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
MAY 28 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 August 1, 2011

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 USA OGRID #:
Address: 56 Texas Camp Road, Lovington, NM 88260
Facility or well name: Vacuum Grayburg San Andres Unit #250
API Number: 30-025-38001 OCD Permit Number:
U/L or Qtr/Qtr H Section 1 Township 18S Range 34E County: Lea
Center of Proposed Design: Latitude N 32.780556° Longitude W 103.510052° 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 20 mil ☐ LLDPE ☐ HDPE ☐ PVC ☒ Other SYNTHETIC
☐ String-Reinforced
Liner Seams: ☐ Welded ☐ Factory ☐ Other Volume: bbl Dimensions: L 100' x W 100' x D 6'

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.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Will any of the proposed closed-loop system operations and associated activities occur on or in areas that *will not* be used for future service and operations?
☐ Yes (If yes, please provide the information below) ☐ No

Required for impacted areas which will not be used for future service and operations:
☐ Soil Backfill and Cover Design Specifications - - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

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

Ground water is less than 50 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Ground water is between 50 and 100 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☒ Yes ☐ No ☐ NA
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☒ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☒ No
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	☐ Yes ☒ No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☒ No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☒ No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☒ No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☐ Yes ☒ No
Within a 100-year floodplain. - FEMA map	☐ Yes ☒ No

18.
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) ***Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.***
☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
☐ Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
☐ Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
☐ Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)
☐ Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

19.

Operator Application Certification:

I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.

Name (Print): _____ Title: _____

Signature: _____ Date: _____

e-mail address: _____ Telephone: _____

20.

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

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

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

21.

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

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

☒ **Closure Completion Date: March 17, 2013**

22.

Closure Method:

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

☐ If different from approved plan, please explain.

23.

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

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

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

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

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

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

☐ Site Reclamation (Photo Documentation)

☐ Soil Backfilling and Cover Installation

☐ Re-vegetation Application Rates and Seeding Technique

24.

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

☒ Proof of Closure Notice (surface owner and division)

☐ Proof of Deed Notice (required for on-site closure)

☒ Plot Plan (for on-site closures and temporary pits)

☒ Confirmation Sampling Analytical Results (if applicable)

☒ Waste Material Sampling Analytical Results (required for on-site closure)

☒ Disposal Facility Name and Permit Number

☒ Soil Backfilling and Cover Installation

☒ Re-vegetation Application Rates and Seeding Technique

☒ Site Reclamation (Photo Documentation)

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

25.

Operator Closure Certification:

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

Name (Print): Kegan Boyer Title: Project Manager

Signature: Kegan Boyer Date: May 16, 2013

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

May 14, 2013

Reference No. 073822

HOBBS OCD

MAY 28 2013

RECEIVED

Mr. Geoffrey R. Leking
Environmental Engineer Specialist
New Mexico Oil Conservation Division, District 1
1625 N. French Drive
Hobbs, NM 88240

Re: Pit Closure Report (As Attachment to Form C-144)
Vacuum Grayburg San Andres Unit #250, API #30-025-38001
Unit Letter H, Section 1, Township 18 South, Range 34 East
Lea County, New Mexico

Dear Mr. Leking:

The subject location is the Vacuum Grayburg San Andres Unit (VGSAU) #250 pit excavation (the Site). The Site is located in Unit Letter H, Section 1, Township 18 South, Range 34 East, Lea County, New Mexico. The approximate pit excavation dimensions are 100' x 100' x 6' average depth. The Site coordinates are N 32.780556°, W 103.510052°. The Site location is shown on Figures 1 & 2.

BACKGROUND

On September 19, 2006, Chevron submitted an application to the New Mexico Oil Conservation Division (NMOCD) for approval to drill and inject fluids into VGSAU Well #250. On October 23, 2006, NMOCD granted Chevron's-request to drill and inject fluids into VGSAU well #250. Subsequent to completion of drilling activities, records indicate a pit closure (C-144) form (Appendix A) was submitted to the NMOCD for review and approval in September 2007. Invoice documentation, provided by Controlled Recovery, Inc. (CRI), indicates 2000 cubic yards of pit materials were disposed at the facility in 2007. In 2010, Chevron was contacted by the NMOCD, District 1 Hobbs office to complete pit closure activities associated with the VGSAU Well #250 following a Site inspection. As a result, an environmental Site consultant (Tetra Tech) was contracted by Chevron CEMC to assess the soils in the pit prior to closure. In December 2010, Chevron Environmental Management Company (CEMC) assumed the responsibilities of

specific RRALs for benzene, BTEX, and TPH. The chloride concentrations were all below the reporting limit (<200 mg/kg).

In the meeting on January 11, 2011, the NMOCD requested CRA to collect another set of chloride samples in the same general vicinities to confirm concentrations were still below the clean-up goal for chlorides. On December 21, 2011, a total of five confirmation samples were collected from the floor of the excavation and were analyzed for benzene, toluene, ethylbenzene and xylenes (BTEX) by SW 8021B, total petroleum hydrocarbons diesel range/gasoline range (TPH- DRO/GRO) by SW8015M and chlorides by EPA 300.0. BTEX and TPH (DRO & GRO) concentrations for all five samples were all below the recommended remedial action levels (1993 RRALs) established for this Site in the Closure Request Workplan dated March 2011. Four of the five chloride results (VGSAU #250 NW-6", VGSAU Center-6", VGSAU #250 NE-6" and VGSAU #250 SE-6") were below the chloride RRAL (250 mg/kg) established for this Site; one sample (VGSAU #250 SW-6") had a chloride result (365 mg/kg) slightly above of RRAL. The NMOCD's revised guidance document for release reporting and corrective actions, dated September 30, 2011, presents a remediation action level of 1,000 mg/kg chlorides in soils where the vertical separation from groundwater is more than 100'. Sample locations for initial and supplemental confirmation soil samples collected are shown on Figure 3.

Although one chloride sample demonstrated a result slightly above the 1993 RRAL for chlorides the result is below the revised 2011 RRAL for chlorides. In addition, the source area (excavated soil material) has been removed and the single remaining chloride concentration does not pose an immediate threat to groundwater due to the vertical separation from base of excavation (approximately 4 feet below ground surface) to groundwater at the Site is more than 100' (Appendix B). Soil sample analytical results for initial and supplemental confirmation samples collected are summarized in Table II. Copies of initial and supplemental confirmation soil sampling laboratory results and chain-of-custody documentation are included in Appendix C.

PROTOCOLS AND PROCEDURES

On June 27, 2012, CRA and CEMC met with Geoffrey Leking, Environmental Engineer Specialist, of the NMOCD District 1 Hobbs office to discuss the protocols and procedures required for closure of the reserve pit. Meeting discussions included the following:

- A C-144 submitted to the NMOCD on September 11, 2007;
- Request by the NMOCD for Chevron to research and provide the following additional information: results of any sampling from the pit location in 2007; waste records from

when materials were allegedly hauled to the CRI facility in 2007; and any other data pertinent to the pit closure activities;

- The protocols of the previous three sampling events (two in 2010 and one in 2011) performed on the pit bottom and their analytical results;
- Proposed remediation activity not to include the removal of any additional material from the existing excavation;
- Procedures for backfilling and cover design specification which included installation of a 20 mil liner over the excavated area, backfilling with imported clean materials (caliche) from approximately 6 feet to 1 foot below grade, and 1-2 feet of topsoil cover;
- Procedures for a re-vegetation plan which included the "construction affected" areas of release site will be graded to match surface contours and seeded using mixtures utilized by local agencies such as the Bureau of Land Management (BLM), County Ag Agency and/or as directed by property owner;
- Submittal of a Final Report on NMOCD Form C-144 which documents site closure activities.

DISPOSAL FACILITY NAME AND PERMIT NUMBER

In order to provide additional information pertinent to pit closure activities, an extensive research was performed to provide waste records. Mr. David Duncan with Environmental Plus was contacted about this project. Mr. Duncan was very familiar with the project but was unable to produce any manifests/bill of ladings for the waste disposal. Controlled Recovery Inc. (CRI) waste disposal facility was used for disposal of this waste and was contacted. Mrs. Kim Flowers was able to provide an invoice (Appendix D) of the waste, but any remaining waste records are located within storage boxes and will take additional time to produce if available. Listed below is CRI's contact information and NMOCD Permit Number:

Controlled Recovery, Inc.
P.O. Box 388
Hobbs, NM 88241-0388
Voice: (575) 393-1079
Fax: (575) 393-3615
Permit No: R 9166

SOIL BACKFILL AND COVER DESIGN SPECIFICATIONS

The specifications for backfilling the excavation include installation of a 20 mil liner over the excavated area, importing clean materials (caliche) and backfilling from approximately 6 feet to 1 foot below grade, cover with 1-2 feet of topsoil.

RE-VEGETATION ACTIVITIES

Re-vegetation activities include "construction affected areas of release site" graded to match surface contour, seeding using mixtures utilized by local agencies such as the BLM, County Ag Agency, and/or as directed by property owner and fertilizing top soil cover area.

SITE RECLAMATION

On November 5, 2012, CRA sent an e-mail to Geoffrey Leking, Environmental Engineer Specialist, of the NMOCD District 1 Hobbs office requesting approval to backfill the Site. Attached to the e-mail was a copy of the invoice, provided by CRI, which documented the amount of excavated material hauled to the facility. On November 7, 2012, Geoffrey Leking gave approval to backfill the site via a reply e-mail.

On March 12, 2013, site reclamation of the VGSAU #250 pit location commenced with installation of a 20 mil liner over the floor of the existing excavation. Documentation photos of liner installation are included in Appendix E.

On March 13, 2013, backfilling activity began with caliche fill material imported from a borrow pit owned by the Pierce Ranch Trust. Backfilling and compaction activity continued until the crest of the caliche fill material was approximately 0.5 foot below ground surface. Approximately 1,998 cubic yards of fill material was imported into the Site. Documentation photos of backfilling and compaction activity are included in Appendix E. After backfilling was completed, the area was capped with approximately 342 cubic yards of top soil. The top soil was compacted leaving an approximate 0.5 foot lift above ground surface and then graded to match area ground contour. Final site reclamation activity included fertilizing the top soil cap with eighty pounds of NPK Triple 13 fertilizer and spreading eighty pounds of Bermuda/Rye/Fescue grass seed mixture. Documentation photos of top soil cap construction, fertilizing and seeding are included in Appendix E.

CONESTOGA-ROVERS & ASSOCIATES

May 14, 2013 Reference No. 073822

RECOMMENDATIONS

CRA recommends no further action be required for the Site and requests closure of the VGSAU #250 Pit. 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

John Fergerson
Senior 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 Vicinity Topo Map
Figure 2 - Site Location Aerial Image Map
Figure 3 - Site Map
Table I - Soil Analytical Summary
Table II - Soil Analytical Cumulative Summary
Appendix A - Initial Completed & Signed Form C-144
Appendix B - Petroleum Recovery Research Center Distance-to-Groundwater Radius Map
Appendix C - Analytical Laboratory Summary Reports
Appendix D - Controlled Recovery, Inc. (CRI) Copy of Invoice
Appendix E - Site Reclamation Photo documentation

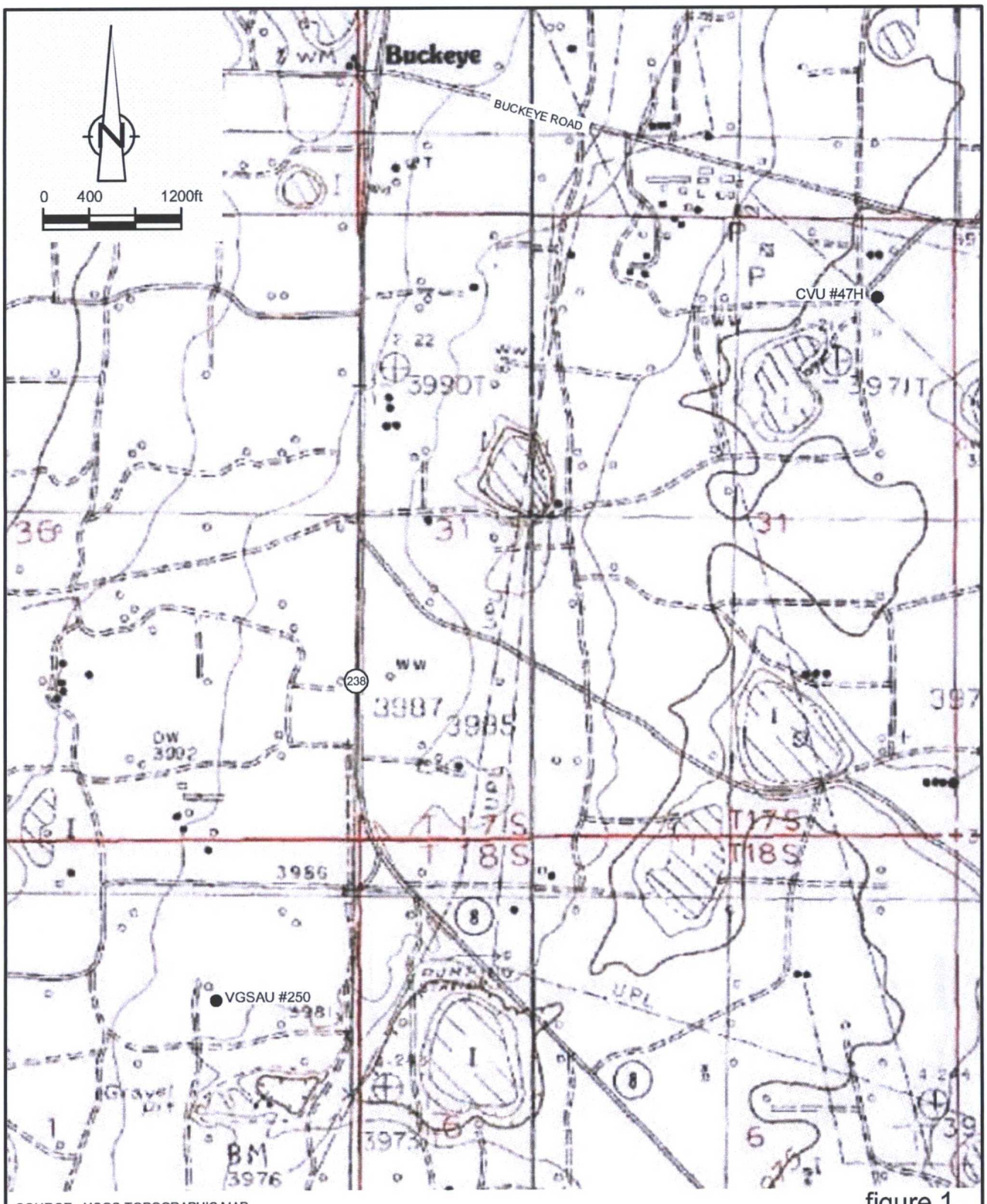
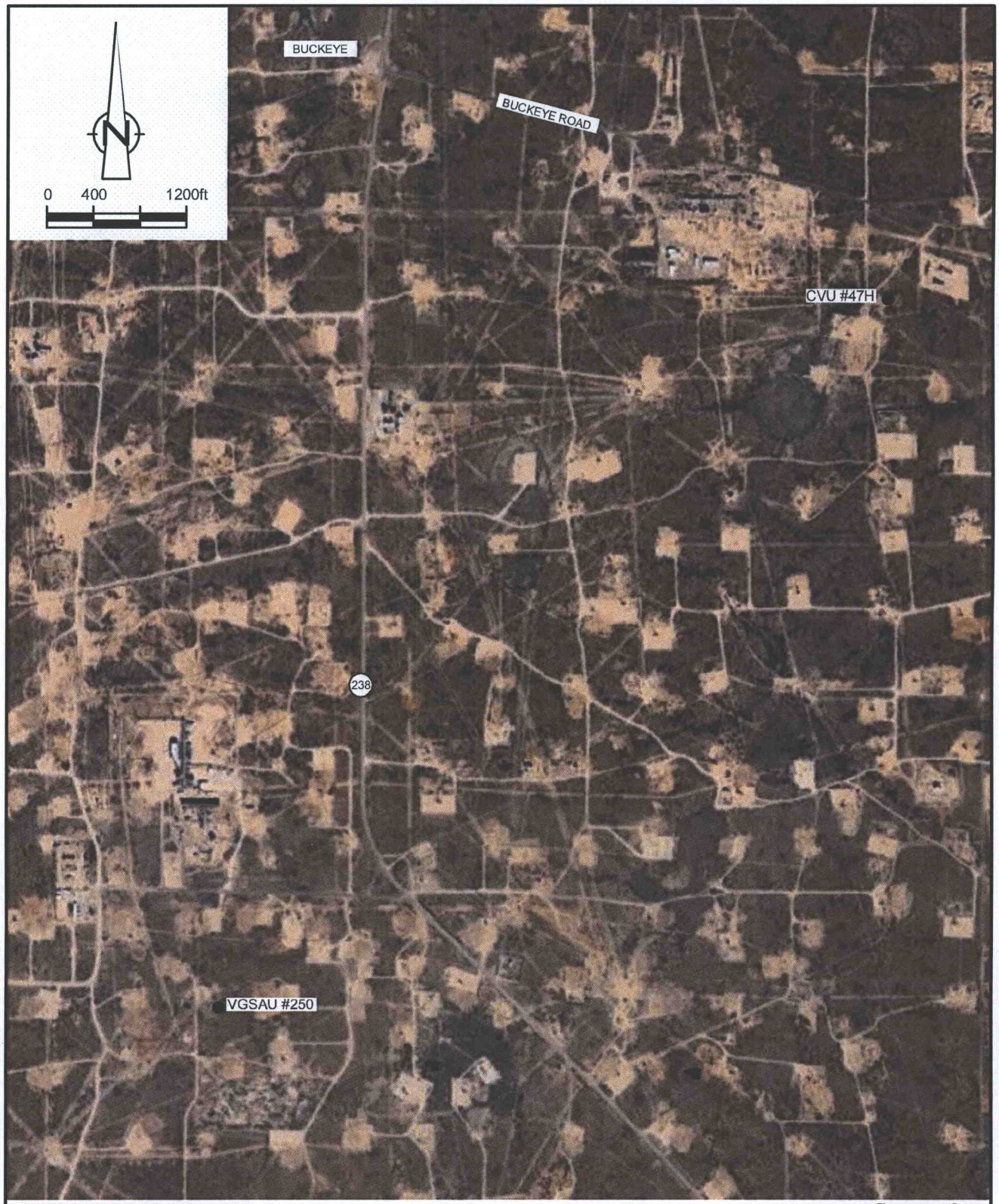


