

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

HOBBS OCD

OCT 16 2013

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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
Revised June 6, 2013

For temporary pits, below-grade tanks, and multi-well fluid management pits, submit to the appropriate NMOCD District Office.
For permanent pits submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

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

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

Instructions: Please submit one application (Form C-144) per individual pit, 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: Chevron, USA OGRID #: _____
Address: 56 Texas Camp Road, Lovington, New Mexico 88260
Facility or well name: Central Vacuum Unit #342
API Number: 30-025-38002 OCD Permit Number: _____
U/L or Qtr/Qtr A Section 36 Township 17S Range 34E County: Lea
Center of Proposed Design: Latitude N 32.7986° Longitude W 103.5089° NAD: ☐ 1927 ☐ 1983
Surface Owner: ☐ Federal ☒ State ☐ Private ☐ Tribal Trust or Indian Allotment

2.
☒ **Pit:** Subsection F, G or J of 19.15.17.11 NMAC
Temporary: ☒ Drilling ☐ Workover
☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A ☐ Multi-Well Fluid Management Low Chloride Drilling Fluid ☐ yes ☐ no
☒ Lined ☐ Unlined Liner type: Thickness 20 mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other Synthetic
☐ String-Reinforced
Liner Seams: ☐ Welded ☐ Factory ☐ Other _____ Volume: _____ bbl Dimensions: L _____ x W _____ x D _____

3.
☐ **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 _____

4.
☐ **Alternative Method:**
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

5.
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 _____

6.

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)

7.

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 19.15.16.8 NMAC

8.

Variances 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:

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

9.

Siting Criteria (regarding permitting): 19.15.17.10 NMAC

Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Siting criteria does not apply to drying pads or above-grade tanks.

General siting

Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank.

- ☐ NM Office of the State Engineer - iWATERS database search; ☐ USGS; ☐ Data obtained from nearby wells

☐ Yes ☐ No
☐ NA

Ground water is less than 50 feet below the bottom of a Temporary pit, permanent pit, or Multi-Well Fluid Management pit.

NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

☐ Yes ☐ No
☐ NA

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. **(Does not apply to below grade tanks)**

- Written confirmation or verification from the municipality; Written approval obtained from the municipality

☐ Yes ☐ No

Within the area overlying a subsurface mine. **(Does not apply to below grade tanks)**

- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division

☐ Yes ☐ No

Within an unstable area. **(Does not apply to below grade tanks)**

- 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. **(Does not apply to below grade tanks)**

- FEMA map

☐ Yes ☐ No

Below Grade Tanks

Within 100 feet of a continuously flowing watercourse, significant watercourse, lake bed, sinkhole, wetland or playa lake (measured from the ordinary high-water mark).

- Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption;.

- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Temporary Pit using Low Chloride Drilling Fluid (maximum chloride content 15,000 mg/liter)

Within 100 feet of a continuously flowing watercourse, or any other significant watercourse or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). (Applies to low chloride temporary pits.)

- Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 300 feet from a occupied 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 200 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 300feet of any other fresh water well or spring, in existence at the time of the initial application.

NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 100 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Temporary Pit Non-low chloride drilling fluid

Within 300 feet of a continuously flowing watercourse, or any other significant watercourse, or within 200 feet of any 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 spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 1000 feet of any other fresh water well or spring, in the existence at the time of the initial application;

- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 300 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Permanent Pit or Multi-Well Fluid Management Pit

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 1000 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 spring or a fresh water well used for domestic or stock watering purposes, 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 500 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

10.

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: _____

11.

Multi-Well Fluid Management Pit 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.

- ☐ 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
- ☐ A List of wells with approved application for permit to drill associated with the pit.
- ☐ 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
- ☐ Hydrogeologic Data - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC

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

12. **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 H₂S, 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

13. **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 ☐ Multi-well Fluid Management Pit
☐ 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

14. **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 C 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 H of 19.15.17.13 NMAC
- ☒ Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

15. **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 require justifications and/or demonstrations of equivalency. Please refer to 19.15.17.10 NMAC for guidance.

Ground water is less than 25 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 25-50 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 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 100 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, 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 300 horizontal feet of a private, domestic fresh water well or spring used for domestic or stock watering purposes, 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
Written confirmation or verification from the municipality; Written approval obtained from the municipality	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 300 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 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 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

16.
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.*

<input type="checkbox"/> Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
<input type="checkbox"/> Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection E of 19.15.17.13 NMAC
<input type="checkbox"/> Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of Subsection K of 19.15.17.11 NMAC
<input type="checkbox"/> 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
<input type="checkbox"/> Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
<input type="checkbox"/> Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of 19.15.17.13 NMAC
<input type="checkbox"/> Waste Material Sampling Plan - based upon the appropriate requirements of 19.15.17.13 NMAC
<input type="checkbox"/> Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)
<input type="checkbox"/> Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
<input type="checkbox"/> Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
<input type="checkbox"/> Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

17.
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: _____

18.
OCD Approval: ☐ Permit Application (including closure plan) ☒ Closure Plan (only) ☐ OCD Conditions (see attachment)

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

Title: _____ **OCD Permit Number:** _____

19.
Closure Report (required within 60 days of closure completion): 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:** June 29, 2013

20.
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.

21.
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.*

<input checked="" type="checkbox"/> Proof of Closure Notice (surface owner and division)
<input type="checkbox"/> Proof of Deed Notice (required for on-site closure for private land only)
<input checked="" type="checkbox"/> Plot Plan (for on-site closures and temporary pits)
<input checked="" type="checkbox"/> Confirmation Sampling Analytical Results (if applicable)
<input checked="" type="checkbox"/> Waste Material Sampling Analytical Results (required for on-site closure)
<input checked="" type="checkbox"/> Disposal Facility Name and Permit Number
<input checked="" type="checkbox"/> Soil Backfilling and Cover Installation
<input checked="" type="checkbox"/> Re-vegetation Application Rates and Seeding Technique
<input checked="" type="checkbox"/> 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): Kegan Boyer Title: CEMC – Project Manager

Signature:  Date: 10/14/13

e-mail address: kegan.boyer@chevron.com Telephone: (713) 372-7705



**CONESTOGA-ROVERS
& ASSOCIATES**

2135 South Loop, 250 West, Midland, Texas 79703
Telephone: (432) 686-0086 Fax: (432) 686-0186
www.CRAworld.com

September 30, 2013

Reference No. 073823

Mr. Geoffrey R. Leking
Environmental Engineer Specialist
New Mexico Oil Conservation Division, District I
1625 N. French Drive
Hobbs, NM 88240

HOBBS OCD

OCT 16 2013

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Dear Mr. Leking:

Re: Pit Closure Report (As Attachment to Form C-144)
Central Vacuum Unit #342 - RP #2672
Section 36 (Unit A), Township 17 South, Range 34 East
Lea County, New Mexico

The subject location is the Chevron Central Vacuum Unit #342 (hereafter referred to as the "Site"). The Site is located in Unit Letter A, Section 36, Township 17 South, Range 34 East, Lea County, New Mexico. The approximate pit excavation dimensions are 115' x 100' x 5' average depth. The Site coordinates are N 32.7986°, W 103.5089°. The Site location is shown on Figure 1.

SITE HISTORY

On April 7, 2010, Chevron submitted a C-144 Form proposing pit closure. The original C-144 closure plan for this reserve pit was on-site burial, however, that approach was rejected by the New Mexico Oil Conservation Division (NMOCD). The original C-144 Form is attached as Appendix A. After a site inspection by the NMOCD, the agency requested that a C-141 Release Notification and Corrective Action Form should be filed by Chevron and consequently, a Remediation Permit number (RP#2672) was assigned to this project. The original C-141 Form is attached as Appendix B.

On January 11, 2011, CRA, CEMC and AECOM met at the NMOCD District I Hobbs office to discuss the path forward at the Site. Topics of discussion included modifications (waste excavation and removal vs. onsite trench burial) to the 2010 Closure Workplan and objectives necessary to close the pit as directed by the NMOCD District I Hobbs office.

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September 30, 2013

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Subsequent to the January 11, 2011 meeting between CRA, CEMC, AECOM and the NMOCD, a Closure Request Workplan prepared by CRA (April 13, 2011) on behalf of Chevron was submitted to the NMOCD.

Subsequent to the Closure Request Workplan prepared by CRA (April 13, 2011), CRA, Chevron (David Pagano) and Mr. Geoffrey Leking met at the NMOCD District I Hobbs office on June 27, 2012 to discuss the path forward at the Site. Topics of discussion included the over-excavation of pit materials to depths of 4-5 feet, off-site disposal of pit materials to an NMOCD-permitted facility, delineation/confirmation sampling of excavation floor subsurface (as appropriate), Site restoration tasks as proposed in the workplan, backfilling, lining, grading, seeding and closure documentation (C-141 Final and C-144 Pit Closure) being submitted upon NMOCD concurrence of vertical delineation of the Site.

Final C-141 Report, including documentation of 2013 delineation and assessment activities is being filed to the NMOCD under a separate cover.

SITE ASSESSMENT AND CONFIRMATION SOIL SAMPLING

Initial Site assessment and soil sampling activities were completed in accordance to the New Mexico Oil Conservation Division's (NMOCD's) guidance document *Guidelines for Remediation of Leaks, Spills and Releases*, dated August 13, 1993. Section III of the guidance document provides three general characteristics (Depth to groundwater, Wellhead Protection Area and Distance to Nearest Surface Water Body) to "evaluate a Sites potential risk, the need for remedial action and the level of cleanup, if necessary, required at the site." Section IV provides ranking criteria for each site-specific characteristic to determine their relative threat to the public, fresh waters and the environment. The sum of each individual characteristic equals the total ranking score. The total ranking score determines the recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (BTEX), total petroleum hydrocarbons (TPH) and chloride in soil.

According to the Petroleum Recovery Research Center (PRRC) database and the New Mexico Office of the State Engineer (NMOSE), there are several water wells in the general vicinity of the Site and the average depth to groundwater in the vicinity of the Site is approximately 107 feet below ground surface (bgs). Appendix C is a topographic map depicting the average depths to groundwater, distance to surface water bodies and any wellheads. Based on average depth to groundwater (>100 feet below ground surface), Wellhead Protection (water source <1,000 feet & <200 feet private) and surface body of water (>1,000 feet) for the Site, the RRALs were determined to be 10 mg/kg for benzene, 50 mg/kg for BTEX, and 100mg/kg for TPH (Guidelines for Remediation of Leaks, Spills, and Releases, August 13, 1993). The RRAL for



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chloride was determined to be 500 mg/kg based on the NMOCD's Guidance for Release Reporting and Corrective Actions under Rule 29 & 30 of the Oil and Gas Regulations (DRAFT), September 30, 2011 guidance.

On March 27, 2013, CRA and Entact of Dallas, Texas mobilized to the Site to perform soil assessment activities. Heavy equipment was utilized to obtain soil samples from 1 foot, 4 feet, and 6 feet below the existing liner. No hydrocarbons were detected above the regulatory levels; however, chloride concentrations exhibited elevated concentrations well above recommended remediation and delineation levels. The chloride concentrations for the 1 foot, 4 feet and 6 feet intervals were 13,100, 12,500 and 13,500 mg/kg respectively.

On April 8, 2013, CRA and Entact mobilized to the Site to begin excavation activities. A total of approximately 1,494 cubic yards (cy) of material was removed from the existing remedial excavation, with floor depths ranging from approximately 5 feet below ground surface (bgs).

In May 2013, after discussions and approval from the NMOCD Hobbs District I office, three soil borings (SB-1, SB-2 and SB-3) were installed within the existing remedial excavation to a depth of 100 feet bgs. Soil samples were collected at 5 to 10 foot intervals in an effort to horizontally and vertically evaluate the extent of chloride impacts. All three soil borings SB-1 (75'-4.94 mg/kg), SB-2 (80'-4.22 mg/kg), and SB-3 (90'-209 mg/kg) demonstrated decreasing chloride levels with depth to well below recommended remediation and delineation levels. Analytical results are summarized in Table I. A soil cross section depicting subsurface conditions is provided in Figure 2. Certified Laboratory Reports for the 2013 soil sampling events are provided in Appendix D.

PROTOCOLS AND PROCEDURES

On June 5, 2013, CRA and CEMC met with Geoffrey Leking, Environmental Engineer Specialist, of the NMOCD District I Hobbs office to discuss the protocols and procedures required for closure of the reserve pit. Meeting discussions included the following:

- The vertical and horizontal delineation of chloride and (any) hydrocarbon impacts had been achieved to the satisfaction of the NMOCD District I office.
- Procedures for excavation and backfilling of imported clean materials (caliche and sandy soils) from approximately 4-5 feet to 4 feet below grade to ensure a uniform/level surface.
- Procedures for installation of a 20 mil poly liner in the excavated area and procedures for backfilling the remaining excavation with clean materials.



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- Procedures to complete backfill activities utilizing clean top soil (1-2 ft.) and use of heavy machinery for grading purposes.
- Procedures for construction affected areas of pit floor/release site to be graded to match surface contours and seeded using mixtures utilized by local agencies such as the BLM, County Ag Agency and/or as directed by property owner.
- Protocol for submittal of Final C-144 Form (Pit Closure) to the NMOCD summarizing Site closure activities.

DISPOSAL FACILITY NAME AND PERMIT NUMBER

CRA was responsible for managing waste associated with the 2013 project activities (1492 cy). Controlled Recovery, Inc. (CRI) of Hobbs, New Mexico was utilized as a disposal facility for impacted soils. The permit number for CRI is R9166. CRI is an NMOCD and Chevron-approved facility. The material was loaded into trucks provided by RWI Construction, Inc. Each truck leaving the Site was provided with a uniquely numbered non-hazardous waste manifest to accompany each load. The manifest was signed by the generator (CEMC's agent), the transporter and finally by CRI landfill's representative. Table II provides disposal volumes (in cubic yards), as well as manifest and vehicle numbers for the waste material that was transported off of the Site. Copies of the Manifests are included in Appendix E in electronic form on a CD.

SOIL BACKFILL AND COVER DESIGN SPECIFICATIONS

The excavation was backfilled with imported clean materials (caliche and sandy soils) from approximately 4-5 feet to 4 feet below grade to ensure a uniform/level surface. A 20 mil poly liner was emplaced in excavated area and the excavation was backfilled with clean materials.

Backfill activities were completed utilizing clean top soil (1-2 ft.) and use of heavy machinery for grading purposes.

RE-VEGETATION ACTIVITIES

Re-vegetation activities included "construction affected areas of release Site". Heavy machinery was used to grade the Site to approximate original surface contour to minimize erosion. Topsoil was ripped, seeded with an approved native grass, and fertilized to ensure maximum growth potential.



