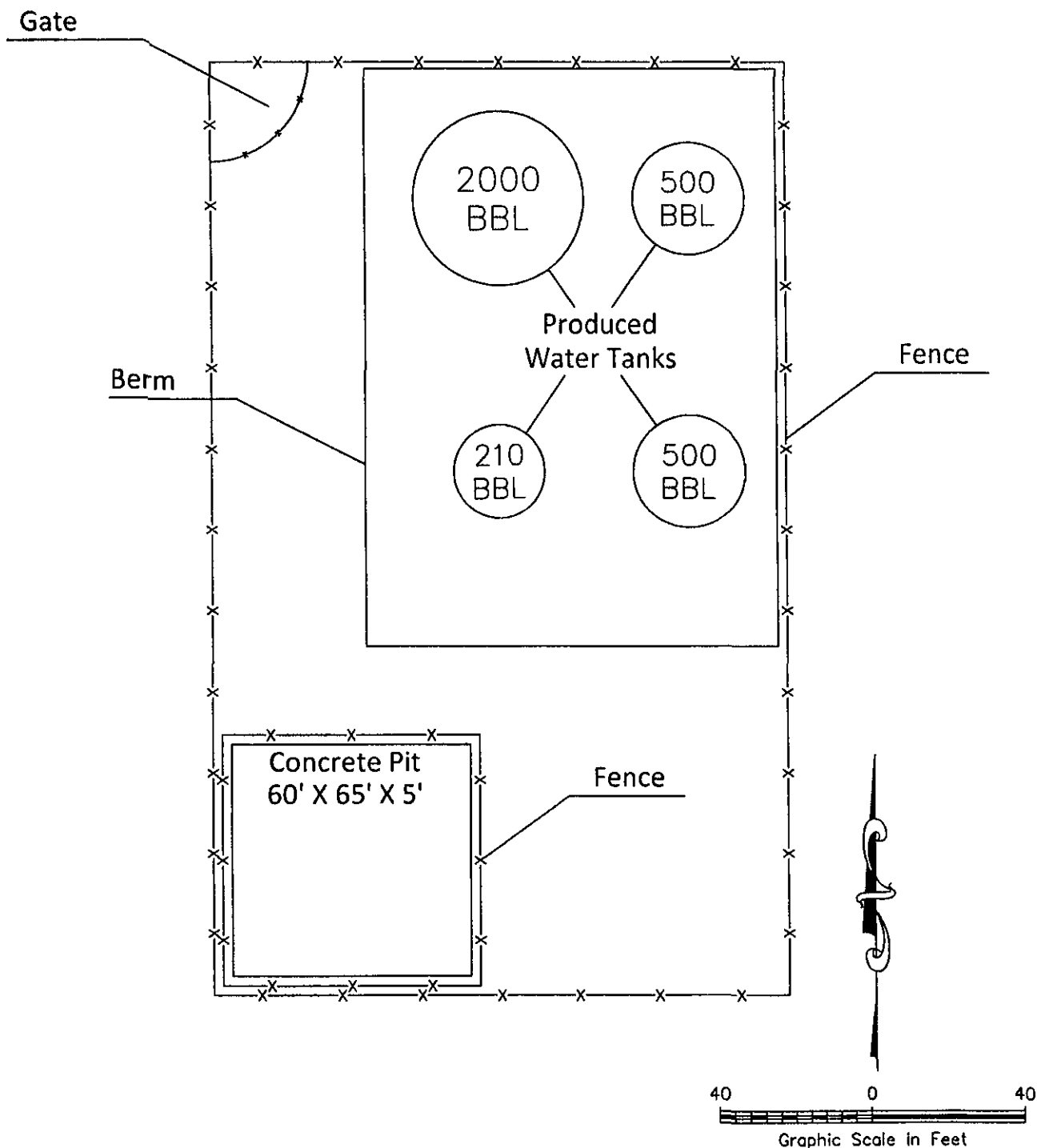


Figure 1 - Topographic Map





Figure 2 - Aerial



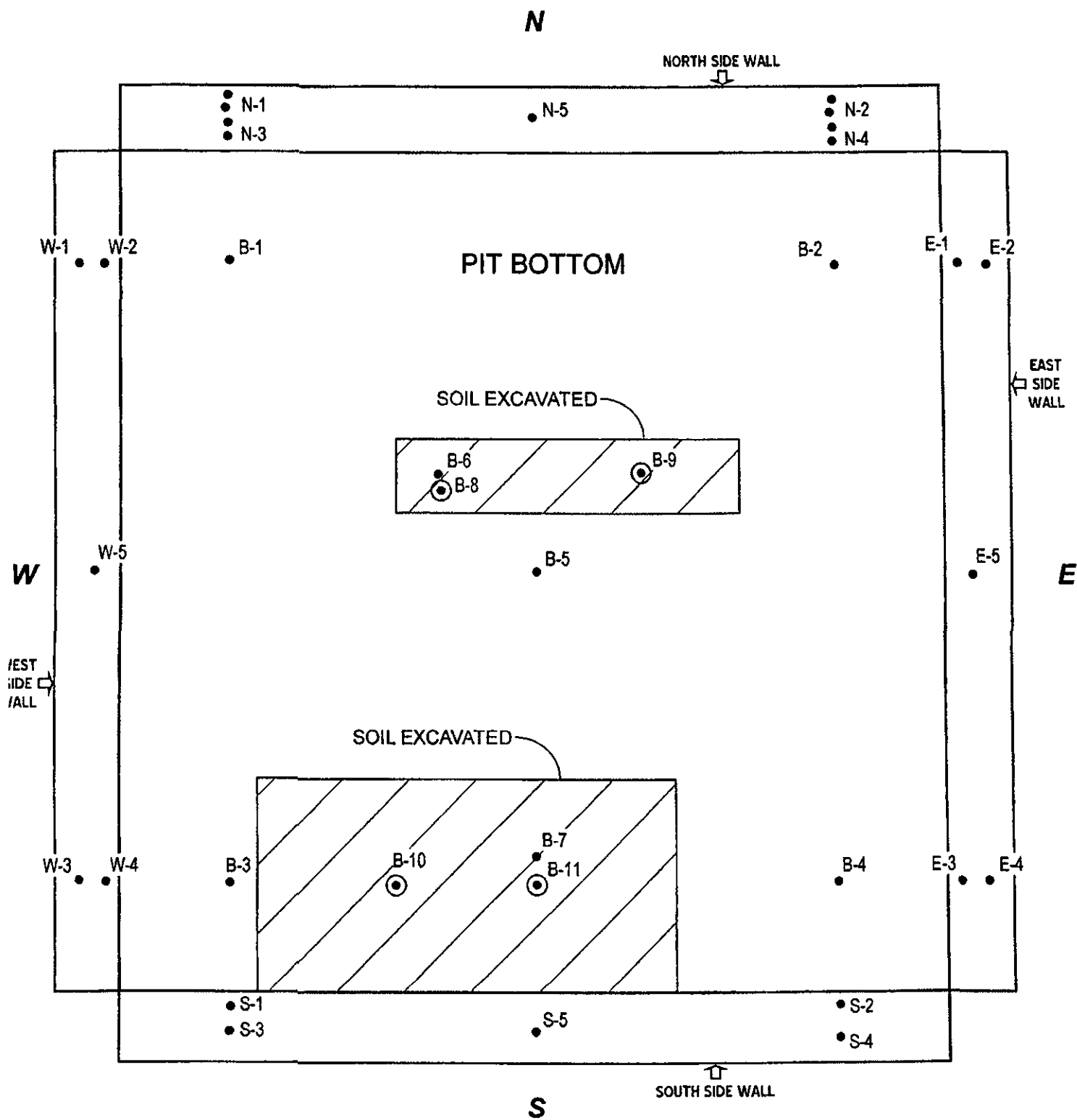
XTO Energy, Inc.  
North Vacuum Abo Unit  
South Water Station  
Unit G (SW/NE), Sec. 26, T-17-S, R-34-E  
Lea County, New Mexico

N 32° 48' 24.9"  
W 103° 31' 43.5"

**L**arson &  
Associates, Inc.  
Environmental Consultants

Figure 3 - Site Drawing





**LEGEND**

- B-5 SOIL SAMPLE LOCATION, MARCH 1, 2009
- ⊙ B-8 SOIL SAMPLE LOCATION, MARCH 5, 2009

SCALE: 1"=10'

DATE:  
03-14-09  
NAME:  
FILE:  
8-0165

**FIGURE #1**

LEA COUNTY, NEW MEXICO

**XTO ENERGY, INC.**

**NORTH VACUUM ABO LEASE**  
SECTION 28, T-17-S, R-34-E,

**SOUTH WATER STATION**  
UNIT "G" (SW 1/4, NE 1/4)

**Larson & Associates, Inc.**  
Environmental Consultants

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
301 W. Grand Avenue, Artesia, NM 88210  
District III  
300 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.