figure 1

SOURCE: USGS TOPOGRAPHIC MAP
BUCKEYE 7.5 MINUTE QUADRANGLE
VGSAU #250 32° 46' 49" N, 103° 30' 34" W

SITE VICINITY MAP
VACUUM GRAYBURG SAN ANDRES UNIT #250
LEA COUNTY, NEW MEXICO
Chevron Environmental Management Company

073822-98(CORR001)GN-MD001 JAN 26/2011



SOURCE: USGS TOPOGRAPHIC MAP
BUCKEYE 7.5 MINUTE QUADRANGLE
VGSAU #250 32° 46' 49" N, 103° 30' 34" W

figure 2

SITE LOCATION MAP
VACUUM GRAYBURG SAN ANDRES UNIT #250
LEA COUNTY, NEW MEXICO
Chevron Environmental Management Company

073822-98(CORR001)GN-MD001 JAN 26/2011

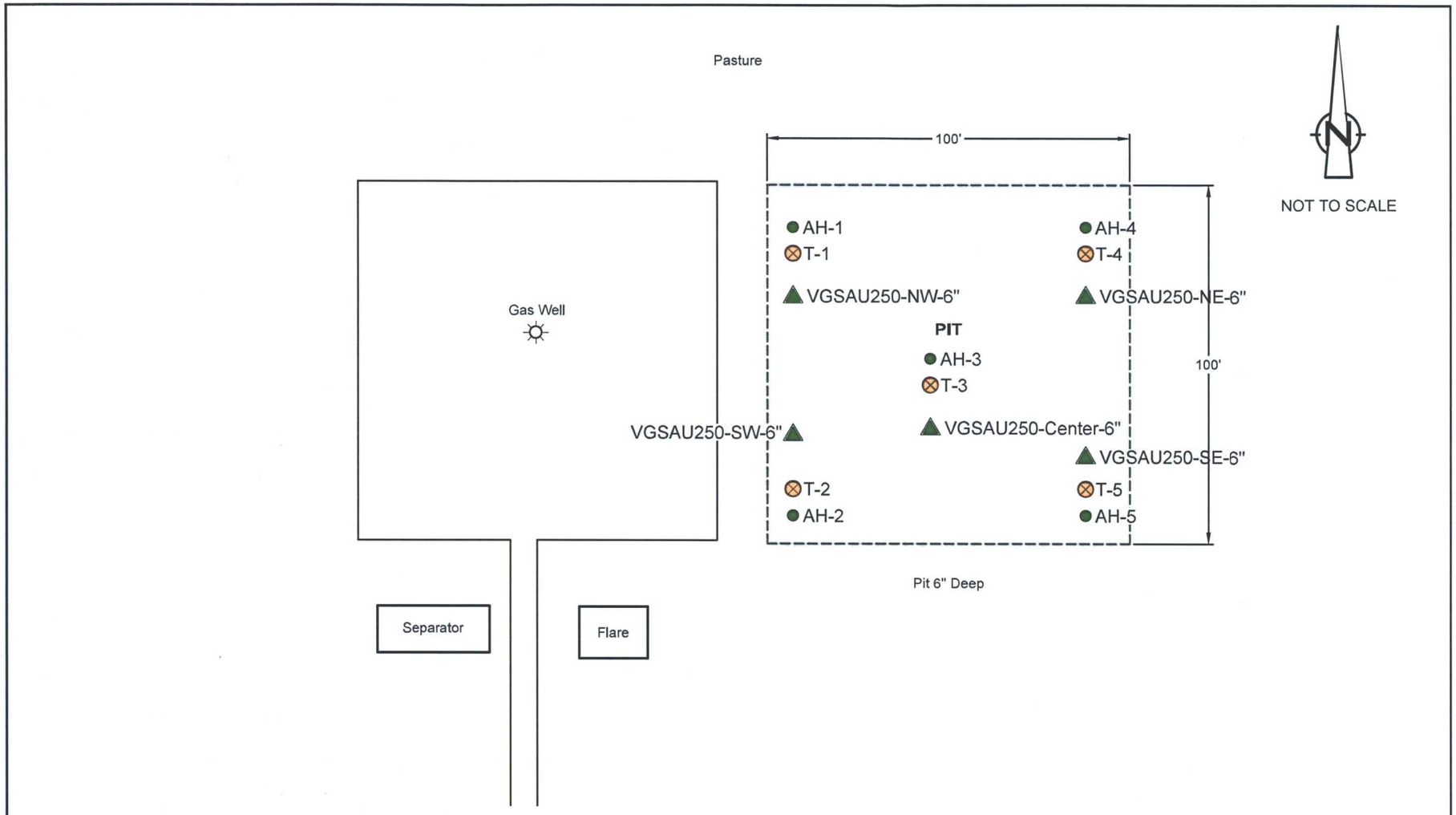


figure 3

SITE MAP
VACUUM GRAYBURG SAN ANDRES UNIT #250
LEA COUNTY, NEW MEXICO
Chevron Environmental Management Company

073822-01(000)GN-DL001 JAN 18/2012

TABLE I

SOIL ANALYTICAL SUMMARY
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
VACUUM GRAYBURG SAN ANDRES UNIT #250 (PIT)
LEA COUNTY, NEW MEXICO

Sample ID	Depth (feet)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH (8015B Modified)			Chlorides (mg/kg)
								DRO (mg/kg)	GRO (mg/kg)	(GRO/DRO (mg/kg)	
NMOCD Recommended Remediation Action Levels (Total Ranking Score = 20)											
			10 mg/kg	**--- mg/kg**	**--- mg/kg**	**--- mg/kg**	**50 mg/kg**	**--- mg/kg**	**--- mg/kg**	**100 mg/kg**	**--- mg/kg**
AH-1	0-1'	7/14/10	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00	<50.0	<200
T-1	1.5-2'	8/19/10	NA	NA	NA	NA	NA	NA	NA	NA	<200
AH-2	0-1'	7/14/10	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00	<50.0	<200
T-2	1.5-2'	8/19/10	NA	NA	NA	NA	NA	NA	NA	NA	<200
AH-3	0-1'	7/14/10	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00	<50.0	<200
T-3	1.5-2'	8/19/10	NA	NA	NA	NA	NA	NA	NA	NA	<200
AH-4	0-1'	7/14/10	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00	<50.0	<200
T-4	2-2.5'	8/19/10	NA	NA	NA	NA	NA	NA	NA	NA	<200
AH-5	0-1'	7/14/10	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00	<50.0	<200
T-5	1.5-2'	8/19/10	NA	NA	NA	NA	NA	NA	NA	NA	<200

Notes:

1. BTEX analyses by EPA Method 8021B.
2. TPH analyzed by EPA Method 8015B Mod.
3. Chlorides analyzed by SM 4500-Cl B
4. NA - Not Analyzed
5. Bold concentrations above lab reporting limits.
6. Highlighted cells indicated concentrations above regulatory limits

TABLE II

CUMULATIVE SOIL ANALYTICAL SUMMARY
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
VACUUM GRAYBURG SAN ANDRES UNIT #250 (PIT)
LEA COUNTY, NEW MEXICO

Sample ID	Depth (feet)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH (8015B Modified)			Chlorides (mg/kg)
								DRO (mg/kg)	GRO (mg/kg)	(GRO/DRO (mg/kg)	
1993 NMOCD Recommended Remediation Action Levels (Total Ranking Score = 20)											
			10 mg/kg	--- mg/kg	--- mg/kg	--- mg/kg	50 mg/kg	--- mg/kg	--- mg/kg	100 mg/kg	--- mg/kg
2011 NMOCD Recommended Remediation Action Levels (Vertical Separation From Groundwater more than 100')											
			0.2 mg/kg	--- mg/kg	--- mg/kg	--- mg/kg	50 mg/kg	--- mg/kg	--- mg/kg	500 mg/kg	1,000 mg/kg
AH-1	0-1'	7/14/10	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00	<50.0	<200
T-1	1.5-2'	8/19/10	NA	NA	NA	NA	NA	NA	NA	NA	<200
VGSAU 250 NW-6"	0.5'	12/21/11	<0.001	<0.001	<0.001	<0.003	<0.003	<1.7	<0.050	<1.7	**14**
AH-2	0-1'	7/14/10	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00	<50.0	<200
T-2	1.5-2'	8/19/10	NA	NA	NA	NA	NA	NA	NA	NA	<200
VGSAU 250 SW-6"	0.5'	12/21/11	<0.001	<0.001	<0.001	<0.003	<0.003	<1.7	<0.050	<1.7	**365**
AH-3	0-1'	7/14/10	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00	<50.0	<200
T-3	1.5-2'	8/19/10	NA	NA	NA	NA	NA	NA	NA	NA	<200
VGSAU 250 Center-6"	0.5'	12/21/11	<0.001	<0.001	<0.001	<0.003	<0.003	**12**	<050	**12**	**44.5**
AH-4	0-1'	7/14/10	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00	<50.0	<200
T-4	2-2.5'	8/19/10	NA	NA	NA	NA	NA	NA	NA	NA	<200
VGSAU 250 NE-6"	0.5'	12/21/11	<0.001	<0.001	<0.001	<0.003	<0.003	<1.7	<0.050	<1.7	**9.52**
AH-5	0-1'	7/14/10	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00	<50.0	<200
T-5	1.5-2'	8/19/10	NA	NA	NA	NA	NA	NA	NA	NA	<200
VGSAU 250 SE-6"	0.5'	12/21/11	<0.001	<0.001	<0.001	<0.003	<0.003	**5.3**	<0.050	**5.3**	**12.6**

Notes:

1. BTEX analyses by EPA Method 8021B
2. TPH analyzed by EPA Method 8015B Mod
3. Chlorides analyzed by SM 4500-Cl B and EPA 300.0
4. NA - Not Analyzed
5. Bold concentrations above lab reporting limits
6. Highlighted cells indicated concentrations above regulatory limits

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-144
June 1, 2004

For drilling and production facilities, submit to appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe office

Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☒
Type of action Registration of a pit or below-grade tank ☐ Closure of a pit or below-grade tank ☒

Operator CHEVRON USA Telephone 505-390-7225 e-mail address lduk@chevron.com
Address P O BOX 1949 2401 AVE O EUNICE, NM 88231
Facility or well name. VGSAU #250 API # 30-025-38001 U/L or Qtr/Qtr H Sec 01 T 18S R 34E
County LEA Latitude Longitude NAD 1927 ☐ 1983 ☐
Surface Owner Federal ☐ State ☒ Private ☐ Indian ☐

Pit	**Below-grade tank**	
Type Drilling ☒ Production ☐ Disposal ☐ Workover ☐ Emergency ☐ Lined ☒ Unlined ☐ Liner type Synthetic ☒ Thickness 20 mil Clay ☐ Pit Volume bbl	Volume bbl Type of fluid Construction material Double-walled, with leak detection? Yes ☐ If not, explain why not	
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water)	Less than 50 feet 50 feet or more, but less than 100 feet 100 feet or more	(20 points) (10 points) (0 points) X
Wellhead protection area (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources)	Yes No	(20 points) (0 points) X
Distance to surface water. (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses)	Less than 200 feet 200 feet or more, but less than 1000 feet 1000 feet or more	(20 points) (10 points) (0 points) X
	Ranking Score (Total Points)	0

If this is a pit closure: (1) Attach a diagram of the facility showing the pit's relationship to other equipment and tanks (2) Indicate disposal location (check the onsite box if your are burying in place) onsite ☐ offsite ☒ If offsite, name of facility CRI . (3) Attach a general description of remedial action taken including remediation start date and end date (4) Groundwater encountered No ☒ Yes ☐ If yes, show depth below ground surface ft and attach sample results
(5) Attach soil sample results and a diagram of sample locations and excavations