**CONESTOGA-ROVERS
& ASSOCIATES**

September 30, 2013

Reference No. 073823

- 5 -

SITE RECLAMATION

The field implementation of the approved Site closure activities began on March 7, 2013. Entact of Dallas, Texas provided labor, heavy equipment and pit lining material. RWI of Hobbs, New Mexico provided haul trucks required for the field operations. CRA was responsible for the overall coordination of field operations, project management tasks and the safety of all CRA employees working on Site. Photos documenting Site reclamation activities are presented in Appendix F.

After a meeting with the NMOCD, approved restoration activities at the Site began on June 24, 2013 with the staging of heavy equipment near the borrow pit and excavated pit areas. Backfill of the excavated pit areas began on June 25, 2013. Installation of excavated pit liner (20 mil) started and was completed on June 26, 2013 by Entact. RWI transported approximately 1,710 cubic yards (cy) of clean fill that was obtained from an off-site borrow pit owned by the Pierce Ranch Trust. Backfill activities were concluded on June 29, 2013 with the Site being graded to minimize erosion, ripped with heavy machinery and seeded with an approved native grass seed (BLM#4). On June 29, 2013, equipment was demobilized from the Site. Site restoration activities and locations are depicted on Figure 3.



**CONESTOGA-ROVERS
& ASSOCIATES**

September 30, 2013

Reference No. 073823

- 6 -

RECOMMENDATIONS

CRA recommends no further action be required for the Site and requests closure of the Central Vacuum Unit #342 Pit (RP #2672). Attached to the front of this closure report is a completed and signed Form C-144.

If you have any questions or comments with regards to this closure request, please do not hesitate to contact our Midland office at (432) 686-0086.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

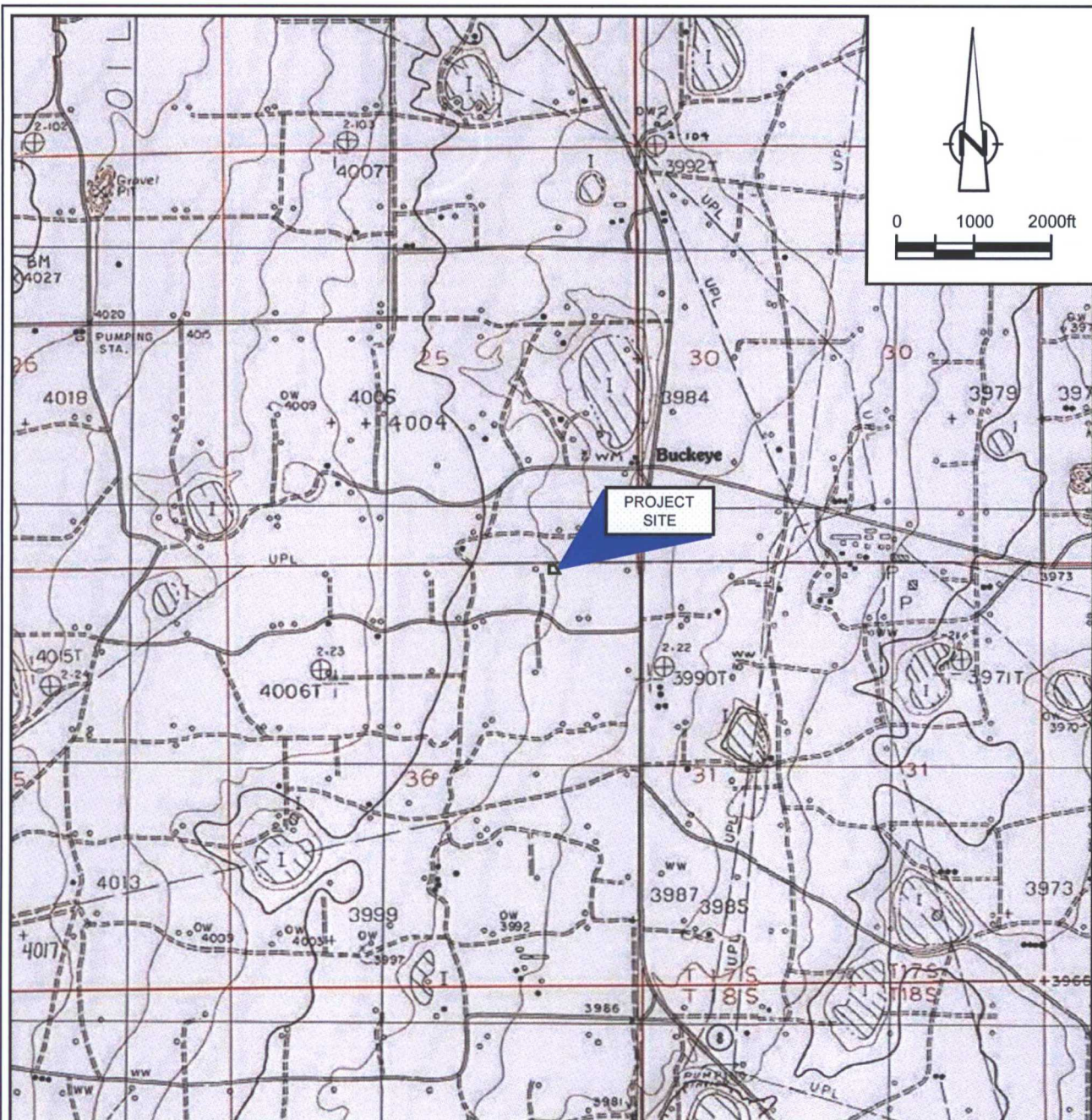
Jake Ferenz
Project Manager

Thomas C. Larson
Midland Operations Manager

JF/pd/1

cc: Mr. David Pagano (Chevron Buckeye FMT) w/encl.
Mr. Kegan Boyer (CEMC Houston) w/encl.

Encl: Figure 1 - Site Location Map
Figure 2 - Soil Cross-Section Map
Figure 3 - Site Restoration Map
Table I - Soil Boring Analytical Summary
Table II - Waste Inventory
Appendix A - Original C-144 Form
Appendix B - Original C-141 Form
Appendix C - Petroleum Recovery Research Center Distance-to-Groundwater Radius Map
Appendix D - Certified Laboratory Reports
Appendix E - Copies of Waste Manifests (on CD)
Appendix F - Site Reclamation Photo Documentation



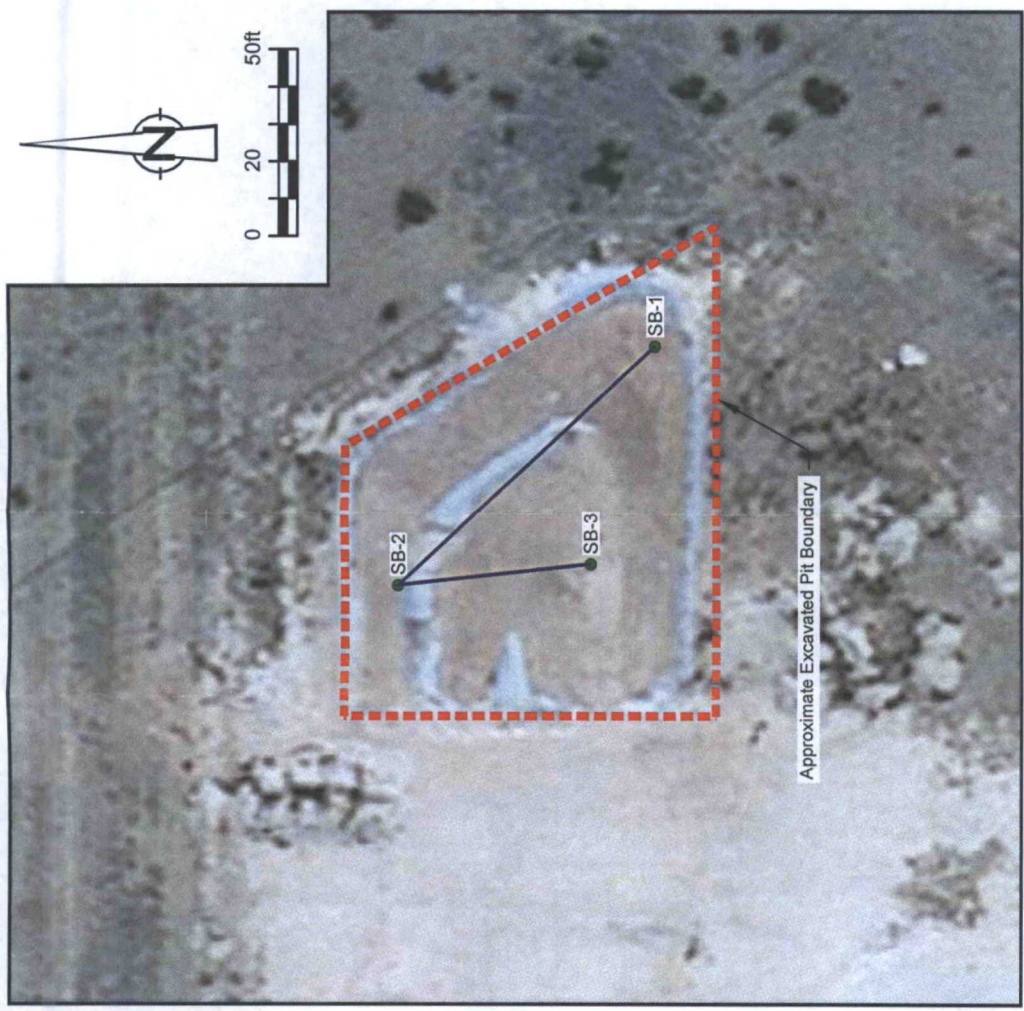
SOURCE: USGS 7.5 MINUTE □UADS
"BUC□EYE AND LOVINGTON SW, NEW ME□ICO"

LAT/LONG: 32.798689° NORTH, 103.508955° WEST
COORDINATE: NAD83 DATUM, U.S. □OOT
STATE PLANE □ONE - NEW ME□ICO EAST

figure 1

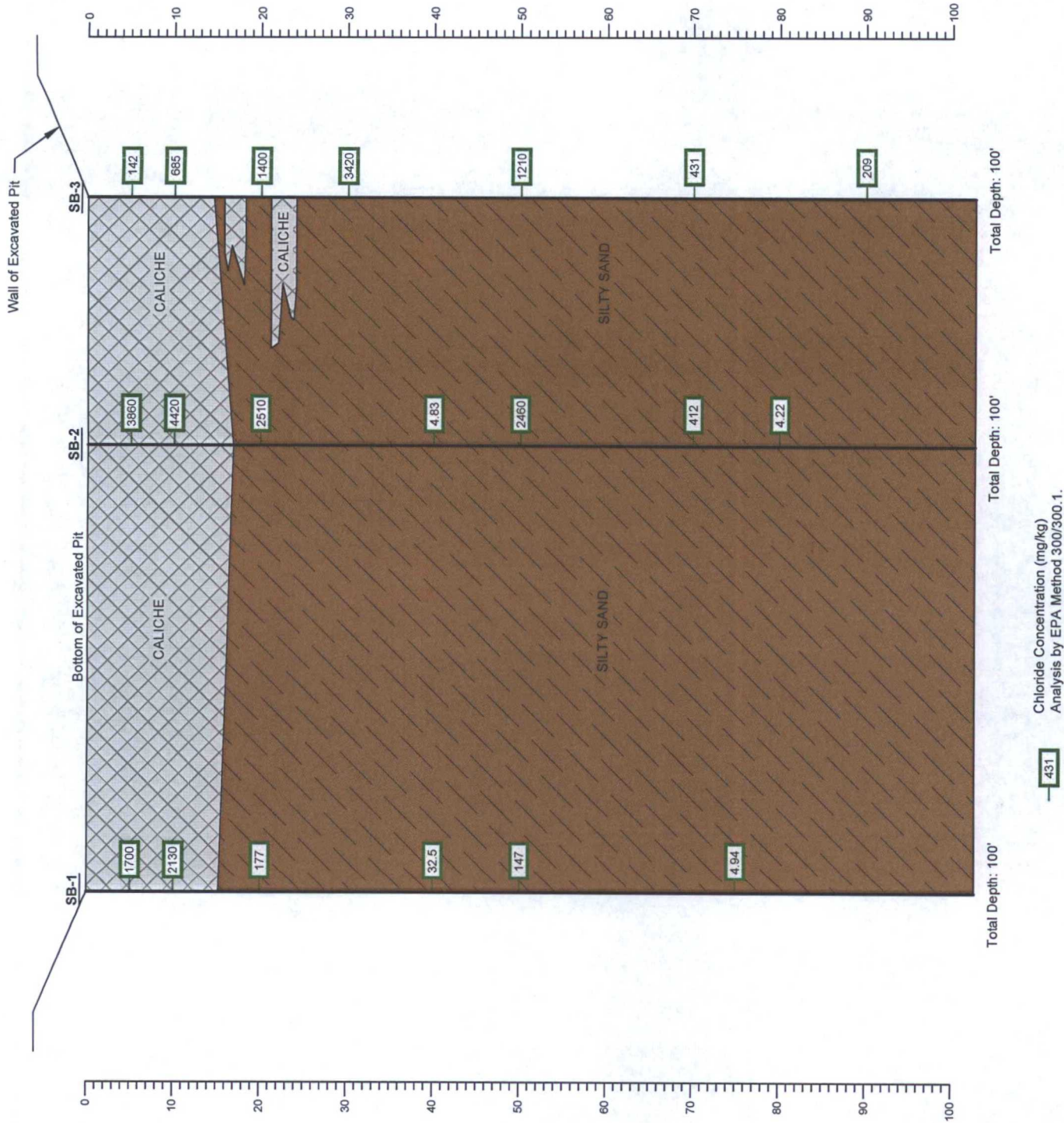
SITE LOCATION MAP
CENTRAL VACUUM UNIT 342 RESERVE PIT
SECTION 36, T 17S, R 34E (RP #2672)
Chevron Environmental Management Company





NOTES:

1. Soil borings advanced May 6 and 7, 2013.
2. Samples evaluated using drill cuttings and split spoon sampler.
3. Boundaries between soil units are approximate.
4. Harrison & Cooper (Lubbock, Texas) drilling contractor. Six-inch borehole using Ingersol Rand 11RTH60 (2006) drill rig.
5. All borings plugged with drill cuttings and approximately 20 bags of bentonite.



SOIL DESCRIPTIONS

- CALICHE - White, tan, dry, indurated at top of unit. Dense to very dense, increasing in silty sands toward base of unit.
- SILTY SAND - Reddish brown, tan, firm to dense, moist toward bottom of unit.

figure 2
SOIL CROSS-SECTION
CENTRAL VACUUM UNIT 342 RESERVE PIT
SECTION 36, T 17S, R 34E (RP #2672)
Chevron Environmental Management Company





LEGEND	
	Approximate Excavated Pit Boundary

- NOTES:**
1. See June 5, 2013 submittal to NMOCD for RP 2672 details and historical data.
 2. Approximately 1,492 CY of impacted soils removed from Site and transported to CRI Landfill in Hobbs, New Mexico.
 3. Approximately 1,710 CY of clean caliche/top soil transported from off-Site borrow pit (Pearce Ranch Trust) for use as backfill.