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

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

☐ **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 \_\_\_\_\_

☐ **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.

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: \_\_\_\_\_

**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<sub>2</sub>S, 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 identify 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): 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 identify 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

**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: \_\_\_\_\_



200 N. Loraine, Ste. 800  
Midland, TX 79701  
432.682.8873

February 18, 2009

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

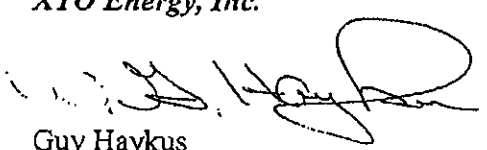
Re: Notice of Pit Closure  
XTO Energy, Inc.  
North Vacuum Abo Lease – South Water Station  
Unit G (SW/4, NE/4), Section 26  
Township 17 South, Range 34 East  
Lea County, New Mexico

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, South Water Station (Facility) beginning on February 23, 2009. The Facility is located in Unit G (SW/4, NE/4), Section 26, Township 17 South, Range 34 East in Lea County, New Mexico. The latitude and longitude is 32° 48' 24.9" north and 103° 31' 43.5" west, respectively. The nearest well is the North Vacuum Abo Lease Well #305 with API #30-025-37971. 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  
Direct Phone: 432.620.6705

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





200 N. Loraine, Ste. 800  
Midland, TX 79701  
432.682.8873

February 9, 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 – South Water Station  
Unit G (SW/4, NE/4), Section 26  
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 – South Water Station (Facility) beginning February 23, 2009. The Facility is located in Unit G (SW/4, NE/4), Section 26, Township 17 South, Range 34 East in Lea County, New Mexico. The latitude and longitude is 32° 48' 24.9" north and 103° 31' 43.5" 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.*

A handwritten signature in black ink, appearing to read "Guy Haykus", written over a horizontal line.

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

U.S. Postal Service  
**CERTIFIED MAIL RECEIPT**  
 (Domestic Mail Only, No Insurance Coverage Provided)  
 For delivery information visit our website at [www.usps.com](http://www.usps.com)

**OFFICIAL USE**

Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$

Postmark Here

Sent To  
 Patrick Lyons, Commissioner  
 NM State Land Office  
 Santa Fe, NM 87501

7007 0220 0002 5086 8607

U.S. Postal Service  
**CERTIFIED MAIL RECEIPT**  
 (Domestic Mail Only, No Insurance Coverage Provided)  
 For delivery information visit our website at [www.usps.com](http://www.usps.com)

**OFFICIAL USE**

Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$

Postmark Here

Total Postage: Mr. Larry Hill  
 Sent To: Oil Conservation Division  
 Street, Apt. No. or PO Box No. 1625 N. French Dr.  
 City, State, ZIP+4 Hobbs, NM 88240

7007 0220 0002 5086 8621

U.S. Postal Service  
**CERTIFIED MAIL RECEIPT**  
 (Domestic Mail Only, No Insurance Coverage Provided)  
 For delivery information visit our website at [www.usps.com](http://www.usps.com)

**OFFICIAL USE**

Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$

Postmark Here

Sent To: Mura Meyers - NM State Land Off.  
 Street, Apt. No. or PO Box No. 2702 N. Grimes St. D  
 City, State, ZIP+4 Hobbs NM 88240

V-11920

APD-C-

# Invoice

## Controlled Recovery Inc.

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

REC'D/MIDLAND  
FEB 27 2009

Date  
Invoice #

2/25/2009  
63531

Terms  
Due Date  
PO #  
Generator  
Memo  
Lease  
Well  
Rig  
Company Man

Net 30  
3/27/2009  
XTO  
SOUTH ABO UNIT

### Bill To

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

Contaminated Soil  
Contaminated Soil

8 CONCRETE  
10 CONCRETE

18.00  
18.00

144.00 212900  
180.00 212954

2/24/2009  
2/24/2009

HUNGRY HORSE  
HUNGRY HORSE

Subtotal 324.00  
Tax (NM Sales Tax 5.375%) 17.42  
Total 341.42

TOPG x

# 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 X 70

Lease Name SOUTH ABQA UNIT

Trucking Company HUNTERLY TRAILER Vehicle Number 01 Driver (Print) TONY

Date 2-24-09 Time 9:30 a.m./p.m. a.m.

## Type of Material

- ☐ Fluids ☐ Soils  
☐ Tank Bottoms ☒ Other Material (List Description Below)

Receiving Area 50/57

## DESCRIPTION

CEMENT  
CONCRETE

Volume of Material ☐ Bbls. ☒ Yard 8 ☐ Gallons 1000

☐ 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 1980 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]  
(Signature)

CRI Representative [Signature]  
(Signature)

## TANK BOTTOMS

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

212900

White - CRI Form C138

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 X T O

Lease Name SOUTH ABOA UNIT

Trucking Company HUNGARY HANSA Vehicle Number 01 Driver (Print) TOAY

Date 2-24-09 Time 12:35 a.m./p.m. (p.m.)

## Type of Material

☐ Fluids ☒ Soils  
☐ Tank Bottoms ☒ Other Material (List Description Below) \_\_\_\_\_ Receiving Area 50/5

## DESCRIPTION

CONTAMINATED  
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 [Signature]  
(Signature)

CRI Representative [Signature]  
(Signature)

## TANK BOTTOMS

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

212954

White - CRI  
Form C138

Canary - CRI Accounting

Pink - CRI Plant

Gold - Transporter  
THE COLOR PRINTER, #7521

V-11920

## Invoice

## Controlled Recovery Inc.

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

Date  
Invoice #

2/26/2009  
63566

Terms  
Due Date  
PO #  
Generator  
Memo  
Lease  
Well  
Rig  
Company Man

Net 30  
3/28/2009  
XTO  
NVAU  
SOUTH

REC'D/MIDLAND  
FEB 27 2009

## Bill To

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

0-2-25-09

Contaminated Soil	12	18.00	216.00	213165	2/25/2009	HUNGRY HORSE
Contaminated Soil	24	18.00	432.00	213173	2/25/2009	AMIGO
Contaminated Soil	12	18.00	216.00	213131	2/25/2009	HUNGRY HORSE
Contaminated Soil	12	18.00	216.00	213101	2/25/2009	HUNGRY HORSE

Subtotal 1,080.00  
Tax (NM Sales Tax 5.375%) 58.05  
Total \$1,138.05

TDPK

NVA South Water Station

AFE # 900425-113253

# 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 From NVAU. South

Trucking Company Hugging Machine Vehicle Number 02 Driver (Print) Benjamin

Date 2-25-09 Time 2:10 a.m. / p.m.

## Type of Material

- ☐ Fluids ☒ Soils  
☐ Tank Bottoms ☐ Other Material (List Description Below)

Receiving Area 50.51

DESCRIPTION Contaminated Soil

Volume of Material ☐ Bbls. ☒ Yard 12 ☐ 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]  
(Signature)

CRI Representative [Signature]  
(Signature)

## TANK BOTTOMS

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

213165

e. White - CRI

Form C138

Canary - CRI Accounting

Pink - CRI Plant

Gold - Transporter  
THE COLOR PRINTER • #7521

# CONTROLLED RECOVERY, I.C.

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 NVA South Water Station

Trucking Company Amigo Vehicle Number 4 Driver (Print) Thermon

Date 2.25.09 Time 2:46 a.m./p.m.