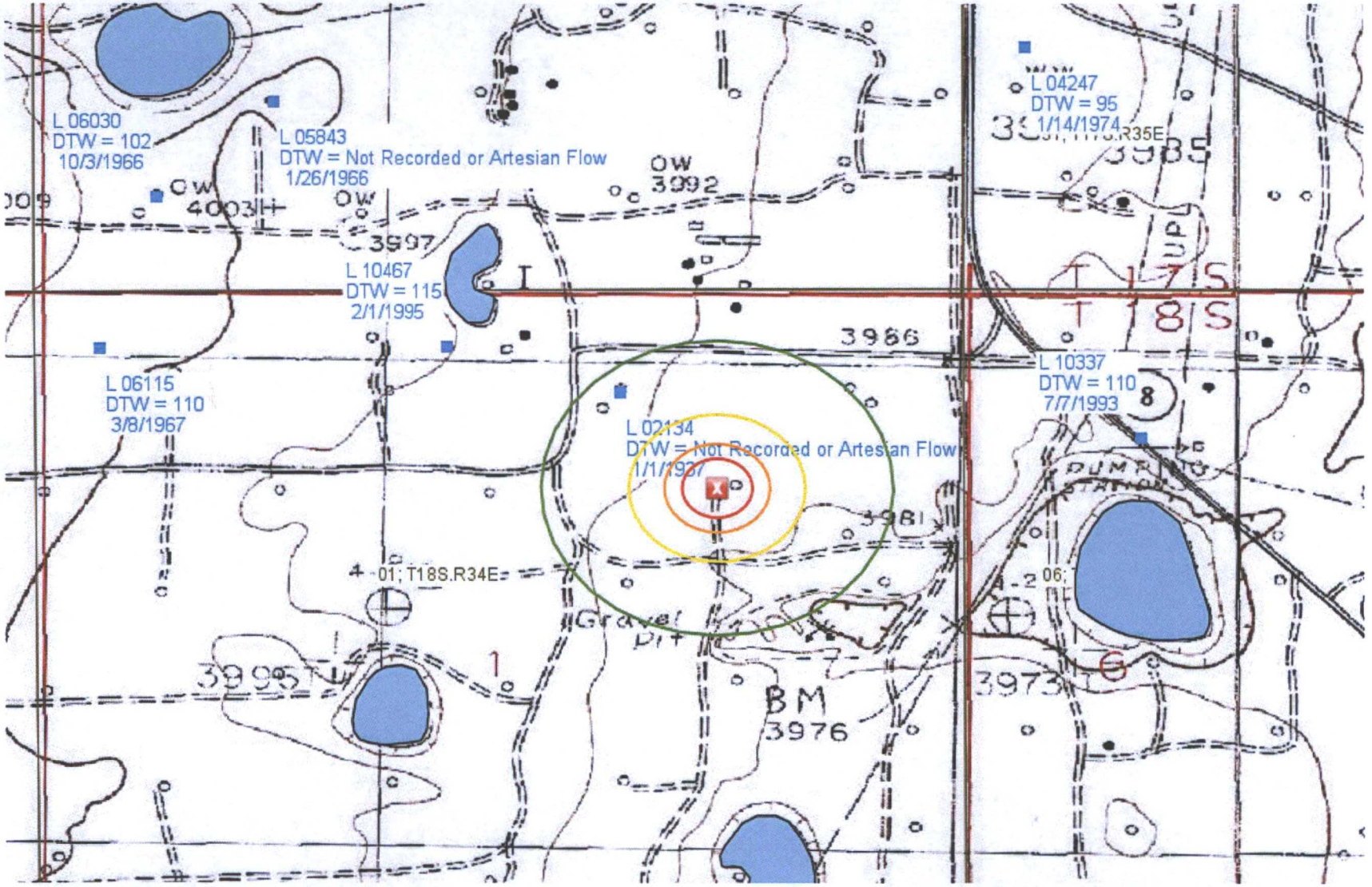
Additional Comments: HAUL TRACKHOE TO LOCATION, HAUL EXCESS WATER AND FLUIDS OFF, BEGIN MIXING CLEAN-UP TO SOLIDIFY FOR HAUL OFF TO CRI, TEST PIT AREA, ONCE TESTED AND PASSED, COVER AREA WITH TOPSOIL AND RETURN IT TO NATURAL GROUND

I hereby certify that the information above is true and complete to the best of my knowledge and belief **I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.**

Date 9/10/07
Printed Name/Title Jim Duke / Construction Rep Signature

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations

Approval
Printed Name/Title L JOHNSON - ENVIRO ENGR Signature Date 9-11-07



Petroleum Recovery Research Center	VGSAU #250 PIT	Figure: 1
		Jan 05, 2011

Summary Report

Ike Tavarez
Tetra Tech
1910 N. Big Spring Street
Midland, TX 79705

Report Date: July 21, 2010

Work Order: 10071924

Project Location: Lea County, NM
Project Name: Vacuum Grayburg San Andres Unit #250 (Pit)
Project Number: 114-6400600

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
238035	AH-1 0-1'	soil	2010-07-14	00:00	2010-07-19
238036	AH-2 0-1'	soil	2010-07-14	00:00	2010-07-19
238037	AH-3 0-1'	soil	2010-07-14	00:00	2010-07-19
238038	AH-4 0-1'	soil	2010-07-14	00:00	2010-07-19
238039	AH-5 0-1'	soil	2010-07-14	00:00	2010-07-19

	BTEX				TPH DRO - NEW	TPH GRO
Sample - Field Code	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
238035 - AH-1 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
238036 - AH-2 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
238037 - AH-3 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
238038 - AH-4 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
238039 - AH-5 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00

Sample: 238035 - AH-1 0-1'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 238036 - AH-2 0-1'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 238037 - AH-3 0-1'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 238038 - AH-4 0-1'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 238039 - AH-5 0-1'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
6015 Harris Parkway, Suite 110 Ft Worth, Texas 76132 817•201•5260
E-Mail: lab@traceanalysis.com

Certifications

WBENC: 237019 **HUB:** 1752439743100-86536 **DBE:** VN 20657
NCTRCA WFWB38444Y0909

NELAP Certifications

Lubbock: T104704219-08-TX LELAP-02003 Kansas E-10317 **El Paso:** T104704221-08-TX LELAP-02002 **Midland:** T104704392-08-TX

Analytical and Quality Control Report

Ike Tavarez
Tetra Tech
1910 N. Big Spring Street
Midland, TX, 79705

Report Date: July 21, 2010

Work Order: 10071924

Project Location: Lea County, NM
Project Name: Vacuum Grayburg San Andres Unit #250 (Pit)
Project Number: 114-6400600

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
238035	AH-1 0-1'	soil	2010-07-14	00:00	2010-07-19
238036	AH-2 0-1'	soil	2010-07-14	00:00	2010-07-19
238037	AH-3 0-1'	soil	2010-07-14	00:00	2010-07-19
238038	AH-4 0-1'	soil	2010-07-14	00:00	2010-07-19
238039	AH-5 0-1'	soil	2010-07-14	00:00	2010-07-19

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

TraceAnalysis, Inc.

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project Vacuum Grayburg San Andres Unit #250 (Pit) were received by TraceAnalysis, Inc. on 2010-07-19 and assigned to work order 10071924. Samples for work order 10071924 were received intact at a temperature of 3.3 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	61608	2010-07-19 at 16:00	71924	2010-07-20 at 11:02
BTEX	S 8021B	61608	2010-07-19 at 16:00	71949	2010-07-21 at 05:06
Chloride (Titration)	SM 4500-Cl B	61621	2010-07-20 at 08:52	71897	2010-07-20 at 11:57
TPH DRO - NEW	S 8015 D	61592	2010-07-19 at 14:30	71873	2010-07-19 at 14:30
TPH DRO - NEW	S 8015 D	61593	2010-07-19 at 14:30	71874	2010-07-19 at 14:30
TPH GRO	S 8015 D	61608	2010-07-19 at 16:00	71925	2010-07-20 at 11:29
TPH GRO	S 8015 D	61608	2010-07-19 at 16:00	71950	2010-07-21 at 05:34

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 10071924 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Sample: 238035 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	71924	Date Analyzed:	2010-07-20	Analyzed By:	AG
Prep Batch:	61608	Sample Preparation:	2010-07-19	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
Benzene		<0.0200		mg/Kg	1	0.0200
Toluene		<0.0200		mg/Kg	1	0.0200
Ethylbenzene		<0.0200		mg/Kg	1	0.0200
Xylene		<0.0200		mg/Kg	1	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.61	mg/Kg	1	2.00	80	52.8 - 137
4-Bromofluorobenzene (4-BFB)		1.61	mg/Kg	1	2.00	80	38.4 - 157

Sample: 238035 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	71897	Date Analyzed:	2010-07-20	Analyzed By:	AR
Prep Batch:	61621	Sample Preparation:	2010-07-20	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		<200		mg/Kg	50	4.00

Sample: 238035 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	71873	Date Analyzed:	2010-07-19	Analyzed By:	kg
Prep Batch:	61592	Sample Preparation:	2010-07-19	Prepared By:	kg

Parameter	Flag	Result	RL	Units	Dilution	RL
DRO		<50.0		mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		96.6	mg/Kg	1	100	97	70 - 130

Sample: 238035 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	71925	Date Analyzed:	2010-07-20	Analyzed By:	AG
Prep Batch:	61608	Sample Preparation:	2010-07-19	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.87	mg/Kg	1	2.00	94	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.77	mg/Kg	1	2.00	88	42 - 159

Sample: 238036 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	71924	Date Analyzed:	2010-07-20	Analyzed By:	AG
Prep Batch:	61608	Sample Preparation:	2010-07-19	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0200	mg/Kg	1	0.0200
Toluene		<0.0200	mg/Kg	1	0.0200
Ethylbenzene		<0.0200	mg/Kg	1	0.0200
Xylene		<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.40	mg/Kg	1	2.00	70	52.8 - 137
4-Bromofluorobenzene (4-BFB)		1.40	mg/Kg	1	2.00	70	38.4 - 157

Sample: 238036 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	71897	Date Analyzed:	2010-07-20	Analyzed By:	AR
Prep Batch:	61621	Sample Preparation:	2010-07-20	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 238036 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	71873	Date Analyzed:	2010-07-19	Analyzed By:	kg
Prep Batch:	61592	Sample Preparation:	2010-07-19	Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		103	mg/Kg	1	100	103	70 - 130

Sample: 238036 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	71925	Date Analyzed:	2010-07-20	Analyzed By:	AG
Prep Batch:	61608	Sample Preparation:	2010-07-19	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.65	mg/Kg	1	2.00	82	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.55	mg/Kg	1	2.00	78	42 - 159

Sample: 238037 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	71924	Date Analyzed:	2010-07-20	Analyzed By:	AG
Prep Batch:	61608	Sample Preparation:	2010-07-19	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
Benzene		<0.0200		mg/Kg	1	0.0200
Toluene		<0.0200		mg/Kg	1	0.0200
Ethylbenzene		<0.0200		mg/Kg	1	0.0200
Xylene		<0.0200		mg/Kg	1	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.62	mg/Kg	1	2.00	81	52.8 - 137
4-Bromofluorobenzene (4-BFB)		1.64	mg/Kg	1	2.00	82	38.4 - 157

Sample: 238037 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	71897	Date Analyzed:	2010-07-20	Analyzed By:	AR
Prep Batch:	61621	Sample Preparation:	2010-07-20	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		<200		mg/Kg	50	4.00

Sample: 238037 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	71873	Date Analyzed:	2010-07-19	Analyzed By:	kg
Prep Batch:	61592	Sample Preparation:	2010-07-19	Prepared By:	kg

Parameter	Flag	Result	RL	Units	Dilution	RL
DRO		<50.0		mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		100	mg/Kg	1	100	100	70 - 130

Sample: 238037 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	71925	Date Analyzed:	2010-07-20	Analyzed By:	AG
Prep Batch:	61608	Sample Preparation:	2010-07-19	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
GRO		<2.00		mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.90	mg/Kg	1	2.00	95	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.80	mg/Kg	1	2.00	90	42 - 159

Sample: 238038 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	71949	Date Analyzed:	2010-07-21	Analyzed By:	AG
Prep Batch:	61608	Sample Preparation:	2010-07-19	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
Benzene		<0.0200		mg/Kg	1	0.0200
Toluene		<0.0200		mg/Kg	1	0.0200
Ethylbenzene		<0.0200		mg/Kg	1	0.0200
Xylene		<0.0200		mg/Kg	1	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.10	mg/Kg	1	2.00	55	52.8 - 137
4-Bromofluorobenzene (4-BFB)		1.11	mg/Kg	1	2.00	56	38.4 - 157

Sample: 238038 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	71897	Date Analyzed:	2010-07-20	Analyzed By:	AR
Prep Batch:	61621	Sample Preparation:	2010-07-20	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		<200		mg/Kg	50	4.00

Sample: 238038 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	71874	Date Analyzed:	2010-07-19	Analyzed By:	kg
Prep Batch:	61593	Sample Preparation:	2010-07-19	Prepared By:	kg

Parameter	Flag	Result	RL	Units	Dilution	RL
DRO		<50.0		mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		94.2	mg/Kg	1	100	94	70 - 130

Sample: 238038 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	71950	Date Analyzed:	2010-07-21	Analyzed By:	AG
Prep Batch:	61608	Sample Preparation:	2010-07-19	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
GRO		<2.00		mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.29	mg/Kg	1	2.00	64	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.23	mg/Kg	1	2.00	62	42 - 159

Sample: 238039 - AH-5 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	71949	Date Analyzed:	2010-07-21	Analyzed By:	AG
Prep Batch:	61608	Sample Preparation:	2010-07-19	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
Benzene		<0.0200		mg/Kg	1	0.0200
Toluene		<0.0200		mg/Kg	1	0.0200
Ethylbenzene		<0.0200		mg/Kg	1	0.0200
Xylene		<0.0200		mg/Kg	1	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.75	mg/Kg	1	2.00	88	52.8 - 137
4-Bromofluorobenzene (4-BFB)		1.75	mg/Kg	1	2.00	88	38.4 - 157

Sample: 238039 - AH-5 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	71897	Date Analyzed:	2010-07-20	Analyzed By:	AR
Prep Batch:	61621	Sample Preparation:	2010-07-20	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 238039 - AH-5 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	71874	Date Analyzed:	2010-07-19	Analyzed By:	kg
Prep Batch:	61593	Sample Preparation:	2010-07-19	Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		96.6	mg/Kg	1	100	97	70 - 130

Sample: 238039 - AH-5 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	71950	Date Analyzed:	2010-07-21	Analyzed By:	AG
Prep Batch:	61608	Sample Preparation:	2010-07-19	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.06	mg/Kg	1	2.00	103	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.93	mg/Kg	1	2.00	96	42 - 159

Method Blank (1) QC Batch: 71873

QC Batch: 71873 Date Analyzed: 2010-07-19 Analyzed By: kg
Prep Batch: 61592 QC Preparation: 2010-07-19 Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<14.5	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		103	mg/Kg	1	100	103	70 - 130