LAT/LONG: 32.798689° NORTH, 103.508955° WEST
COORDINATE: NAD83 DATUM, U.S. FOOT
STATE PLANE ZONE - NEW MEXICO EAST



figure 3
SITE RESTORATION MAP
CENTRAL VACUUM UNIT 342 RESERVE PIT
SECTION 36, T 17S, R 34E (RP #2672)
Chevron Environmental Management Company

TABLE I

**Soil Boring Analytical Summary
Central Vacuum Unit #342
Lea County, New Mexico**

Sample ID	Sample Date	Depth (feet bgs)	Chloride (mg/kg)
NMOCD Recommended Remediation Action Levels			500
SB-1			
SB-1-5'	5/6/2013	5'	1,700
SB-1-10'	5/6/2013	10'	2,130
SB-1-20'	5/6/2013	20'	177
SB-1-40'	5/6/2013	40'	32.5
SB-1-50'	5/6/2013	50'	147
SB-1-75'	5/6/2013	75'	4.94
SB-1-100'	5/6/2013	100'	NA
SB-2			
SB-2-5'	5/6/2013	5'	3,860
SB-2-10'	5/6/2013	10'	4,420
SB-2-20'	5/6/2013	20'	2,510
SB-2-40'	5/6/2013	40'	4.83
SB-2-50'	5/6/2013	50'	2,460
SB-2-70'	5/6/2013	70'	412
SB-2-80'	5/6/2013	80'	4.22
SB-2-90'	5/6/2013	90'	NA
SB-2-100'	5/6/2013	100'	NA
SB-3			
SB-3-5'	5/7/2013	5'	142
SB-3-10'	5/7/2013	10'	685
SB-3-20'	5/7/2013	20'	1,400
SB-3-30'	5/7/2013	30'	3,420
SB-3-50'	5/7/2013	50'	1,210
SB-3-70'	5/7/2013	70'	431
SB-3-90'	5/7/2013	90'	209

Notes:

1. Chlorides analyzed by E300.0
2. NA - indicates sample was not analyzed
3. Highlighted cells indicated concentrations above regulatory guidelines
4. Chloride - RRALs based on NMOCD September 30, 2011 (DRAFT) guidance Release Reporting and Corrective Actions Under Rule 29 & 30

TABLE II
WASTE INVENTORY
CENTRAL VACUUM UNIT #342
LEA COUNTY, NEW MEXICO

DATE	TRUCK NUMBER	MANIFEST NUMBER	QUANTITY OF WASTE <i>cubic yards</i>
4/9/2013	2	492809	18
4/9/2013	2	492757	18
4/9/2013	2	492708	18
4/9/2013	5	492688	18
4/9/2013	5	492741	18
4/9/2013	5	492800	18
4/9/2013	7	492746	18
4/9/2013	7	492694	18
4/9/2013	7	492795	18
4/9/2013	10	492812	18
4/9/2013	10	492752	18
4/9/2013	10	492705	18
4/9/2013	13	492691	18
4/9/2013	13	492745	18
4/9/2013	13	492801	18
4/9/2013	151	492689	18
4/9/2013	151	492742	18
4/9/2013	151	492792	18
4/9/2013	720	492802	18
4/9/2013	720	492754	18
4/9/2013	720	492702	18
4/10/2013	2	493129	18
4/10/2013	2	493028	18
4/10/2013	2	493074	18
4/10/2013	5	493016	18
4/10/2013	5	493061	18
4/10/2013	5	493117	18
4/10/2013	7	493123	18
4/10/2013	7	493069	18
4/10/2013	7	493024	18
4/10/2013	10	493119	18
4/10/2013	10	493064	18
4/10/2013	10	493019	18
4/10/2013	13	493022	18
4/10/2013	13	493067	18
4/10/2013	13	493122	18
4/10/2013	151	493110	18
4/10/2013	151	493062	18
4/10/2013	151	493017	18
4/10/2013	720	493015	18
4/10/2013	720	493063	18
4/10/2013	720	493116	18

TABLE II
WASTE INVENTORY
CENTRAL VACUUM UNIT #342
LEA COUNTY, NEW MEXICO

DATE	TRUCK NUMBER	MANIFEST NUMBER	QUANTITY OF WASTE <i>cubic yards</i>
4/11/2013	10	493361	18
4/11/2013	10	493417	18
4/11/2013	10	493316	18
4/11/2013	5	493414	18
4/11/2013	5	493306	18
4/11/2013	5	493363	18
4/11/2013	13	493416	18
4/11/2013	13	493360	18
4/11/2013	13	493308	18
4/11/2013	5	493307	18
4/11/2013	5	493415	18
4/11/2013	5	493355	18
4/11/2013	2	493419	18
4/11/2013	2	493364	18
4/11/2013	2	493319	18
4/11/2013	720	493418	18
4/11/2013	720	493368	18
4/11/2013	720	493318	18
4/11/2013	7	493413	18
4/11/2013	7	493359	18
4/11/2013	7	493312	18
4/12/2013	10	493630	18
4/12/2013	10	493683	18
4/12/2013	5	493628	18
4/12/2013	5	493673	18
4/12/2013	13	493627	18
4/12/2013	13	493679	18
4/12/2013	5	493675	18
4/12/2013	5	493625	18
4/12/2013	2	493631	18
4/12/2013	2	493678	18
4/12/2013	720	493676	18
4/12/2013	720	493629	18
4/12/2013	7	493626	18
4/12/2013	7	493674	18
4/13/2013	10	493869	18
4/13/2013	13	493868	18
4/13/2013	5	493864	18
4/13/2013	7	493858	18
4/13/2013	720	493863	18
4/13/2013	7	493866	18
Total:			1494

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

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

Form C-144
July 21, 2008

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

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

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

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

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

1.
Operator: Chevron OGRID #: _____
Address: 15 Smith Rd Midland Tx 79705
Facility or well name: Central Vacuum Unit 342
API Number: 30-025-38002 OCD Permit Number: _____
U/L or Qtr/Qtr _____ Section 36 Township 17S Range 34E County: Lea
Center of Proposed Design: Latitude _____ Longitude _____ 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 80 mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other _____
☐ String-Reinforced
Liner Seams: ☒ Welded ☐ Factory ☐ Other _____ Volume: _____ bbl Dimensions: L _____ x W _____ x D _____

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

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

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

6.

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

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

7.

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

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

8.

Signs: Subsection C of 19.15.17.11 NMAC

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

9.

Administrative Approvals and Exceptions:

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

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

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

10.

Siting Criteria (regarding permitting): 19.15.17.10 NMAC

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

Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank.

- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

☐ Yes ☒ No

Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).

- Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☒ No

Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (*Applies to temporary, emergency, or cavitation pits and below-grade tanks*)

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

☐ Yes ☒ No
☐ NA

Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (*Applies to permanent pits*)

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

☐ Yes ☒ No
☐ NA

Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application.

- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

☐ Yes ☒ No

Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended.

- Written confirmation or verification from the municipality; Written approval obtained from the municipality

☐ Yes ☒ No

Within 500 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☒ No

Within the area overlying a subsurface mine.

- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division

☐ Yes ☒ No

Within an unstable area.

- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map

☐ Yes ☒ No

Within a 100-year floodplain.

- FEMA map

☐ Yes ☒ No

11.

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

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

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

12.

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

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

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

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

13.

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

- ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC
☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
☐ Climatological Factors Assessment
☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Quality Control/Quality Assurance Construction and Installation Plan
☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Nuisance or Hazardous Odors, including H₂S, 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): Rodney Bailey Title: Environmental AdvisorSignature: Rodney Bailey Date: 4-7-10e-mail address: baile29@chevron.com Telephone: 432-687-7123

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: _____

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

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): Rodney Bailey Title: Environmental AdvisorSignature: Rodney Bailey Date: 4-7-10

e-mail address: _____ Telephone: _____

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	Chevron Environmental Management Co.	Contact	Matt Hudson
Address	1400 Smith Street Room 19001A	Telephone No.	(713) 372-1046
Facility Name	Central Vacuum Unit #342	Facility Type	Reserve Pit API #30-025-38002
Surface Owner	State of New Mexico	Mineral Owner	Lease No.

LOCATION OF RELEASE

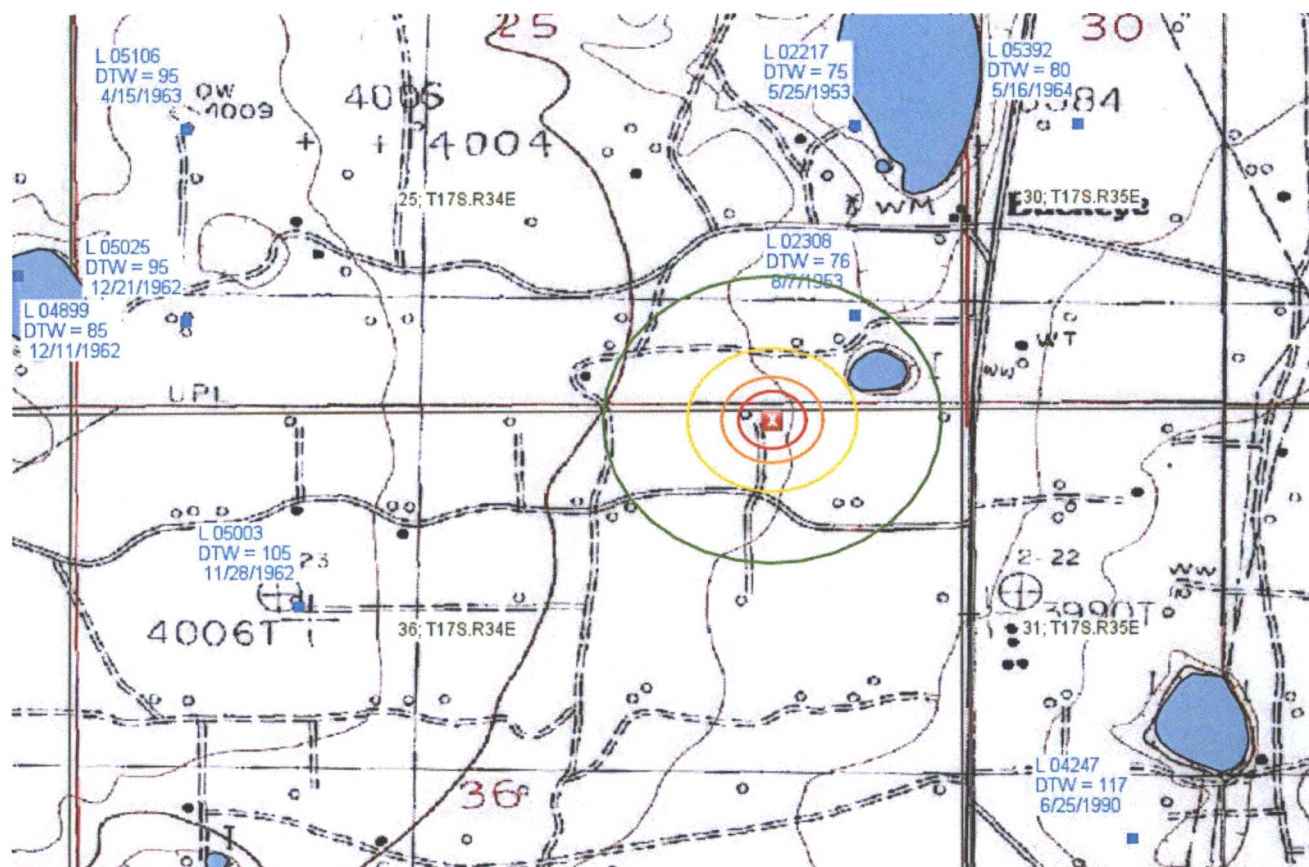
Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	36	17 S	34 E	81.2	North	1186.4	East	Lea

Latitude 32.798611 Longitude -103.509167

NATURE OF RELEASE

Type of Release	C141 submittal requested by L Johnson	Volume of Release	Unknown	Volume Recovered	Unknown
Source of Release	Reserve Pit	Date and Hour of Occurrence	Date and Hour of Discovery		
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.* NA					
Describe Cause of Problem and Remedial Action Taken.* Larry Johnson requested that a C141 be prepared for this location following a Site Inspection.					
Describe Area Affected and Cleanup Action Taken.* Per NMOCD directives, a reserve pit area of approximately 85' x 110' x 100' will be over-excavated and sampled. A remediation plan including analytical results and closure plan will be developed and submitted to the District 1 office for review and approval.					
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:		<u>OIL CONSERVATION DIVISION</u>			
Printed Name: Matt Hudson		Approved by District Supervisor:			
Title: Project Manager		Approval Date:		Expiration Date:	
E-mail Address: mhudson@chevron.com		Conditions of Approval:			Attached <input type="checkbox"/>
Date:		Phone: 713-372-1046			

* Attach Additional Sheets If Necessary



Distance (ft): 200 300 500 1000



Petroleum Recovery
Research Center

CENTRAL VACUUM UNIT #342

Figure: 1

Client name/project name

Dec 08, 2010

Analytical Report 462651

for Conestoga Rovers & Associates

Project Manager: Tom Larson

CEMC CVU 342

073823

16-MAY-13

Collected By: Client



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Lakeland: Florida (E84098)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code: AZ000989): Arizona (AZ0758)



16-MAY-13

Project Manager: **Tom Larson**
Conestoga Rovers & Associates
2135 S Loop 250 W
Midland, TX 79703

Reference: XENCO Report No(s): **462651**
CEMC CVU 342
Project Address: New Mexico

Tom Larson:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 462651. 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. The uncertainty of measurement associated with the results of analysis reported is available upon request. 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. 462651 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,

Kelsey Brooks

Project 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 Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB-1 5'	S	05-06-13 13:25		462651-001
SB-1 10'	S	05-06-13 13:40		462651-002
SB-1 20'	S	05-06-13 13:45		462651-003
SB-1 40'	S	05-06-13 13:55		462651-004
SB-1 50'	S	05-06-13 14:10		462651-005
SB-1 75'	S	05-06-13 14:25		462651-006
SB-1 100'	S	05-06-13 14:35		462651-007
SB-2 5'	S	05-06-13 15:20		462651-008
SB-2 10'	S	05-06-13 15:25		462651-009
SB-2 20'	S	05-06-13 15:35		462651-010
SB-2 40'	S	05-06-13 15:38		462651-011
SB-2 50'	S	05-06-13 15:40		462651-012
SB-2 70'	S	05-06-13 15:45		462651-013
SB-2 80'	S	05-06-13 15:55		462651-014
SB-2 90'	S	05-06-13 16:05		462651-015
SB-2 100'	S	05-06-13 16:15		462651-016
SB-3 5'	S	05-07-13 09:50		462651-017
SB-3 10'	S	05-07-13 10:00		462651-018
SB-3 20'	S	05-07-13 10:05		462651-019
SB-3 30'	S	05-07-13 10:10		462651-020
SB-3 50'	S	05-07-13 10:15		462651-021
SB-3 70'	S	05-07-13 10:30		462651-022
SB-3 90'	S	05-07-13 10:35		462651-023



CASE NARRATIVE

Client Name: Conestoga Rovers & Associates

Project Name: CEMC CVU 342



Project ID: 073823
Work Order Number(s): 462651

Report Date: 16-MAY-13
Date Received: 05/07/2013

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-913372 Inorganic Anions by EPA 300/300.1
E300

Batch 913372, Chloride recovered below QC limits in the Matrix Spike.