## Type of Material

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

## DESCRIPTION

Cement Soil

Volume of Material ☐ Bbls. ☒ Yard 24 ☐ 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	BS&W/BBLS Received	BS&W	%
1st Gauge					
2nd Gauge			Free Water		
Received			Total Received		

213173

White - CRI

Form C138

Canary - CRI Accounting

Pink - CRI Plant

Gold - Transporter

THE COLOR PRINTER • 47521



# 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 NVAU South Water Station

Trucking Company Hendry Hauling Vehicle Number 07 Driver (Print) Benny

Date 2-25-09 Time 12:20 am/pm

## Type of Material

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

## DESCRIPTION

Cement

Volume of Material ☐ Bbls. ☒ Yard 12 ☐ 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]  
(Signature)

## TANK BOTTOMS

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

213131

White - CRI Form C138

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 NRAU South Water Station  
Trucking Company Hungry/Hungry Vehicle Number 02 Driver (Print) Benny  
Date 2-25-09 Time 10:00 a.m./p.m.

## Type of Material

☐ Fluids ☒ Soils  
☐ Tank Bottoms ☒ Other Material (List Description Below) Receiving Area 50.51

## DESCRIPTION

Non-hazardous

Volume of Material ☐ Bbls. ☒ Yard 12 ☐ 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 Benny Ran Martin  
(Signature)

## TANK BOTTOMS

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

213101

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 04 2009

## Bill To

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

Date  
Invoice #

2/27/2009  
63606

Terms  
Due Date  
PO #  
Generator  
Memo  
Lease  
Well  
Rig  
Company Man

Net 30  
3/29/2009  
XTO  
NORTH VACUUM ABO  
SOUTH ST

Contaminated Soil	20	18.00	360.00	213261	2/26/2009	R & M
Contaminated Soil	20	18.00	360.00	213264	2/26/2009	AMIGO
Contaminated Soil	20	18.00	360.00	213282	2/26/2009	R & M
Contaminated Soil	20	18.00	360.00	213294	2/26/2009	AMIGO
Contaminated Soil	20	18.00	360.00	213322	2/26/2009	AMIGO
Contaminated Soil	20	18.00	360.00	213353	2/26/2009	R & M
Contaminated Soil	20	18.00	360.00	213318	2/26/2009	R & M
Contaminated Soil	12	18.00	216.00	213363	2/26/2009	HUNGRY HORSE
Contaminated Soil	12	18.00	216.00	213380	2/26/2009	HUNGRY HORSE
Contaminated Soil	12	18.00	216.00	213324	2/26/2009	HUNGRY HORSE
Contaminated Soil	12	18.00	216.00	213321	2/26/2009	HUNGRY HORSE
Contaminated Soil	12	18.00	216.00	213301	2/26/2009	HUNGRY HORSE
Contaminated Soil	12	18.00	216.00	213268	2/26/2009	HUNGRY HORSE

Subtotal 3,816.00  
Tax (NM Sales Tax 5.375%) 205.11  
Total \$4,021.11

TO PG 1

# CONTROLLED RECOVERY, II

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 North VAC A130 South St.

Trucking Company RSM Vehicle Number 113 Driver (Print) Jones

Date 2-26-05 Time 8:20 a.m./p.m.

## Type of Material

- ☐ Fluids ☒ Soils  
☐ Tank Bottoms ☐ Other Material (List Description Below)

Receiving Area Soil

## DESCRIPTION

Cont Soil

Volume of Material ☐ Bbls. ☒ Yard 20 ☐ 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	

213261

White - CRI Form C138

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 North Ute ABC South St

Trucking Company Amigo Vehicle Number 4 Driver (Print) Herman

Date 2-26-09 Time 8:38 a.m./p.m.

## Type of Material

☐ Fluids ☒ Soils  
☐ Tank Bottoms ☐ Other Material (List Description Below) Receiving Area SO-57

## DESCRIPTION

Cont Soil

Volume of Material ☐ Bbls. ☒ Yard 20 ☐ 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)

CRI Representative \_\_\_\_\_ (Signature)

## TANK BOTTOMS

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

213264

# 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 - North Joe

Lease Name A30 South St

Trucking Company TRSM Vehicle Number 113 Driver (Print) Torus

Date 2-26-09 Time 10:20 a.m./p.m.

## Type of Material

- ☐ Fluids ☒ Soils  
☐ Tank Bottoms ☐ Other Material (List Description Below)

Receiving Area SA-57

## DESCRIPTION

Cont Soil

Volume of Material ☐ Bbls. ☒ Yard 20 ☐ 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 [Signature]  
(Signature)

CRI Representative [Signature]  
(Signature)

## TK BOTTOMS

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

213282

White - CRI

Form C138

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 XTU

Lease Name North Vac ABO - South St

Trucking Company Amigo Vehicle Number 4 Driver (Print) Herman

Date 2-26-06 Time 10:39 a.m./p.m.

## Type of Material

☐ Fluids ☒ Soils  
☐ Tank Bottoms ☐ Other Material (List Description Below) Receiving Area 50-5

## DESCRIPTION

Cont Soil

Volume of Material ☐ Bbls. ☒ Yard 20 ☐ 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) [Signature]

RI Representative (Signature) [Signature]

## TANK BOTTOMS

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

213294

White - CRI

Form C138

Canary - CRI Accounting

Pink - CRI Plant

Gold - Transporter  
THE COLOR PRINTER - #7521

# CONTROLLED RECOVERY, II

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 North VHC 4150 S. 16 St

Trucking Company Amigo Vehicle Number 46 Driver (Print) Herman

Date 7-26-09 Time 12:35 a.m./p.m.

## Type of Material

☐ Fluids ☒ Soils  
☐ Tank Bottoms ☐ Other Material (List Description Below) Receiving Area S21 S

## DESCRIPTION

Volume of Material ☐ Bbls. ☒ Yard 20 ☐ 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)

RI Representative \_\_\_\_\_ (Signature)

## TANK BOTTOMS

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

213322

White - CRI Form C138

Canary - CRI Accounting

Pink - CRI Plant

Gold - Transporter  
THE COLOR PRINTER - #7521



# CONTROLLED RECOVERY, I. D.

P.O. Box 388 • Hobbs, New Mexico 88241-0388 • (575) 393-1079 • www.crihobbs.com  
 NMOC Order R9166

Bill to \_\_\_\_\_

Address \_\_\_\_\_

Company/Generator XTO

Lease Name North Lake ADO San 44

Trucking Company R.M. Vehicle Number 113 Driver (Print) Jesus

Date 2-26-09 Time 2:30 a.m./p.m.

## Type of Material

- ☐ Fluids ☒ Soils  
☐ Tank Bottoms ☐ Other Material (List Description Below)

Receiving Area 50.51

## DESCRIPTION

Land Soil

Volume of Material ☐ Bbls. 8.5 ☒ Yard 20 ☐ 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]  
 (Signature)

CRI Representative [Signature]  
 (Signature)

## ANK BOTTOMS

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

213353

White - CRI Form C138

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 North Val ABC South St.  
 Trucking Company R.M. Vehicle Number 113 Driver (Print) JESUS  
 Date 2-26-09 Time 12:24 a.m. / p.m.

## Type of Material

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

## DESCRIPTION

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Volume of Material ☐ Bbls. 0.5 ☒ Yard 20 ☐ Gallons \_\_\_\_\_  
☐ Wash Out ☐ Call Out ☒ After Hours ☐ Debris Charge

## GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

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☐ 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 Jesus Lopez (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		

213318

White - CRI

Form C138

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 North Vac ABO Sou Lf ST.

Trucking Company Hungry Horse Vehicle Number OZ Driver (Print) Benny

Date 2-24-09 Time 3:00 a.m./p.m.

## Type of Material

- ☐ Fluids ☒ Soils  
☐ Tank Bottoms ☐ Other Material (List Description Below)

Receiving Area 50.57

## DESCRIPTION

Cont. Soil

Volume of Material ☐ Bbls. ☒ Yard 12 ☐ 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] (Signature)

CRI Representative [Signature] (Signature)

## TANK BOTTOMS

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

213363

White - CRI Form C138

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 XTD

Lease Name North UAC APO South SW

Trucking Company Management Services Vehicle Number 01 Driver (Print) CD

Date 7-26-09 Time 3:35 a.m./p.m.