Method Blank (1) QC Batch: 71874

QC Batch: 71874 Date Analyzed: 2010-07-19 Analyzed By: kg
Prep Batch: 61593 QC Preparation: 2010-07-19 Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<14.5	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		87.4	mg/Kg	1	100	87	70 - 130

Method Blank (1) QC Batch: 71897

QC Batch: 71897 Date Analyzed: 2010-07-20 Analyzed By: AR
Prep Batch: 61621 QC Preparation: 2010-07-20 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

Method Blank (1) QC Batch: 71924

QC Batch: 71924 | Date Analyzed: 2010-07-20 | Analyzed By: AG
Prep Batch: 61608 | QC Preparation: 2010-07-19 | Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.0150	mg/Kg	0.02
Toluene		<0.00950	mg/Kg	0.02
Ethylbenzene		<0.0106	mg/Kg	0.02
Xylene		<0.00930	mg/Kg	0.02

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.19	mg/Kg	1	2.00	110	66.6 - 122
4-Bromofluorobenzene (4-BFB)		2.18	mg/Kg	1	2.00	109	55.4 - 132

Method Blank (1) QC Batch: 71925

QC Batch: 71925 | Date Analyzed: 2010-07-20 | Analyzed By: AG
Prep Batch: 61608 | QC Preparation: 2010-07-19 | Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		<1.65	mg/Kg	2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.63	mg/Kg	1	2.00	132	67.6 - 150
4-Bromofluorobenzene (4-BFB)		2.41	mg/Kg	1	2.00	120	52.4 - 130

Method Blank (1) QC Batch: 71949

QC Batch: 71949 | Date Analyzed: 2010-07-21 | Analyzed By: AG
Prep Batch: 61608 | QC Preparation: 2010-07-19 | Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.0150	mg/Kg	0.02
Toluene		<0.00950	mg/Kg	0.02
Ethylbenzene		<0.0106	mg/Kg	0.02
Xylene		<0.00930	mg/Kg	0.02

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.01	mg/Kg	1	2.00	100	66.6 - 122
4-Bromofluorobenzene (4-BFB)		1.93	mg/Kg	1	2.00	96	55.4 - 132

Method Blank (1) QC Batch: 71950

QC Batch: 71950 Date Analyzed: 2010-07-21 Analyzed By: AG
Prep Batch: 61608 QC Preparation: 2010-07-19 Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		<1.65	mg/Kg	2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.44	mg/Kg	1	2.00	122	67.6 - 150
4-Bromofluorobenzene (4-BFB)		2.16	mg/Kg	1	2.00	108	52.4 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 71873 Date Analyzed: 2010-07-19 Analyzed By: kg
Prep Batch: 61592 QC Preparation: 2010-07-19 Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	256	mg/Kg	1	250	<14.5	102	57.4 - 133.4

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	251	mg/Kg	1	250	<14.5	100	57.4 - 133.4	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	111	114	mg/Kg	1	100	111	114	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 71874 Date Analyzed: 2010-07-19 Analyzed By: kg
Prep Batch: 61593 QC Preparation: 2010-07-19 Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	239	mg/Kg	1	250	<14.5	96	57.4 - 133.4

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	248	mg/Kg	1	250	<14.5	99	57.4 - 133.4	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	102	106	mg/Kg	1	100	102	106	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 71897 | Date Analyzed: 2010-07-20 | Analyzed By: AR
Prep Batch: 61621 | QC Preparation: 2010-07-20 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.5	mg/Kg	1	100	<2.18	98	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	101	mg/Kg	1	100	<2.18	101	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 71924 | Date Analyzed: 2010-07-20 | Analyzed By: AG
Prep Batch: 61608 | QC Preparation: 2010-07-19 | Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.99	mg/Kg	1	2.00	<0.0150	100	81.9 - 108
Toluene	2.02	mg/Kg	1	2.00	<0.00950	101	81.9 - 107
Ethylbenzene	2.00	mg/Kg	1	2.00	<0.0106	100	78.4 - 107
Xylene	6.06	mg/Kg	1	6.00	<0.00930	101	79.1 - 107

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

continued ...

control spikes continued ...

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	2.03	mg/Kg	1	2.00	<0.0150	102	81.9 - 108	2	20
Toluene	2.07	mg/Kg	1	2.00	<0.00950	104	81.9 - 107	2	20
Ethylbenzene	2.04	mg/Kg	1	2.00	<0.0106	102	78.4 - 107	2	20
Xylene	6.21	mg/Kg	1	6.00	<0.00930	104	79.1 - 107	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.09	2.04	mg/Kg	1	2.00	104	102	70.2 - 114
4-Bromofluorobenzene (4-BFB)	2.15	2.09	mg/Kg	1	2.00	108	104	69.8 - 121

Laboratory Control Spike (LCS-1)

QC Batch: 71925 | Date Analyzed: 2010-07-20 | Analyzed By: AG
Prep Batch: 61608 | QC Preparation: 2010-07-19 | Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	15.7	mg/Kg	1	20.0	<1.65	78	69.9 - 95.4

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	16.6	mg/Kg	1	20.0	<1.65	83	69.9 - 95.4	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.68	2.68	mg/Kg	1	2.00	134	134	61.9 - 142
4-Bromofluorobenzene (4-BFB)	2.53	2.55	mg/Kg	1	2.00	126	128	68.2 - 132

Laboratory Control Spike (LCS-1)

QC Batch: 71949 | Date Analyzed: 2010-07-21 | Analyzed By: AG
Prep Batch: 61608 | QC Preparation: 2010-07-19 | Prepared By: AG

continued ...

control spikes continued ...

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.02	mg/Kg	1	2.00	<0.0150	101	81.9 - 108
Toluene	2.04	mg/Kg	1	2.00	<0.00950	102	81.9 - 107
Ethylbenzene	2.00	mg/Kg	1	2.00	<0.0106	100	78.4 - 107
Xylene	6.08	mg/Kg	1	6.00	<0.00930	101	79.1 - 107

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	1.95	mg/Kg	1	2.00	<0.0150	98	81.9 - 108	4	20
Toluene	1.96	mg/Kg	1	2.00	<0.00950	98	81.9 - 107	4	20
Ethylbenzene	1.93	mg/Kg	1	2.00	<0.0106	96	78.4 - 107	4	20
Xylene	5.87	mg/Kg	1	6.00	<0.00930	98	79.1 - 107	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.92	1.96	mg/Kg	1	2.00	96	98	70.2 - 114
4-Bromofluorobenzene (4-BFB)	1.96	2.01	mg/Kg	1	2.00	98	100	69.8 - 121

Laboratory Control Spike (LCS-1)

QC Batch: 71950 | Date Analyzed: 2010-07-21 | Analyzed By: AG
Prep Batch: 61608 | QC Preparation: 2010-07-19 | Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	14.2	mg/Kg	1	20.0	<1.65	71	69.9 - 95.4

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	14.6	mg/Kg	1	20.0	<1.65	73	69.9 - 95.4	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.24	2.30	mg/Kg	1	2.00	112	115	61.9 - 142
4-Bromofluorobenzene (4-BFB)	2.08	2.16	mg/Kg	1	2.00	104	108	68.2 - 132

Matrix Spike (MS-1) Spiked Sample: 238025

QC Batch: 71873 | Date Analyzed: 2010-07-19 | Analyzed By: kg
Prep Batch: 61592 | QC Preparation: 2010-07-19 | Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	241	mg/Kg	1	250	<14.5	96	35.2 - 167.1

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	242	mg/Kg	1	250	<14.5	97	35.2 - 167.1	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	101	106	mg/Kg	1	100	101	106	70 - 130

Matrix Spike (MS-1) Spiked Sample: 238039

QC Batch: 71874 | Date Analyzed: 2010-07-19 | Analyzed By: kg
Prep Batch: 61593 | QC Preparation: 2010-07-19 | Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	235	mg/Kg	1	250	<14.5	94	35.2 - 167.1

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	225	mg/Kg	1	250	<14.5	90	35.2 - 167.1	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	102	97.3	mg/Kg	1	100	102	97	70 - 130

Matrix Spike (MS-1) Spiked Sample: 238039

QC Batch: 71897 | Date Analyzed: 2010-07-20 | Analyzed By: AR
Prep Batch: 61621 | QC Preparation: 2010-07-20 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10000	mg/Kg	100	10000	<218	100	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10200	mg/Kg	100	10000	<218	102	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 238026

QC Batch: 71924 | Date Analyzed: 2010-07-20 | Analyzed By: AG
Prep Batch: 61608 | QC Preparation: 2010-07-19 | Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.94	mg/Kg	1	2.00	<0.0150	97	80.5 - 112
Toluene	2.01	mg/Kg	1	2.00	<0.00950	100	82.4 - 113
Ethylbenzene	2.06	mg/Kg	1	2.00	<0.0106	103	83.9 - 114
Xylene	6.25	mg/Kg	1	6.00	<0.00930	104	84 - 114

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param		MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	[1]	2.31	mg/Kg	1	2.00	<0.0150	116	80.5 - 112	17	20
Toluene	[2]	2.37	mg/Kg	1	2.00	<0.00950	118	82.4 - 113	16	20
Ethylbenzene	[3]	2.45	mg/Kg	1	2.00	<0.0106	122	83.9 - 114	17	20
Xylene	[4]	7.38	mg/Kg	1	6.00	<0.00930	123	84 - 114	17	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.61	1.74	mg/Kg	1	2	80	87	41.3 - 117
4-Bromofluorobenzene (4-BFB)	1.67	1.82	mg/Kg	1	2	84	91	35.5 - 129

Matrix Spike (MS-1) Spiked Sample: 238037

QC Batch: 71925 | Date Analyzed: 2010-07-20 | Analyzed By: AG
Prep Batch: 61608 | QC Preparation: 2010-07-19 | Prepared By: AG

[1]MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.
[2]MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.
[3]MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.
[4]MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	15.2	mg/Kg	1	20.0	<1.65	76	61.8 - 114

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	16.2	mg/Kg	1	20.0	<1.65	81	61.8 - 114	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.55	2.31	mg/Kg	1	2	78	116	50 - 162
4-Bromofluorobenzene (4-BFB)	1.58	2.30	mg/Kg	1	2	79	115	50 - 162

Matrix Spike (MS-1) Spiked Sample: 238038

QC Batch: 71949 | Date Analyzed: 2010-07-21 | Analyzed By: AG
Prep Batch: 61608 | QC Preparation: 2010-07-19 | Prepared By: AG

Param		MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		2.16	mg/Kg	1	2.00	<0.0150	108	80.5 - 112
Toluene		2.23	mg/Kg	1	2.00	<0.00950	112	82.4 - 113
Ethylbenzene		2.28	mg/Kg	1	2.00	<0.0106	114	83.9 - 114
Xylene	[5]	6.91	mg/Kg	1	6.00	<0.00930	115	84 - 114

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param		MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		2.21	mg/Kg	1	2.00	<0.0150	110	80.5 - 112	2	20
Toluene	[6]	2.28	mg/Kg	1	2.00	<0.00950	114	82.4 - 113	2	20
Ethylbenzene	[7]	2.32	mg/Kg	1	2.00	<0.0106	116	83.9 - 114	2	20
Xylene	[8]	7.03	mg/Kg	1	6.00	<0.00930	117	84 - 114	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.70	1.17	mg/Kg	1	2	85	58	41.3 - 117
4-Bromofluorobenzene (4-BFB)	1.73	1.19	mg/Kg	1	2	86	60	35.5 - 129

[5]Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.
[6]MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.
[7]MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.
[8]MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

Matrix Spike (MS-1) Spiked Sample: 238039

QC Batch: 71950 | Date Analyzed: 2010-07-21 | Analyzed By: AG
Prep Batch: 61608 | QC Preparation: 2010-07-19 | Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	14.7	mg/Kg	1	20.0	<1.65	74	61.8 - 114

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	15.4	mg/Kg	1	20.0	<1.65	77	61.8 - 114	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.12	2.32	mg/Kg	1	2	106	116	50 - 162
4-Bromofluorobenzene (4-BFB)	2.12	2.32	mg/Kg	1	2	106	116	50 - 162

Standard (CCV-3)

QC Batch: 71873 | Date Analyzed: 2010-07-19 | Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	265	106	80 - 120	2010-07-19

Standard (CCV-4)

QC Batch: 71873 | Date Analyzed: 2010-07-19 | Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	244	98	80 - 120	2010-07-19

Standard (CCV-1)

QC Batch: 71874 | Date Analyzed: 2010-07-19 | Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	246	98	80 - 120	2010-07-19

Standard (CCV-2)

QC Batch: 71874 Date Analyzed: 2010-07-19 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	255	102	80 - 120	2010-07-19

Standard (ICV-1)

QC Batch: 71897 Date Analyzed: 2010-07-20 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	102	102	85 - 115	2010-07-20

Standard (CCV-1)

QC Batch: 71897 Date Analyzed: 2010-07-20 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	98.3	98	85 - 115	2010-07-20

Standard (CCV-2)

QC Batch: 71924 Date Analyzed: 2010-07-20 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0995	100	80 - 120	2010-07-20
Toluene		mg/Kg	0.100	0.101	101	80 - 120	2010-07-20
Ethylbenzene		mg/Kg	0.100	0.0996	100	80 - 120	2010-07-20
Xylene		mg/Kg	0.300	0.302	101	80 - 120	2010-07-20

Standard (CCV-3)

QC Batch: 71924 Date Analyzed: 2010-07-20 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0972	97	80 - 120	2010-07-20
Toluene		mg/Kg	0.100	0.0979	98	80 - 120	2010-07-20
Ethylbenzene		mg/Kg	0.100	0.0954	95	80 - 120	2010-07-20
Xylene		mg/Kg	0.300	0.290	97	80 - 120	2010-07-20

Standard (CCV-2)

QC Batch: 71925 Date Analyzed: 2010-07-20 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.992	99	80 - 120	2010-07-20

Standard (CCV-3)

QC Batch: 71925 Date Analyzed: 2010-07-20 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.978	98	80 - 120	2010-07-20

Standard (CCV-1)

QC Batch: 71949 Date Analyzed: 2010-07-21 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0972	97	80 - 120	2010-07-21
Toluene		mg/Kg	0.100	0.0984	98	80 - 120	2010-07-21
Ethylbenzene		mg/Kg	0.100	0.0957	96	80 - 120	2010-07-21
Xylene		mg/Kg	0.300	0.291	97	80 - 120	2010-07-21

Standard (CCV-2)

QC Batch: 71949 Date Analyzed: 2010-07-21 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0979	98	80 - 120	2010-07-21
Toluene		mg/Kg	0.100	0.0989	99	80 - 120	2010-07-21
Ethylbenzene		mg/Kg	0.100	0.0964	96	80 - 120	2010-07-21
Xylene		mg/Kg	0.300	0.293	98	80 - 120	2010-07-21

Standard (CCV-1)

QC Batch: 71950 Date Analyzed: 2010-07-21 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.956	96	80 - 120	2010-07-21

Standard (CCV-2)

QC Batch: 71950 Date Analyzed: 2010-07-21 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.957	96	80 - 120	2010-07-21