Samples affected are: 462651-020.

The Laboratory Control Sample for Chloride is within laboratory Control Limits

Batch: LBA-913623 Inorganic Anions by EPA 300/300.1
E300

Batch 913623, Chloride recovered below QC limits in the Matrix Spike.

Samples affected are: 462651-019, -022, -008, -021, -010, -011, -013, -009, -012, -018, -014, -006, -017.

The Laboratory Control Sample for Chloride is within laboratory Control Limits



Certificate of Analysis Summary 462651

Conestoga Rovers & Associates, Midland, TX

Project Name: CEMC CVU 342



Project Id: 073823

Contact: Tom Larson

Project Location: New Mexico

Date Received in Lab: Tue May-07-13 04:50 pm

Report Date: 16-MAY-13

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	462651-001	462651-002	462651-003	462651-004	462651-005	462651-006
	Field Id:	SB-1 5'	SB-1 10'	SB-1 20'	SB-1 40'	SB-1 50'	SB-1 75'
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	May-06-13 13:25	May-06-13 13:40	May-06-13 13:45	May-06-13 13:55	May-06-13 14:10	May-06-13 14:25
Inorganic Anions by EPA 300/300.1	Extracted:	May-09-13 14:00	May-09-13 14:00	May-09-13 14:00	May-09-13 14:00	May-09-13 14:00	May-10-13 08:00
	Analyzed:	May-09-13 17:09	May-09-13 17:31	May-09-13 17:53	May-09-13 18:15	May-09-13 19:20	May-10-13 10:57
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1700 41.8	2130 41.1	177 4.28	32.5 3.10	147 4.19	4.94 3.07
Percent Moisture	Extracted:						
	Analyzed:	May-08-13 15:15	May-08-13 15:15	May-08-13 15:15	May-08-13 15:15	May-08-13 15:15	May-08-13 15:15
	Units/RL:	% RL	% RL	% RL	% RL	% RL	% RL
Percent Moisture		4.20 1.00	2.66 1.00	6.54 1.00	3.34 1.00	4.52 1.00	2.34 1.00

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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Kelsey Brooks
Project Manager



Certificate of Analysis Summary 462651

Conestoga Rovers & Associates, Midland, TX

Project Name: CEMC CVU 342



Project Id: 073823

Contact: Tom Larson

Project Location: New Mexico

Date Received in Lab: Tue May-07-13 04:50 pm

Report Date: 16-MAY-13

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	462651-007	462651-008	462651-009	462651-010	462651-011	462651-012
	Field Id:	SB-1 100'	SB-2 5'	SB-2 10'	SB-2 20'	SB-2 40'	SB-2 50'
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	May-06-13 14:35	May-06-13 15:20	May-06-13 15:25	May-06-13 15:35	May-06-13 15:38	May-06-13 15:40
Inorganic Anions by EPA 300/300.1	Extracted:		May-10-13 08:00	May-10-13 08:00	May-10-13 08:00	May-10-13 08:00	May-10-13 08:00
	Analyzed:		May-10-13 11:41	May-10-13 10:14	May-10-13 12:02	May-10-13 12:24	May-10-13 13:29
	Units/RL:		mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride			3860 103	4420 106	2510 41.9	4.83 3.81	2460 41.8
Percent Moisture	Extracted:						
	Analyzed:	May-08-13 15:15	May-08-13 15:15	May-08-13 15:15	May-08-13 15:15	May-08-13 15:15	May-08-13 15:15
	Units/RL:	% RL	% RL	% RL	% RL	% RL	% RL
Percent Moisture		3.77 1.00	3.07 1.00	5.30 1.00	4.56 1.00	21.2 1.00	4.31 1.00

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Kelsey Brooks
Project Manager



Certificate of Analysis Summary 462651

Conestoga Rovers & Associates, Midland, TX

Project Name: CEMC CVU 342



Project Id: 073823

Contact: Tom Larson

Project Location: New Mexico

Date Received in Lab: Tue May-07-13 04:50 pm

Report Date: 16-MAY-13

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	462651-013	462651-014	462651-015	462651-016	462651-017	462651-018
	Field Id:	SB-2 70'	SB-2 80'	SB-2 90'	SB-2 100'	SB-3 5'	SB-3 10'
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	May-06-13 15:45	May-06-13 15:55	May-06-13 16:05	May-06-13 16:15	May-07-13 09:50	May-07-13 10:00
Inorganic Anions by EPA 300/300.1	Extracted:	May-10-13 08:00	May-10-13 08:00			May-10-13 08:00	May-10-13 08:00
	Analyzed:	May-10-13 13:51	May-10-13 14:13			May-10-13 16:01	May-10-13 16:23
	Units/RL:	mg/kg RL	mg/kg RL			mg/kg RL	mg/kg RL
Chloride		412 10.7	4.22 3.29			142 4.31	685 21.5
Percent Moisture	Extracted:						
	Analyzed:	May-08-13 15:15	May-08-13 16:20	May-08-13 16:20	May-08-13 16:20	May-08-13 16:20	May-08-13 16:20
	Units/RL:	% RL	% RL	% RL	% RL	% RL	% RL
Percent Moisture		6.44 1.00	19.1 1.00	5.13 1.00	6.82 1.00	7.22 1.00	7.15 1.00

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Kelsey Brooks
Project Manager



Certificate of Analysis Summary 462651

Conestoga Rovers & Associates, Midland, TX

Project Name: CEMC CVU 342



Project Id: 073823

Contact: Tom Larson

Project Location: New Mexico

Date Received in Lab: Tue May-07-13 04:50 pm

Report Date: 16-MAY-13

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	462651-019	462651-020	462651-021	462651-022	462651-023	
	Field Id:	SB-3 20'	SB-3 30'	SB-3 50'	SB-3 70'	SB-3 90'	
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	May-07-13 10:05	May-07-13 10:10	May-07-13 10:15	May-07-13 10:30	May-07-13 10:35	
Inorganic Anions by EPA 300/300.1	Extracted:	May-10-13 08:00	May-09-13 16:00	May-10-13 08:00	May-10-13 08:00		
	Analyzed:	May-10-13 16:44	May-10-13 04:06	May-10-13 17:06	May-10-13 18:12		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		1400 42.4	3420 43.0	1210 21.1	431 10.3		
Percent Moisture	Extracted:						
	Analyzed:	May-08-13 16:45	May-08-13 16:45	May-08-13 16:45	May-08-13 16:45	May-08-13 16:45	
	Units/RL:	% RL	% RL	% RL	% RL	% RL	
Percent Moisture		5.63 1.00	6.94 1.00	5.19 1.00	2.97 1.00	4.09 1.00	

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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Kelsey Brooks
Project Manager



Certificate of Analytical Results 462651



Conestoga Rovers & Associates, Midland, TX
CEMC CVU 342

Sample Id: SB-1 5' Matrix: Soil Date Received: 05.07.13 16.50
Lab Sample Id: 462651-001 Date Collected: 05.06.13 13.25
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: AMB % Moisture: 4.2
Analyst: AMB Date Prep: 05.09.13 14.00 Basis: Dry Weight
Seq Number: 913609

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1700	41.8	mg/kg	05.09.13 17.09		20

Analytical Method: Percent Moisture
Tech: SHSM % Moisture:
Analyst: WRU Basis: Wet Weight
Seq Number: 913266

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	4.20	1.00	%	05.08.13 15.15		1



Certificate of Analytical Results 462651



Conestoga Rovers & Associates, Midland, TX CEMC CVU 342

Sample Id: SB-1 10'
Lab Sample Id: 462651-002

Matrix: Soil
Date Collected: 05.06.13 13.40

Date Received: 05.07.13 16.50

Analytical Method: Inorganic Anions by EPA 300/300.1
Tech: AMB
Analyst: AMB
Seq Number: 913609

Prep Method: E300P
% Moisture: 2.66
Basis: Dry Weight
Date Prep: 05.09.13 14.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2130	41.1	mg/kg	05.09.13 17.31		20

Analytical Method: Percent Moisture
Tech: SHSM
Analyst: WRU
Seq Number: 913266

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	2.66	1.00	%	05.08.13 15.15		1

**Conestoga Rovers & Associates, Midland, TX**
CEMC CVU 342

Sample Id:	SB-1 20'	Matrix: Soil	Date Received: 05.07.13 16.50
Lab Sample Id:	462651-003	Date Collected: 05.06.13 13.45	
Analytical Method:	Inorganic Anions by EPA 300/300.1	Prep Method: E300P	
Tech:	AMB	% Moisture: 6.54	
Analyst:	AMB	Date Prep: 05.09.13 14.00	Basis: Dry Weight
Seq Number:	913609		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	177	4.28	mg/kg	05.09.13 17.53		2

Analytical Method:	Percent Moisture		
Tech:	SHSM	% Moisture:	
Analyst:	WRU	Basis: Wet Weight	
Seq Number:	913266		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	6.54	1.00	%	05.08.13 15.15		1



Certificate of Analytical Results 462651



Conestoga Rovers & Associates, Midland, TX

CEMC CVU 342

Sample Id: SB-1 40'
Lab Sample Id: 462651-004

Matrix: Soil
Date Collected: 05.06.13 13.55

Date Received: 05.07.13 16.50

Analytical Method: Inorganic Anions by EPA 300/300.1
Tech: AMB
Analyst: AMB
Seq Number: 913609

Prep Method: E300P
% Moisture: 3.34
Date Prep: 05.09.13 14.00
Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	32.5	3.10	mg/kg	05.09.13 18.15		1.5

Analytical Method: Percent Moisture
Tech: SHSM
Analyst: WRU
Seq Number: 913266

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	3.34	1.00	%	05.08.13 15.15		1



Certificate of Analytical Results 462651



Conestoga Rovers & Associates, Midland, TX
CEMC CVU 342

Sample Id: SB-1 50' Matrix: Soil Date Received: 05.07.13 16.50
Lab Sample Id: 462651-005 Date Collected: 05.06.13 14.10
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: AMB % Moisture: 4.52
Analyst: AMB Date Prep: 05.09.13 14.00 Basis: Dry Weight
Seq Number: 913609

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	147	4.19	mg/kg	05.09.13 19.20		2

Analytical Method: Percent Moisture
Tech: SHSM % Moisture:
Analyst: WRU Basis: Wet Weight
Seq Number: 913266

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	4.52	1.00	%	05.08.13 15.15		1



Certificate of Analytical Results 462651



Conestoga Rovers & Associates, Midland, TX

CEMC CVU 342

Sample Id: SB-1 75'
Lab Sample Id: 462651-006

Matrix: Soil
Date Collected: 05.06.13 14.25

Date Received: 05.07.13 16.50

Analytical Method: Inorganic Anions by EPA 300/300.1
Tech: AMB
Analyst: AMB
Seq Number: 913623

Prep Method: E300P
% Moisture: 2.34
Basis: Dry Weight
Date Prep: 05.10.13 08.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4.94	3.07	mg/kg	05.10.13 10.57		1.5

Analytical Method: Percent Moisture
Tech: SHSM
Analyst: WRU
Seq Number: 913266

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	2.34	1.00	%	05.08.13 15.15		1



Certificate of Analytical Results 462651



Conestoga Rovers & Associates, Midland, TX
CEMC CVU 342

Sample Id: SB-1 100'
Lab Sample Id: 462651-007

Matrix: Soil
Date Collected: 05.06.13 14.35

Date Received: 05.07.13 16.50

Analytical Method: Percent Moisture
Tech: SHSM
Analyst: WRU
Seq Number: 913266

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	3.77	1.00	%	05.08.13 15.15		1



Certificate of Analytical Results 462651



Conestoga Rovers & Associates, Midland, TX
CEMC CVU 342

Sample Id: SB-2 5' Matrix: Soil Date Received: 05.07.13 16.50
Lab Sample Id: 462651-008 Date Collected: 05.06.13 15.20
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: AMB % Moisture: 3.07
Analyst: AMB Date Prep: 05.10.13 08.00 Basis: Dry Weight
Seq Number: 913623

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3860	103	mg/kg	05.10.13 11.41		50

Analytical Method: Percent Moisture
Tech: SHSM % Moisture:
Analyst: WRU Basis: Wet Weight
Seq Number: 913266

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	3.07	1.00	%	05.08.13 15.15		1



Certificate of Analytical Results 462651



Conestoga Rovers & Associates, Midland, TX

CEMC CVU 342

Sample Id: SB-2 10' **Matrix:** Soil **Date Received:** 05.07.13 16.50
Lab Sample Id: 462651-009 **Date Collected:** 05.06.13 15.25
Analytical Method: Inorganic Anions by EPA 300/300.1 **Prep Method:** E300P
Tech: AMB **% Moisture:** 5.3
Analyst: AMB **Date Prep:** 05.10.13 08.00 **Basis:** Dry Weight
Seq Number: 913623

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4420	106	mg/kg	05.10.13 10.14		50

Analytical Method: Percent Moisture
Tech: SHSM **% Moisture:**
Analyst: WRU **Basis:** Wet Weight
Seq Number: 913266

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	5.30	1.00	%	05.08.13 15.15		1



Certificate of Analytical Results 462651



Conestoga Rovers & Associates, Midland, TX CEMC CVU 342

Sample Id: SB-2 20'
Lab Sample Id: 462651-010

Matrix: Soil
Date Collected: 05.06.13 15.35

Date Received: 05.07.13 16.50

Analytical Method: Inorganic Anions by EPA 300/300.1
Tech: AMB
Analyst: AMB
Seq Number: 913623

Prep Method: E300P
% Moisture: 4.56
Basis: Dry Weight
Date Prep: 05.10.13 08.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2510	41.9	mg/kg	05.10.13 12.02		20

Analytical Method: Percent Moisture
Tech: SHSM
Analyst: WRU
Seq Number: 913266

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	4.56	1.00	%	05.08.13 15.15		1