## Type of Material

- ☐ Fluids      ☒ Soils  
☒ Tank Bottoms      ☐ Other Material (List Description Below)

Receiving Area SW-SW

## DESCRIPTION

Oil Spill

Volume of Material      ☐ Bbls.      ☒ Yard 12      ☐ 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 \_\_\_\_\_  
(Signature)

CRI Representative P.D. [Signature]  
(Signature)

## ANK BOTTOMS

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

213380

White - CRI

Form C138

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 XTU

Lease Name Northline A150 South St

Trucking Company Young's Trucking Vehicle Number 02 Driver (Print) BETTY

Date 7-26-09 Time 17:48 a.m./p.m.

## Type of Material

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

## DESCRIPTION

1 in 1 in 1

Volume of Material ☐ Bbls. ☒ Yard 12 ☐ 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] (Signature)

CRI Representative [Signature] (Signature)

## TANK BOTTOMS

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

213324

White - CRI Form C138

Canary - CRI Accounting

Pink - CRI Plant

Gold - Transporter  
THE COLOR PRINTER - #7521

# CONTROLLED RECOVERY, II

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

NMOCD Order R9166

Bill to \_\_\_\_\_

Address \_\_\_\_\_

Company/Generator K70

Lease Name North Inc ABO South St. C12

Trucking Company Hungry Horse Vehicle Number 01 Driver (Print) B...

Date 2-20-05 Time 12:31 a.m. / p.m.

## Type of Material

- ☐ Fluids ☐ Soils  
☐ Tank Bottoms ☐ Other Material (List Description Below)

Receiving Area 50.57

## DESCRIPTION

Crude Oil

Volume of Material ☐ Bbls. ☒ Yard 12 ☐ 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 C.D. McCallum  
 (Signature)

CRI Representative Russ Madsen  
 (Signature)

## TANK BOTTOMS

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

213321

White - CRI Form C138

Canary - CRI Accounting

Pink - CRI Plant

Gold - Transporter  
 THE COLOR PRINTER - #7521

# CONTROLLED RECOVERY, II

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 North Vaca ARSO South St

Trucking Company Hungry Horse Vehicle Number 02 Driver (Print) Benny

Date 2-26-09 Time 8:57 am. / p.m.

## Type of Material

☐ Fluids ☐ Soils  
☐ Tank Bottoms ☐ Other Material (List Description Below)

Receiving Area SO-SI

## DESCRIPTION

Cont Soil

Volume of Material ☐ Bbls. ☒ Yard 12 ☐ 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 Benny  
(Signature)

CRI Representative Rene  
(Signature)

## TANK BOTTOMS

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

213269

White - CRI

Form C138

Canary - CRI Accounting

Pink - CRI Plant

Gold - Transporter  
THE COLOR PRINTER • #7521

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88410  
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

APP-D-

Form C-141  
Revised October 10, 2003

Submit 2 Copies to appropriate  
District Office in accordance  
with Rule 116 on back  
side of form

RECEIVED

MAR 13 2009

HOBBS

### Release Notification and Corrective Action

#### OPERATOR

☒ Initial Report

☐ Final Report

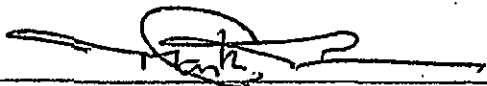
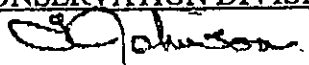
Name of Company: XTO Energy, Inc.	Contact: Guy Haykus/Production Superintendent	
Address: 200 N. Loraine St., Ste. 800, Midland, TX 79701	Telephone No.: (432) 682-8873	
Facility Name: North Vacuum Abo Lease - South Water Station	Facility Type: Produced Water Injection Station	
Surface Owner: State of New Mexico	Mineral Owner	Lease No.

#### LOCATION OF RELEASE

Unit Letter G	Section 26	Township 17S	Range 34E	Feet from the	North/South Line	Feet from the	East/West Line	County: Lea
------------------	---------------	-----------------	--------------	---------------	------------------	---------------	----------------	-------------

Latitude: N 32° 48' 24.9" Longitude: W 103° 31' 43.5"

#### 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: 02/27/2009/3:00 pm CST
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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 discreet soil samples collected from two (2) areas showing staining near pit center and south of pit center. 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 NMOC 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 NMOC 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, NMOC 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: 	OIL CONSERVATION DIVISION	
Printed Name: Mark Larson, Larson & Associates, Inc. (Consultant)	Approved by District Supervisor:  ENVIR	
Title: Sr. Project Manager / President	Approval Date: 3.13.09	Expiration Date: —
E-mail Address: mark@laenvironmental.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 03/02/2009 Phone: (432) 687-0901	RP# 04.3.2115	

\* Attach Additional Sheets If Necessary



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

RECEIVED

MAR 13 2009

HOBBS

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

APD-E

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

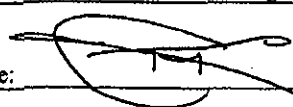
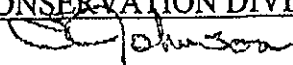
Name of Company: XTO Energy, Inc.	Contact: Guy Haykus/Production Superintendent	
Address: 200 N. Loraine St., Ste. 800, Midland, TX 79701	Telephone No.: (432) 682-8873	
Facility Name: North Vacuum Abo Lease - South Water Station	Facility Type: Produced Water Injection Station	
Surface Owner: State of New Mexico	Mineral Owner	Lease No.

#### LOCATION OF RELEASE

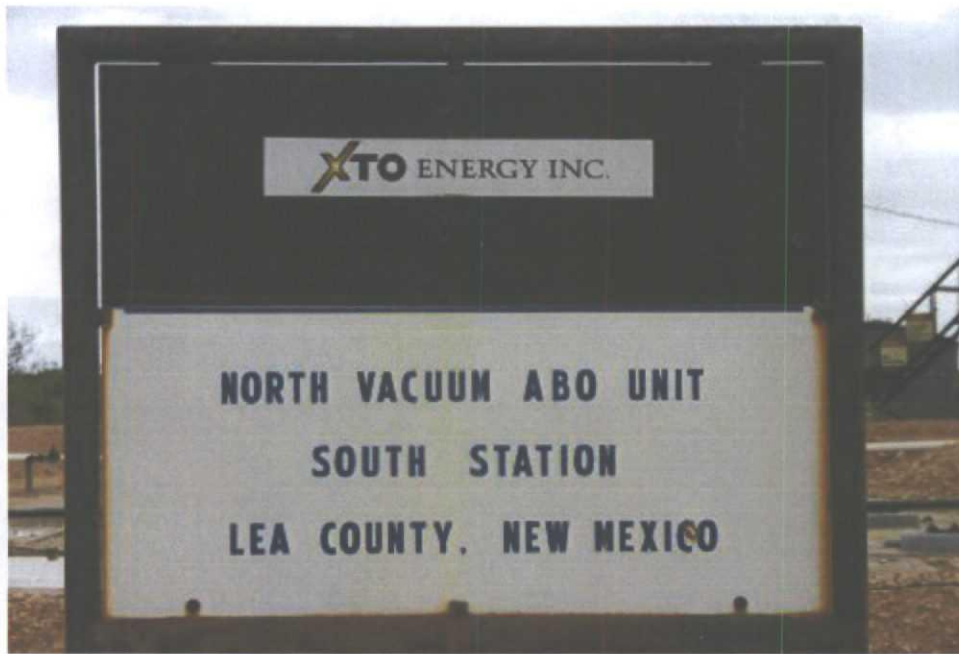
Unit Letter G	Section 26	Township 17S	Range 34E	Feet from the	North/South Line	Feet from the	East/West Line	County: Lea
------------------	---------------	-----------------	--------------	---------------	------------------	---------------	----------------	-------------

Latitude: N 32° 48' 24.9" Longitude: W 103° 31' 43.5"