Order #: 10071924

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 1

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: Chevron

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-G400600

PROJECT NAME: Vacuum Grayburg San Andres Unit #250 (Pit) Lea Co NM

LAB I.D. NUMBER	DATE 2010	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH TX1005 (Ext. to C35) / TPH 8015 MOD	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
288035	7/14		S		X	AH-1 0-1'	1				X		X	X											X				
036						AH-2 0-1'	1				X		X	X											X				
037						AH-3 0-1'	1				X		X	X											X				
038						AH-4 0-1'	1				X		X	X											X				
039						AH-5 0-1'	1				X		X	X											X				

RELINQUISHED BY: (Signature)	Date: 7/14/10 Time: 2:05	RECEIVED BY: (Signature)	Date: 7/14/10 Time: 14:05
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:

SAMPLED BY: (Print & Initial) TF JS — Date: 7-14-10 Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: OTHER:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes / No

RECEIVING LABORATORY: Trace

ADDRESS:

CITY: Midland STATE: Tx ZIP:

CONTACT: PHONE: RECEIVED BY: (Signature) DATE: TIME:

SAMPLE CONDITION WHEN RECEIVED: 3.3°c intact

REMARKS: All tests Midland

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

Summary Report

Ike Tavarez
Tetra Tech
1910 N. Big Spring Street
Midland, TX 79705

Report Date: August 30, 2010

Work Order: 10082304

Project Location: Lea County, NM
Project Name: Chevron/Vacuum Grayburg San Andres Unit #250 (Pit)
Project Number: 114-6400600

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
242080	T-1 1.5-2'	soil	2010-08-19	00:00	2010-08-20
242081	T-2 1.5-2'	soil	2010-08-19	00:00	2010-08-20
242082	T-3 1.5-2'	soil	2010-08-19	00:00	2010-08-20
242083	T-4 2-2.5'	soil	2010-08-19	00:00	2010-08-20
242084	T-5 1.5-2'	soil	2010-08-19	00:00	2010-08-20

Sample: 242080 - T-1 1.5-2'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 242081 - T-2 1.5-2'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 242082 - T-3 1.5-2'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 242083 - T-4 2-2.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 242084 - T-5 1.5-2'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 | Lubbock, Texas 79424 | 800•378•1296 | 806•794•1296 | FAX 806•794•1298
200 East Sunset Road, Suite E | El Paso, Texas 79922 | 888•588•3443 | 915•585•3443 | FAX 915•585•4944
5002 Basin Street, Suite A1 | Midland Texas 79703 | | 432•689•6301 | FAX 432•689•6313
6015 Harris Parkway, Suite 110 | Ft. Worth, Texas 76132 | | 817•201•5260 |
E-Mail: lab@traceanalysis.com

Certifications

WBENC: 237019 **HUB:** 1752439743100-86536 **DBE:** VN 20657
NCTRCA WFWB38444Y0909

NELAP Certifications

Lubbock: T104704219-08-TX LELAP-02003 Kansas E-10317 **El Paso:** T104704221-08-TX LELAP-02002 **Midland:** T104704392-08-TX

Analytical and Quality Control Report

Ike Tavarez
Tetra Tech
1910 N. Big Spring Street
Midland, TX, 79705

Report Date: August 30, 2010

Work Order: 10082304

Project Location: Lea County, NM
Project Name: Chevron/Vacuum Grayburg San Andres Unit #250 (Pit)
Project Number: 114-6400600

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
242080	T-1 1.5-2'	soil	2010-08-19	00:00	2010-08-20
242081	T-2 1.5-2'	soil	2010-08-19	00:00	2010-08-20
242082	T-3 1.5-2'	soil	2010-08-19	00:00	2010-08-20
242083	T-4 2-2.5'	soil	2010-08-19	00:00	2010-08-20
242084	T-5 1.5-2'	soil	2010-08-19	00:00	2010-08-20

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

TraceAnalysis, Inc.

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project Chevron/Vacuum Grayburg San Andres Unit #250 (Pit) were received by TraceAnalysis, Inc. on 2010-08-20 and assigned to work order 10082304. Samples for work order 10082304 were received intact at a temperature of 4.0 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Chloride (Titration)	SM 4500-Cl B	62585	2010-08-26 at 09:38	73008	2010-08-27 at 15:06

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 10082304 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Sample: 242080 - T-1 1.5-2'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73008	Date Analyzed:	2010-08-27	Analyzed By:	AR
Prep Batch:	62585	Sample Preparation:	2010-08-26	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 242081 - T-2 1.5-2'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73008	Date Analyzed:	2010-08-27	Analyzed By:	AR
Prep Batch:	62585	Sample Preparation:	2010-08-26	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 242082 - T-3 1.5-2'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73008	Date Analyzed:	2010-08-27	Analyzed By:	AR
Prep Batch:	62585	Sample Preparation:	2010-08-26	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 242083 - T-4 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73008	Date Analyzed:	2010-08-27	Analyzed By:	AR
Prep Batch:	62585	Sample Preparation:	2010-08-26	Prepared By:	AR

continued ...

sample 242083 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 242084 - T-5 1.5-2'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73008	Date Analyzed:	2010-08-27	Analyzed By:	AR
Prep Batch:	62585	Sample Preparation:	2010-08-26	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Method Blank (1) QC Batch: 73008

QC Batch:	73008	Date Analyzed:	2010-08-27	Analyzed By:	AR
Prep Batch:	62585	QC Preparation:	2010-08-26	Prepared By:	AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

Laboratory Control Spike (LCS-1)

QC Batch:	73008	Date Analyzed:	2010-08-27	Analyzed By:	AR
Prep Batch:	62585	QC Preparation:	2010-08-26	Prepared By:	AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.7	mg/Kg	1	100	<2.18	99	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	102	mg/Kg	1	100	<2.18	102	85 - 115	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 242084

QC Batch: 73008 | Date Analyzed: 2010-08-27 | Analyzed By: AR
Prep Batch: 62585 | QC Preparation: 2010-08-26 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	9840	mg/Kg	100	10000	<218	97	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10200	mg/Kg	100	10000	<218	100	85 - 115	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Standard (ICV-1)

QC Batch: 73008 | Date Analyzed: 2010-08-27 | Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-08-27

Standard (CCV-1)

QC Batch: 73008 | Date Analyzed: 2010-08-27 | Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.4	99	85 - 115	2010-08-27

WO#: 10082504

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 1

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: Chevron

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6400600

PROJECT NAME: Chevron / Vacuum Grayburg San Andres Unit #250 La Co, NM

LAB I.D. NUMBER	DATE 2010	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
242080	8/19		S		X	T-1 1.5'-2'	1				X													X				
081						T-2 1.5'-2'																							
082						T-3 1.5'-2'																							
083						T-4 2'-2.5'																							
084	▼		▼		▼	T-5 1.5'-2'	▼				▼													▼				

RELINQUISHED BY: (Signature)	Date: 8/20/10 Time: 1545	RECEIVED BY: (Signature)	Date: 8/20/10 Time: 15:45
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:

SAMPLED BY: (Print & Initial) JJ — Date: 8/19 Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: — OTHER:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: PHONE: RECEIVED BY: (Signature)
DATE: TIME:

SAMPLE CONDITION WHEN RECEIVED: 4.0°c intact

REMARKS: all tests - Midland

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

ALS Environmental

10-Jan-2012

James Ornelas
Conestoga-Rovers & Associates
2135 S Loop 250 West
Midland, TX 79703

Tel: (412) 686-0086
Fax: (432) 686-0186

Re: 073822 CEMC Vacuum Graysburg San Andres Unit # 250 Work Order: **1112715**

Dear James,

ALS Environmental received 6 samples on 22-Dec-2011 10:45 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 23.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Patricia L. Lynch

Electronically approved by: Mary K. Knowles

Patricia L. Lynch
Project Manager

ACCREDITED IN ACCORDANCE WITH nelac
Certificate No: TX: T104704231-11-5

ALS Environmental

Date: 10-Jan-12

Client: Conestoga-Rovers & Associates
Project: 073822 CEMC Vacuum Graysburg San Andres Unit # 250
Work Order: 1112715

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1112715-01	VGSAU 250 SE-6" 122111	Soil		12/21/2011 11:28	12/22/2011 10:45	☐
1112715-02	VGSAU 250 Center-6" 122111	Soil		12/21/2011 11:26	12/22/2011 10:45	☐
1112715-03	VGSAU 250 NW-6" 122111	Soil		12/21/2011 11:22	12/22/2011 10:45	☐
1112715-04	VGSAU 250 SW-6" 122111	Soil		12/21/2011 11:20	12/22/2011 10:45	☐
1112715-05	VGSAU 250 NE-6" 122111	Soil		12/21/2011 11:24	12/22/2011 10:45	☐
1112715-06	Trip Blank	Water		12/21/2011	12/22/2011 10:45	☐

Client:	Conestoga-Rovers & Associates
Project:	073822 CEMC Vacuum Graysburg San Andres Unit # 250
Work Order:	1112715

Case Narrative

Batch R121062 BTEX, Sample 1112708-01A: MS/MSD is for an unrelated sample.

Batch R121102 BTEX, Sample 1112754-10A: MS/MSD is for an unrelated sample.

Batch R121204 BTEX, Sample 1112741-01A: MS/MSD is for an unrelated sample.

ALS Environmental

Date: *10-Jan-12*

Client: Conestoga-Rovers & Associates

Project: 073822 CEMC Vacuum Graysburg San Andres Unit # 250 **Work Order:** 1112715

Sample ID: VGSAU 250 SE-6" 122111 **Lab ID:** 1112715-01

Collection Date: 12/21/2011 11:28 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH AND MISCELLANEOUS GCFID			**SW8015M**		Prep Date: **12/27/2011**	Analyst: **KMB**
DRO (>C10 - C28)	**5.3**		**1.7**	**mg/Kg**	1	12/27/2011 05:44 PM
Surr: 2-Fluorobiphenyl	*72.7*		*70-130*	*%REC*	1	12/27/2011 05:44 PM
GASOLINE RANGE ORGANICS - SW8015C			**SW8015**			Analyst: **KKP**
Gasoline Range Organics	U		0.050	mg/Kg	1	12/29/2011 02:41 AM
Surr: 4-Bromofluorobenzene	*92.1*		*70-130*	*%REC*	1	12/29/2011 02:41 AM
BTEX			**SW8021B**			Analyst: **SMA**
Benzene	U		1.0	µg/Kg	1	12/28/2011 01:25 AM
Toluene	U		1.0	µg/Kg	1	12/28/2011 01:25 AM
Ethylbenzene	U		1.0	µg/Kg	1	12/28/2011 01:25 AM
Xylenes, Total	U		3.0	µg/Kg	1	12/28/2011 01:25 AM
Surr: 4-Bromofluorobenzene	*76.2*		*75-131*	*%REC*	1	12/28/2011 01:25 AM
Surr: Trifluorotoluene	*93.1*		*73-130*	*%REC*	1	12/28/2011 01:25 AM
ANIONS - EPA 300.0 (1993)			**E300**		Prep Date: **12/29/2011**	Analyst: **JKP**
Chloride	**12.6**		**4.80**	**mg/Kg**	1	12/29/2011 08:21 PM
Surr: Selenate (surr)	*114*		*85-115*	*%REC*	1	12/29/2011 08:21 PM
MOISTURE			**SW3550**			Analyst: **KAH**
Percent Moisture	**16.2**		**0.0100**	**wt%**	1	12/29/2011 12:20 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Jan-12*

Client: Conestoga-Rovers & Associates

Project: 073822 CEMC Vacuum Graysburg San Andres Unit # 250 **Work Order:** 1112715

Sample ID: VGSAU 250 Center-6" 122111 **Lab ID:** 1112715-02

Collection Date: 12/21/2011 11:26 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH AND MISCELLANEOUS GCFID			**SW8015M**		Prep Date: **12/27/2011**	Analyst: **KMB**
DRO (>C10 - C28)	**12**		**1.7**	**mg/Kg**	1	12/27/2011 06:04 PM
Surr: 2-Fluorobiphenyl	*77.7*		*70-130*	*%REC*	1	12/27/2011 06:04 PM
GASOLINE RANGE ORGANICS - SW8015C			**SW8015**			Analyst: **KKP**
Gasoline Range Organics	U		0.050	mg/Kg	1	12/29/2011 02:58 AM
Surr: 4-Bromofluorobenzene	*105*		*70-130*	*%REC*	1	12/29/2011 02:58 AM
BTEX			**SW8021B**			Analyst: **SMA**
Benzene	U		1.0	µg/Kg	1	12/28/2011 01:43 AM
Toluene	U		1.0	µg/Kg	1	12/28/2011 01:43 AM
Ethylbenzene	U		1.0	µg/Kg	1	12/28/2011 01:43 AM
Xylenes, Total	U		3.0	µg/Kg	1	12/28/2011 01:43 AM
Surr: 4-Bromofluorobenzene	*77.2*		*75-131*	*%REC*	1	12/28/2011 01:43 AM
Surr: Trifluorotoluene	*91.7*		*73-130*	*%REC*	1	12/28/2011 01:43 AM
ANIONS - EPA 300.0 (1993)			**E300**		Prep Date: **12/29/2011**	Analyst: **JKP**
Chloride	**44.5**		**4.89**	**mg/Kg**	1	12/29/2011 09:26 PM
Surr: Selenate (surr)	*115*		*85-115*	*%REC*	1	12/29/2011 09:26 PM
MOISTURE			**SW3550**			Analyst: **KAH**
Percent Moisture	**12.5**		**0.0100**	**wt%**	1	12/29/2011 12:20 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Jan-12*

Client: Conestoga-Rovers & Associates
Project: 073822 CEMC Vacuum Graysburg San Andres Unit # 250 **Work Order:** 1112715
Sample ID: VGSAU 250 NW-6" 122111 **Lab ID:** 1112715-03
Collection Date: 12/21/2011 11:22 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH AND MISCELLANEOUS GCFID			**SW8015M**		Prep Date: **12/27/2011**	Analyst: **KMB**
DRO (>C10 - C28)	U		1.7	mg/Kg	1	12/27/2011 05:06 PM
Surr: 2-Fluorobiphenyl	*73.4*		*70-130*	*%REC*	1	12/27/2011 05:06 PM
GASOLINE RANGE ORGANICS - SW8015C			**SW8015**			Analyst: **KKP**
Gasoline Range Organics	U		0.050	mg/Kg	1	12/29/2011 03:15 AM
Surr: 4-Bromofluorobenzene	*90.8*		*70-130*	*%REC*	1	12/29/2011 03:15 AM
BTEX			**SW8021B**			Analyst: **SMA**
Benzene	U		1.0	µg/Kg	1	12/28/2011 02:00 AM
Toluene	U		1.0	µg/Kg	1	12/28/2011 02:00 AM
Ethylbenzene	U		1.0	µg/Kg	1	12/28/2011 02:00 AM
Xylenes, Total	U		3.0	µg/Kg	1	12/28/2011 02:00 AM
Surr: 4-Bromofluorobenzene	*77.2*		*75-131*	*%REC*	1	12/28/2011 02:00 AM
Surr: Trifluorotoluene	*92.3*		*73-130*	*%REC*	1	12/28/2011 02:00 AM
ANIONS - EPA 300.0 (1993)			**E300**		Prep Date: **12/29/2011**	Analyst: **JKP**
Chloride	**14.0**		**4.94**	**mg/Kg**	1	12/29/2011 09:48 PM
Surr: Selenate (surr)	*115*		*85-115*	*%REC*	1	12/29/2011 09:48 PM
MOISTURE			**SW3550**			Analyst: **KAH**
Percent Moisture	**17.7**		**0.0100**	**wt%**	1	12/29/2011 12:20 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Jan-12*