Certificate of Analytical Results 462651



Conestoga Rovers & Associates, Midland, TX

CEMC CVU 342

Sample Id: SB-2 40' Matrix: Soil Date Received: 05.07.13 16.50
Lab Sample Id: 462651-011 Date Collected: 05.06.13 15.38
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: AMB % Moisture: 21.2
Analyst: AMB Date Prep: 05.10.13 08.00 Basis: Dry Weight
Seq Number: 913623

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4.83	3.81	mg/kg	05.10.13 12.24		1.5

Analytical Method: Percent Moisture
Tech: SHSM % Moisture:
Analyst: WRU Basis: Wet Weight
Seq Number: 913266

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	21.2	1.00	%	05.08.13 15.15		1



Certificate of Analytical Results 462651



Conestoga Rovers & Associates, Midland, TX

CEMC CVU 342

Sample Id: SB-2 50'
Lab Sample Id: 462651-012

Matrix: Soil
Date Collected: 05.06.13 15.40

Date Received: 05.07.13 16.50

Analytical Method: Inorganic Anions by EPA 300/300.1
Tech: AMB
Analyst: AMB
Seq Number: 913623

Prep Method: E300P
% Moisture: 4.31
Basis: Dry Weight
Date Prep: 05.10.13 08.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2460	41.8	mg/kg	05.10.13 13.29		20

Analytical Method: Percent Moisture
Tech: SHSM
Analyst: WRU
Seq Number: 913266

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	4.31	1.00	%	05.08.13 15.15		1



Certificate of Analytical Results 462651



Conestoga Rovers & Associates, Midland, TX

CEMC CVU 342

Sample Id: SB-2 70' Matrix: Soil Date Received: 05.07.13 16.50
Lab Sample Id: 462651-013 Date Collected: 05.06.13 15.45
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: AMB % Moisture: 6.44
Analyst: AMB Date Prep: 05.10.13 08.00 Basis: Dry Weight
Seq Number: 913623

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	412	10.7	mg/kg	05.10.13 13.51		5

Analytical Method: Percent Moisture
Tech: SHSM % Moisture:
Analyst: WRU Basis: Wet Weight
Seq Number: 913266

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	6.44	1.00	%	05.08.13 15.15		1



Certificate of Analytical Results 462651



Conestoga Rovers & Associates, Midland, TX

CEMC CVU 342

Sample Id: SB-2 80'
Lab Sample Id: 462651-014

Matrix: Soil
Date Collected: 05.06.13 15.55

Date Received: 05.07.13 16.50

Analytical Method: Inorganic Anions by EPA 300/300.1
Tech: AMB
Analyst: AMB
Seq Number: 913623

Prep Method: E300P
% Moisture: 19.1
Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4.22	3.29	mg/kg	05.10.13 14.13		1.33

Analytical Method: Percent Moisture
Tech: SHSM
Analyst: WRU
Seq Number: 913266

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	19.1	1.00	%	05.08.13 16.20		1



Certificate of Analytical Results 462651



Conestoga Rovers & Associates, Midland, TX
CEMC CVU 342

Sample Id: SB-2 90'
Lab Sample Id: 462651-015

Matrix: Soil
Date Collected: 05.06.13 16.05

Date Received: 05.07.13 16.50

Analytical Method: Percent Moisture
Tech: SHSM
Analyst: WRU
Seq Number: 913266

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	5.13	1.00	%	05.08.13 16.20		1



Certificate of Analytical Results 462651



Conestoga Rovers & Associates, Midland, TX

CEMC CVU 342

Sample Id: SB-2 100'

Matrix: Soil

Date Received: 05.07.13 16.50

Lab Sample Id: 462651-016

Date Collected: 05.06.13 16.15

Analytical Method: Percent Moisture

Tech: SHSM

% Moisture:

Analyst: WRU

Basis: Wet Weight

Seq Number: 913266

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	6.82	1.00	%	05.08.13 16.20		1



Certificate of Analytical Results 462651



Conestoga Rovers & Associates, Midland, TX

CEMC CVU 342

Sample Id: SB-3 5' **Matrix:** Soil **Date Received:** 05.07.13 16.50
Lab Sample Id: 462651-017 **Date Collected:** 05.07.13 09.50
Analytical Method: Inorganic Anions by EPA 300/300.1 **Prep Method:** E300P
Tech: AMB **% Moisture:** 7.22
Analyst: AMB **Date Prep:** 05.10.13 08.00 **Basis:** Dry Weight
Seq Number: 913623

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	142	4.31	mg/kg	05.10.13 16.01		2

Analytical Method: Percent Moisture
Tech: SHSM **% Moisture:**
Analyst: WRU **Basis:** Wet Weight
Seq Number: 913266

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	7.22	1.00	%	05.08.13 16.20		1



Certificate of Analytical Results 462651



Conestoga Rovers & Associates, Midland, TX

CEMC CVU 342

Sample Id: SB-3 10'
Lab Sample Id: 462651-018

Matrix: Soil
Date Collected: 05.07.13 10.00

Date Received: 05.07.13 16.50

Analytical Method: Inorganic Anions by EPA 300/300.1
Tech: AMB
Analyst: AMB
Seq Number: 913623

Prep Method: E300P
% Moisture: 7.15
Basis: Dry Weight
Date Prep: 05.10.13 08.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	685	21.5	mg/kg	05.10.13 16.23		10

Analytical Method: Percent Moisture
Tech: SHSM
Analyst: WRU
Seq Number: 913266

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	7.15	1.00	%	05.08.13 16.20		1



Conestoga Rovers & Associates, Midland, TX

CEMC CVU 342

Sample Id:	SB-3 20'	Matrix:	Soil	Date Received:	05.07.13 16.50
Lab Sample Id:	462651-019	Date Collected:	05.07.13 10.05		
Analytical Method:	Inorganic Anions by EPA 300/300.1	Prep Method:	E300P		
Tech:	AMB	% Moisture:	5.63		
Analyst:	AMB	Date Prep:	05.10.13 08.00	Basis:	Dry Weight
Seq Number:	913623				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1400	42.4	mg/kg	05.10.13 16.44		20

Analytical Method:	Percent Moisture		
Tech:	SHSM	% Moisture:	
Analyst:	WRU	Basis:	Wet Weight
Seq Number:	913267		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	5.63	1.00	%	05.08.13 16.45		1



Certificate of Analytical Results 462651



Conestoga Rovers & Associates, Midland, TX CEMC CVU 342

Sample Id:	SB-3 30'	Matrix:	Soil	Date Received:	05.07.13 16.50
Lab Sample Id:	462651-020	Date Collected:	05.07.13 10.10		
Analytical Method:	Inorganic Anions by EPA 300/300.1	Prep Method:	E300P		
Tech:	AMB	% Moisture:	6.94		
Analyst:	AMB	Date Prep:	05.09.13 16.00	Basis:	Dry Weight
Seq Number:	913372				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3420	43.0	mg/kg	05.10.13 04.06		20

Analytical Method:	Percent Moisture				
Tech:	SHSM			% Moisture:	
Analyst:	WRU			Basis:	Wet Weight
Seq Number:	913267				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	6.94	1.00	%	05.08.13 16.45		1



Certificate of Analytical Results 462651



Conestoga Rovers & Associates, Midland, TX
CEMC CVU 342

Sample Id: SB-3 50' Matrix: Soil Date Received: 05.07.13 16.50
Lab Sample Id: 462651-021 Date Collected: 05.07.13 10.15
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: AMB % Moisture: 5.19
Analyst: AMB Date Prep: 05.10.13 08.00 Basis: Dry Weight
Seq Number: 913623

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1210	21.1	mg/kg	05.10.13 17.06		10

Analytical Method: Percent Moisture
Tech: SHSM % Moisture:
Analyst: WRU Basis: Wet Weight
Seq Number: 913267

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	5.19	1.00	%	05.08.13 16.45		1



Certificate of Analytical Results 462651



Conestoga Rovers & Associates, Midland, TX

CEMC CVU 342

Sample Id: SB-3 70'
Lab Sample Id: 462651-022

Matrix: Soil
Date Collected: 05.07.13 10.30

Date Received: 05.07.13 16.50

Analytical Method: Inorganic Anions by EPA 300/300.1
Tech: AMB
Analyst: AMB
Seq Number: 913623

Prep Method: E300P
% Moisture: 2.97
Date Prep: 05.10.13 08.00
Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	431	10.3	mg/kg	05.10.13 18.12		5

Analytical Method: Percent Moisture
Tech: SHSM
Analyst: WRU
Seq Number: 913267

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	2.97	1.00	%	05.08.13 16.45		1



Certificate of Analytical Results 462651



Conestoga Rovers & Associates, Midland, TX
CEMC CVU 342

Sample Id:	SB-3 90'	Matrix:	Soil	Date Received:	05.07.13 16.50
Lab Sample Id:	462651-023	Date Collected:	05.07.13 10.35		
Analytical Method:	Percent Moisture				
Tech:	SHSM			% Moisture:	
Analyst:	WRU			Basis:	Wet Weight
Seq Number:	913267				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	4.09	1.00	%	05.08.13 16.45		1

Flagging Criteria

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

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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(602) 437-0330	


Conestoga Rovers & Associates

CEMC CVU 342

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 913609

Matrix: Solid

Prep Method: E300P

Date Prep: 05/09/2013

MB Sample Id: 637998-1-BLK

LCS Sample Id: 637998-1-BKS

LCSD Sample Id: 637998-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<2.00	50.0	51.5	103	51.4	103	80-120	0	20	mg/kg	05/09/13 15:21	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 913372

Matrix: Solid

Prep Method: E300P

Date Prep: 05/09/2013

MB Sample Id: 637855-1-BLK

LCS Sample Id: 637855-1-BKS

LCSD Sample Id: 637855-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<2.00	50.0	51.6	103	51.7	103	80-120	0	20	mg/kg	05/09/13 22:41	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 913623

Matrix: Solid

Prep Method: E300P

Date Prep: 05/10/2013

MB Sample Id: 638012-1-BLK

LCS Sample Id: 638012-1-BKS

LCSD Sample Id: 638012-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<2.00	50.0	51.6	103	51.2	102	80-120	1	20	mg/kg	05/10/13 09:10	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 913609

Matrix: Soil

Prep Method: E300P

Date Prep: 05/09/2013

Parent Sample Id: 462609-001

MS Sample Id: 462609-001 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	<2.66	66.5	78.5	118	80-120	mg/kg	05/09/13 16:26	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 913372

Matrix: Soil

Prep Method: E300P

Date Prep: 05/09/2013

Parent Sample Id: 462651-020

MS Sample Id: 462651-020 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	3420	1070	4390	91	80-120	mg/kg	05/10/13 04:28	



QC Summary 462651



Conestoga Rovers & Associates

CEMC CVU 342

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 913372

Matrix: Soil

Prep Method: E300P

Date Prep: 05/09/2013

Parent Sample Id: 462827-001

MS Sample Id: 462827-001 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	98.1	112	213	103	80-120	mg/kg	05/09/13 23:46	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 913623

Matrix: Soil

Prep Method: E300P

Date Prep: 05/10/2013

Parent Sample Id: 462651-009

MS Sample Id: 462651-009 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	4420	2640	7130	103	80-120	mg/kg	05/10/13 10:36	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 913623

Matrix: Soil

Prep Method: E300P

Date Prep: 05/10/2013

Parent Sample Id: 462711-003

MS Sample Id: 462711-003 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	5590	6310	5840	4	80-120	mg/kg	05/10/13 15:18	X

Analytical Method: Percent Moisture

Seq Number: 913266

Matrix: Solid

MB Sample Id: 913266-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Percent Moisture	ND	%	05/08/13 15:15	

Analytical Method: Percent Moisture

Seq Number: 913267

Matrix: Solid

MB Sample Id: 913267-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Percent Moisture	ND	%	05/08/13 16:45	



Conestoga Rovers & Associates

CEMC CVU 342

Analytical Method: Percent Moisture

Seq Number: 913266

Parent Sample Id: 462609-001

Matrix: Soil

MD Sample Id: 462609-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Percent Moisture	<1.00	<1.00	0	20	%	05/08/13 15:15	U

Analytical Method: Percent Moisture

Seq Number: 913267

Parent Sample Id: 462651-019

Matrix: Soil

MD Sample Id: 462651-019 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Percent Moisture	5.63	6.47	14	20	%	05/08/13 16:45	

☐ 4143 Greenbriar Drive, Stafford, TX 77477 281-240-4200
☐ 5332, Blackberry Drive, San Antonio, TX 78238 210-509-3334

☐ 9701 Harry Hines Blvd., Dallas, TX 75220 214-902-0300
☐ 12800 West I-20 East, Odessa, TX 79765 432-563-1800

Serial #: 330719 Page 2 of 3

Company-City		Phone		Lab Only:	
Project Name-Location		Previously done at XENCO		Project ID	
Proj. State: TX, AL, FL, GA, LA, MS, NC, NJ, PA, SC, TN, UT Other		Proj. Manager (PM)		TAT: ASAP 5h 12h 24h 48h 3d 5d 7d 10d 21d Standard TAT is project specific. It is typically 5-7 Working Days for level II and 10+ Working days for level III and IV data.	
E-mail Results to <input type="checkbox"/> PM and <input type="checkbox"/> Fax No:		J.M. Carlson			
Invoice to <input type="checkbox"/> Accounting <input type="checkbox"/> Inc. Invoice with Final Report <input type="checkbox"/> Invoice must have a P.O. Bill to:					
Quote/Pricing:		P.O. No:		<input type="checkbox"/> Call for P.O.	
Reg Program: UST DRY-CLEAN Land-Fill Waste-Disp NPDES DW TRRP					
OAPP Per-Contract CLP AGCEE NAVY DOE DOD USACE OTHER:					
Special DLs (GW DW OAPP MDLs RLS See Lab PM Included Call PM)					
Sampler Name	Signature				
Sample ID	Sampling Date	Time	Depth ft' In" m	Matrix	Composite
1 5B-2 40'	2013	1538		S	X 1
2 50'		1540			
3 70'		1545			
4 80'		1555			
5 90'		1605			
6 100'		1615			
7 5B-3 5'	5-7	450			
8 10'		1000			
9 20'		1005			
10 30'		1010			
Relinquished by (Initials and Sign)		Date & Time	Relinquished to (Initials and Sign)		Date & Time
1) J.M. Carlson		5:43 11:50	2) J.M. Carlson		5/13 16:00
3)			4)		
5)			6)		
Preservatives: Various (V), HCl pH<2 (H), H2SO4 pH<2 (S), HNO3 pH<2 (N), Aspc Acid&NaOH (A), ZnAc&NaOH (Z), (Cool, <4C) (C), None (NA), See Label (L), Other (O)		Total Containers per COC:			
Cont. Size: 4oz (4), 8oz (8), 32oz (32), 40ml VOA (40), 1L (1), 500ml (5), Tedlar Bag (B), Various (V), Other		Cooler Temp: 6.0 °C			
Matrix: Air (A), Product (P), Solid (S), Water (W), Liquid (L)		Otherwise agreed on writing. Reports are the Intellectual Property of XENCO until paid. Samples will be held 30 days after final report is e-mailed unless hereby requested. Rush Charges and Collection Fees are pre-approved if needed.			
Committed to Excellence in Service and Quality		www.xenco.com			