#### 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: 02/27/2009/3:00 pm CST
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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 discreet soil samples collected from two (2) areas showing staining near pit center and south of pit center. 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: 	OIL CONSERVATION DIVISION 	
Printed Name: Mark Larson, Larson & Associates, Inc. (Consultant)	Approved by District Supervisor ENVIRONMENTAL ENGINEER	
Title: Sr. Project Manager / President	Approval Date: 3.15.09	Expiration Date:
E-mail Address: mark@laenvironmental.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 03/02/2009 Phone: (432) 687-0901	175-09.3-2115	

Attach Additional Sheets If Necessary



Facility Sign



Permanent Pit Prior to Closure Activities



Drained Pit Ready for Inspection and Closure



Concrete Removed and Vadose Zone Exposed for Inspection





View of Native Soil in the Sidewall



Backfilled Pit Awaiting Reseeding

V-11920

APD-F-

## Invoice

## Controlled Recovery Inc.

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

Date  
Invoice #

3/13/2009  
64004

Terms  
Due Date  
PO #  
Generator  
Memo  
Lease  
Well  
Rig  
Company Man

Net 30  
4/12/2009  
XTO  
NVAU  
SOUTHWEST

REC'D MIDLAND  
MAR 16 2009

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

Contaminated Soil	20	18.00	360.00	214937	3/9/2009	Rocker Three
Contaminated Soil	20	18.00	360.00	214938	3/9/2009	HUNGRY HORSE
Contaminated Soil	20	18.00	360.00	214933	3/9/2009	HUNGRY HORSE
Contaminated Soil	20	18.00	360.00	214915	3/9/2009	Rocker Three
Contaminated Soil	12	18.00	216.00	214884	3/9/2009	HUNGRY HORSE
Contaminated Soil	12	18.00	216.00	214883	3/9/2009	HUNGRY HORSE
Contaminated Soil	12	18.00	216.00	214973	3/9/2009	HUNGRY HORSE
Contaminated Soil	12	18.00	216.00	214972	3/9/2009	HUNGRY HORSE
Contaminated Soil	20	18.00	360.00	214885	3/9/2009	Rocker Three
Contaminated Soil	20	18.00	360.00	214974	3/9/2009	Rocker Three

Subtotal 3,024.00  
Tax (NM Sales Tax 5.375%) 162.54  
Total \$3,186.54

TO PFX

# CONTROLLED RECOVERY, C.

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

NMOCD Order R9166

Bill to \_\_\_\_\_

Address \_\_\_\_\_

Company/Generator X T U

Lease Name N V A V SOUTH WEST

Trucking Company ROCKEX 3 Vehicle Number 3 Driver (Print) JAVIER

Date 3-9-09 Time 1:15 a.m. / PM

## Type of Material

☐ Fluids ☒ Soils  
☐ Tank Bottoms ☐ Other Material (List Description Below) Receiving Area 50/57

## DESCRIPTION

CONT  
SOIL

Volume of Material ☐ Bbls. ☒ Yard 20 ☐ 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]  
(Signature)

CRI Representative [Signature]  
(Signature)

## TANK BOTTOMS

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

214937

White - CRI

Form C138

Canary - CRI Accounting

Pink - CRI Plant

Gold - Transporter  
THE COLOR PRINTER - #7521

# CONTROLLED RECOVERY, C.

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

NMOCD Order R9166

Bill to \_\_\_\_\_

Address \_\_\_\_\_

Company/Generator FTU

Lease Name NVAU SOUTH WEST

Trucking Company HUNGRY HORSE Vehicle Number 01 Driver (Print) Tony

Date 3-9-09 Time 1:15 a.m./(p.m.)

## Type of Material

☐ Fluids ☒ Soils  
☐ Tank Bottoms ☐ Other Material (List Description Below) Receiving Area 5867

## DESCRIPTION

Cont  
SOIL

Volume of Material ☐ Bbls. ☒ Yard 12.50 ☐ 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 \_\_\_\_\_  
(Signature)

CRI Representative \_\_\_\_\_  
(Signature)

## TANK BOTTOMS

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

214936

# CONTROLLED RECOVERY, IC.

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

NMOCD Order R9166

Bill to \_\_\_\_\_

Address \_\_\_\_\_

Company/Generator X T O

Lease Name NVAU SOUTHWEST

Trucking Company HUMBAY HORSE Vehicle Number 02 Driver (Print) BENNY

Date 3-9-09 Time 1:10 a.m. / (p.m.)

## Type of Material

☐ Fluids ☒ Soils  
☐ Tank Bottoms ☐ Other Material (List Description Below) Receiving Area 50/57

## DESCRIPTION

CONT  
SOIL

Volume of Material ☐ Bbls. ☒ Yard 12 ☐ 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 [Signature]  
(Signature)

CRI Representative [Signature]  
(Signature)

## TANK BOTTOMS

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

214933

White - CRI Form C138

Canary - CRI Accounting

Pink - CRI Plant

Gold - Transporter  
THE COLOR PRINTER - #7521



# CONTROLLED RECOVERY, C.

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

NMOCD Order R9166

Bill to \_\_\_\_\_

Address \_\_\_\_\_

Company/Generator X T O

Lease Name NVAU SOUTHWEST

Trucking Company ROCKWELL 3 Vehicle Number 3 Driver (Print) JAVILIN

Date 3-9-09 Time 11:20 a.m. / p.m.

## Type of Material

☐ Fluids ☒ Soils  
☐ Tank Bottoms ☐ Other Material (List Description Below) Receiving Area 50/27

## DESCRIPTION

CONJ.  
50.2

Volume of Material ☐ Bbls. ☒ Yard 20 ☐ 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]  
(Signature)

CRI Representative [Signature]  
(Signature)

## TANK BOTTOMS

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

214919

White - CRI  
Form C138

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 X T O

Lease Name NVAU SOUTH WEST

Trucking Company HUNGER HORSE Vehicle Number 01 Driver (Print) TONY

Date 3-9-09 Time 9:20 a.m. / p.m.

## Type of Material

☐ Fluids ☒ Soils  
☐ Tank Bottoms ☐ Other Material (List Description Below) Receiving Area \_\_\_\_\_

## DESCRIPTION

Cont  
SOIL

Volume of Material: ☐ Bbls. ☒ Yard 12 ☐ 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]  
(Signature)

CRI Representative [Signature]  
(Signature)

## TANK BOTTOMS

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

214884

# 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 X T O

Lease Name MUAU SOUTH WEST

Trucking Company HUNGARY HORSE Vehicle Number 01 Driver (Print) TONY

Date 3-9-09 Time 3:10 a.m./p.m. 6

## Type of Material

☐ Fluids ☒ Solids  
☐ Tank Bottoms ☐ Other Material (List Description Below) Receiving Area 52/47

## DESCRIPTION

CONF  
SO.2

Volume of Material ☐ Bbls. ☒ Yard 12 ☐ 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 [Signature]  
(Signature)

CRI Representative [Signature]  
(Signature)

## TANK BOTTOMS

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

Form C138

White - CRI

Canary - CRI Accounting

Pink - CRI Plant

Gold - Transporter

THE COLOR PRINTER - #7521

214973

# CONTROLLED RECOVERY VC.

P.O. Box 388 • Hobbs, New Mexico 88241-0388 • (575) 393-1075 • www.crihobbs.com  
NMOCD Order R9166

Bill to \_\_\_\_\_

Address \_\_\_\_\_

Company/Generator XTO

Lease Name NVH SOUTH WEST

Trucking Company HUNGARY HALL Vehicle Number 02 Driver (Print) BENNY

Date 3-9-09 Time 3:45 a.m./p.m. pm

## Type of Material

- ☐ Fluids ☒ Soils  
☐ Tank Bottoms ☐ Other Material (List Description Below)

Receiving Area 50/67

## DESCRIPTION

COAT SOIL

Volume of Material ☐ Bbls. ☒ Yard 12 ☐ 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 Randy Hargis  
(Signature)

CRI Representative [Signature]  
(Signature)

## TANK BOTTOMS

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

214972

Form C138  
White - CRI

Canary - CRI Accounting

Pink - CRI Plant

Gold - Transporter  
THE COLOR PRINTER - #7521

# CONTROLLED RECOVERY INC.

P.O. Box 36 Hobbs, New Mexico 88241-0388 • (575) 393-1033 • www.crihobbs.com  
NMOCD Order R9166

Bill to \_\_\_\_\_

Address \_\_\_\_\_

Company/Generator XTO

Lease Name NVAU SOUTHWEST

Trucking Company ROCKEY 3 Vehicle Number 3 Driver (Print) JAVIER

Date 3-9-09 Time 9:30 a.m. / p.m.