Client: Conestoga-Rovers & Associates

Project: 073822 CEMC Vacuum Graysburg San Andres Unit # 250 **Work Order:** 1112715

Sample ID: VGSAU 250 SW-6" 122111 **Lab ID:** 1112715-04

Collection Date: 12/21/2011 11:20 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH AND MISCELLANEOUS GCFID			**SW8015M**		Prep Date: **12/27/2011**	Analyst: **KMB**
DRO (>C10 - C28)	U		1.7	mg/Kg	1	12/27/2011 05:25 PM
Surr: 2-Fluorobiphenyl	*84.4*		*70-130*	*%REC*	1	12/27/2011 05:25 PM
GASOLINE RANGE ORGANICS - SW8015C			**SW8015**			Analyst: **KKP**
Gasoline Range Organics	U		0.050	mg/Kg	1	12/29/2011 03:33 AM
Surr: 4-Bromofluorobenzene	*92.4*		*70-130*	*%REC*	1	12/29/2011 03:33 AM
BTEX			**SW8021B**			Analyst: **SMA**
Benzene	U		1.0	µg/Kg	1	12/28/2011 02:17 AM
Toluene	U		1.0	µg/Kg	1	12/28/2011 02:17 AM
Ethylbenzene	U		1.0	µg/Kg	1	12/28/2011 02:17 AM
Xylenes, Total	U		3.0	µg/Kg	1	12/28/2011 02:17 AM
Surr: 4-Bromofluorobenzene	*75.4*		*75-131*	*%REC*	1	12/28/2011 02:17 AM
Surr: Trifluorotoluene	*87.7*		*73-130*	*%REC*	1	12/28/2011 02:17 AM
ANIONS - EPA 300.0 (1993)			**E300**		Prep Date: **12/29/2011**	Analyst: **JKP**
Chloride	**365**		**4.65**	**mg/Kg**	1	12/29/2011 10:10 PM
Surr: Selenate (surr)	*113*		*85-115*	*%REC*	1	12/29/2011 10:10 PM
MOISTURE			**SW3550**			Analyst: **KAH**
Percent Moisture	**10.9**		**0.0100**	**wt%**	1	12/29/2011 12:20 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Jan-12*

Client: Conestoga-Rovers & Associates
Project: 073822 CEMC Vacuum Graysburg San Andres Unit # 250 **Work Order:** 1112715
Sample ID: VGSAU 250 NE-6" 122111 **Lab ID:** 1112715-05
Collection Date: 12/21/2011 11:24 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH AND MISCELLANEOUS GCFID			**SW8015M**		Prep Date: **12/27/2011**	Analyst: **KMB**
DRO (>C10 - C28)	U		1.7	mg/Kg	1	12/27/2011 03:29 PM
Surr: 2-Fluorobiphenyl	*101*		*70-130*	*%REC*	1	12/27/2011 03:29 PM
GASOLINE RANGE ORGANICS - SW8015C			**SW8015**			Analyst: **KKP**
Gasoline Range Organics	U		0.050	mg/Kg	1	12/29/2011 03:50 AM
Surr: 4-Bromofluorobenzene	*107*		*70-130*	*%REC*	1	12/29/2011 03:50 AM
BTEX			**SW8021B**			Analyst: **SMA**
Benzene	U		1.0	µg/Kg	1	12/30/2011 01:48 AM
Toluene	U		1.0	µg/Kg	1	12/30/2011 01:48 AM
Ethylbenzene	U		1.0	µg/Kg	1	12/30/2011 01:48 AM
Xylenes, Total	U		3.0	µg/Kg	1	12/30/2011 01:48 AM
Surr: 4-Bromofluorobenzene	*114*		*75-131*	*%REC*	1	12/30/2011 01:48 AM
Surr: Trifluorotoluene	*115*		*73-130*	*%REC*	1	12/30/2011 01:48 AM
ANIONS - EPA 300.0 (1993)			**E300**		Prep Date: **12/29/2011**	Analyst: **JKP**
Chloride	**9.52**		**4.85**	**mg/Kg**	1	12/29/2011 10:31 PM
Surr: Selenate (surr)	*104*		*85-115*	*%REC*	1	12/29/2011 10:31 PM
MOISTURE			**SW3550**			Analyst: **KAH**
Percent Moisture	**13.4**		**0.0100**	**wt%**	1	12/29/2011 12:20 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *10-Jan-12*

Client: Conestoga-Rovers & Associates

Project: 073822 CEMC Vacuum Graysburg San Andres Unit # 250 **Work Order:** 1112715

Sample ID: Trip Blank **Lab ID:** 1112715-06

Collection Date: 12/21/2011 **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **SMA**
Benzene	U		1.0	µg/L	1	12/28/2011 02:21 AM
Toluene	U		1.0	µg/L	1	12/28/2011 02:21 AM
Ethylbenzene	U		1.0	µg/L	1	12/28/2011 02:21 AM
Methyl tert-butyl ether	U		5.0	µg/L	1	12/28/2011 02:21 AM
Xylenes, Total	U		3.0	µg/L	1	12/28/2011 02:21 AM
Surr: 4-Bromofluorobenzene	*112*		*77-129*	*%REC*	1	12/28/2011 02:21 AM
Surr: Trifluorotoluene	*85.2*		*75-130*	*%REC*	1	12/28/2011 02:21 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 10-Jan-12

Client: Conestoga-Rovers & Associates

Work Order: 1112715

Project: 073822 CEMC Vacuum Graysburg San Andres Unit

QC BATCH REPORT

Batch ID: **57810** Instrument ID **FID-8** Method: **SW8015M**

MBLK Sample ID: **FBLKS1-111227-57810** Units: **mg/Kg** Analysis Date: **12/27/2011 01:16 PM**

Client ID: Run ID: **FID-8_111227A** SeqNo: **2639478** Prep Date: **12/27/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (>C10 - C28)	U	1.7								
Surr: 2-Fluorobiphenyl	*2.845*	0	*3.3*	0	*86.2*	*70-130*	0			

LCS Sample ID: **FLCSS1-111227-57810** Units: **mg/Kg** Analysis Date: **12/27/2011 01:38 PM**

Client ID: Run ID: **FID-8_111227A** SeqNo: **2639480** Prep Date: **12/27/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (>C10 - C28)	33.08	1.7	33.3	0	99.3	70-130	0			
Surr: 2-Fluorobiphenyl	*3.489*	0	*3.3*	0	*106*	*70-130*	0			

MS Sample ID: **1112715-05CMS** Units: **mg/Kg** Analysis Date: **12/27/2011 03:49 PM**

Client ID: **VGSAU 250 NE-6" 122111** Run ID: **FID-8_111227A** SeqNo: **2639483** Prep Date: **12/27/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (>C10 - C28)	34.67	1.7	33.26	0.2244	104	70-130	0			
Surr: 2-Fluorobiphenyl	*3.366*	0	*3.296*	0	*102*	*70-130*	0			

MSD Sample ID: **1112715-05CMSD** Units: **mg/Kg** Analysis Date: **12/27/2011 04:08 PM**

Client ID: **VGSAU 250 NE-6" 122111** Run ID: **FID-8_111227A** SeqNo: **2639485** Prep Date: **12/27/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (>C10 - C28)	37.24	1.7	33.29	0.2244	111	70-130	34.67	7.16	30	
Surr: 2-Fluorobiphenyl	*3.876*	0	*3.299*	0	*117*	*70-130*	3.366	*14.1*	*30*	

The following samples were analyzed in this batch:

1112715-01C	1112715-02C	1112715-03C
1112715-04C	1112715-05C	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1112715
Project: 073822 CEMC Vacuum Graysburg San Andres Unit

QC BATCH REPORT

Batch ID: **R121062** Instrument ID **BTEX3** Method: **SW8021B**

MBLK Sample ID: **BBLKS1-111227-R121062** Units: **µg/Kg** Analysis Date: **12/27/2011 06:39 PM**
Client ID: Run ID: **BTEX3_111227A** SeqNo: **2638966** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	U	1.0								
Toluene	U	1.0								
Ethylbenzene	U	1.0								
Xylenes, Total	U	3.0								
Surr: 4-Bromofluorobenzene	*26.79*	1.0	*30*	0	*89.3*	*75-131*	0			
Surr: Trifluorotoluene	*33.48*	1.0	*30*	0	*112*	*73-130*	0			

LCS Sample ID: **BLCSS1-111227-R121062** Units: **µg/Kg** Analysis Date: **12/27/2011 05:47 PM**
Client ID: Run ID: **BTEX3_111227A** SeqNo: **2638963** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	16.7	1.0	20	0	83.5	74-129	0			
Toluene	16.8	1.0	20	0	84	75-128	0			
Ethylbenzene	16.52	1.0	20	0	82.6	73-127	0			
Xylenes, Total	46.29	3.0	60	0	77.2	74-127	0			
Surr: 4-Bromofluorobenzene	*23.73*	1.0	*30*	0	*79.1*	*75-131*	0			
Surr: Trifluorotoluene	*29.96*	1.0	*30*	0	*99.9*	*73-130*	0			

LCSD Sample ID: **BLCSDS1-111227-R121062** Units: **µg/Kg** Analysis Date: **12/27/2011 06:04 PM**
Client ID: Run ID: **BTEX3_111227A** SeqNo: **2638964** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.25	1.0	20	0	101	74-129	16.7	19.2	30	
Toluene	19.28	1.0	20	0	96.4	75-128	16.8	13.8	30	
Ethylbenzene	19.62	1.0	20	0	98.1	73-127	16.52	17.2	30	
Xylenes, Total	53.64	3.0	60	0	89.4	74-127	46.29	14.7	30	
Surr: 4-Bromofluorobenzene	*27.71*	1.0	*30*	0	*92.4*	*75-131*	23.73	*15.5*	*30*	
Surr: Trifluorotoluene	*35.21*	1.0	*30*	0	*117*	*73-130*	29.96	*16.1*	*30*	

MS Sample ID: **1112708-01AMS** Units: **µg/Kg** Analysis Date: **12/27/2011 10:51 PM**
Client ID: Run ID: **BTEX3_111227A** SeqNo: **2639778** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	18.77	1.0	20	4.99	68.9	74-129	0			S
Toluene	20.14	1.0	20	9.148	54.9	75-128	0			S
Ethylbenzene	15.1	1.0	20	0	75.5	73-127	0			
Xylenes, Total	45.88	3.0	60	7.498	64	74-127	0			S
Surr: 4-Bromofluorobenzene	*23.15*	1.0	*30*	0	*77.2*	*75-131*	0			
Surr: Trifluorotoluene	*31.5*	1.0	*30*	0	*105*	*73-130*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1112715
Project: 073822 CEMC Vacuum Graysburg San Andres Unit

QC BATCH REPORT

Batch ID: **R121062** Instrument ID **BTEX3** Method: **SW8021B**

MSD Sample ID: **1112708-01AMSD** Units: **µg/Kg** Analysis Date: **12/27/2011 11:08 PM**
Client ID: Run ID: **BTEX3_111227A** SeqNo: **2639779** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	19.08	1.0	20	4.99	70.5	74-129	18.77	1.67	30	S
Toluene	18.92	1.0	20	9.148	48.8	75-128	20.14	6.24	30	S
Ethylbenzene	14.5	1.0	20	0	72.5	73-127	15.1	4.04	30	S
Xylenes, Total	44.86	3.0	60	7.498	62.3	74-127	45.88	2.25	30	S
Surr: 4-Bromofluorobenzene	*24.65*	1.0	*30*	0	*82.2*	*75-131*	23.15	*6.26*	*30*	
Surr: Trifluorotoluene	*38.48*	1.0	*30*	0	*128*	*73-130*	31.5	*19.9*	*30*	

The following samples were analyzed in this batch: 1112715-01A 1112715-02A 1112715-03A 1112715-04A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1112715
Project: 073822 CEMC Vacuum Graysburg San Andres Unit

QC BATCH REPORT

Batch ID: **R121102** Instrument ID **BTEX1** Method: **SW8021B**

MBLK Sample ID: **BBLKW2-111227-R121102** Units: **µg/L** Analysis Date: **12/28/2011 01:29 AM**
Client ID: Run ID: **BTEX1_111227B** SeqNo: **2640546** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	U	1.0								
Toluene	U	1.0								
Ethylbenzene	U	1.0								
Methyl tert-butyl ether	U	5.0								
Xylenes, Total	U	3.0								
Surr: 4-Bromofluorobenzene	*33.98*	1.0	*30*	0	*113*	*77-129*	0			
Surr: Trifluorotoluene	*26.01*	1.0	*30*	0	*86.7*	*75-130*	0			

LCS Sample ID: **BLCSW2-111227-R121102** Units: **µg/L** Analysis Date: **12/28/2011 12:55 AM**
Client ID: Run ID: **BTEX1_111227B** SeqNo: **2640544** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	22.87	1.0	20	0	114	77-126	0			
Toluene	22.91	1.0	20	0	115	80-124	0			
Ethylbenzene	23.47	1.0	20	0	117	76-125	0			
Methyl tert-butyl ether	105.7	5.0	100	0	106	75-128	0			
Xylenes, Total	71.15	3.0	60	0	119	79-124	0			
Surr: 4-Bromofluorobenzene	*35.28*	1.0	*30*	0	*118*	*77-129*	0			
Surr: Trifluorotoluene	*26.6*	1.0	*30*	0	*88.7*	*75-130*	0			

LCSD Sample ID: **BLCSDW2-111227-R121102** Units: **µg/L** Analysis Date: **12/28/2011 01:12 AM**
Client ID: Run ID: **BTEX1_111227B** SeqNo: **2640545** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	23.46	1.0	20	0	117	77-126	22.87	2.58	20	
Toluene	23.62	1.0	20	0	118	80-124	22.91	3.06	20	
Ethylbenzene	23.95	1.0	20	0	120	76-125	23.47	2.02	20	
Methyl tert-butyl ether	102.2	5.0	100	0	102	75-128	105.7	3.34	20	
Xylenes, Total	73.3	3.0	60	0	122	79-124	71.15	2.98	20	
Surr: 4-Bromofluorobenzene	*34.87*	1.0	*30*	0	*116*	*77-129*	35.28	*1.19*	*20*	
Surr: Trifluorotoluene	*26.47*	1.0	*30*	0	*88.2*	*75-130*	26.6	*0.487*	*20*	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1112715
Project: 073822 CEMC Vacuum Graysburg San Andres Unit