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☐ 5332, Blackberry Drive, San Antonio, TX 78238 210-509-3334

☐ 9701 Harry Hines Blvd., Dallas, TX 75220 214-902-0300
☐ 12600 West I-20 East, Odessa, TX 79765 432-563-1800

Serial #: **330720** Page **3** of **3**

ANALYSIS REQUEST & CHAIN OF CUSTODY RECORD

Company-City		Phone		Lab Only:	
Project Name-Location		Previously done at XENCO		Project ID	
Proj. State: TX, AL, FL, GA, LA, MS, NC, NJ, PA, SC, TN, UT Other		Proj. Manager (PM)		TAT: ASAP 5h 12h 24h 48h 3d 5d 7d 10d 21d Standard TAT is project specific. It is typically 5-7 Working Days for level II and 10+ Working days for level III and IV data.	
E-mail Results to		PM and		Fax No:	
Invoice to <input type="checkbox"/> Accounting <input type="checkbox"/> Inc. Invoice with Final Report <input type="checkbox"/> Invoice must have a P.O. Bill to:		P.O. No:		<input type="checkbox"/> Call for P.O.	
Quote/Pricing:		Reg Program: UST DRY-CLEAN Land-Fill Waste-Disp NPDES DW TRRP		QAPP Per-Contract CLP AGCEE NAVY DOE DOD USACE OTHER:	
Special DLs (GW DW QAPP MDLs RLS See Lab PM Included Call PM)		Signature		Preservatives	
Sample ID	Sampling Date	Time	Depth ft' In" m	Matrix	Composite
1	SB-3	5-7	1015	S	X 1 4oz C C
2	7d	1030			
3	9d	1035			
4					
5					
6					
7					
8					
9					
10					
Relinquished by (Initials and Sign)		Date & Time		Relinquished to (Initials and Sign)	
1) <i>Yanlaige</i>		5-7-13 1650		2) <i>Kungskun</i>	
3) <i>Yanlaige</i>		5-7-13 1650		4) <i>Kungskun</i>	
5) <i>Yanlaige</i>		5-7-13 1650		6) <i>Kungskun</i>	
Preservatives: Various (V), HCl pH<2 (H), H2SO4 pH<2 (S), HNO3 pH<2 (N), Asbc Acid&NaOH (A), ZnAc&NaOH (Z), (Cool, <4C) (C), None (NA), See Label (L), Other (O)		Date & Time		Total Containers per COC:	
Cont. Size: 4oz (4), 8oz (8), 32oz (32), 40ml VOA (40), 1L (1), 500ml (5), Tedlar Bag (B), Various (V), Other		Date & Time		Cooler Temp: 6-20 °C	
Matrix: Air (A), Product (P), Solid (S), Water (W), Liquid (L)		Date & Time		Other: <i>CL - Chlorides 300.0 EPA</i>	
Notice: Signature of this document and relinquishment of these samples constitutes a valid purchase order from client company to Xenco Laboratories and its affiliates, subcontractors and assigns under Xenco's standard terms and conditions of service unless previously negotiated under a fully executed client contract.		Date & Time		TATASAP 5h 12h 24h 48h 3d 5d 7d 10d 21d	
Addn: PAH above		mg/L W, mg/Kg S		Highest Hit	
Hold Samples (Surcharges will apply and are pre-approved)		Sample Clean-ups are pre-approved as needed		Remarks	
Addn:		Date		Rcv. by:	
From:		Date		Rcv. by:	



XENCO Laboratories



Prelogin/Nonconformance Report- Sample Log-In

Client: Conestoga Rovers & Associates

Date/ Time Received: 05/07/2013 04:50:00 PM

Work Order #: 462651

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	6
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	Yes
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:	PH Device/Lot#:
----------	-----------------

Checklist completed by:

Kelsey Brooks
Kelsey Brooks

Date: 05/08/2013

Checklist reviewed by:

Kelsey Brooks
Kelsey Brooks

Date: 05/08/2013

Analytical Report 462651

for

Conestoga Rovers & Associates

Project Manager: Tom Larson

CEMC CVU 342

073823

21-MAY-13

Collected By: Client



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Lakeland: Florida (E84098)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code: AZ000989): Arizona (AZ0758)



21-MAY-13

Project Manager: **Tom Larson**
Conestoga Rovers & Associates
2135 S Loop 250 W
Midland, TX 79703

Reference: XENCO Report No(s): **462651**
CEMC CVU 342
Project Address: New Mexico

Tom Larson:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 462651. 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. The uncertainty of measurement associated with the results of analysis reported is available upon request. 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. 462651 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,

Kelsey Brooks

Project Manager

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

Certified and approved by numerous States and Agencies.

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Sample Cross Reference 462651



Conestoga Rovers & Associates, Midland, TX

CEMC CVU 342

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB-1 5'	S	05-06-13 13:25		462651-001
SB-1 10'	S	05-06-13 13:40		462651-002
SB-1 20'	S	05-06-13 13:45		462651-003
SB-1 40'	S	05-06-13 13:55		462651-004
SB-1 50'	S	05-06-13 14:10		462651-005
SB-1 75'	S	05-06-13 14:25		462651-006
SB-1 100'	S	05-06-13 14:35		462651-007
SB-2 5'	S	05-06-13 15:20		462651-008
SB-2 10'	S	05-06-13 15:25		462651-009
SB-2 20'	S	05-06-13 15:35		462651-010
SB-2 40'	S	05-06-13 15:38		462651-011
SB-2 50'	S	05-06-13 15:40		462651-012
SB-2 70'	S	05-06-13 15:45		462651-013
SB-2 80'	S	05-06-13 15:55		462651-014
SB-2 90'	S	05-06-13 16:05		462651-015
SB-2 100'	S	05-06-13 16:15		462651-016
SB-3 5'	S	05-07-13 09:50		462651-017
SB-3 10'	S	05-07-13 10:00		462651-018
SB-3 20'	S	05-07-13 10:05		462651-019
SB-3 30'	S	05-07-13 10:10		462651-020
SB-3 50'	S	05-07-13 10:15		462651-021
SB-3 70'	S	05-07-13 10:30		462651-022
SB-3 90'	S	05-07-13 10:35		462651-023



CASE NARRATIVE



Client Name: Conestoga Rovers & Associates

Project Name: CEMC CVU 342

Project ID: 073823
Work Order Number(s): 462651

Report Date: 21-MAY-13
Date Received: 05/07/2013

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-913372 Inorganic Anions by EPA 300/300.1
E300

Batch 913372, Chloride recovered below QC limits in the Matrix Spike.

Samples affected are: 462651-020.

The Laboratory Control Sample for Chloride is within laboratory Control Limits

Batch: LBA-913623 Inorganic Anions by EPA 300/300.1
E300

Batch 913623, Chloride recovered below QC limits in the Matrix Spike.

Samples affected are: 462651-019, -022, -008, -021, -010, -011, -013, -009, -012, -018, -023, -014, -006, -017.

The Laboratory Control Sample for Chloride is within laboratory Control Limits



Certificate of Analysis Summary 462651

Conestoga Rovers & Associates, Midland, TX

Project Name: CEMC CVU 342



Project Id: 073823

Contact: Tom Larson

Project Location: New Mexico

Date Received in Lab: Tue May-07-13 04:50 pm

Report Date: 21-MAY-13

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	462651-001	462651-002	462651-003	462651-004	462651-005	462651-006
	Field Id:	SB-1 5'	SB-1 10'	SB-1 20'	SB-1 40'	SB-1 50'	SB-1 75'
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	May-06-13 13:25	May-06-13 13:40	May-06-13 13:45	May-06-13 13:55	May-06-13 14:10	May-06-13 14:25
Inorganic Anions by EPA 300/300.1	Extracted:	May-09-13 14:00	May-09-13 14:00	May-09-13 14:00	May-09-13 14:00	May-09-13 14:00	May-10-13 08:00
	Analyzed:	May-09-13 17:09	May-09-13 17:31	May-09-13 17:53	May-09-13 18:15	May-09-13 19:20	May-10-13 10:57
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1700 41.8	2130 41.1	177 4.28	32.5 3.10	147 4.19	4.94 3.07
Percent Moisture	Extracted:						
	Analyzed:	May-08-13 15:15	May-08-13 15:15	May-08-13 15:15	May-08-13 15:15	May-08-13 15:15	May-08-13 15:15
	Units/RL:	% RL	% RL	% RL	% RL	% RL	% RL
Percent Moisture		4.20 1.00	2.66 1.00	6.54 1.00	3.34 1.00	4.52 1.00	2.34 1.00

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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Kelsey Brooks
Project Manager



Certificate of Analysis Summary 462651

Conestoga Rovers & Associates, Midland, TX

Project Name: CEMC CVU 342



Project Id: 073823

Contact: Tom Larson

Project Location: New Mexico

Date Received in Lab: Tue May-07-13 04:50 pm

Report Date: 21-MAY-13

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	462651-007	462651-008	462651-009	462651-010	462651-011	462651-012
	Field Id:	SB-1 100'	SB-2 5'	SB-2 10'	SB-2 20'	SB-2 40'	SB-2 50'
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	May-06-13 14:35	May-06-13 15:20	May-06-13 15:25	May-06-13 15:35	May-06-13 15:38	May-06-13 15:40
Inorganic Anions by EPA 300/300.1	Extracted:		May-10-13 08:00	May-10-13 08:00	May-10-13 08:00	May-10-13 08:00	May-10-13 08:00
	Analyzed:		May-10-13 11:41	May-10-13 10:14	May-10-13 12:02	May-10-13 12:24	May-10-13 13:29
	Units/RL:		mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
			3860 103	4420 106	2510 41.9	4.83 3.81	2460 41.8
Chloride							
Percent Moisture	Extracted:		May-08-13 15:15	May-08-13 15:15	May-08-13 15:15	May-08-13 15:15	May-08-13 15:15
	Analyzed:	May-08-13 15:15	May-08-13 15:15	May-08-13 15:15	May-08-13 15:15	May-08-13 15:15	May-08-13 15:15
	Units/RL:	% RL	% RL	% RL	% RL	% RL	% RL
		3.77 1.00	3.07 1.00	5.30 1.00	4.56 1.00	21.2 1.00	4.31 1.00
Percent Moisture							

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Kelsey Brooks
Project Manager



Certificate of Analysis Summary 462651

Conestoga Rovers & Associates, Midland, TX

Project Name: CEMC CVU 342



Project Id: 073823

Contact: Tom Larson

Project Location: New Mexico

Date Received in Lab: Tue May-07-13 04:50 pm

Report Date: 21-MAY-13

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	462651-013	462651-014	462651-015	462651-016	462651-017	462651-018
	Field Id:	SB-2 70'	SB-2 80'	SB-2 90'	SB-2 100'	SB-3 5'	SB-3 10'
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	May-06-13 15:45	May-06-13 15:55	May-06-13 16:05	May-06-13 16:15	May-07-13 09:50	May-07-13 10:00
Inorganic Anions by EPA 300/300.1	Extracted:	May-10-13 08:00	May-10-13 08:00			May-10-13 08:00	May-10-13 08:00
	Analyzed:	May-10-13 13:51	May-10-13 14:13			May-10-13 16:01	May-10-13 16:23
	Units/RL:	mg/kg RL	mg/kg RL			mg/kg RL	mg/kg RL
Chloride		412 10.7	4.22 3.29			142 4.31	685 21.5
Percent Moisture	Extracted:						
	Analyzed:	May-08-13 15:15	May-08-13 16:20	May-08-13 16:20	May-08-13 16:20	May-08-13 16:20	May-08-13 16:20
	Units/RL:	% RL	% RL	% RL	% RL	% RL	% RL
Percent Moisture		6.44 1.00	19.1 1.00	5.13 1.00	6.82 1.00	7.22 1.00	7.15 1.00

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Kelsey Brooks
Project Manager



Certificate of Analysis Summary 462651

Conestoga Rovers & Associates, Midland, TX

Project Name: CEMC CVU 342



Project Id: 073823

Contact: Tom Larson

Project Location: New Mexico

Date Received in Lab: Tue May-07-13 04:50 pm

Report Date: 21-MAY-13

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	462651-019	462651-020	462651-021	462651-022	462651-023	
	Field Id:	SB-3 20'	SB-3 30'	SB-3 50'	SB-3 70'	SB-3 90'	
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	May-07-13 10:05	May-07-13 10:10	May-07-13 10:15	May-07-13 10:30	May-07-13 10:35	
Inorganic Anions by EPA 300/300.1	Extracted:	May-10-13 08:00	May-09-13 16:00	May-10-13 08:00	May-10-13 08:00	May-13-13 10:00	
	Analyzed:	May-10-13 16:44	May-10-13 04:06	May-10-13 17:06	May-10-13 18:12	*** ** *	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		1400 42.4	3420 43.0	1210 21.1	431 10.3	209 4.17	
Percent Moisture	Extracted:						
	Analyzed:	May-08-13 16:45	May-08-13 16:45	May-08-13 16:45	May-08-13 16:45	May-08-13 16:45	
	Units/RL:	% RL	% RL	% RL	% RL	% RL	
Percent Moisture		5.63 1.00	6.94 1.00	5.19 1.00	2.97 1.00	4.09 1.00	

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Kelsey Brooks
Project Manager

**Conestoga Rovers & Associates, Midland, TX**
CEMC CVU 342

Sample Id: SB-1 5' **Matrix:** Soil **Date Received:** 05.07.13 16.50
Lab Sample Id: 462651-001 **Date Collected:** 05.06.13 13.25
Analytical Method: Inorganic Anions by EPA 300/300.1 **Prep Method:** E300P
Tech: AMB **% Moisture:** 4.2
Analyst: AMB **Date Prep:** 05.09.13 14.00 **Basis:** Dry Weight
Seq Number: 913609

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1700	41.8	mg/kg	05.09.13 17.09		20

Analytical Method: Percent Moisture
Tech: SHSM **% Moisture:**
Analyst: WRU **Basis:** Wet Weight
Seq Number: 913266

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	4.20	1.00	%	05.08.13 15.15		1