## Type of Material

- ☐ Fluids ☒ Soils  
☐ Tank Bottoms ☐ Other Material (List Description Below)

Receiving Area 50/57

## DESCRIPTION

CONT  
SOIL

Volume of Material ☐ Bbls. ☒ Yard 20 ☐ 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]  
(Signature)

CRI Representative [Signature]  
(Signature)

## TANK BOTTOMS

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

214885

White - CRI

Form C138

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

X T O

Lease Name

NVAU SOUTHWEST

Trucking Company

ROCKEN 3

Vehicle Number

3

Driver (Print)

JAVILA

Date

3-9-09

Time

3:10

a.m. / p.m.

## Type of Material

☐ Fluids

☒ Solts

☐ Tank Bottoms

☐ Other Material (List Description Below)

Receiving Area

SD/67

## DESCRIPTION

CONT.  
SD/67

Volume of Material

☐ Bbls.

☒ Yard

20

☐ 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

(Signature)

CRI Representative

(Signature)

## TANK BOTTOMS

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

White - CRI

Form C138

Canary - CRI Accounting

Pink - CRI Plant

Gold - Transporter

THE COLOR PRINTER - #7521

214974

## Jones, Brad A., EMNRD

---

**From:** Mark Larson [Mark@laenvironmental.com]  
**Sent:** Monday, March 02, 2009 5:01 PM  
**To:** Price, Wayne, EMNRD  
**Cc:** Jones, Brad A., EMNRD; William\_Haykus@xtoenergy.com; Hill, Larry, EMNRD  
**Subject:** Re: XTO Energy, Inc., North Vacuum Abo Lease, South Water Station Form C-141 and Initial Soil Sample Results Transmittal, March 2, 2009  
**Attachments:** 20090302175134.pdf

Dear Wayne, Please find attached submittal on behalf of XTO Energy, Inc. of initial soil samples (composite and discreet) from a permanent pit at the North Vacuum Abo Lease, ~~South Water Station~~ in Lea County, New Mexico. The C-141 and soil sample results are submitted per the closure plan approved on February 4, 2009. XTO proposes to excavate two (2) areas beginning on March 4, 2009, where the laboratory reported total petroleum hydrocarbons (TPH) by method 418.1 at 2,730 mg/Kg and 19,600 mg/Kg in discreet soil samples B-6 and B-7, respectively. No benzene, BTEX or chloride was reported in the samples at concentrations above the OCD thresholds of 0.2 mg/Kg, 50 mg/Kg and 250 mg/Kg, respectively. The original document is being sent via certified mail with return receipt requested. Please contact me if you have questions.

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](mailto:mark@laenvironmental.com)



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We are a community of 6 million users fighting spam.  
SPAMfighter has removed 3828 of my spam emails to date.  
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---

RECEIVED

2009 MAR 5 PM 1 02

March 2, 2009

VIA: Certified Mail (Return Receipt Requested)

VIA EMAIL: Wayne.Price@state.nm.us

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

Re: Soil Sample Results from Permanent Pit  
XTO Energy, Inc., North Vacuum Abo Lease ~~South Water Station~~  
Unit G (SW/4, NE/4), Section 26, Township 17 South, Range 34 East  
Lea County, New Mexico

Dear Mr. Price,

Pursuant to 19.15.17.13C(3) NMAC, this letter transmits to the New Mexico Oil Conservation Division (OCD) form C-141 (Attachment A) and laboratory results (Attachment B) for composite and discreet soil samples collected from a permanent pit at the North Vacuum Abo Lease, South Water Station (Facility). The Facility is located in Unit G (SW/4, NE/4), Section 26, Township 17 South, Range 34 East in Lea County, New Mexico. The Facility is positioned at latitude 32° 48' 24.9" north and longitude is 103° 31' 43.5" west. Contact information for XTO is as follows:

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

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

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

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

On February 18, 2009, XTO sent certified letters, with return receipt requested, to the OCD District 1 office, located in Hobbs, New Mexico and the New Mexico State Land Office, as surface owner of record, at its Santa Fe and Hobbs, New Mexico offices, to notify these entities of pending closure of the



pit according to a closure plan approved by the OCD Environmental Bureau in Santa Fe, New Mexico on February 4, 2009. The closure was scheduled to commence on February 23, 2009.

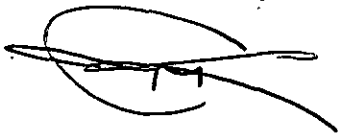
On February 23, 2009, XTO removed ancillary equipment (i.e. fencing, netting, etc.) for salvage or scrap metal. A track-mounted hammer hoe was used to remove the concrete lining from the pit. The concrete was disposed at Controlled Recovery, Inc., which operates under OCD permit R9166. On February 26, 2009, LAI personnel collected 5-spot composite soil samples from the bottom (BC-1) and sidewalls (SC-1, EC-1, WC-1 and NC-1) of the pit following removal of the concrete. Two (2) discreet samples (B-6 and B-7) were collected from the bottom of the pit at locations with apparent staining. The composite and discreet soil samples were placed in clean glass sample containers, labeled, chilled in an ice chest and hand-delivered under chain of custody control and preservation to Xenco Laboratories (formerly Environmental Lab of Texas, Inc.) located in Odessa, Texas. The laboratory 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.

The laboratory reported no benzene, BTEX and chloride above OCD limits of 0.2 milligrams per kilogram (mg/Kg) for benzene, 50 mg/Kg for BTEX or 250 mg/Kg for chloride. The laboratory reported TPH in the composite samples between 43.8 mg/Kg in the south composite sample (SC-1) and 873 mg/Kg in the north composite sample (NC-1). The TPH in the discreet samples was 2,730 mg/Kg (B-6) and 19,600 mg/Kg (B-7). Groundwater occurs at approximately 120 feet below ground surface. Table 1 presents a summary of the laboratory analysis. Attachment A presents the laboratory report.

XTO proposes to excavate the TPH at locations B-6 (2,730 mg/Kg) and B-7 (19,600 mg/Kg) to delineate the TPH by field methods and collect samples for laboratory confirmation when field observations indicate that the extent of contamination has been obtained. The excavation activity is scheduled for March 4, 2009. Please contact myself at (432) 687-0901 or Guy Haykus with XTO at (432) 682-8873, if you have questions.

Sincerely,

**Larson & Associates, Inc.**



Mark J. Larson, P.G., C.P.G., C.G.W.P.  
Sr. Project Manager/President

Cc: Guy Haykus/XTO Energy, Inc/Production Superintendent - Midland  
DeeAnn Kemp/XTO Energy Inc/Regulatory and Production Mgr. - Midland  
Kristy Ward/XTO Energy Inc/Regulatory Analyst - Midland  
Larry Hill/OCD District 1

## Tables

Table 1  
Soil Analytical Data Summary  
XTO Energy, Inc.  
North Vacuum Abo Lease - South Water Station  
Unit G (SW/4, NE/4) Sec 26, T17S, R34E  
Lea County, New Mexico  
LAI Project No.: 8-0165

Sample ID	Date	Benzene	Toluene	Ethyl benzene	Total Xylenes	Total BTEX	TPH C6-C28	Chlorides
RRAL:		0.2				50	1,000	250
BC-1	2/26/2009	<0.0012	<0.0023	<0.0012	<0.0012	<0.0012	<b>454</b>	<b>241</b>
SC-1	2/26/2009	<0.0011	<0.0022	<0.0011	<0.0011	<0.0011	<b>43.8</b>	<b>41.6</b>
EC-1	2/26/2009	<0.0011	<0.0022	<0.0011	<0.0011	<0.0011	<b>283</b>	<b>92.6</b>
WC-1	2/26/2009	<0.0011	<0.0021	<0.0011	<0.0011	<0.0011	<b>460</b>	<b>8.75</b>
NC-1	2/26/2009	<0.0011	<0.0023	<0.0011	<0.0011	<0.0011	<b>873</b>	<b>72.9</b>
B-7	2/26/2009	<0.0013	<0.0025	<b>0.0017</b>	<b>0.0037</b>	<b>0.0054</b>	<b>19,600</b>	<b>23.4</b>
B-6	2/26/2009	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<b>2,730</b>	<b>120</b>

**Notes**

RRAL - Recommended Remediation Action Level

BTEX analyzed via EPA SW Method 8021B.

Total Petroleum Hydrocarbons analyzed via EPA Method 418.1.

Chlorides analyzed via EPA Method 300.

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

**Bold** indicates the analyte was detected.

**Bold and blue** indicates the value exceeds NMOCD requirements.

**Attachment A**

**Form C-141**

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

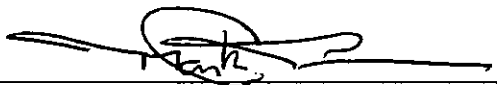
Name of Company: XTO Energy, Inc.	Contact: Guy Haykus/Production Superintendent	
Address: 200 N. Loraine St., Ste. 800, Midland, TX 79701	Telephone No.: (432) 682-8873	
Facility Name: North Vacuum Abo Lease - South Water Station	Facility Type: Produced Water Injection Station	
Surface Owner: State of New Mexico	Mineral Owner	Lease No.

**LOCATION OF RELEASE**

Unit Letter G	Section 26	Township 17S	Range 34E	Feet from the	North/South Line	Feet from the	East/West Line	County: Lea
------------------	---------------	-----------------	--------------	---------------	------------------	---------------	----------------	-------------

Latitude: N 32° 48' 24.9" Longitude: W 103° 31' 43.5"

**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: 02/27/2009/3:00 pm CST
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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 discreet soil samples collected from two (2) areas showing staining near pit center and south of pit center. 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: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Mark Larson, Larson & Associates, Inc. (Consultant)	Approved by District Supervisor:	
Title: Sr. Project Manager / President	Approval Date:	Expiration Date:
E-mail Address: mark@laenvironmental.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 03/02/2009	Phone: (432) 687-0901	

\* Attach Additional Sheets If Necessary

**Attachment B**

**Laboratory Report**

# **Analytical Report 326072**

**for**

**Larson & Associates**

**Project Manager: Michelle Green**

**Vacuum Water Station South**

**27-FEB-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**



27-FEB-09

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

Reference: XENCO Report No: **326072**  
**Vacuum Water Station South**  
Project Address: 8-0165

**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 326072. 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. 326072 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

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## Sample Cross Reference 326072



Larson & Associates, Midland, TX  
Vacuum Water Station South

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BC-1	S	Feb-26-09 13:55		326072-001
SC-1	S	Feb-26-09 11:00		326072-002
EC-1	S	Feb-26-09 11:30		326072-003
WC-1	S	Feb-26-09 11:00		326072-004
NC-1	S	Feb-26-09 13:45		326072-005
B-7	S	Feb-26-09 14:00		326072-006
B-6	S	Feb-26-09 14:15		326072-007



# Certificate of Analysis Summary 326072

Larson & Associates, Midland, TX

Project Name: Vacuum Water Station South



Project Id:

Contact: Michelle Green

Project Location: 8-0165

Date Received in Lab: Thu Feb-26-09 05:37 pm


Report Date: 27-FEB-09

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	326072-001	326072-002	326072-003	326072-004	326072-005	326072-006
	<i>Field Id:</i>	BC-1	SC-1	EC-1	WC-1	NC-1	B-7
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Feb-26-09 13:55	Feb-26-09 11:00	Feb-26-09 11:30	Feb-26-09 11:00	Feb-26-09 13:45	Feb-26-09 14:00
<b>Anions by EPA 300</b>	<i>Extracted:</i>	Feb-27-09 09:27	Feb-27-09 09:27	Feb-27-09 09:27	Feb-27-09 09:27	Feb-27-09 09:27	Feb-27-09 09:27
	<i>Analyzed:</i>	Feb-27-09 09:27	Feb-27-09 09:27	Feb-27-09 09:27	Feb-27-09 09:27	Feb-27-09 09:27	Feb-27-09 09:27
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		241 11.7	41.6 5.43	92.6 5.40	8.75 5.36	72.9 5.70	23.4 6.28
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Feb-27-09 08:00	Feb-27-09 08:00	Feb-27-09 08:00	Feb-27-09 08:00	Feb-27-09 08:00	Feb-27-09 08:00
	<i>Analyzed:</i>	Feb-27-09 10:18	Feb-27-09 10:39	Feb-27-09 10:59	Feb-27-09 11:20	Feb-27-09 11:40	Feb-27-09 12:01
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		ND 0.0012	ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0013
Toluene		ND 0.0023	ND 0.0022	ND 0.0022	ND 0.0021	ND 0.0023	ND 0.0025
Ethylbenzene		ND 0.0012	ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0011	0.0017 0.0013
m,p-Xylenes		ND 0.0023	ND 0.0022	ND 0.0022	ND 0.0021	ND 0.0023	0.0037 0.0025
o-Xylene		ND 0.0012	ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0013
Total Xylenes		ND 0.0012	ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0011	0.0037 0.0013
Total BTEX		ND 0.0012	ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0011	0.0054 0.0013
<b>Percent Moisture</b>	<i>Extracted:</i>	Feb-27-09 12:02	Feb-27-09 12:02	Feb-27-09 12:02	Feb-27-09 12:02	Feb-27-09 12:02	Feb-27-09 12:02
	<i>Analyzed:</i>	Feb-27-09 12:02	Feb-27-09 12:02	Feb-27-09 12:02	Feb-27-09 12:02	Feb-27-09 12:02	Feb-27-09 12:02
	<i>Units/RL:</i>	% RL	% RL	% RL	% RL	% RL	% RL
Percent Moisture		14.37 1.00	7.89 1.00	7.40 1.00	6.76 1.00	12.24 1.00	20.39 1.00
<b>TPH by EPA 418.1</b>	<i>Extracted:</i>	Feb-27-09 08:47	Feb-27-09 08:47	Feb-27-09 08:47	Feb-27-09 08:47	Feb-27-09 08:47	Feb-27-09 08:47
	<i>Analyzed:</i>	Feb-27-09 08:47	Feb-27-09 08:47	Feb-27-09 08:47	Feb-27-09 08:47	Feb-27-09 08:47	Feb-27-09 08:47
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
TPH, Total Petroleum Hydrocarbons		454 11.7	43.8 10.9	283 10.8	460 10.7	873 11.4	19600 62.8

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Brent Barron  
Odessa Laboratory Director



# Certificate of Analysis Summary 326072

Larson & Associates, Midland, TX

Project Name: Vacuum Water Station South



Project Id:

Contact: Michelle Green

Project Location: 8-0165

Date Received in Lab: Thu Feb-26-09 05:37 pm

Report Date: 27-FEB-09

Project Manager: Brent Barron, II

<b>Analysis Requested</b>	<b>Lab Id:</b> 326072-007 <b>Field Id:</b> B-6 <b>Depth:</b> <b>Matrix:</b> SOIL <b>Sampled:</b> Feb-26-09 14:15					
<b>Anions by EPA 300</b>	<b>Extracted:</b> <b>Analyzed:</b> Feb-27-09 09:27 <b>Units/RL:</b> mg/kg RL					
Chloride	120 5.20					
<b>BTEX by EPA 8021B</b>	<b>Extracted:</b> Feb-27-09 08:00 <b>Analyzed:</b> Feb-27-09 12:21 <b>Units/RL:</b> mg/kg RL					
Benzene	ND 0.0010					
Toluene	ND 0.0021					
Ethylbenzene	ND 0.0010					
m,p-Xylenes	ND 0.0021					
o-Xylene	ND 0.0010					
Total Xylenes	ND 0.0010					
Total BTEX	ND 0.0010					
<b>Percent Moisture</b>	<b>Extracted:</b> <b>Analyzed:</b> Feb-27-09 12:02 <b>Units/RL:</b> % RL					
Percent Moisture	3.80 1.00					
<b>TPH by EPA 418.1</b>	<b>Extracted:</b> <b>Analyzed:</b> Feb-27-09 08:47 <b>Units/RL:</b> mg/kg RL					
TPH, Total Petroleum Hydrocarbons	2730 10.4					

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Brent Barron  
Odessa Laboratory Director

- 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.

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	Phone	Fax
4143 Greenbriar Dr, Stafford, Tx 77477	(281) 240-4200	(281) 240-4280
9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116



## Form 2 - Surrogate Recoveries

Project Name: Vacuum Water Station South

Work Orders : 326072,

Project ID:

Lab Batch #: 751059

Sample: 525549-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 02/27/09 08:56

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0278	0.0300	93	80-120	
4-Bromofluorobenzene	0.0260	0.0300	87	80-120	

Lab Batch #: 751059

Sample: 525549-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 02/27/09 09:17

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0279	0.0300	93	80-120	
4-Bromofluorobenzene	0.0265	0.0300	88	80-120	

Lab Batch #: 751059

Sample: 525549-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 02/27/09 09:58

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0314	0.0300	105	80-120	
4-Bromofluorobenzene	0.0279	0.0300	93	80-120	

Lab Batch #: 751059

Sample: 326072-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 02/27/09 10:18

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0306	0.0300	102	80-120	
4-Bromofluorobenzene	0.0276	0.0300	92	80-120	

Lab Batch #: 751059

Sample: 326072-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 02/27/09 10:39

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0309	0.0300	103	80-120	
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	

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

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 \cdot A / B$

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



## Form 2 - Surrogate Recoveries

Project Name: Vacuum Water Station South

Work Orders : 326072,

Project ID:

Lab Batch #: 751059

Sample: 326072-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 02/27/09 10:59

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0313	0.0300	104	80-120	
4-Bromofluorobenzene	0.0281	0.0300	94	80-120	

Lab Batch #: 751059

Sample: 326072-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 02/27/09 11:20

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0308	0.0300	103	80-120	
4-Bromofluorobenzene	0.0293	0.0300	98	80-120	

Lab Batch #: 751059

Sample: 326072-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 02/27/09 11:40

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0310	0.0300	103	80-120	
4-Bromofluorobenzene	0.0293	0.0300	98	80-120	

Lab Batch #: 751059

Sample: 326072-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 02/27/09 12:01

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0326	0.0300	109	80-120	
4-Bromofluorobenzene	0.0236	0.0300	79	80-120	**

Lab Batch #: 751059

Sample: 326072-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 02/27/09 12:21

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0312	0.0300	104	80-120	
4-Bromofluorobenzene	0.0267	0.0300	89	80-120	

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

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 \cdot A / B$

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



## Form 2 - Surrogate Recoveries

Project Name: Vacuum Water Station South

Work Orders : 326072,

Project ID:

Lab Batch #: 751059

Sample: 326072-002 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 02/27/09 12:42

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0283	0.0300	94	80-120	
4-Bromofluorobenzene		0.0271	0.0300	90	80-120	

Lab Batch #: 751059

Sample: 326072-002 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 02/27/09 13:02

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0281	0.0300	94	80-120	
4-Bromofluorobenzene		0.0266	0.0300	89	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.



## Blank Spike Recovery



Project Name: Vacuum Water Station South

Work Order #: 326072

Project ID:

Lab Batch #: 751054

Sample: 751054-1-BKS

Matrix: Solid

Date Analyzed: 02/27/2009

Date Prepared: 02/27/2009

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.





## BS / BSD Recoveries



Project Name: Vacuum Water Station South

Work Order #: 326072

Analyst: ASA

Date Prepared: 02/27/2009

Project ID:

Date Analyzed: 02/27/2009

Lab Batch ID: 751059

Sample: 525549-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

### BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	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
Analytes											
Benzene	ND	0.1000	0.1025	103	0.1	0.1038	104	1	70-130	35	
Toluene	ND	0.1000	0.1030	103	0.1	0.1045	105	1	70-130	35	
Ethylbenzene	ND	0.1000	0.1010	101	0.1	0.1027	103	2	71-129	35	
m,p-Xylenes	ND	0.2000	0.2112	106	0.2	0.2145	107	2	70-135	35	
o-Xylene	ND	0.1000	0.1030	103	0.1	0.1050	105	2	71-133	35	

Analyst: ASA

Date Prepared: 02/27/2009

Date Analyzed: 02/27/2009

Lab Batch ID: 751012

Sample: 751012-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

### BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by EPA 418.1	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
Analytes											
TPH, Total Petroleum Hydrocarbons	ND	2500	2080	83	2500	2080	83	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: Vacuum Water Station South



Work Order #: 326072

Lab Batch #: 751054

Date Analyzed: 02/27/2009

Date Prepared: 02/27/2009

Project ID:

Analyst: LATCOR

QC- Sample ID: 325914-001 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	92.6	114	210	103	80-120	

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



# Form 3 - MS / MSD Recoveries



Project Name: Vacuum Water Station South

Work Order #: 326072

Project ID:

Lab Batch ID: 751059

QC- Sample ID: 326072-002 S

Batch #: 1 Matrix: Soil

Date Analyzed: 02/27/2009

Date Prepared: 02/27/2009

Analyst: ASA

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
BTEX by EPA 8021B Analytes	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	0.1086	0.0847	78	0.1086	0.0888	82	5	70-130	35	
Toluene	ND	0.1086	0.0791	73	0.1086	0.0830	76	5	70-130	35	
Ethylbenzene	ND	0.1086	0.0692	64	0.1086	0.0725	67	5	71-129	35	X
m,p-Xylenes	ND	0.2171	0.1443	66	0.2171	0.1518	70	5	70-135	35	X
o-Xylene	ND	0.1086	0.0691	64	0.1086	0.0730	67	5	71-133	35	X

Lab Batch ID: 751012

QC- Sample ID: 326072-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 02/27/2009

Date Prepared: 02/27/2009

Analyst: ASA

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
TPH by EPA 418.1 Analytes	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	454	2920	2770	79	2920	2960	86	7	65-135	35	

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

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

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



## Sample Duplicate Recovery



Project Name: Vacuum Water Station South

Work Order #: 326072

Lab Batch #: 751054

Project ID:

Date Analyzed: 02/27/2009

Date Prepared: 02/27/2009

Analyst: LATCOR

QC- Sample ID: 325914-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Anions by EPA 300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	92.6	95.9	4	20	

Lab Batch #: 751040

Date Analyzed: 02/27/2009

Date Prepared: 02/27/2009

Analyst: BEV

QC- Sample ID: 326072-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	14.4	16.0	11	20	

Spike Relative Difference RPD  $200 * |(B-A)/(B+A)|$

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

[illegible]

**Environmental Lab of Texas**  
Variance/ Corrective Action Report- Sample Log-In

Client: Larson + Associates  
Date/ Time: 02-26-09 @ 1737  
Lab ID #: 326072  
Initials: JMF

**Sample Receipt Checklist**

				Client Initials	
#1	Temperature of container/ cooler?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	5.5	°C
#2	Shipping container in good condition?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
#3	Custody Seals intact on shipping container/ cooler?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	(Not Present)	
#4	Custody Seals intact on sample bottles/ container?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	(Not Present)	
#5	Chain of Custody present?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
#6	Sample instructions complete of Chain of Custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
#7	Chain of Custody signed when relinquished/ received?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
#8	Chain of Custody agrees with sample label(s)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	ID written on Cont / Lid	
#9	Container label(s) legible and intact?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
#11	Containers supplied by ELOT?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
#12	Samples in proper container/ bottle?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	See Below	
#13	Samples properly preserved?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	See Below	
#14	Sample bottles intact?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
#15	Preservations documented on Chain of Custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
#16	Containers documented on Chain of Custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
#17	Sufficient sample amount for indicated test(s)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	See Below	
#18	All samples received within sufficient hold time?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	See Below	
#19	Subcontract of sample(s)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	(Not Applicable)	
#20	VOC samples have zero headspace?	<input checked="" type="radio"/> Yes	<input type="radio"/> 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