QC BATCH REPORT

Batch ID: **R121102** Instrument ID **BTEX1** Method: **SW8021B**

MS Sample ID: **1112754-10AMS** Units: **µg/L** Analysis Date: **12/28/2011 09:52 AM**
Client ID: Run ID: **BTEX1_111227B** SeqNo: **2640560** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	43.17	1.0	20	21.96	106	77-126	0			
Toluene	29.31	1.0	20	0.4547	144	80-124	0			S
Ethylbenzene	30.82	1.0	20	4.867	130	76-125	0			S
Methyl tert-butyl ether	116.5	5.0	100	8.027	109	75-128	0			
Xylenes, Total	84.93	3.0	60	9.819	125	79-124	0			S
Surr: 4-Bromofluorobenzene	*31.4*	1.0	*30*	0	*105*	*77-129*	0			
Surr: Trifluorotoluene	*35.05*	1.0	*30*	0	*117*	*75-130*	0			

MSD Sample ID: **1112754-10AMSD** Units: **µg/L** Analysis Date: **12/28/2011 10:09 AM**
Client ID: Run ID: **BTEX1_111227B** SeqNo: **2640561** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	44.04	1.0	20	21.96	110	77-126	43.17	2	20	
Toluene	30.62	1.0	20	0.4547	151	80-124	29.31	4.36	20	S
Ethylbenzene	31.74	1.0	20	4.867	134	76-125	30.82	2.93	20	S
Methyl tert-butyl ether	116.7	5.0	100	8.027	109	75-128	116.5	0.142	20	
Xylenes, Total	102.1	3.0	60	9.819	154	79-124	84.93	18.3	20	S
Surr: 4-Bromofluorobenzene	*30.99*	1.0	*30*	0	*103*	*77-129*	31.4	*1.32*	*20*	
Surr: Trifluorotoluene	*38.52*	1.0	*30*	0	*128*	*75-130*	35.05	*9.43*	*20*	

The following samples were analyzed in this batch: 1112715-06A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1112715
Project: 073822 CEMC Vacuum Graysburg San Andres Unit

QC BATCH REPORT

Batch ID: **R121151** Instrument ID **FID-6** Method: **SW8015**

MBLK Sample ID: **GBLKS2-122811-R121151** Units: **mg/Kg** Analysis Date: **12/29/2011 12:07 AM**
Client ID: Run ID: **FID-6_111228B** SeqNo: **2641537** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	U	0.050								
Surr: 4-Bromofluorobenzene	*0.08268*	0.0050	*0.1*	0	*82.7*	*70-130*	0			

LCS Sample ID: **GLCSS2-122811-R121151** Units: **mg/Kg** Analysis Date: **12/28/2011 11:33 PM**
Client ID: Run ID: **FID-6_111228B** SeqNo: **2641535** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.9611	0.050	1	0	96.1	70-130	0			
Surr: 4-Bromofluorobenzene	*0.08601*	0.0050	*0.1*	0	*86*	*70-130*	0			

LCSD Sample ID: **GLCSDS2-122811-R121151** Units: **mg/Kg** Analysis Date: **12/28/2011 11:50 PM**
Client ID: Run ID: **FID-6_111228B** SeqNo: **2641536** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	1.059	0.050	1	0	106	70-130	0.9611	9.71	30	
Surr: 4-Bromofluorobenzene	*0.0967*	0.0050	*0.1*	0	*96.7*	*70-130*	0.08601	*11.7*	*30*	

MS Sample ID: **1112620-37BMS** Units: **mg/Kg** Analysis Date: **12/29/2011 01:50 AM**
Client ID: Run ID: **FID-6_111228B** SeqNo: **2641545** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.962	0.050	1	0	96.2	70-130	0			
Surr: 4-Bromofluorobenzene	*0.08068*	0.0050	*0.1*	0	*80.7*	*70-130*	0			

MSD Sample ID: **1112620-37BMSD** Units: **mg/Kg** Analysis Date: **12/29/2011 02:07 AM**
Client ID: Run ID: **FID-6_111228B** SeqNo: **2641546** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	1.047	0.050	1	0	105	70-130	0.962	8.46	30	
Surr: 4-Bromofluorobenzene	*0.08739*	0.0050	*0.1*	0	*87.4*	*70-130*	0.08068	*7.98*	*30*	

The following samples were analyzed in this batch:

1112715-01B	1112715-02B	1112715-03B
1112715-04B	1112715-05B	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1112715
Project: 073822 CEMC Vacuum Graysburg San Andres Unit

QC BATCH REPORT

Batch ID: **R121204** Instrument ID **BTEX3** Method: **SW8021B**

MBLK Sample ID: **BBLKS1-111229-R121204** Units: **µg/Kg** Analysis Date: **12/30/2011 01:14 AM**
Client ID: Run ID: **BTEX3_111230A** SeqNo: **2643081** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	U	1.0								
Toluene	U	1.0								
Ethylbenzene	U	1.0								
Xylenes, Total	U	3.0								
Surr: 4-Bromofluorobenzene	*31.32*	1.0	*30*	0	*104*	*75-131*	0			
Surr: Trifluorotoluene	*31.55*	1.0	*30*	0	*105*	*73-130*	0			

LCS Sample ID: **BLCSS1-111229-R121204** Units: **µg/Kg** Analysis Date: **12/30/2011 12:22 AM**
Client ID: Run ID: **BTEX3_111230A** SeqNo: **2643079** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.45	1.0	20	0	102	74-129	0			
Toluene	20.94	1.0	20	0	105	75-128	0			
Ethylbenzene	21.7	1.0	20	0	108	73-127	0			
Xylenes, Total	62.27	3.0	60	0	104	74-127	0			
Surr: 4-Bromofluorobenzene	*34.93*	1.0	*30*	0	*116*	*75-131*	0			
Surr: Trifluorotoluene	*36.58*	1.0	*30*	0	*122*	*73-130*	0			

LCSD Sample ID: **BLCSDS1-111229-R121204** Units: **µg/Kg** Analysis Date: **12/30/2011 12:39 AM**
Client ID: Run ID: **BTEX3_111230A** SeqNo: **2643080** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.36	1.0	20	0	102	74-129	20.45	0.475	30	
Toluene	20.87	1.0	20	0	104	75-128	20.94	0.318	30	
Ethylbenzene	21.58	1.0	20	0	108	73-127	21.7	0.536	30	
Xylenes, Total	62.96	3.0	60	0	105	74-127	62.27	1.1	30	
Surr: 4-Bromofluorobenzene	*32.87*	1.0	*30*	0	*110*	*75-131*	34.93	*6.06*	*30*	
Surr: Trifluorotoluene	*33.63*	1.0	*30*	0	*112*	*73-130*	36.58	*8.38*	*30*	

MS Sample ID: **1112741-01AMS** Units: **µg/Kg** Analysis Date: **12/30/2011 02:23 AM**
Client ID: Run ID: **BTEX3_111230A** SeqNo: **2643085** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	11.82	1.0	20	0	59.1	74-129	0			S
Toluene	10.67	1.0	20	0	53.4	75-128	0			S
Ethylbenzene	8.829	1.0	20	0	44.1	73-127	0			S
Xylenes, Total	25.98	3.0	60	0	43.3	74-127	0			S
Surr: 4-Bromofluorobenzene	*31.95*	1.0	*30*	0	*106*	*75-131*	0			
Surr: Trifluorotoluene	*31.36*	1.0	*30*	0	*105*	*73-130*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1112715
Project: 073822 CEMC Vacuum Graysburg San Andres Unit

QC BATCH REPORT

Batch ID: **R121204** Instrument ID **BTEX3** Method: **SW8021B**

MSD Sample ID: **1112741-01AMSD** Units: **µg/Kg** Analysis Date: **12/30/2011 02:40 AM**

Client ID: Run ID: **BTEX3_111230A** SeqNo: **2643086** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	15.28	1.0	20	0	76.4	74-129	11.82	25.6	30	
Toluene	13.55	1.0	20	0	67.7	75-128	10.67	23.7	30	S
Ethylbenzene	12.05	1.0	20	0	60.2	73-127	8.829	30.9	30	SR
Xylenes, Total	33.58	3.0	60	0	56	74-127	25.98	25.5	30	S
Surr: 4-Bromofluorobenzene	*34.95*	1.0	*30*	0	*117*	*75-131*	31.95	*8.98*	*30*	
Surr: Trifluorotoluene	*34.37*	1.0	*30*	0	*115*	*73-130*	31.36	*9.16*	*30*	

The following samples were analyzed in this batch: 1112715-05A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1112715
Project: 073822 CEMC Vacuum Graysburg San Andres Unit

QC BATCH REPORT

Batch ID: **57890** Instrument ID **ICS3K2** Method: **E300**

MBLK Sample ID: **WBLKS1-122911-57890** Units: **mg/Kg** Analysis Date: **12/29/2011 12:50 PM**
Client ID: Run ID: **ICS3K2_111229A** SeqNo: **2642740** Prep Date: **12/29/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	5.0								
Surr: Selenate (surr)	*44.84*	1.0	*49.9*	0	*89.9*	*85-115*	0			

LCS Sample ID: **WLCSS1-122911-57890** Units: **mg/Kg** Analysis Date: **12/29/2011 01:12 PM**
Client ID: Run ID: **ICS3K2_111229A** SeqNo: **2642741** Prep Date: **12/29/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	214.6	5.0	200	0	107	90-110	0			
Surr: Selenate (surr)	*57.1*	1.0	*50*	0	*114*	*85-115*	0			

LCSD Sample ID: **WLCSDS1-122911-57890** Units: **mg/Kg** Analysis Date: **12/29/2011 01:34 PM**
Client ID: Run ID: **ICS3K2_111229A** SeqNo: **2642742** Prep Date: **12/29/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	214.9	5.0	200	0	107	90-110	214.6	0.154	20	
Surr: Selenate (surr)	*57.01*	1.0	*50*	0	*114*	*85-115*	57.1	*0.158*	*20*	

MS Sample ID: **1112715-01CMS** Units: **mg/Kg** Analysis Date: **12/29/2011 08:43 PM**
Client ID: **VGSAU 250 SE-6" 122111** Run ID: **ICS3K2_111229A** SeqNo: **2642744** Prep Date: **12/29/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	101.6	4.3	86.42	12.58	103	75-125	0			
Surr: Selenate (surr)	*49.28*	0.86	*43.21*	0	*114*	*80-120*	0			

MSD Sample ID: **1112715-01CMSD** Units: **mg/Kg** Analysis Date: **12/29/2011 09:05 PM**
Client ID: **VGSAU 250 SE-6" 122111** Run ID: **ICS3K2_111229A** SeqNo: **2642745** Prep Date: **12/29/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	103.2	4.4	88.44	12.58	102	75-125	101.6	1.58	20	
Surr: Selenate (surr)	*50.29*	0.88	*44.22*	0	*114*	*80-120*	49.28	*2.02*	*20*	

The following samples were analyzed in this batch:

1112715-01C	1112715-02C	1112715-03C
1112715-04C	1112715-05C	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1112715
Project: 073822 CEMC Vacuum Graysburg San Andres Unit

QC BATCH REPORT

Batch ID: **R121181** Instrument ID **Balance1** Method: **SW3550**

DUP Sample ID: **1112721-09ADUP** Units: **wt%** Analysis Date: **12/29/2011 12:20 PM**

Client ID: Run ID: **BALANCE1_111229D** SeqNo: **2642619** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Percent Moisture	53.77	0.010	0	0	0	0-0	52.41	2.57	20	

The following samples were analyzed in this batch:

1112715-01C	1112715-02C	1112715-03C
1112715-04C	1112715-05C	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 10-Jan-12

Client: Conestoga-Rovers & Associates
Project: 073822 CEMC Vacuum Graysburg San Andres Unit # 250
WorkOrder: 1112715

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µg/Kg	Micrograms per Kilogram
µg/L	Micrograms per Liter
mg/Kg	Milligrams per Kilogram
wt%	

ALS Environmental

Sample Receipt Checklist

Client Name: **CRA-MID** Date/Time Received: **22-Dec-11 10:45**

Work Order: **1112715** Received by: **PMG**

Checklist completed by Robert D. Harris (eSignature) 23-Dec-11 (Date) Reviewed by: Patricia L. Lynch (eSignature) 27-Dec-11 (Date)

Matrices: soils
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.4c	002	
Cooler(s)/Kit(s):	4006		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes: Trip blank on COC without analyses; Logged in with BTEX analysis.

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

SRC Page 1 of 1

ALS Environmental

Chain of Custody Form

Page 1 of 1

COC ID: 48121

1112715

CRA-MID: Conestoga-Rovers & Associates

Project: Vacuum Grayburg San Andres-073822

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	Vacuum Grayburg San Andres	A	BTEX (8021)
Work Order		Project Number	073822	B	GRO (8015M)
Company Name	Conestoga-Rovers & Associates	Bill To Company	Conestoga-Rovers & Associates	C	DRO (8015M)
Send Report To	James Ornelas	Invoice Attn	James Ornelas	D	Anions (300) Cl
Address	2135 S Loop 250 West	Address	2135 S Loop 250 West	E	Moisture
				F	
City/State/Zip	Midland, TX 79703	City/State/Zip	Midland, TX 79703	G	
Phone	(432) 686-0086	Phone	(432) 686-0086	H	
Fax	(432) 686-0186	Fax	(432) 686-0186	I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	VGSAU 250 SE-6" 122111	12-21-11	1128	S	—	3	X	X	X	X	X						
2	VGSAU 250 CENTER-6" 122111	12-21-11	1126	S	—	3	X	X	X	X	X						
3	VGSAU 250 NW-6" 122111	12-21-11	1122	S	—	3	X	X	X	X	X						
4	VGSAU 250 SW-6" 122111	12-21-11	1120	S	—	5	X	X	X	X	X						
5	VGSAU 250 NE-6" 122111	12-21-11	1124	S	—	3	X	X	X	X	X						
6	TRIP BLANKS																
7	TEMP																
8																	
9																	
10																	

Sampler(s) Please Print & Sign: J. PRIMOZA

Shipment Method: FedEx

Required Turnaround Time: (Check Box) ☑ Std 10 WK Days ☐ 5 WK Days ☐ Other ☐ 2 WK Days ☐ 24 Hour

Results Due Date:

Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date:	Time:	Received by (Laboratory): 12.22.11 1045.
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes: 10 Day TAT.

Cooler ID	Cooler Temp.
4906	

QC Package: (Check One Box Below)

☑ Level II Std QC ☐ TRRP Checklist

☐ Level III Std QC/Raw Data ☐ TRRP Level IV

☐ Level IV SW846/CLP

☐ Other / EDD

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

111275

ALS Environmental
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

CUSTODY SEAL		Seal Broken By:
Date: 12-21-11	Time: 1532	Date: 12-22-11
Name: J. Primera		
Company: CRA		

This portion can be removed for Recipient's records.