Conestoga Rovers & Associates, Midland, TX CEMC CVU 342

Sample Id: SB-1 10'	Matrix: Soil	Date Received: 05.07.13 16.50
Lab Sample Id: 462651-002	Date Collected: 05.06.13 13.40	
Analytical Method: Inorganic Anions by EPA 300/300.1	Prep Method: E300P	
Tech: AMB	% Moisture: 2.66	
Analyst: AMB	Date Prep: 05.09.13 14.00	Basis: Dry Weight
Seq Number: 913609		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2130	41.1	mg/kg	05.09.13 17.31		20

Analytical Method: Percent Moisture	
Tech: SHSM	% Moisture:
Analyst: WRU	Basis: Wet Weight
Seq Number: 913266	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	2.66	1.00	%	05.08.13 15.15		1

**Conestoga Rovers & Associates, Midland, TX**
CEMC CVU 342**Sample Id:** SB-1 20'
Lab Sample Id: 462651-003**Matrix:** Soil
Date Collected: 05.06.13 13.45**Date Received:** 05.07.13 16.50**Analytical Method:** Inorganic Anions by EPA 300/300.1
Tech: AMB
Analyst: AMB
Seq Number: 913609**Prep Method:** E300P
% Moisture: 6.54
Date Prep: 05.09.13 14.00
Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	177	4.28	mg/kg	05.09.13 17.53		2

Analytical Method: Percent Moisture
Tech: SHSM
Analyst: WRU
Seq Number: 913266**% Moisture:**
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	6.54	1.00	%	05.08.13 15.15		1



Certificate of Analytical Results 462651



Conestoga Rovers & Associates, Midland, TX
CEMC CVU 342

Sample Id: SB-1 40' Matrix: Soil Date Received: 05.07.13 16.50
Lab Sample Id: 462651-004 Date Collected: 05.06.13 13.55
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: AMB % Moisture: 3.34
Analyst: AMB Date Prep: 05.09.13 14.00 Basis: Dry Weight
Seq Number: 913609

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	32.5	3.10	mg/kg	05.09.13 18.15		1.5

Analytical Method: Percent Moisture
Tech: SHSM % Moisture:
Analyst: WRU Basis: Wet Weight
Seq Number: 913266

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	3.34	1.00	%	05.08.13 15.15		1

**Conestoga Rovers & Associates, Midland, TX**

CEMC CVU 342

Sample Id: SB-1 50'
Lab Sample Id: 462651-005**Matrix:** Soil
Date Collected: 05.06.13 14.10**Date Received:** 05.07.13 16.50**Analytical Method:** Inorganic Anions by EPA 300/300.1
Tech: AMB
Analyst: AMB
Seq Number: 913609**Prep Method:** E300P
% Moisture: 4.52
Date Prep: 05.09.13 14.00
Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	147	4.19	mg/kg	05.09.13 19.20		2

Analytical Method: Percent Moisture
Tech: SHSM
Analyst: WRU
Seq Number: 913266**% Moisture:**
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	4.52	1.00	%	05.08.13 15.15		1



Conestoga Rovers & Associates, Midland, TX
CEMC CVU 342

Sample Id: SB-1 75'	Matrix: Soil	Date Received: 05.07.13 16.50
Lab Sample Id: 462651-006	Date Collected: 05.06.13 14.25	
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Tech: AMB		% Moisture: 2.34
Analyst: AMB	Date Prep: 05.10.13 08.00	Basis: Dry Weight
Seq Number: 913623		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4.94	3.07	mg/kg	05.10.13 10.57		1.5

Analytical Method: Percent Moisture	
Tech: SHSM	% Moisture:
Analyst: WRU	Basis: Wet Weight
Seq Number: 913266	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	2.34	1.00	%	05.08.13 15.15		1

**Conestoga Rovers & Associates, Midland, TX**

CEMC CVU 342

Sample Id: SB-1 100'

Matrix: Soil

Date Received: 05.07.13 16.50

Lab Sample Id: 462651-007

Date Collected: 05.06.13 14.35

Analytical Method: **Percent Moisture**

Tech: SHSM

% Moisture:

Analyst: WRU

Basis: Wet Weight

Seq Number: 913266

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	3.77	1.00	%	05.08.13 15.15		1



Certificate of Analytical Results 462651



Conestoga Rovers & Associates, Midland, TX
CEMC CVU 342

Sample Id: SB-2 5' Matrix: Soil Date Received: 05.07.13 16.50
Lab Sample Id: 462651-008 Date Collected: 05.06.13 15.20
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: AMB % Moisture: 3.07
Analyst: AMB Date Prep: 05.10.13 08.00 Basis: Dry Weight
Seq Number: 913623

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3860	103	mg/kg	05.10.13 11.41		50

Analytical Method: Percent Moisture
Tech: SHSM % Moisture:
Analyst: WRU Basis: Wet Weight
Seq Number: 913266

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	3.07	1.00	%	05.08.13 15.15		1



Certificate of Analytical Results 462651



Conestoga Rovers & Associates, Midland, TX
CEMC CVU 342

Sample Id: SB-2 10' Matrix: Soil Date Received: 05.07.13 16.50
Lab Sample Id: 462651-009 Date Collected: 05.06.13 15.25
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: AMB % Moisture: 5.3
Analyst: AMB Date Prep: 05.10.13 08.00 Basis: Dry Weight
Seq Number: 913623

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4420	106	mg/kg	05.10.13 10.14		50

Analytical Method: Percent Moisture
Tech: SHSM % Moisture:
Analyst: WRU Basis: Wet Weight
Seq Number: 913266

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	5.30	1.00	%	05.08.13 15.15		1

**Conestoga Rovers & Associates, Midland, TX**
CEMC CVU 342

Sample Id:	SB-2 20'	Matrix: Soil	Date Received: 05.07.13 16.50
Lab Sample Id:	462651-010	Date Collected: 05.06.13 15.35	
Analytical Method:	Inorganic Anions by EPA 300/300.1	Prep Method: E300P	
Tech:	AMB	% Moisture: 4.56	
Analyst:	AMB	Date Prep: 05.10.13 08.00	Basis: Dry Weight
Seq Number:	913623		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2510	41.9	mg/kg	05.10.13 12.02		20

Analytical Method:	Percent Moisture	
Tech:	SHSM	% Moisture:
Analyst:	WRU	Basis: Wet Weight
Seq Number:	913266	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	4.56	1.00	%	05.08.13 15.15		1

**Conestoga Rovers & Associates, Midland, TX**

CEMC CVU 342

Sample Id:	SB-2 40'	Matrix:	Soil	Date Received:	05.07.13 16.50
Lab Sample Id:	462651-011	Date Collected:	05.06.13 15.38		
Analytical Method:	Inorganic Anions by EPA 300/300.1	Prep Method:	E300P		
Tech:	AMB	% Moisture:	21.2		
Analyst:	AMB	Date Prep:	05.10.13 08.00	Basis:	Dry Weight
Seq Number:	913623				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4.83	3.81	mg/kg	05.10.13 12.24		1.5

Analytical Method:	Percent Moisture				
Tech:	SHSM	% Moisture:			
Analyst:	WRU	Basis:	Wet Weight		
Seq Number:	913266				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	21.2	1.00	%	05.08.13 15.15		1



Conestoga Rovers & Associates, Midland, TX
CEMC CVU 342

Sample Id: SB-2 50'	Matrix: Soil	Date Received: 05.07.13 16.50
Lab Sample Id: 462651-012	Date Collected: 05.06.13 15.40	
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Tech: AMB		% Moisture: 4.31
Analyst: AMB	Date Prep: 05.10.13 08.00	Basis: Dry Weight
Seq Number: 913623		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2460	41.8	mg/kg	05.10.13 13.29		20

Analytical Method: Percent Moisture	
Tech: SHSM	% Moisture:
Analyst: WRU	Basis: Wet Weight
Seq Number: 913266	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	4.31	1.00	%	05.08.13 15.15		1

Conestoga Rovers & Associates, Midland, TX
CEMC CVU 342Sample Id: SB-2 70'
Lab Sample Id: 462651-013Matrix: Soil
Date Collected: 05.06.13 15.45

Date Received: 05.07.13 16.50

Analytical Method: Inorganic Anions by EPA 300/300.1
Tech: AMB
Analyst: AMB
Seq Number: 913623Prep Method: E300P
% Moisture: 6.44
Date Prep: 05.10.13 08.00
Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	412	10.7	mg/kg	05.10.13 13.51		5

Analytical Method: Percent Moisture
Tech: SHSM
Analyst: WRU
Seq Number: 913266% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	6.44	1.00	%	05.08.13 15.15		1


Conestoga Rovers & Associates, Midland, TX

CEMC CVU 342

Sample Id: SB-2 80'	Matrix: Soil	Date Received: 05.07.13 16.50
Lab Sample Id: 462651-014	Date Collected: 05.06.13 15.55	
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Tech: AMB		% Moisture: 19.1
Analyst: AMB	Date Prep: 05.10.13 08.00	Basis: Dry Weight
Seq Number: 913623		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4.22	3.29	mg/kg	05.10.13 14.13		1.33

Analytical Method: Percent Moisture		
Tech: SHSM		% Moisture:
Analyst: WRU		Basis: Wet Weight
Seq Number: 913266		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	19.1	1.00	%	05.08.13 16.20		1



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Conestoga Rovers & Associates, Midland, TX

CEMC CVU 342

Sample Id: SB-2 90'
Lab Sample Id: 462651-015

Matrix: Soil
Date Collected: 05.06.13 16.05

Date Received: 05.07.13 16.50

Analytical Method: Percent Moisture
Tech: SHSM
Analyst: WRU
Seq Number: 913266

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	5.13	1.00	%	05.08.13 16.20		1



Certificate of Analytical Results 462651



Conestoga Rovers & Associates, Midland, TX

CEMC CVU 342

Sample Id: SB-2 100'
Lab Sample Id: 462651-016

Matrix: Soil
Date Collected: 05.06.13 16.15

Date Received: 05.07.13 16.50

Analytical Method: Percent Moisture
Tech: SHSM
Analyst: WRU
Seq Number: 913266

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	6.82	1.00	%	05.08.13 16.20		1



Certificate of Analytical Results 462651



Conestoga Rovers & Associates, Midland, TX
CEMC CVU 342

Sample Id: SB-3 5' **Matrix:** Soil **Date Received:** 05.07.13 16.50
Lab Sample Id: 462651-017 **Date Collected:** 05.07.13 09.50
Analytical Method: Inorganic Anions by EPA 300/300.1 **Prep Method:** E300P
Tech: AMB **% Moisture:** 7.22
Analyst: AMB **Date Prep:** 05.10.13 08.00 **Basis:** Dry Weight
Seq Number: 913623

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	142	4.31	mg/kg	05.10.13 16.01		2

Analytical Method: Percent Moisture
Tech: SHSM **% Moisture:**
Analyst: WRU **Basis:** Wet Weight
Seq Number: 913266

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	7.22	1.00	%	05.08.13 16.20		1



Certificate of Analytical Results 462651



Conestoga Rovers & Associates, Midland, TX
CEMC CVU 342

Sample Id: SB-3 10' Matrix: Soil Date Received: 05.07.13 16.50
Lab Sample Id: 462651-018 Date Collected: 05.07.13 10.00
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: AMB % Moisture: 7.15
Analyst: AMB Date Prep: 05.10.13 08.00 Basis: Dry Weight
Seq Number: 913623

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	685	21.5	mg/kg	05.10.13 16.23		10

Analytical Method: Percent Moisture
Tech: SHSM % Moisture:
Analyst: WRU Basis: Wet Weight
Seq Number: 913266

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	7.15	1.00	%	05.08.13 16.20		1



Certificate of Analytical Results 462651



Conestoga Rovers & Associates, Midland, TX
CEMC CVU 342

Sample Id: SB-3 20'
Lab Sample Id: 462651-019

Matrix: Soil
Date Collected: 05.07.13 10.05

Date Received: 05.07.13 16.50

Analytical Method: Inorganic Anions by EPA 300/300.1
Tech: AMB
Analyst: AMB
Seq Number: 913623

Prep Method: E300P
% Moisture: 5.63
Date Prep: 05.10.13 08.00
Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1400	42.4	mg/kg	05.10.13 16.44		20

Analytical Method: Percent Moisture
Tech: SHSM
Analyst: WRU
Seq Number: 913267

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	5.63	1.00	%	05.08.13 16.45		1

Conestoga Rovers & Associates, Midland, TX CEMC CVU 342

Sample Id: SB-3 30'	Matrix: Soil	Date Received: 05.07.13 16.50
Lab Sample Id: 462651-020	Date Collected: 05.07.13 10.10	
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Tech: AMB		% Moisture: 6.94
Analyst: AMB	Date Prep: 05.09.13 16.00	Basis: Dry Weight
Seq Number: 913372		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3420	43.0	mg/kg	05.10.13 04.06		20

Analytical Method: Percent Moisture		
Tech: SHSM		% Moisture:
Analyst: WRU		Basis: Wet Weight
Seq Number: 913267		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	6.94	1.00	%	05.08.13 16.45		1



Conestoga Rovers & Associates, Midland, TX

CEMC CVU 342

Sample Id: SB-3 50'	Matrix: Soil	Date Received: 05.07.13 16.50
Lab Sample Id: 462651-021	Date Collected: 05.07.13 10.15	
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Tech: AMB		% Moisture: 5.19
Analyst: AMB	Date Prep: 05.10.13 08.00	Basis: Dry Weight
Seq Number: 913623		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1210	21.1	mg/kg	05.10.13 17.06		10

Analytical Method: Percent Moisture		% Moisture:
Tech: SHSM		Basis: Wet Weight
Analyst: WRU		
Seq Number: 913267		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	5.19	1.00	%	05.08.13 16.45		1



Conestoga Rovers & Associates, Midland, TX
CEMC CVU 342

Sample Id:	SB-3 70'	Matrix: Soil	Date Received: 05.07.13 16.50
Lab Sample Id:	462651-022	Date Collected: 05.07.13 10.30	
Analytical Method:	Inorganic Anions by EPA 300/300.1	Prep Method: E300P	
Tech:	AMB	% Moisture: 2.97	
Analyst:	AMB	Date Prep: 05.10.13 08.00	Basis: Dry Weight
Seq Number:	913623		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	431	10.3	mg/kg	05.10.13 18.12		5

Analytical Method:	Percent Moisture	
Tech:	SHSM	% Moisture:
Analyst:	WRU	Basis: Wet Weight
Seq Number:	913267	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	2.97	1.00	%	05.08.13 16.45		1



Certificate of Analytical Results 462651



Conestoga Rovers & Associates, Midland, TX

CEMC CVU 342

Sample Id: SB-3 90'
Lab Sample Id: 462651-023

Matrix: Soil
Date Collected: 05.07.13 10.35

Date Received: 05.07.13 16.50

Analytical Method: Inorganic Anions by EPA 300/300.1
Tech: AMB
Analyst: AMB
Seq Number: 913623

Prep Method: E300P
% Moisture: 4.09
Date Prep: 05.13.13 10.00
Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	209	4.17	mg/kg	05.10.13 18.33		2

Analytical Method: Percent Moisture
Tech: SHSM
Analyst: WRU
Seq Number: 913267

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMOIST	4.09	1.00	%	05.08.13 16.45		1

- 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 affect the recovery of the spike concentration. This condition could also affect 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 quantitation limit and above the detection limit.
- 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.

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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Conestoga Rovers & Associates
CEMC CVU 342

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 913609

MB Sample Id: 637998-1-BLK

Matrix: Solid

LCS Sample Id: 637998-1-BKS

Prep Method: E300P

Date Prep: 05.09.13

LCSD Sample Id: 637998-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<2.00	50.0	51.5	103	51.4	103	80-120	0	20	mg/kg	05.09.13 15:21	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 913372

MB Sample Id: 637855-1-BLK

Matrix: Solid

LCS Sample Id: 637855-1-BKS

Prep Method: E300P

Date Prep: 05.09.13

LCSD Sample Id: 637855-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<2.00	50.0	51.6	103	51.7	103	80-120	0	20	mg/kg	05.09.13 22:41	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 913623

MB Sample Id: 638012-1-BLK

Matrix: Solid

LCS Sample Id: 638012-1-BKS

Prep Method: E300P

Date Prep: 05.10.13

LCSD Sample Id: 638012-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<2.00	50.0	51.6	103	51.2	102	80-120	1	20	mg/kg	05.10.13 09:10	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 913609

Parent Sample Id: 462609-001

Matrix: Soil

MS Sample Id: 462609-001 S

Prep Method: E300P

Date Prep: 05.09.13

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	<2.66	66.5	78.5	118	80-120	mg/kg	05.09.13 16:26	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 913372

Parent Sample Id: 462651-020

Matrix: Soil

MS Sample Id: 462651-020 S

Prep Method: E300P

Date Prep: 05.09.13

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	3420	1070	4390	91	80-120	mg/kg	05.10.13 04:28	



Conestoga Rovers & Associates
CEMC CVU 342

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 913372

Matrix: Soil

Prep Method: E300P

Parent Sample Id: 462827-001

MS Sample Id: 462827-001 S

Date Prep: 05.09.13

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	98.1	112	213	103	80-120	mg/kg	05.09.13 23:46	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 913623

Matrix: Soil

Prep Method: E300P

Parent Sample Id: 462651-009

MS Sample Id: 462651-009 S

Date Prep: 05.10.13

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	4420	2640	7130	103	80-120	mg/kg	05.10.13 10:36	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 913623

Matrix: Soil

Prep Method: E300P

Parent Sample Id: 462711-003

MS Sample Id: 462711-003 S

Date Prep: 05.10.13

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	5590	6310	5840	4	80-120	mg/kg	05.10.13 15:18	X

Analytical Method: Percent Moisture

Seq Number: 913266

Matrix: Solid

MB Sample Id: 913266-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Percent Moisture	ND	%	05.08.13 15:15	

Analytical Method: Percent Moisture

Seq Number: 913267

Matrix: Solid

MB Sample Id: 913267-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Percent Moisture	ND	%	05.08.13 16:45	



QC Summary 462651



Conestoga Rovers & Associates

CEMC CVU 342

Analytical Method: Percent Moisture

Seq Number: 913266

Parent Sample Id: 462609-001

Matrix: Soil

MD Sample Id: 462609-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Percent Moisture	<1.00	<1.00	0	20	%	05.08.13 15:15	U

Analytical Method: Percent Moisture

Seq Number: 913267

Parent Sample Id: 462651-019

Matrix: Soil

MD Sample Id: 462651-019 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Percent Moisture	5.63	6.47	14	20	%	05.08.13 16:45	



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ANALYSIS REQUEST & CHAIN OF CUSTODY RECORD

☐ 9701 Harry Hines Blvd., Dallas, TX 75220 214-902-0300
☐ 12800 West L-20 East, Odessa, TX 79765 432-563-1800

Serial #: 330721 Page 1 of 3

Company/City: <u>CEA Midland</u>		Phone: <u>6860086</u>								
Project Name/Location: <u>CEMC CIV 342</u>		Project ID: <u>673823</u>								
Proj. State: TX, AL, FL, GA, LA, MS, NC, NJ, PA, SC, TN, UT Other (AM)		Proj. Manager (PM): <u>Tom Larson</u>								
E-mail Results to: <u>thlarsen@ceaworks.com</u>		Fax No:								
Invoice to: <input type="checkbox"/> Accounting <input type="checkbox"/> Inc. Invoice with Final Report <input type="checkbox"/> Invoice must have a P.O. Bill to: <u>see 3500 CEC Knight CEA</u>		P.O. No: <input type="checkbox"/> Call for P.O.								
Quote/Pricing:		Reg Program: <u>UST DRY-CLEAN Land-Fill Waste-Disp NPDES DW TRRP</u>								
QAPP Per-Contract CLP AGCEE NAVY DOE DOD USACE OTHER: <u>MUACD</u>		Special DLS (GW DW QAPP MDLs RLS See Lab PM Included Call PM)								
Sampler Name: <u>Tom Larson</u>		Signature: <u>[Signature]</u>								
Sample ID	Sampling Date	Time	Depth ft' in" m	Matrix	Composite	Grab	# Containers	Container Size	Container Type	Preservatives
1 50-1 5'	9/13/13 5-6	1325		S			X 1 402 C C			
2 10'		1240								
3 20'		1345								
4 40'		1355								
5 50'		1410								
6 75'		1425								
7 100'		1435								
8 50-2 5'	5-6	1520								
9 10'		1525								
10 20'		1535								
Relinquished by (Initials and Sign): <u>[Signature]</u>		Date & Time: <u>5-7-13 1651</u>		Relinquished to (Initials and Sign): <u>[Signature]</u>		Date & Time: <u>5/11/13 1651</u>		Total Containers per COC: <u>1</u>		Cooler Temp: <u>6.0</u> °C
Preservatives: Various (V), HCl pH<2 (H), H2SO4 pH<2 (S), HNO3 pH<2 (N), Asbc Acid&NaOH (A), ZnAc&NaOH (Z), (Cool, <4C) (C), None (NA). See Label (L), Other (O) Cont. Size: 4oz (4), 8oz (8), 32oz (32), 40ml VOA (40), 1L (1), 500ml (5), Tedlar Bag (B), Various (V), Other _____ Cont. Type: Glass Amb (A), Glass Clear (C), Plastic (P), Various (V) Matrix: Air (A), Product (P), Solid (S), Water (W), Liquid (L) Notice: Signature of this document and relinquishment of these samples constitutes a valid purchase order from client company to Xenco Laboratories and its affiliates, subcontractors and assigns under Xenco's standard terms and conditions of service unless previously negotiated under a fully executed client contract.										



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Serial #: 330719 Page 2 of 3

Company/City Phone

Project Name/Location ☐ Previously done at XENCO Project ID

Proj. State: TX, AL, FL, GA, LA, MS, NC, NJ, PA, SC, TN, UT Other ☐ PM and ☐ Fax No:

E-mail Results to ☐ PM and ☐ Fax No:

Invoice to ☐ Accounting ☐ Inc. Invoice with Final Report ☐ Invoice must have a P.O.

Bill to:

Quote/Pricing: P.O. No: ☐ Call for P.O.

Reg Program: UST DRY-CLEAN Land-Fill Waste-Disp NPDES DW TRRP

QAPP Per-Contract CLP AGCEE NAVY DOE DOD USACE OTHER:

Special DLS (GW DW QAPP MDLs RLS See Lab PM Included Call PM)

Sampler Name Signature

Sample ID

Sampling Date

Time

Depth ft' In" m

Matrix

Composite

Grab

Containers

Container Size

Container Type

Preservatives

VOA: Full-List BTEX-MTBE EtOH Oxyg VOHs VOAs

VOA: PP TCL DW Appdx-1 Appdx-2 CALL Other:

PAHs SIM 8310 8270

TX-1005 DRO GRO MA EPH MA VPH

SVOCs: Full-List DW BN&AE TCLP PP Appdx-2 CALL

OC Pesticides PCBs Herbicides OP Pesticides

Metals: RCRA-8 RCRA-4 Pb 13PP 23TAL Appdx 1 Appdx2

SPLP - TCLP (Metals VOCs SVOCs Pest. Herb. PCBs)

EDB / DBCP

CI- chlorides 300.0000

TATASAP 5h 12h 24h 48h 3d 5d 7d 10d 21d

Addn: PAH above mg/L W, mg/Kg S Highest Hit

Hold Samples (Surcharges will apply and are pre-approved)

Sample Clean-ups are pre-approved as needed

Addn: Date Rcv. by: From:

Remarks

Relinquished by (Initials and Sign)

Date & Time

Relinquished to (Initials and Sign)

Date & Time

Total Containers per COC:

Cooler Temp: 6.0 °C

Other: See Label (L), Other (O)

Cont. Type: Glass Amb (A), Glass Clear (C), Plastic (P), Various (V)

Matrix: Air (A), Product (P), Solid (S), Water (W), Liquid (L)

Preservatives: Various (V), HCl pH<2 (H), H2SO4 pH<2 (S), HNO3 pH<2 (N), Asbc Acid&NaOH (A), ZnAc&NaOH (Z), (Cool <4C) (C), None (NA)

Cont. Size: 4oz (4), 8oz (8), 32oz (32), 40ml VOA (40), 1L (1), 500ml (5), Tedlar Bag (B), Various (V), Other

Notice: Signature of this document and relinquishment of these samples constitutes a valid purchase order from client company to Xenco Laboratories and its affiliates.

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Final 1.002



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Serial #: 330720 Page 3 of 3

ANALYSIS REQUEST & CHAIN OF CUSTODY RECORD

Company-City		Phone		Lab Only:	
Project Name-Location		Previously done at XENCO		Project ID	
Proj. State: TX, AL, FL, GA, LA, MS, NC, NJ, PA, SC, TN, UT Other		Proj. Manager (PM)		TAT: ASAP 5h 12h 24h 48h 3d 5d 7d 10d 21d Standard TAT is project specific. It is typically 5-7 Working Days for level II and 10+ Working days for level III and IV data.	
E-mail Results to		<input type="checkbox"/> PM and		Fax No:	
Invoice to <input type="checkbox"/> Accounting <input type="checkbox"/> Inc. Invoice with Final Report <input type="checkbox"/> Invoice must have a P.O. Bill to:		P.O. No:		<input type="checkbox"/> Call for P.O.	
Quote/Pricing:		Reg Program: UST DRY-CLEAN Land-Fill Waste-Disp NPDES DW TRRP		QAPP Per-Contract CLP AGCEE NAVY DOE DOD USACE OTHER:	
Special DLS (GW DW QAPP MDLs RLS See Lab PM Included Call PM)		Signature		Remarks	
Sample ID	Sampling Date	Time	Depth ft' in" m	Matrix	Composite
1	5B-3	5-7	1015	S	X 1 4oz
2	70'	1030			
3	90'	1035			
4					
5					
6					
7					
8					
9					
10					
Relinquished by (Initials and Sign)		Date & Time		Relinquished to (Initials and Sign)	
1) 10/10/13		5-7:13 1650		2) 10/10/13	
3) 10/10/13		5-7:13 1650		4) 10/10/13	
5) 10/10/13		5-7:13 1650		6) 10/10/13	
Preservatives: Various (V), HCl pH<2 (H), H2SO4 pH<2 (S), HNO3 pH<2 (N), Asbc Acid&NaOH (A), ZnAc&NaOH (Z), (Cool, <4C) (C), None (NA), See Label (L), Other (O)		Cont. Size: 4oz (4), 8oz (8), 32oz (32), 40ml VOA (40), 1L (1), 500ml (S), Tedlar Bag (B), Various (V), Other		Matrix: Air (A), Product (P), Solid (S), Water (W), Liquid (L)	
Total Containers per COC:		Cooler Temp: 6-20 °C		Other (O)	
Otherwise agreed on writing. Reports are the Intellectual Property of XENCO		until paid. Samples will be held 30 days after final report is e-mailed unless		hereby requested. Rush Charges and Collection Fees are pre-approved if needed.	
TATASAP 5h 12h 24h 48h 3d 5d 7d 10d 21d		Addn: PAH above mg/L W, mg/Kg S Highest Hit		Hold Samples (Surcharges will apply and are pre-approved)	
Sample Clean-ups are pre-approved as needed		Addn:		Date	
Rcv. by:		From:			



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: Conestoga Rovers & Associates

Date/ Time Received: 05/07/2013 04:50:00 PM

Work Order #: 462651

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	6
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	Yes
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst: PH Device/Lot#:

Checklist completed by: Kelsey Brooks
Kelsey Brooks

Date: 05/08/2013

Checklist reviewed by: Kelsey Brooks
Kelsey Brooks

Date: 05/08/2013



PHOTO 1: View of reserve pit facing west before any remedial work activities



PHOTO 2: View of reserve pit facing southwest before any remedial work activities



PHOTOGRAPH LOG
Central Vacuum Unit #342
Lea County, New Mexico
Chevron Environmental Management Company



PHOTO 3: View of hydro-vac activities – April 2, 2013



PHOTO 4: View of excavation/waste removal activities



PHOTOGRAPH LOG
Central Vacuum Unit #342
Lea County, New Mexico
Chevron Environmental Management Company



PHOTO 5: View of excavation activities



PHOTO 6: View of excavated reserve pit facing southeast



PHOTOGRAPH LOG
 Central Vacuum Unit #342
 Lea County, New Mexico
 Chevron Environmental Management Company



PHOTO 7: View of excavated pit and entrance ramp facing southeast



PHOTO 8: View of drill rig inside excavated reserve pit facing east



PHOTOGRAPH LOG
Central Vacuum Unit #342
Lea County, New Mexico
Chevron Environmental Management Company



PHOTO 9: View of backfill activities facing northeast



PHOTO 10: View of backfilling activities facing northeast, ready for liner material



PHOTOGRAPH LOG
 Central Vacuum Unit #342
 Lea County, New Mexico
Chevron Environmental Management Company



PHOTO 11: View of 20 mil poly liner installation facing northeast



PHOTO 12: View of 20 mil poly liner installation facing northwest



PHOTOGRAPH LOG
Central Vacuum Unit #342
Lea County, New Mexico
Chevron Environmental Management Company



PHOTO 13: View of final grading and seeding activities completed with new vegetative growth already taking place - facing southeast.



PHOTO 13: View of final grading and seeding activities completed facing northeast. Flags are representative of entrance ramp location during remedial activities for the Site.



PHOTOGRAPH LOG
Central Vacuum Unit #342
Lea County, New Mexico
Chevron Environmental Management Company