Date 12-21-11 FedEx Tracking Number 875882536305

Sender's Name J. Primera Phone 432 686-0086

Company CRA

Address 2135 South Loop 250 West Dept./Floor/Suite/Room

Midland State TX ZIP 79703

Your Internal Billing Reference 073822 Ugshu

Invoice

Controlled Recovery, Inc.
P.O. Box 388
Hobbs, NM 88241-0388

Voice: (575) 393-1079
Fax: (575) 393-3615

Invoice Number: 039721

Invoice Date: Oct 24, 2007

Page: 1

Sold To:
CHEVRON
HCR 60 BOX 423
LOVINGTON, NM 88260

Ship to:
CHEVRON
VGSAU #250

Customer ID	Customer PO	Payment Terms	
CHEV-BUCK		Net 30 Days	
Sales Rep ID	**Shipping Method**	**Ship Date**	**Due Date**
	SEE ATTACHED		11/23/07

Quantity	Item	Description	Unit Price	Extension
2,000.00		CONT SOIL PER ATTACHED	16.00	32,000.00

Subtotal	32,000.00
Sales Tax	2,140.00
Total Invoice Amount	34,140.00
Payment/Credit Applied	
TOTAL	34,140.00

Check/Credit Memo No:


CASE

Leking, Geoffrey R, EMNRD

From: Kainer, Ryan <rkainer@craworld.com>
Sent: Monday, November 05, 2012 9:03 AM
To: Leking, Geoffrey R, EMNRD
Cc: Larson, Thomas
Subject: Chevron - Vacuum Grayburg San Andres Unit (VGSAU) #250
Attachments: 062712 OCD Mtg Minutes VGSAU 250 pit closure.pdf; Chevron VGSAU 250.pdf

Mr. Leking,

In reference to the VGSAU #250 pit closure request, extensive research has been performed in providing waste records for this excavated pit. Mr. David Duncan with Environmental Plus was contacted about this project. Mr. Duncan was very familiar with the project, but was unable to produce any manifest/bill of ladings for the waste disposal. CRI waste disposal facility was used for as the disposal facility of this waste and was contacted (Kim Flowers). Mrs. Flowers was able to provide an invoice of the waste, but any remaining waste records are located within storage boxes and will take additional time to produce if available. The invoice is attached along with the meeting minutes of CRA's visit with you on 6/27/12. CRA is asking that the attached invoice be sufficient documentation to prove waste disposal of approximately 2,000 cubic yards occurred within CRI's disposal facility and that backfilling of this pit may commence. Please let me know if we need to provide more detailed information.

On another note, Mr. Tom Larson and myself would like to visit with you one day this week to discuss soil boring locations for the Central Vacuum Unit # 47H. We have identified two soil boring locations and will need OCD approval. Please let me know what day this week works best for you.

Thank you,

Ryan Kainer
Conestoga-Rovers & Associates (CRA)
2135 S Loop 250 West
Midland, TX 79703

Phone: 432.686.0086
Cell: 432.301.4056
Email: rkainer@craworld.com
www.CRAworld.com
Think before you print
Perform every task the safe way, the right way, every time!

CHEVRON
VGSAU 280
30-025-38001
4-1-18S-34E
110' GW
Approved for backfill on
11/7/12 – NMED completed
C-144 for closure

CONESTOGA-ROVERS & ASSOCIATES

MEETING MINUTES

Reference No. 073822

PROJECT:	VGSAU 250 (API #30-025-38001) reserve pit closure				
CLIENT:	Chevron Environmental Management Company	CLIENT REFERENCE NO.:	073822		
RE:					
LOCATION:	New Mexico Oil Conservation Division Office - Hobbs, New Mexico	DATE:	6/27/12	TIME:	1030 am MST

Participants:

Tom Larson - CRA Senior Project Manager	David Pagano - HSE Specialist, Chevron Lovington, NM	Geoffrey Leking - OCD Hobbs, Environmental Engineer	

Distribution:

☒File ☒Participants			

Item	*Description*	*Action By*
1	This project involves the closure of a reserve pit in which a C-144 was submitted to the OCD on 9/11/07.	all
2	Site observations indicate that the pit materials and liner were removed from the location (100' x100' x6' deep excavation). Some overexcavation in the area below the former pit may have occurred. OCD is requesting additional information from Chevron that may be available for review: results of any sampling from the pit location in 2007; waste records from when materials were alledgedly hauled to the CRI facility in 2007; and any other data pertinent to the pit closure activities. OCD acknowledges that the data may or may not be readily available - and absence of the all the info may not be a 'deal breaker' in closing out the pit - see #3. Chevron will perform research to obtain the requested data and contact the OCD in the next few week to get a ruling on proceeding with proposed pit closure activities,	all
3	Three sampling events have been performed at the reserve pit bottom locations (5-spot sample pattern) - two events in 2010 and one event in December 2011. The samples analyzed did not exhibit TPH or BTEX above regulatory levels. One sample location exhibited a chloride concentration of 365 mg/kg in the 2011 event. All other chloride samples analyzed (14) from the excavation floor were below 250 mg/kg.	all

CONESTOGA-ROVERS & ASSOCIATES

Item	*Description*	*Action By*
4	Proposed remediation activites, at this time, do not include the removal of any materiasls from the existing excavation.	
5	Excavation shall be backfilled with imported clean materials (caliche) from approximately 6 feet to 1 foot below grade. A 20 mil liner will be laid over this excavated area and covered with 1-2 foot of topsoil cover.	all
6	Construction affected areas of release site will 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	all
7	Site Closure activities will be documented and submitted as a 'Final Report' on OCD Form C-144. Disposal information regarding the removal of pit materials (and underlaying soils) is required to document closure activities on the C-144.	all

☒ Attachments: Soil Data Tables; Figure 3 (CRA) Site Map

Prepared By: Tom Larson Date Issued: 7/2/12

This confirms and records CRA's interpretation of the discussions which occurred and our understanding reached during this meeting. Unless notified in writing within 7 days of the date issued, we will assume that this recorded interpretation or description is complete and accurate.

TABLE I
SOIL ANALYTICAL SUMMARY
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
VACUUM GRAYBURG SAN ANDRES UNIT #250 (PIT)
LEA COUNTY, NEW MEXICO

Sample ID	Depth (feet)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH (8015B Modified)			Chlorides (mg/kg)
								DRO (mg/kg)	GRO (mg/kg)	(GRO/DRO (mg/kg)	
NMOCD Recommended Remediation Action Levels (Total Ranking Score = 10)											
			10 mg/kg	— mg/kg	— mg/kg	— mg/kg	50 mg/kg	— mg/kg	— mg/kg	100 mg/kg	— mg/kg
AH-1	0-1'	7/14/10	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00	<50.0	<200
T-1	1.5-2'	8/19/10	NA	NA	NA	NA	NA	NA	NA	NA	<200
AH-2	0-1'	7/14/10	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00	<50.0	<200
T-2	1.5-2'	8/19/10	NA	NA	NA	NA	NA	NA	NA	NA	<200
AH-3	0-1'	7/14/10	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00	<50.0	<200
T-3	1.5-2'	8/19/10	NA	NA	NA	NA	NA	NA	NA	NA	<200
AH-4	0-1'	7/14/10	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00	<50.0	<200
T-4	2-2.5'	8/19/10	NA	NA	NA	NA	NA	NA	NA	NA	<200
AH-5	0-1'	7/14/10	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00	<50.0	<200
T-5	1.5-2'	8/19/10	NA	NA	NA	NA	NA	NA	NA	NA	<200

Notes:

1. BTEX analyses by EPA Method 8021B.
2. TPH analyzed by EPA Method 8015B Mod.
3. Chlorides analyzed by SM 4500-Cl B
4. NA - Not Analyzed
5. Bold concentrations above lab reporting limits.
6. Highlighted cells indicated concentrations above regulatory limits

TABLE I
SOIL ANALYTICAL SUMMARY
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
VACUUM GRAYBURG SAN ANDRES UNIT #250 (PIT)
LEA COUNTY, NEW MEXICO

Sample ID	Depth (feet)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH (8015B Modified)			Chlorides (mg/kg)
								DRO (mg/kg)	GRO (mg/kg)	(GRO/DRO (mg/kg)	
1993 NMOCD Recommended Remediation Action Levels (Total Ranking Score = 20)											
			10 mg/kg	— mg/kg	— mg/kg	— mg/kg	50 mg/kg	— mg/kg	— mg/kg	100 mg/kg	250 mg/kg
2011 NMOCD Recommended Remediation Action Levels (Vertical Separation From Groundwater more than 100')											
			0.2 mg/kg	— mg/kg	— mg/kg	— mg/kg	50 mg/kg	— mg/kg	— mg/kg	500 mg/kg	1,000 mg/kg
AH-1	0-1'	7/14/10	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00	<50.0	<200
T-1	1.5-2'	8/19/10	NA	NA	NA	NA	NA	NA	NA	NA	<200
VGSAU 250 NW-6"	0.5'	12/21/11	<0.001	<0.001	<0.001	<0.003	<0.003	<1.7	<0.050	<1.7	**14**
AH-2	0-1'	7/14/10	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00	<50.0	<200
T-2	1.5-2'	8/19/10	NA	NA	NA	NA	NA	NA	NA	NA	<200
VGSAU 250 SW-6"	0.5'	12/21/11	<0.001	<0.001	<0.001	<0.003	<0.003	<1.7	<0.050	<1.7	365
AH-3	0-1'	7/14/10	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00	<50.0	<200
T-3	1.5-2'	8/19/10	NA	NA	NA	NA	NA	NA	NA	NA	<200
VGSAU 250 Center-6"	0.5'	12/21/11	<0.001	<0.001	<0.001	<0.003	<0.003	**12**	<050	**12**	**44.5**
AH-4	0-1'	7/14/10	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00	<50.0	<200
T-4	2-2.5'	8/19/10	NA	NA	NA	NA	NA	NA	NA	NA	<200
VGSAU 250 NE-6"	0.5'	12/21/11	<0.001	<0.001	<0.001	<0.003	<0.003	<1.7	<0.050	<1.7	**9.52**
AH-5	0-1'	7/14/10	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00	<50.0	<200
T-5	1.5-2'	8/19/10	NA	NA	NA	NA	NA	NA	NA	NA	<200
VGSAU 250 SE-6"	0.5'	12/21/11	<0.001	<0.001	<0.001	<0.003	<0.003	**5.3**	<0.050	**5.3**	**12.6**

Notes:

1. BTEX analyses by EPA Method 8021B.
2. TPH analyzed by EPA Method 8015B Mod.
3. Chlorides analyzed by SM 4500-Cl B and EPA 300.0
4. NA - Not Analyzed
5. Bold concentrations above lab reporting limits.
6. Highlighted cells indicated concentrations above regulatory limits

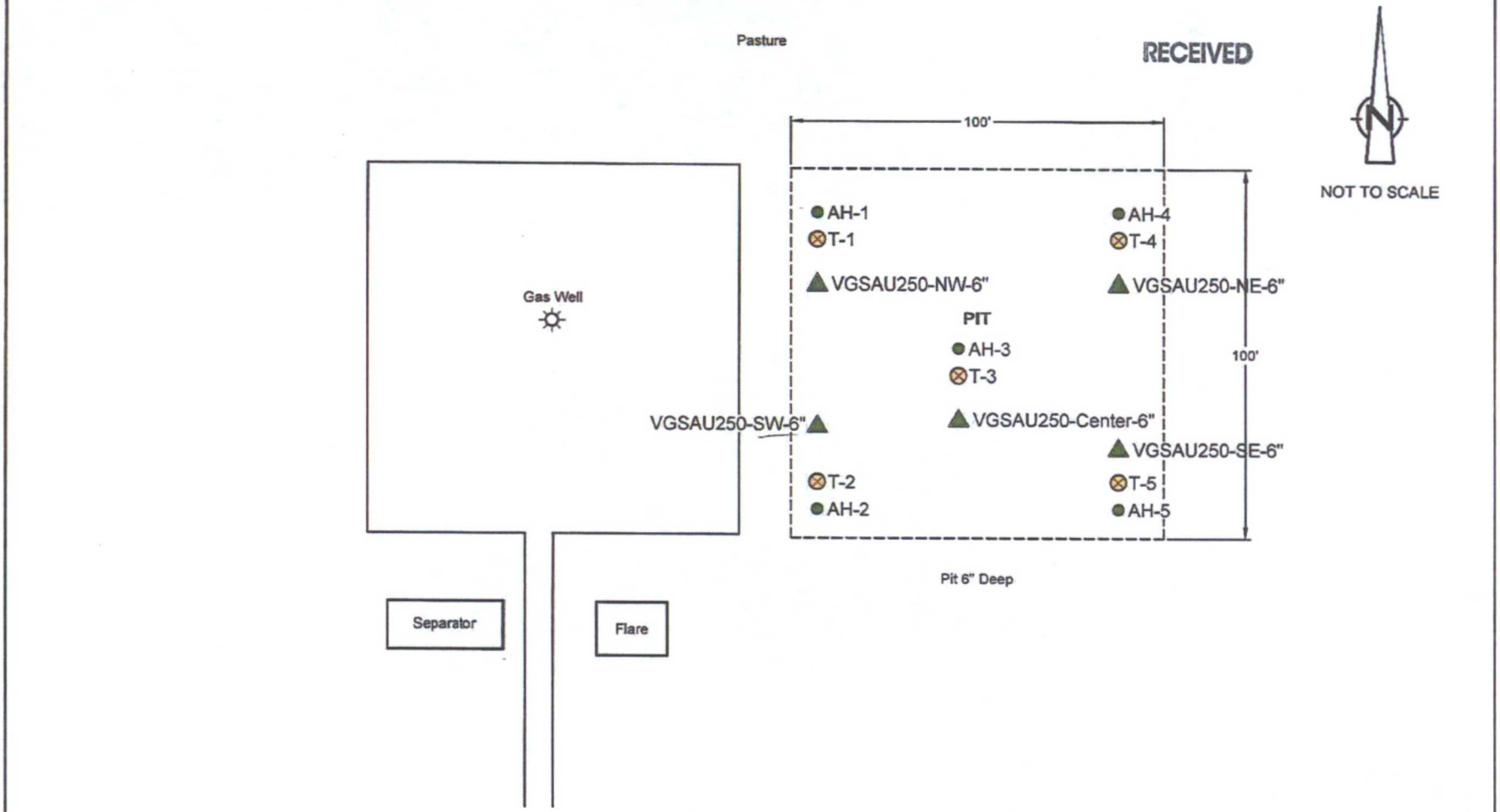


figure 3

SITE MAP
VACUUM GRAYBURG SAN ANDRES UNIT #250
LEA COUNTY, NEW MEXICO
Chevron Environmental Management Company

073822-01(000)GN-DL001 JAN 18/2012

Controlled Recovery, Inc.
P.O. Box 388
Hobbs, NM 88241-0388

Voice: (575) 393-1079
Fax: (575) 393-3615

Invoice

Invoice Number: 039721

Invoice Date: Oct 24, 2007

Page: 1

Sold To:
CHEVRON
HCR 60 BOX 423
LOVINGTON, NM 88260

Ship to:
CHEVRON
VGSAU #250

Customer ID	Customer PO	Payment Terms	
CHEV-BUCK		Net 30 Days	
Sales Rep ID	**Shipping Method**	**Ship Date**	**Due Date**
	SEE ATTACHED		11/23/07

Quantity	Item	Description	Unit Price	Extension
2,000.00		CONT SOIL PER ATTACHED	16.00	32,000.00

Subtotal	32,000.00
Sales Tax	2,140.00
Total Invoice Amount	34,140.00
Payment/Credit Applied	
TOTAL	34,140.00

Check/Credit Memo No: