



16 November, 2021

New Mexico Oil Conservation Division

1625 North French Drive

Santa Fe, New Mexico

RE: Closure Request

Chevron USA Inc.

UL – J, Section 33, Township 18S, Range 32E, County – Lea

Lat: 32.7021505063, Long: -103.769514507

Incident # - NGRLL1012338608

To Whom it may concern,

We are submitting this request for closure based on the activities below.

Activities were initiated to bring the impacted area into conformance with NMOCDD requirements. For clarity and cross reference purposes, the following Closure Request offers a brief Overview, a Site Map showing impacted area, a Sampling Map, Depth to Groundwater, Photos, Lab Data with Chain of Custody, a brief Summary of Field Activities and Conclusion.

On 1-29-2010 Chevron had a spill of 7.26 bbls with 6 bbls recovered due to an open ball valve. A third part contractor was contacted but clean-up was never initiated.

On 2-9-12 Chevron had another spill on this site of 32.76 bbls oil and 8.88 bbls produced water.

In June of 2012, Chevron mobilized to the Site and collected six soil samples from the remedial excavation areas. Following the initial field assessment activities, Chevron delegated the continuation of assessment and delineation efforts for the Site to CEMC.

In June 2014, CEMC contracted CRA to perform a comprehensive soil assessment at the Site by implementing a soil boring program.

The sampling map and analytical results addresses both spills.

- This is evident in the sampling map where there is a circle around the spill from 1-29-10 which occurred to the North of the battery, and the site map imbedded in the closure report where there is a green area at the top.
- The second spill on 2-9-12 occurred on the Southwest side of the pad with some spray to the North. This information is contained in each Initial C-141.
- I am asking you to consider closure of Incident Number NGR11012338608 (1RP-2504) based on these facts.

Questions, concerns and/or needs for additional information should be directed to Amy Barnhill at (432) 687-7108 or via e-mail at ABarnhill@chevron.com.

Thank you for your time and attention to the matter.

Amy Barnhill

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

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NGRL1012338608
District RP	1RP-2504
Facility ID	
Application ID	

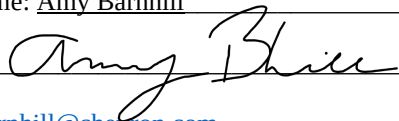
Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: *Each of the following items must be included in the closure report.*

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection). **No photos available as this spill is from 2007.**
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Amy Barnhill Title: Waste and Water Specialist
Signature:  Date: 11-16-21
email: ABarnhill@chevron.com Telephone: 432-687-7108

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by:  Date: 03/31/2022
Printed Name: _____ Title: _____
Jennifer Nobui Environmental Specialist A

Original



www.CRAworld.com



Final Report

**SOIL ASSESSMENT AND DELINEATION
ACTIVITIES REPORT
KEEL FEDERAL TANK BATTERY
RP #2504**

Unit J, Section 33, Township 18 South, Range 32 East, Lea
County, New Mexico

Prepared for: Chevron Environmental Management Company

Conestoga-Rovers & Associates

2135 South Loop, 250 West
Midland, Texas 79703

November 2014 • 086493 • Report No. 1



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Section 1.0 Introduction

Conestoga-Rovers and Associates (CRA) is pleased to present this Soil Assessment and Delineation Activities Report to Chevron Environmental Management Company (CEMC) for the Keel Federal Tank Battery release location (hereafter referred to as the "Site").

This Report also serves as documentation of corrective actions performed by Chevron in association with Incident Number NGR11012338608 (1RP #2504); which the New Mexico Oil Conservation Division (NMOCD) District I, Hobbs, New Mexico office assigned to the release in August of 2014.

Section 2.0 Project Information and Background

The Site is located in Unit J, Section 33, Township 18 South, Range 32 East, approximately 11 miles south of Maljamar, New Mexico, in western Lea County (Figure 1 and Figure 2). The Site is located on public lands managed by the Bureau of Land Management (BLM).

CRA understands that Chevron conducted initial field assessment activities at the Site in February 2012. Chevron's assessment included a site visit, soil sample collection, analytical laboratory analyses and preliminary determinations of impacts to environmental media. Following the initial field assessment activities, Chevron delegated the continuation of assessment and delineation efforts for the Site to CEMC. In June 2014, CEMC contracted CRA to perform a comprehensive soil assessment at the Site by implementing a soil boring program.

On July 17, 2014, CRA mobilized to the Site to perform a site visit. During the site visit, proposed boring locations were marked and New Mexico one-call parameters were flagged for utility locating purposes. In addition, the Site was walked to observe site features.

2.1 Keel Federal Tank Battery Release

Chevron submitted a C-141 Form to the NMOCD dated February 25, 2012 (included as Appendix B), describing a release of 7.26 barrels (bbls) of oil resulting from a failed ball valve on the vessel. The C-141 reported that approximately 6 bbls of oil was recovered by a vacuum truck. The effected area was described as follows:

Dirt and sandy soil within the tank battery and approximately 432 square feet of sandy surface North of the battery fence.

Free standing fluids were recovered with a vacuum truck and squeegee. Chevron proceeded immediately with remedial activities. Chevron used a backhoe to backdrag the area of contaminated soils and roto-tilled an area South of the heater treater (West of the battery). The excavated soils were loaded and transported to an approved disposal facility. The actual volume and final disposition of the excavated soils are unknown. A third party contractor was dispatched to the spill site but no evidence of work was ever performed.

On February 9, 2012 Chevron had another spill on this site and in June of 2012, Chevron mobilized to the Site and collected six soil samples from the remedial excavation areas, that included the spill on 1-29-2010. These six soil samples were submitted to Cardinal Laboratories, Hobbs, New Mexico for determination of benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA Method 8021 B, total petroleum hydrocarbons (TPH) by Method 8015 (GRO + DRO) and chlorides by EPA Method SM4500Cl-B. The following results were reported:

<u>Sample Point</u>	<u>TPH (GRO + DRO)</u>	<u>Chlorides</u>
SS-1	<10.0 (mg/kg)	<16.0 (mg/kg)
SS-2	<10.0 (mg/kg)	<16.0 (mg/kg)
SS-3	<10.0 (mg/kg)	32 (mg/kg)
SS-4	<10.0 (mg/kg)	16 (mg/kg)
SS-5	7980 (mg/kg)	28800(mg/kg)
SS-6	23.8(mg/kg)	32 (mg/kg)

Based on the analytical results from the June 2012 sampling event, and as directed by the BLM; Chevron returned to the Site in July 2012 to over-seed the excavated area to the north and west of the battery.

2.2 Recommended Remediation Action Levels

Information available on the Petroleum Recovery Research Center (PRRC) Mapping Portal and the United States Geological Survey (USGS) Current Water Database for the Nation demonstrates that the depth to groundwater at the Site is greater than 100-feet bgs. The nearest private domestic water source is greater than 200-feet from the release site; the nearest public/municipal water source is greater than 1,000-feet from the release site; and the release site lies more than 1,000 horizontal feet from the nearest surface water body. Consequently, the NMOCD total ranking criteria score is zero (0) for the Site. The anticipated site-specific Recommended Remediation Action Levels (RRALs; per 2011 Draft Guidance) to be

applied to this location by the NMOCD for TPH (GRO+DRO) at the site is 500 mg/kg and 1,000 mg/kg for chlorides.

New Mexico Oil Conservation Division Site Assessment		
	Ranking Criteria	Score
Depth to Ground Water (>100 feet)		0
Wellhead Protection Area (> 1000 feet from water source, > 200 feet from domestic source)		0
Distance to Surface Body Water (>1000 horizontal feet)		0
Ranking Criteria Total Score		0*
*Because the ranking criteria total score is 0, NMOCD established RRALs are 50 mg/kg for benzene, toluene, ethylbenzene, and xylene (BTEX), 500 mg/kg TPH (GRO + DRO), and 1,000 mg/kg for chlorides ¹ .		

¹ NMOCD Draft Guidance for Release Reporting and Corrective Action, September 30, 2011

Section 3.0 Soil Assessment and Delineation Activities

On July 29, 2014, CRA's contracted service provider, Harrison & Cooper, Inc. (HCI) of Lubbock, Texas submitted an initial New Mexico One Call utility locate ticket (2014311123) pertaining to the installation of five soil borings (2-drill rig and 3-hand auger) under RP #3290. CRA submitted a MCBU Chevron Dig Plan with appropriate attachments for approval to the Chevron Buckeye Field Management Team. On August 13, 2014, HCI and CRA mobilized to the Site to begin soil boring activities. The drill rig soil borings (SB-1 and SB-2) were pre-cleared via air knife techniques to a depth of 5-feet bgs or until refusal. The borings were advanced using an air rotary drill rig, and split spoon sampling techniques were utilized to collect soil samples. Chloride concentrations in soil were field screened by mixing soil samples with distilled water. The rinsate was then screened using Hach chloride test strips. One boring (SB-1) was advanced to a total depth of 50-feet bgs, and soil boring (SB-2) was advanced to a total depth of 60-feet bgs based on field screening for chlorides. The remaining three soil borings (HA-1, HA-2, and HA-3) were advanced by hand auger. All three hand auger borings were advanced to a total depth of 1-foot bgs. A photo log documenting the drilling activities is included as Appendix C. Soil borings were logged in accordance with the Unified Soil Classification System and recorded. Visual representation of the boring logs can be found in Appendix D. The location of the soil borings are presented on the Site Details and Analytical Results Map (Figure 3).

Soil samples were collected for laboratory analysis from each boring (SB-1, SB-2, HA-1, HA-2, and HA-3) at varying intervals beginning at 0-feet bgs. Soil samples were packed into laboratory prepared jars and stored in a cooler with ice. The soil samples were sent to Xenco Laboratories (Xenco) in Odessa, Texas for analysis of BTEX by EPA Method 8021B; TPH by EPA Method SW 8015 Modified and for chloride analysis by EPA Method 300/300.1. Soil laboratory analytical

results are summarized in Table 1. The soil laboratory analytical report is included as Appendix E. A Site Details and Analytical Results Map is presented as Figure 3.

3.1 Soil Sampling Analytical Results

The soil type observed in soil samples collected during the drilling program consisted of orange sand from the surface to approximately 15-feet bgs. A very fine grained, unconsolidated and poorly cemented orange sand interbedded with a very fine grain sandstone and broken caliche was observed from approximately 15-feet to total depth of 50-feet bgs. Moisture content observed in the soil samples was dry in all instances.

All soil samples collected (SB-1, SB-2, HA-1, HA-2, and HA-3) from the Site in 2014 for laboratory analyses exhibited concentrations below laboratory reporting limits and below Site RRALs for BTEX (50 mg/kg) and TPH (GRO + DRO) (500 mg/kg). All soil samples collected from the Site in 2014 for laboratory analysis exhibited chloride concentrations in soil below Site RRALs (1,000 mg/kg). This data from the soil boring program demonstrates that the nature and extent of hydrocarbon and chloride impacts from the release incident are minimal and the potential risk to impact groundwater is extremely low.

Section 4.0 Conclusions

Evaluation of the analytical data obtained from soil assessment and delineation activities performed in July of 2014 has indicated that vertical and horizontal delineation of BTEX, TPH (GRO + DRO), and chloride impacts have been achieved. Based on data provided in this report, no further delineation or remedial efforts are warranted. CRA recommends closure of the release associated with RP # 3290.

If you have any questions or comments with regards to this Soil Assessment and Delineation Activities Report, please do not hesitate to contact our Midland office at (432) 686-0086. Your timely response to this correspondence is appreciated.

All of Which is Respectfully Submitted,

CONESTOGA ROVERS & ASSOCIATES



Thomas C. Larson
Principal, Midland Operations Manager



Jake L. Ferenz
Project Manager

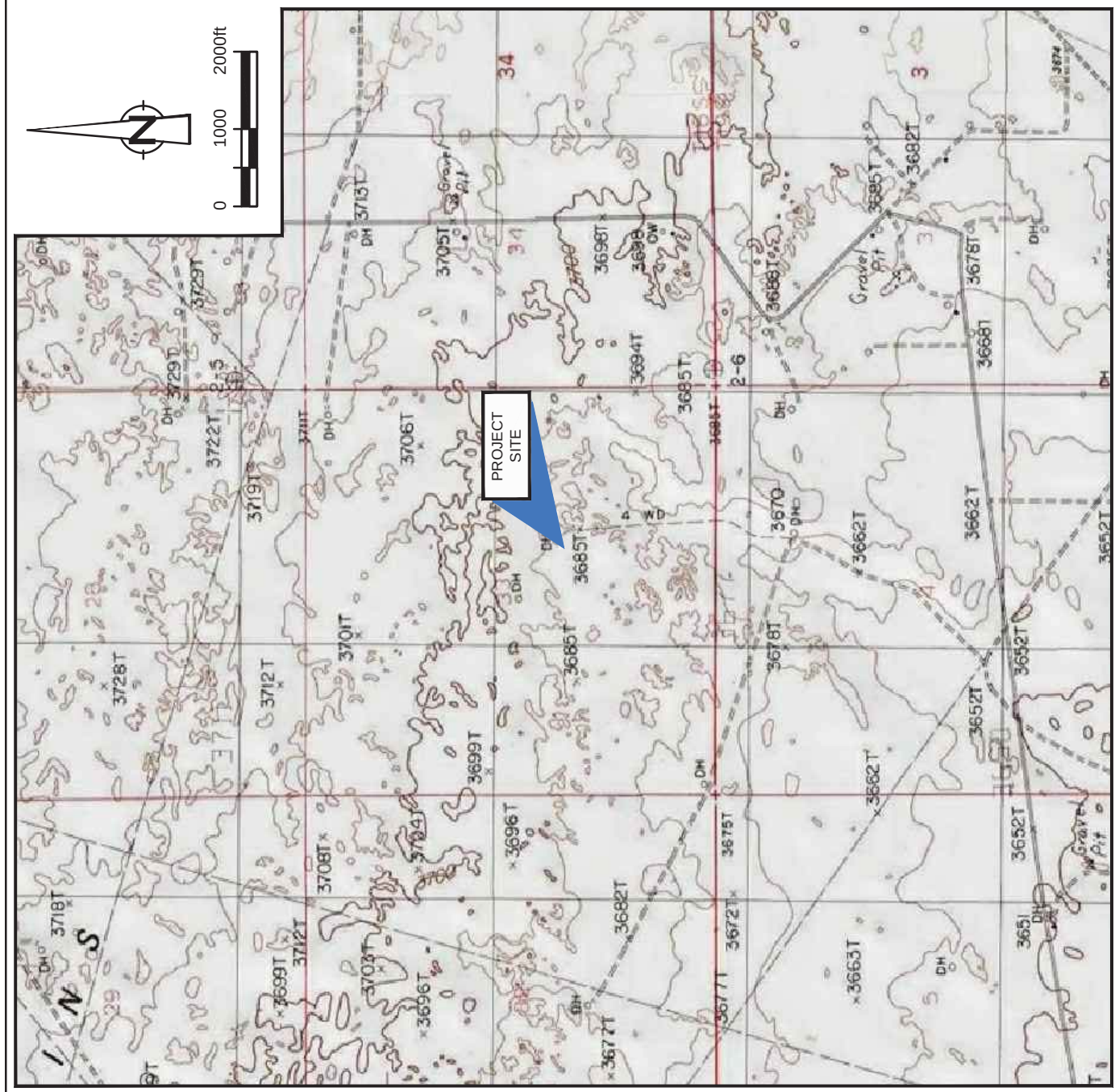
Chevron Environmental Management
Company

Soil Assessment and Delineation Activities Report

Figures

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November 2014



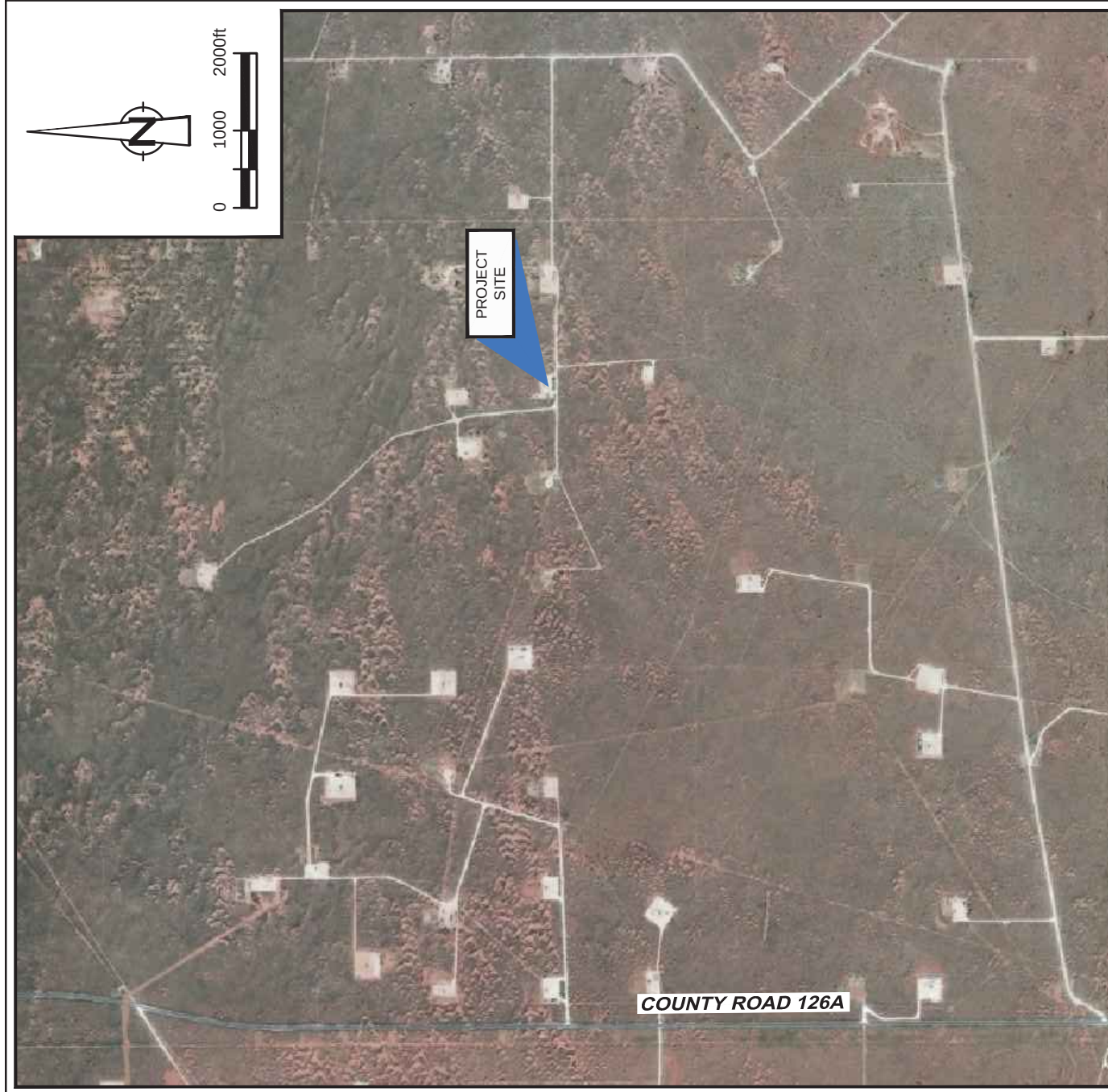


SOURCE: USGS 7.5 MINUTE QUAD
"GREENWOOD LAKE AND LAGUNA GATUNA NW, NEW MEXICO"

LAT/LONG: 32.7021° NORTH, 103.7695° WEST
COORDINATE: NAD83 DATUM, U.S. FOOT
STATE PLANE ZONE - NEW MEXICO EAST

figure 1
SITE LOCATION MAP
KEEL FEDERAL TANK BATTERY
LEA COUNTY, NEW MEXICO
Chevron Environmental Management Company





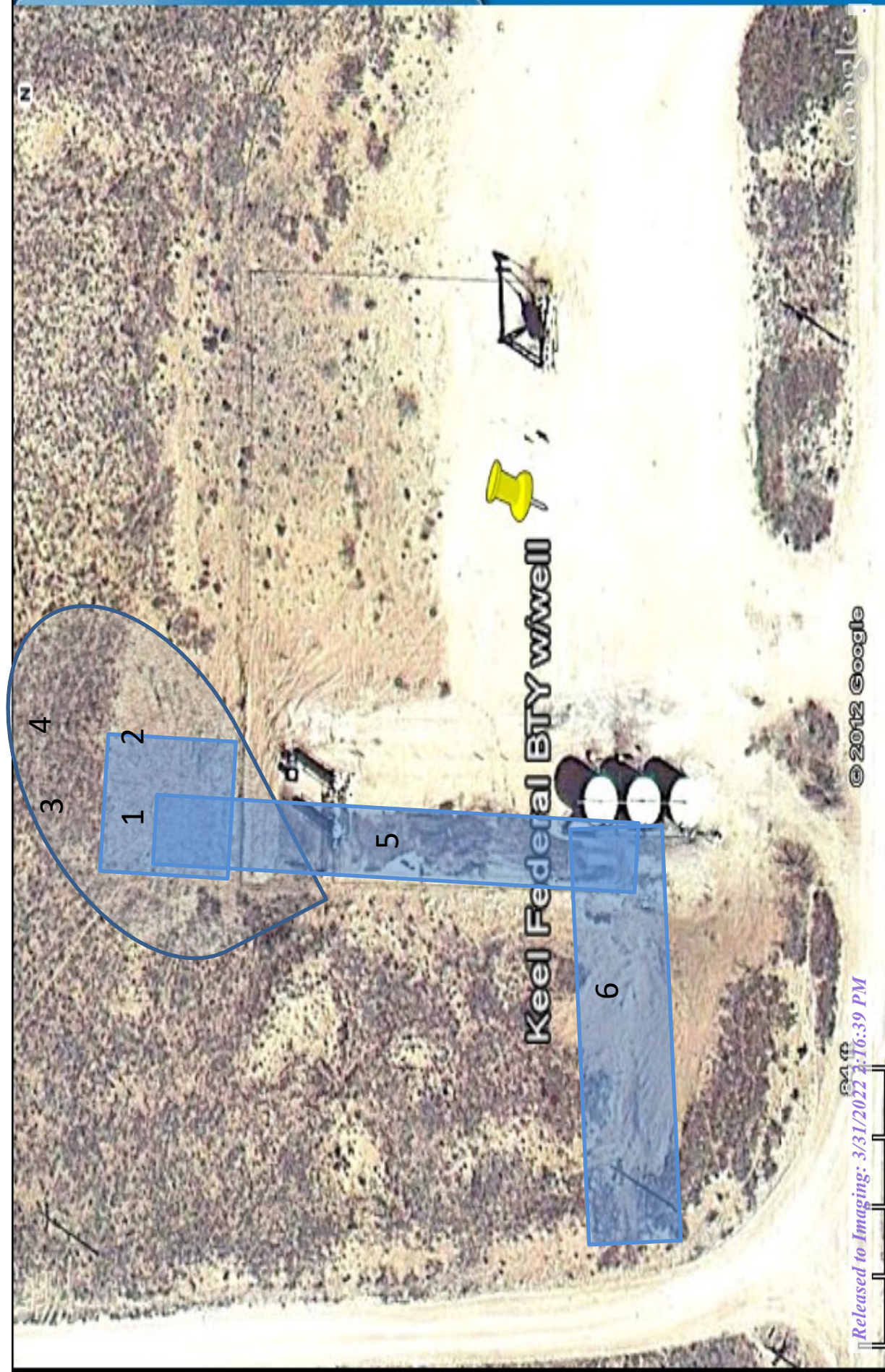
LAT/LONG: 32.7021° NORTH, 103.7695° WEST
COORDINATE: NAD83 DATUM, U.S. FOOT
STATE PLANE ZONE - NEW MEXICO EAST

figure 2
SITE AERIAL MAP
KEEL FEDERAL TANK BATTERY
LEA COUNTY, NEW MEXICO
Chevron Environmental Management Company



086493-00(001)GN-DL001 SEP 9/2014

Keel Federal Bty Spill on/off Pad & Spray Off Pad - Confirmation Samples Diagram 6/26/12



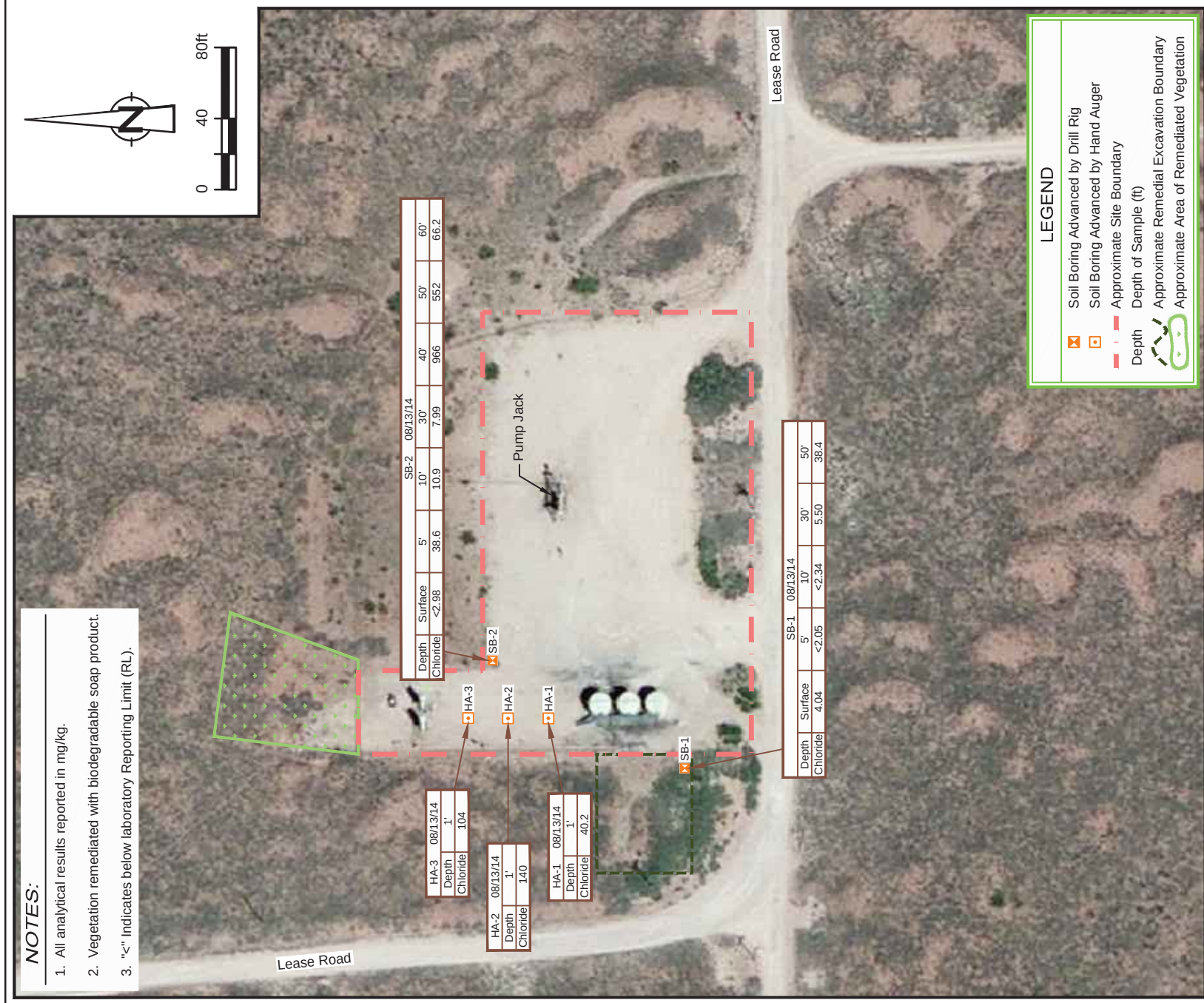


figure 3

SITE DETAILS AND ANALYTICAL RESULTS MAP
KEEL FEDERAL TANK BATTERY
LEA COUNTY, NEW MEXICO
Chevron Environmental Management Company



Chevron Environmental Management
Company

Soil Assessment and Delineation Activities Report

Tables

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TABLE 1

SOIL ANALYTICAL SUMMARY
CEMC-KEEL FEDERAL TANK BATTERY
LEA COUNTY, NEW MEXICO

Sample ID	Depth (bgs)	Sample Date	Benzene	Toluene	Ethyl- Benzene	Xylenes			Total BTX	TPH (SW8015 Modified)							Chlorides
						m,p- Xylenes	o-Xylenes	Total Xylenes		GRO C6-Cl10	DRO >Cl10-C28	GRO C6-Cl12	DRO C12-C28	ORO C28-C35	Total TPH		
NMOCD Recommended Remediation Action Levels																	
			0.2	---	---	---	---	---	50	500	500	500	500	500	2,500	1,000	
SPRAY #1	Surface	6/26/12	[mg/kg] <0.050	[mg/kg] <0.050	[mg/kg] <0.050	[mg/kg] ---	[mg/kg] ---	[mg/kg] <0.150	[mg/kg] ---	[mg/kg] <10.0	[mg/kg] <10.0	[mg/kg] ---	[mg/kg] ---	[mg/kg] ---	[mg/kg] ---	[mg/kg] <16.0	
SPRAY #2	Surface	6/26/12	<0.050	<0.050	<0.050	---	---	<0.150	---	<10.0	<10.0	---	---	---	---	<16.0	
SPRAY #3	Surface	6/26/12	<0.050	<0.050	<0.050	---	---	<0.150	---	<10.0	<10.0	---	---	---	---	32.0	
SPRAY #4	Surface	6/26/12	<0.050	<0.050	<0.050	---	---	<0.150	---	<10.0	<10.0	---	---	---	---	16.0	
SS #5	Surface	6/26/12	<0.050	<0.050	0.417	---	---	0.319	---	<50.0	7980	---	---	---	---	20800	
SS #6	Surface	6/26/12	<0.050	<0.050	<0.050	---	---	<0.150	---	<10.0	23.8	---	---	---	---	32.0	
SB1	Surface	8/13/14	<0.00103	<0.00207	<0.00103	<0.00207	<0.00103	<0.00103	<0.00103	---	---	<15.6	52.4	<15.6	52.4	4.04	
SB1 5'	5'	8/13/14	<0.00102	<0.00204	<0.00102	<0.00204	<0.00102	<0.00102	<0.00102	---	---	<15.4	<15.4	<15.4	<15.4	<2.05	
SB1 10'	10'	8/13/14	<0.00117	<0.00234	<0.00117	<0.00234	<0.00117	<0.00117	<0.00117	---	---	<17.5	<17.5	<17.5	<17.5	<2.34	
SB1 30'	30'	8/13/14	<0.00103	<0.00206	<0.00103	<0.00206	<0.00103	<0.00103	<0.00103	---	---	<15.5	<15.5	<15.5	<15.5	5.50	
SB1 50'	50'	8/13/14	<0.00106	<0.00211	<0.00106	<0.00211	<0.00106	<0.00106	<0.00106	---	---	<15.9	<15.9	<15.9	<15.9	38.4	
SB2	Surface	8/13/14	<0.00149	<0.00297	<0.00149	<0.00297	<0.00149	<0.00149	<0.00149	---	---	<22.3	57.3	<22.3	57.3	<2.98	
SB2 5'	5'	8/13/14	<0.00129	<0.00258	<0.00129	<0.00258	<0.00129	<0.00129	<0.00129	---	---	<19.4	38.6	<19.4	38.6	38.6	
SB2 10'	10'	8/13/14	<0.00129	<0.00259	<0.00129	<0.00259	<0.00129	<0.00129	<0.00129	---	---	<19.4	32.7	<19.4	32.7	10.9	
SB2 30'	30'	8/13/14	<0.00142	<0.00284	<0.00142	<0.00284	<0.00142	<0.00142	<0.00142	---	---	<21.3	<21.3	<21.3	<21.3	7.99	
SB2 40'	40'	8/13/14	<0.00144	<0.00288	<0.00144	<0.00288	<0.00144	<0.00144	<0.00144	---	---	<21.7	<21.7	<21.7	<21.7	966	
SB2 50'	50'	8/13/14	<0.00120	<0.00241	<0.00120	<0.00241	<0.00120	<0.00120	<0.00120	---	---	<18.1	<18.1	<18.1	<18.1	552	
SB2 60'	60'	8/13/14	<0.00123	<0.00247	<0.00123	<0.00247	<0.00123	<0.00123	<0.00123	---	---	<18.5	<18.5	<18.5	<18.5	66.2	
HA1	1'	8/13/14	<0.00105	<0.00209	<0.00105	<0.00209	<0.00105	<0.00105	<0.00105	---	---	<15.7	147	<15.7	147	40.2	
HA2	1'	8/13/14	<0.00132	<0.00265	<0.00132	<0.00265	<0.00132	<0.00132	<0.00132	---	---	<19.9	55.0	<19.9	55.0	140	
HA3	1'	8/13/14	<0.00133	<0.00266	<0.00133	<0.00266	<0.00133	<0.00133	<0.00133	---	---	<20.0	241	<20.0	241	104	

Notes:

1. All analytical results reported in (mg/kg) [milligrams per kilogram]
2. BTX analysis by Method EPA 8201 B
3. TPH analysis by Method EPA SW8015 Modified
4. 2012 Chloride analyses by Method EPA SM4500Cl-8; 2014 Chloride analyses by Method EPA 300/300.1
5. Highlighted cells indicate concentrations exceeding guidance RRLs
6. RRLs from NMOC (September 2011 Draft) Release Guidance Document
7. < indicates below laboratory Reporting Limit (RL)
8. (SB) indicates Soil Borings; (HA) indicates Hand Auger; Spray indicates location of 2012 Chevron sampling site; (S) indicates Soil Sample
9. "n/a" indicates not analyzed
10. bgs- below ground surface

Chevron Environmental Management
Company

Soil Assessment and Delineation Activities Report

Appendices

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November 2014



Chevron Environmental Management
Company

Soil Assessment and Delineation Activities Report

Appendix A

Original Form C-141

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November 2014



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

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

X Initial Report Final Report

Name of Company	Chevron USA	Contact	Tejay Simpson
Address	HCR 60 Box 423 Lovington, N.M. 88260	Telephone No.	505-396-4414 X 201
Facility Name	KEEL A FEDERAL	Facility Type	PRODUCTION BATTERY
Surface Owner	FEDERAL BLM	Mineral Owner	FEDERAL
		Lease No.	FEDERAL LEASE NO. 24161

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	South Line	Feet from the	East Line	County
J	33	18.0S	32E	1980		2080		Lea

Latitude: 32.7021505063 / Longitude: -103.769514507

NATURE OF RELEASE

API #30-025-33316

Type of Release	Crude Oil	Volume of Release	Oil 7.262 Barrels	Volume Recovered	6.0 BARREL ESTIMATE
Source of Release	Sight Glass Failure on Heater Treater.	Date and Hour of Occurrence	1-29-2010 @ ????	Date and Hour of Discovery	1-29-2010 @ 15:00
Was Immediate Notice Given?	☒ Yes ☐ No ☐ Not Required	If YES, To Whom?	Robert Harrison		
By Whom?	Tejay Simpson	Date and Hour	1-29-2010 @ 17:09		
Was a Watercourse Reached?	☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.*

WATER @ 330'

Describe Cause of Problem and Remedial Action Taken.*

At approximately 15:00 hours, Chevron Field Specialist arrived on the location of the Keel A Federal Battery and observed oil spraying out of the top side of the bottom sight glass. The Field Specialist used a shovel to close the 1/2" ball valves between the vessel and the sight glass gauge cock valves stopping the release of oil. Operations Supervisor was called to the scene. Area of impact and average depth of free standing fluid and depth of soil penetration was determined and spill volume was calculated at 7.262 barrels of oil. Vacuum truck arrived at the location and recovered free standing oil. Total recovery of free standing fluid estimated at 6.0 barrels.

Notification was made to the NMOCD and BLM by phone at approximately 17:09 hours.

Describe Area Affected and Cleanup Action Taken.

Dirt and sandy soil within the tank battery and approximately 432 square feet of sandy surface north of the battery fence immediately adjacent to the battery.

Free standing fluid was recovered with vacuum truck and squeegee. Backhoe was dispatched to the location the following morning and back drag spill area recovering contaminated soil. Contaminated soil was taken to CRI disposal. Impact area inside the battery and immediately south of the heater treater was roto-tilled to ensure less than 1% THC.

Ocotillo Environmental Service was dispatched to the spill site on Monday, February 1st to obtain soil samples to help develop final clean-up and remediation plan.

Additional clean-up is scheduled to be conducted the week of February 8th.

Evidence of historic spill inside the battery were discovered during initial clean up response.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: 		<u>OIL CONSERVATION DIVISION</u>	
Printed Name: Tejay Simpson		Approved by: District Supervisor 	
Title: Operations Supervisor		Approval Date: 05/03/10	Expiration Date: 07/06/10
E-mail Address: tscq@chevron.com		Conditions of Approval: SUBM (X) FINAL	
Date: February 2, 2010	Phone: 396-4414 X 201	Attached ☐	
* Attach Additional Sheets If Necessary		MRP-10-5-2504	

Chevron Environmental Management
Company

Soil Assessment and Delineation Activities Report

Appendix B

Photographic Log

086493 (1)
November 2014





PHOTO 1: View of soil boring (SB-1) installation activities facing north west



PHOTO 2: View of soil boring (SB-1) installation activities and hand auger (HA-1, HA-2, and HA-3) locations facing north east



PHOTOGRAPH LOG
Keel Federal Tank Battery
Lea County, New Mexico
Chevron Environmental Management Company

Chevron Environmental Management
Company

Soil Assessment and Delineation Activities Report

Appendix C

Soil Boring Logs

086493 (1)
November 2014



SOIL BORING LOG

Project: Keel Federal Tank Battery
Lea County, NM

Project:	Keel Federal Tank Battery Lea County, NM	No.	SB-1	File No.:	
Client:	CEMC			Date: 08/13/14	
				Drilling Co.: HCI	
				Supervisor: Kenny Cooper	
				Type Rig: Air/Mud Rotary	
				Logged by: John Ferguson	

LABORATORY TEST DATA						FIELD DATA				BORING DATA	
Benzene	Toluene	Ethyl-benzene	Xylenes	Total TPH (C6-C35)	Chlorides	Photo-Ionization Detection Reading (ppm)	Sampling	Depth (feet)	Water Level	Screen Interval	Start Time: 9:20 am Finish Time: 9:45 Sand: Dull orange, very fine grain, unconsolidated, with broken caliche in matrix, dry Clay/Sand: Dull orange, very fine grain, unconsolidated, dry Sand: orange, very fine grain, unconsolidated, dry Sand: Dull orange, very fine grain, unconsolidated with poorly cemented very fine grain sandstone and broken caliche in matrix, dry Sand: Dull yellow to orange, very fine grain, unconsolidated with poorly cemented very fine grain sandstone and broken caliche in matrix, dry Sand: Orange very fine grain, unconsolidated, with poorly cemented very fine grain sandstone in matrix, dry
								5			
								10			
								15			
								20			
								25			
								30			
								35			
								40			

☒ Sampling Interval

Stratification is Inferred And May Not be Exact.
 Soil Classification Based on Visual-Manual Procedure

Water First Noted
 Analyzed Sample

Released to Imaging: 3/31/2022 2:16:39 PM

[illegible]

[illegible]

Chevron Environmental Management
Company

Soil Assessment and Delineation Activities Report

Appendix D

Soil Laboratory Analytical Report

086493 (1)
November 2014



Analytical Report 491572

for

Conestoga Rovers & Associates

Project Manager: Jacob Ferenz
CEMC-Keel Federal Tank Battery

086493

26-AUG-14

Collected By: Client



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-14-16-TX), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
New Jersey (TX007), North Carolina(681), Oklahoma (9218), Pennsylvania (68-03610)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Texas (T104704477), Louisiana (04176), USDA (P330-07-00105)

Xenco-Lakeland: Florida (E84098)

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

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

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

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

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



26-AUG-14

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

Reference: XENCO Report No(s): **491572**
CEMC-Keel Federal Tank Battery
Project Address:

Jacob Ferenz:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 491572. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 491572 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kelsey Brooks
Project Manager

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

Certified and approved by numerous States and Agencies.

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

Houston - Dallas - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America



Sample Cross Reference 491572

Conestoga Rovers & Associates, Midland, TX

CEMC-Keel Federal Tank Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
S-086493-081314-JMF-SB1	S	08-13-14 09:20		491572-001
S-086493-081314-JMF-SB1 5'	S	08-13-14 09:25	- 5 ft	491572-002
S-086493-081314-JMF-SB1 10'	S	08-13-14 09:30	- 10 ft	491572-003
S-086493-081314-JMF-SB1 30'	S	08-13-14 09:35	- 30 ft	491572-004
S-086493-081314-JMF-SB1 50'	S	08-13-14 09:40	- 50 ft	491572-005
S-086493-081314-JMF-SB2	S	08-13-14 10:10		491572-006
S-086493-081314-JMF-SB2 5'	S	08-13-14 10:15	- 5 ft	491572-007
S-086493-081314-JMF-SB2 10'	S	08-13-14 10:20	- 10 ft	491572-008
S-086493-081314-JMF-SB2 30'	S	08-13-14 10:25	- 30 ft	491572-009
S-086493-081314-JMF-SB2 40'	S	08-13-14 10:30	- 40 ft	491572-010
S-086493-081314-JMF-SB2 50'	S	08-13-14 10:35	- 50 ft	491572-011
S-086493-081314-JMF-SB2 60'	S	08-13-14 10:40	- 60 ft	491572-012
S-086493-081314-JMF-HA1	S	08-13-14 12:00	- 1 ft	491572-013
S-086493-081314-JMF-HA2	S	08-13-14 12:05	- 1 ft	491572-014
S-086493-081314-JMF-HA3	S	08-13-14 12:10	- 1 ft	491572-015



CASE NARRATIVE

Client Name: Conestoga Rovers & Associates
Project Name: CEMC-Keel Federal Tank Battery

Project ID: 086493
Work Order Number(s): 491572

Report Date: 26-AUG-14
Date Received: 08/15/2014

Sample receipt non conformance and comments:

Sample receipt non conformance and comments per sample:

None



Certificate of Analytical Results 491572

Conestoga Rovers & Associates, Midland, TX

CEMC-Keel Federal Tank Battery

Sample Id: S-086493-081314-JMF-SB1
Lab Sample Id: 491572-001
Matrix: Soil
Date Received: 08.15.14 12.00
Date Collected: 08.13.14 09.20

Analytical Method: Inorganic Anions by EPA 300/300.1

Tech: JUM
Analyst: JUM
Seq Number: 949014
Prep Method: E300P
% Moisture: 3.92
Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4.04	2.08	mg/kg	08.22.14 05.58		1

Analytical Method: TPH By SW8015 Mod

Tech: ARM
Analyst: ARM
Seq Number: 948415
Prep Method: TX1005P
% Moisture: 3.92
Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C12 Gasoline Range Hydrocarbons	PHC612	ND	15.6	mg/kg	08.16.14 19.26	U	1
C12-C28 Diesel Range Hydrocarbons	PHCG1028	52.4	15.6	mg/kg	08.16.14 19.26		1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	15.6	mg/kg	08.16.14 19.26	U	1
Total TPH	PHC635	52.4	15.6	mg/kg	08.16.14 19.26		1
Surrogate			% Recovery	Units	Analysis Date	Flag	
1-Chlorooctane	111-85-3		114	%	08.16.14 19.26		
o-Terphenyl	84-15-1		115	%	08.16.14 19.26		



Certificate of Analytical Results 491572

Conestoga Rovers & Associates, Midland, TX

CEMC-Keel Federal Tank Battery

Sample Id: S-086493-081314-JMF-SB1

Lab Sample Id: 491572-001

Matrix: Soil

Date Received: 08.15.14 12.00

Date Collected: 08.13.14 09.20

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ARM

% Moisture: 3.92

Analyst: ARM

Basis: Dry Weight

Seq Number: 948567

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	ND	0.00103	mg/kg	08.18.14 17.36	U	1
Toluene	108-88-3	ND	0.00207	mg/kg	08.18.14 17.36	U	1
Ethylbenzene	100-41-4	ND	0.00103	mg/kg	08.18.14 17.36	U	1
m,p-Xylenes	179601-23-1	ND	0.00207	mg/kg	08.18.14 17.36	U	1
o-Xylene	95-47-6	ND	0.00103	mg/kg	08.18.14 17.36	U	1
Total Xylenes	1330-20-7	ND	0.00103	mg/kg	08.18.14 17.36	U	1
Total BTEX		ND	0.00103	mg/kg	08.18.14 17.36	U	1
Surrogate							
1,4-Difluorobenzene *			%	Limits	Analysis Date	Flag	
	540-36-3		104	%	08.18.14 17.36		
4-Bromofluorobenzene *	460-00-4		92	%	08.18.14 17.36		



Certificate of Analytical Results 491572

Conestoga Rovers & Associates, Midland, TX

CEMC-Keel Federal Tank Battery

Sample Id: S-086493-081314-JMF-SBI 5'
Lab Sample Id: 491572-002
Matrix: Soil
Date Received: 08.15.14 12.00
Date Collected: 08.13.14 09.25
Sample Depth: 5 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Tech: JUM
Analyst: JUM
Seq Number: 949014
Prep Method: E300P
% Moisture: 2.61
Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	ND	2.05	mg/kg	08.22.14 06.21	U	1

Analytical Method: TPH By SW8015 Mod

Tech: ARM
Analyst: ARM
Seq Number: 948415
Prep Method: TX1005P
% Moisture: 2.61
Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C12 Gasoline Range Hydrocarbons	PHC612	ND	15.4	mg/kg	08.16.14 19.55	U	1
C12-C28 Diesel Range Hydrocarbons	PHCG1028	ND	15.4	mg/kg	08.16.14 19.55	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	15.4	mg/kg	08.16.14 19.55	U	1
Total TPH	PHC635	ND	15.4	mg/kg	08.16.14 19.55	U	1
Surrogate			%	Units	Analysis Date	Flag	
1-Chlorooctane	111-85-3		Recovery	%	08.16.14 19.55		
o-Terphenyl	84-15-1		108	%	08.16.14 19.55		
			106	%	08.16.14 19.55		



Certificate of Analytical Results 491572

Conestoga Rovers & Associates, Midland, TX

CEMC-Keel Federal Tank Battery

Sample Id: S-080493-081314-JMF-SBI 5'

Lab Sample Id: 491572-002

Matrix: Soil

Date Received: 08.15.14 12.00

Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B

Tech: ARM

Prep Method: SW5030B

Analyst: ARM

% Moisture: 2.61

Seq Number: 948567

Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	ND	0.00102	mg/kg	08.18.14 17.19	U	1
Toluene	108-88-3	ND	0.00204	mg/kg	08.18.14 17.19	U	1
Ethylbenzene	100-41-4	ND	0.00102	mg/kg	08.18.14 17.19	U	1
m,p-Xylenes	179601-23-1	ND	0.00204	mg/kg	08.18.14 17.19	U	1
o-Xylene	95-47-6	ND	0.00102	mg/kg	08.18.14 17.19	U	1
Total Xylenes	1330-20-7	ND	0.00102	mg/kg	08.18.14 17.19	U	1
Total BTEX		ND	0.00102	mg/kg	08.18.14 17.19	U	1
Surrogate			%				
4-Bromofluorobenzene *	Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
	460-00-4	89	%	80-120	08.18.14 17.19		
1,4-Difluorobenzene *	540-36-3	101	%	80-120	08.18.14 17.19		



Certificate of Analytical Results 491572

Conestoga Rovers & Associates, Midland, TX

CEMC-Keel Federal Tank Battery

Sample Id: S-086493-081314-JMF-SB1 10' Matrix: Soil Date Received: 08.15.14 12.00
Lab Sample Id: 491572-003 Date Collected: 08.13.14 09.30 Sample Depth: 10 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Tech: JUM Prep Method: E300P
Analyst: JUM % Moisture: 14.46
Seq Number: 949014 Date Prep: 08.21.14 17.00 Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	ND	2.34	mg/kg	08.22.14 07.29	U	1

Analytical Method: TPH By SW8015 Mod

Tech: ARM Prep Method: TX1005P
Analyst: ARM % Moisture: 14.46
Seq Number: 948415 Date Prep: 08.15.14 16.00 Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C12 Gasoline Range Hydrocarbons	PHC612	ND	17.5	mg/kg	08.16.14 21.18	U	1
C12-C28 Diesel Range Hydrocarbons	PHCG1028	ND	17.5	mg/kg	08.16.14 21.18	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	17.5	mg/kg	08.16.14 21.18	U	1
Total TPH	PHC635	ND	17.5	mg/kg	08.16.14 21.18	U	1
Surrogate			%				
1-Chlorooctane		Cas Number	Recovery	Units	Limits	Analysis Date	Flag
		111-85-3	110	%	70-135	08.16.14 21.18	
o-Terphenyl		84-15-1	111	%	70-135	08.16.14 21.18	



Certificate of Analytical Results 491572

Conestoga Rovers & Associates, Midland, TX

CEMC-Keel Federal Tank Battery

Sample Id: S-080493-081314-JMF-SB1 10' Date Received: 08.15.14 12.00
Lab Sample Id: 491572-003 Matrix: Soil Sample Depth: 10 ft
Date Collected: 08.13.14 09.30

Analytical Method: BTEX by EPA 8021B

Tech: ARM Prep Method: SW5030B
Analyst: ARM % Moisture: 14.46
Seq Number: 948567 Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	ND	0.00117	mg/kg	08.18.14 17.52	U	1
Toluene	108-88-3	ND	0.00234	mg/kg	08.18.14 17.52	U	1
Ethylbenzene	100-41-4	ND	0.00117	mg/kg	08.18.14 17.52	U	1
m,p-Xylenes	179601-23-1	ND	0.00234	mg/kg	08.18.14 17.52	U	1
o-Xylene	95-47-6	ND	0.00117	mg/kg	08.18.14 17.52	U	1
Total Xylenes	1330-20-7	ND	0.00117	mg/kg	08.18.14 17.52	U	1
Total BTEX		ND	0.00117	mg/kg	08.18.14 17.52	U	1
Surrogate							
4-Bromofluorobenzene *	Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene *	460-00-4	93	%	80-120	08.18.14 17.52		
	540-36-3	106	%	80-120	08.18.14 17.52		



Certificate of Analytical Results 491572

Conestoga Rovers & Associates, Midland, TX

CEMC-Keel Federal Tank Battery

Sample Id: S-086493-081314-JMF-SBI 30'
Lab Sample Id: 491572-004

Matrix: Soil
Date Collected: 08.13.14 09.35
Date Received: 08.15.14 12.00
Sample Depth: 30 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Tech: JUM
Analyst: JUM
Seq Number: 949014

Prep Method: E300P
% Moisture: 3.68
Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5.50	2.08	mg/kg	08.22.14 07.52		1

Analytical Method: TPH By SW8015 Mod

Tech: ARM
Analyst: ARM
Seq Number: 948415

Prep Method: TX1005P
% Moisture: 3.68
Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C12 Gasoline Range Hydrocarbons	PHC612	ND	15.5	mg/kg	08.16.14 21.46	U	1
C12-C28 Diesel Range Hydrocarbons	PHCG1028	ND	15.5	mg/kg	08.16.14 21.46	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	15.5	mg/kg	08.16.14 21.46	U	1
Total TPH	PHC635	ND	15.5	mg/kg	08.16.14 21.46	U	1

Surrogate

	Cas Number	Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	08.16.14 21.46	
o-Terphenyl	84-15-1	106	%	70-135	08.16.14 21.46	



Certificate of Analytical Results 491572

Conestoga Rovers & Associates, Midland, TX

CEMC-Keel Federal Tank Battery

Sample Id: S-080493-081314-JMF-SBI 30'
Lab Sample Id: 491572-004
Matrix: Soil
Date Collected: 08.13.14 09.35
Date Received: 08.15.14 12.00
Sample Depth: 30 ft

Analytical Method: BTEX by EPA 8021B

Tech: ARM

Analyst: ARM

Seq Number: 948567

Prep Method: SW5030B

% Moisture: 3.68

Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	ND	0.00103	mg/kg	08.18.14 18.09	U	1
Toluene	108-88-3	ND	0.00206	mg/kg	08.18.14 18.09	U	1
Ethylbenzene	100-41-4	ND	0.00103	mg/kg	08.18.14 18.09	U	1
m,p-Xylenes	179601-23-1	ND	0.00206	mg/kg	08.18.14 18.09	U	1
o-Xylene	95-47-6	ND	0.00103	mg/kg	08.18.14 18.09	U	1
Total Xylenes	1330-20-7	ND	0.00103	mg/kg	08.18.14 18.09	U	1
Total BTEX		ND	0.00103	mg/kg	08.18.14 18.09	U	1
Surrogate			%				
4-Bromofluorobenzene *	Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene *	460-00-4	93	%	80-120	08.18.14 18.09		
	540-36-3	107	%	80-120	08.18.14 18.09		



Certificate of Analytical Results 491572

Conestoga Rovers & Associates, Midland, TX

CEMC-Keel Federal Tank Battery

Sample Id: S-086493-081314-JMF-SBI 50'
Lab Sample Id: 491572-005
Matrix: Soil
Date Collected: 08.13.14 09.40
Date Received: 08.15.14 12.00
Sample Depth: 50 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Tech: JUM
Analyst: JUM
Seq Number: 949014
Prep Method: E300P
% Moisture: 5.62
Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	38.4	2.12	mg/kg	08.22.14 08.14		1

Analytical Method: TPH By SW8015 Mod

Tech: ARM
Analyst: ARM
Seq Number: 948415
Prep Method: TX1005P
% Moisture: 5.62
Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C12 Gasoline Range Hydrocarbons	PHC612	ND	15.9	mg/kg	08.16.14 22.12	U	1
C12-C28 Diesel Range Hydrocarbons	PHCG1028	ND	15.9	mg/kg	08.16.14 22.12	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	15.9	mg/kg	08.16.14 22.12	U	1
Total TPH	PHC635	ND	15.9	mg/kg	08.16.14 22.12	U	1
Surrogate			%				
1-Chlorooctane		Cas Number	Recovery	Units	Limits	Analysis Date	Flag
		111-85-3	112	%	70-135	08.16.14 22.12	
o-Terphenyl		84-15-1	113	%	70-135	08.16.14 22.12	



Certificate of Analytical Results 491572

Conestoga Rovers & Associates, Midland, TX

CEMC-Keel Federal Tank Battery

Sample Id: S-080493-081314-JMF-SBI 50'
Lab Sample Id: 491572-005
Matrix: Soil
Date Received: 08.15.14 12.00
Sample Depth: 50 ft

Analytical Method: BTEX by EPA 8021B

Tech: ARM

Prep Method: SW5030B

Analyst: ARM

% Moisture: 5.62

Seq Number: 948567

Date Prep: 08.18.14 14.00

Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	ND	0.00106	mg/kg	08.18.14 18.25	U	1
Toluene	108-88-3	ND	0.00211	mg/kg	08.18.14 18.25	U	1
Ethylbenzene	100-41-4	ND	0.00106	mg/kg	08.18.14 18.25	U	1
m,p-Xylenes	179601-23-1	ND	0.00211	mg/kg	08.18.14 18.25	U	1
o-Xylene	95-47-6	ND	0.00106	mg/kg	08.18.14 18.25	U	1
Total Xylenes	1330-20-7	ND	0.00106	mg/kg	08.18.14 18.25	U	1
Total BTEX		ND	0.00106	mg/kg	08.18.14 18.25	U	1
Surrogate							
4-Bromofluorobenzene *							
1,4-Difluorobenzene *							
	Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
	460-00-4	91	%	80-120	08.18.14 18.25		
	540-36-3	103	%	80-120	08.18.14 18.25		



Certificate of Analytical Results 491572

Conestoga Rovers & Associates, Midland, TX

CEMC-Keel Federal Tank Battery

Sample Id: S-086493-081314-JMF-SB2

Lab Sample Id: 491572-006

Matrix: Soil

Date Received: 08.15.14 12.00

Date Collected: 08.13.14 10.10

Analytical Method: Inorganic Anions by EPA 300/300.1

Tech: JUM

Prep Method: E300P

Analyst: JUM

% Moisture: 32.99

Seq Number: 949014

Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	ND	2.98	mg/kg	08.22.14 08.37	U	1

Analytical Method: TPH By SW8015 Mod

Tech: ARM

Prep Method: TX1005P

Analyst: ARM

% Moisture: 32.99

Seq Number: 948415

Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C12 Gasoline Range Hydrocarbons	PHC612	ND	22.3	mg/kg	08.16.14 22.40	U	1
C12-C28 Diesel Range Hydrocarbons	PHCG1028	57.3	22.3	mg/kg	08.16.14 22.40		1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	22.3	mg/kg	08.16.14 22.40	U	1
Total TPH	PHC635	57.3	22.3	mg/kg	08.16.14 22.40		1

Surrogate

1-Chlorooctane

o-Terphenyl

Cas Number	Recovery	Units	Limits	Analysis Date	Flag
111-85-3	116	%	70-135	08.16.14 22.40	
84-15-1	118	%	70-135	08.16.14 22.40	



Certificate of Analytical Results 491572

Conestoga Rovers & Associates, Midland, TX

CEMC-Keel Federal Tank Battery

Sample Id: S-086493-081314-JMF-SB2

Lab Sample Id: 491572-006

Matrix: Soil

Date Received: 08.15.14 12.00

Date Collected: 08.13.14 10.10

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ARM

% Moisture: 32.99

Analyst: ARM

Basis: Dry Weight

Seq Number: 948567

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	ND	0.00149	mg/kg	08.18.14 18.42	U	1
Toluene	108-88-3	ND	0.00297	mg/kg	08.18.14 18.42	U	1
Ethylbenzene	100-41-4	ND	0.00149	mg/kg	08.18.14 18.42	U	1
m,p-Xylenes	179601-23-1	ND	0.00297	mg/kg	08.18.14 18.42	U	1
o-Xylene	95-47-6	ND	0.00149	mg/kg	08.18.14 18.42	U	1
Total Xylenes	1330-20-7	ND	0.00149	mg/kg	08.18.14 18.42	U	1
Total BTEX		ND	0.00149	mg/kg	08.18.14 18.42	U	1
Surrogate							
4-Bromofluorobenzene *	Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene *	460-00-4	88	%	80-120	08.18.14 18.42		
	540-36-3	104	%	80-120	08.18.14 18.42		



Certificate of Analytical Results 491572

Conestoga Rovers & Associates, Midland, TX

CEMC-Keel Federal Tank Battery

Sample Id: S-086493-081314-JMF-SB2 5'
Lab Sample Id: 491572-007
Matrix: Soil
Date Collected: 08.13.14 10.15
Date Received: 08.15.14 12.00
Sample Depth: 5 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Tech: JUM
Analyst: JUM
Seq Number: 949014
Prep Method: E300P
% Moisture: 22.89
Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	38.6	2.59	mg/kg	08.22.14 09.22		1

Analytical Method: TPH By SW8015 Mod

Tech: ARM
Analyst: ARM
Seq Number: 948415
Prep Method: TX1005P
% Moisture: 22.89
Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C12 Gasoline Range Hydrocarbons	PHC612	ND	19.4	mg/kg	08.16.14 23.11	U	1
C12-C28 Diesel Range Hydrocarbons	PHCG1028	38.6	19.4	mg/kg	08.16.14 23.11		1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	19.4	mg/kg	08.16.14 23.11	U	1
Total TPH	PHC635	38.6	19.4	mg/kg	08.16.14 23.11		1
Surrogate			%	Units	Analysis Date	Flag	
1-Chlorooctane	111-85-3		113	%	08.16.14 23.11		
o-Terphenyl	84-15-1		115	%	08.16.14 23.11		



Certificate of Analytical Results 491572

Conestoga Rovers & Associates, Midland, TX

CEMC-Keel Federal Tank Battery

Sample Id: S-080493-081314-JMF-SB2 5'

Lab Sample Id: 491572-007

Matrix: Soil

Date Received: 08.15.14 12.00

Date Collected: 08.13.14 10.15

Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ARM

% Moisture: 22.89

Analyst: ARM

Basis: Dry Weight

Seq Number: 948905

Date Prep: 08.21.14 11.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	ND	0.00129	mg/kg	08.21.14 16.29	U	1
Toluene	108-88-3	ND	0.00258	mg/kg	08.21.14 16.29	U	1
Ethylbenzene	100-41-4	ND	0.00129	mg/kg	08.21.14 16.29	U	1
m,p-Xylenes	179601-23-1	ND	0.00258	mg/kg	08.21.14 16.29	U	1
o-Xylene	95-47-6	ND	0.00129	mg/kg	08.21.14 16.29	U	1
Total Xylenes	1330-20-7	ND	0.00129	mg/kg	08.21.14 16.29	U	1
Total BTEX		ND	0.00129	mg/kg	08.21.14 16.29	U	1
Surrogate			%				
4-Bromofluorobenzene *	Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
	460-00-4	88	%	80-120	08.21.14 16.29		
1,4-Difluorobenzene *	540-36-3	97	%	80-120	08.21.14 16.29		



Certificate of Analytical Results 491572

Conestoga Rovers & Associates, Midland, TX

CEMC-Keel Federal Tank Battery

Sample Id: S-086493-081314-JMF-SB2 10' Matrix: Soil Date Received: 08.15.14 12.00
Lab Sample Id: 491572-008 Date Collected: 08.13.14 10.20 Sample Depth: 10 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Tech: JUM Prep Method: E300P
Analyst: JUM % Moisture: 22.99
Seq Number: 949014 Date Prep: 08.21.14 17.00 Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	10.9	2.60	mg/kg	08.22.14 09.45		1

Analytical Method: TPH By SW8015 Mod

Tech: ARM Prep Method: TX1005P
Analyst: ARM % Moisture: 22.99
Seq Number: 948415 Date Prep: 08.15.14 16.00 Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C12 Gasoline Range Hydrocarbons	PHC612	ND	19.4	mg/kg	08.16.14 23.38	U	1
C12-C28 Diesel Range Hydrocarbons	PHCG1028	32.7	19.4	mg/kg	08.16.14 23.38		1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	19.4	mg/kg	08.16.14 23.38	U	1
Total TPH	PHC635	32.7	19.4	mg/kg	08.16.14 23.38		1
Surrogate			%	Units	Analysis Date	Flag	
1-Chlorooctane	111-85-3		113	%	08.16.14 23.38		
o-Terphenyl	84-15-1		117	%	08.16.14 23.38		



Certificate of Analytical Results 491572

Conestoga Rovers & Associates, Midland, TX

CEMC-Keel Federal Tank Battery

Sample Id: S-086493-081314-JMF-SB2 10' Matrix: Soil Date Received: 08.15.14 12.00
Lab Sample Id: 491572-008 Date Collected: 08.13.14 10.20 Sample Depth: 10 ft

Analytical Method: BTEX by EPA 8021B

Tech: ARM

Prep Method: SW5030B

Analyst: ARM

% Moisture: 22.99

Seq Number: 948905

Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	ND	0.00129	mg/kg	08.21.14 16.46	U	1
Toluene	108-88-3	ND	0.00259	mg/kg	08.21.14 16.46	U	1
Ethylbenzene	100-41-4	ND	0.00129	mg/kg	08.21.14 16.46	U	1
m,p-Xylenes	179601-23-1	ND	0.00259	mg/kg	08.21.14 16.46	U	1
o-Xylene	95-47-6	ND	0.00129	mg/kg	08.21.14 16.46	U	1
Total Xylenes	1330-20-7	ND	0.00129	mg/kg	08.21.14 16.46	U	1
Total BTEX		ND	0.00129	mg/kg	08.21.14 16.46	U	1
Surrogate							
1,4-Difluorobenzene *			%	Limits	Analysis Date	Flag	
	540-36-3		Recovery	80-120	08.21.14 16.46		
4-Bromofluorobenzene *	460-00-4		108	%			
			96	%	08.21.14 16.46		



Certificate of Analytical Results 491572

Conestoga Rovers & Associates, Midland, TX

CEMC-Keel Federal Tank Battery

Sample Id: S-086493-081314-JMF-SB2 30'
Lab Sample Id: 491572-009

Matrix: Soil

Date Received: 08.15.14 12.00

Date Collected: 08.13.14 10.25

Sample Depth: 30 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Tech: JUM

Prep Method: E300P

Analyst: JUM

% Moisture: 29.73

Seq Number: 949014

Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.99	2.85	mg/kg	08.22.14 10.08		1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture: 29.73

Analyst: ARM

Basis: Dry Weight

Seq Number: 948415

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C12 Gasoline Range Hydrocarbons	PHC612	ND	21.3	mg/kg	08.17.14 00.04	U	1
C12-C28 Diesel Range Hydrocarbons	PHCG1028	ND	21.3	mg/kg	08.17.14 00.04	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	21.3	mg/kg	08.17.14 00.04	U	1
Total TPH	PHC635	ND	21.3	mg/kg	08.17.14 00.04	U	1

Surrogate

Limits

Units

Recovery

Cas Number

Flag

Analysis Date

1-Chlorooctane

70-135

%

112

111-85-3

08.17.14 00.04

o-Terphenyl

70-135

%

115

84-15-1

08.17.14 00.04



Certificate of Analytical Results 491572

Conestoga Rovers & Associates, Midland, TX

CEMC-Keel Federal Tank Battery

Sample Id: S-086493-081314-JMF-SB2 30'
Lab Sample Id: 491572-009
Matrix: Soil
Date Received: 08.15.14 12.00
Sample Depth: 30 ft

Analytical Method: BTEX by EPA 8021B

Tech: ARM

Prep Method: SW5030B

Analyst: ARM

% Moisture: 29.73

Seq Number: 948567

Date Prep: 08.18.14 14.00

Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	ND	0.00142	mg/kg	08.18.14 19.32	U	1
Toluene	108-88-3	ND	0.00284	mg/kg	08.18.14 19.32	U	1
Ethylbenzene	100-41-4	ND	0.00142	mg/kg	08.18.14 19.32	U	1
m,p-Xylenes	179601-23-1	ND	0.00284	mg/kg	08.18.14 19.32	U	1
o-Xylene	95-47-6	ND	0.00142	mg/kg	08.18.14 19.32	U	1
Total Xylenes	1330-20-7	ND	0.00142	mg/kg	08.18.14 19.32	U	1
Total BTEX		ND	0.00142	mg/kg	08.18.14 19.32	U	1
Surrogate			%				
4-Bromofluorobenzene *	Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene *	460-00-4	103	%	80-120	08.18.14 19.32		
	540-36-3	111	%	80-120	08.18.14 19.32		



Certificate of Analytical Results 491572

Conestoga Rovers & Associates, Midland, TX

CEMC-Keel Federal Tank Battery

Sample Id: S-086493-081314-JMF-SB2 40'
Lab Sample Id: 491572-010

Matrix: Soil
Date Collected: 08.13.14 10.30
Date Received: 08.15.14 12.00
Sample Depth: 40 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Tech: JUM

Prep Method: E300P

Analyst: JUM

% Moisture: 30.98

Seq Number: 949014

Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	966	58.0	mg/kg	08.22.14 10.30		20

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture: 30.98

Analyst: ARM

Basis: Dry Weight

Seq Number: 948415

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C12 Gasoline Range Hydrocarbons	PHC612	ND	21.7	mg/kg	08.17.14 00.35	U	1
C12-C28 Diesel Range Hydrocarbons	PHCG1028	ND	21.7	mg/kg	08.17.14 00.35	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	21.7	mg/kg	08.17.14 00.35	U	1
Total TPH	PHC635	ND	21.7	mg/kg	08.17.14 00.35	U	1
Surrogate			%				
1-Chlorooctane			Recovery	Units	Analysis Date	Flag	
	111-85-3		115	%	08.17.14 00.35		
o-Terphenyl	84-15-1		114	%	08.17.14 00.35		



Certificate of Analytical Results 491572

Conestoga Rovers & Associates, Midland, TX

CEMC-Keel Federal Tank Battery

Sample Id: S-080493-081314-JMF-SB2 40'
Lab Sample Id: 491572-010
Matrix: Soil
Date Received: 08.15.14 12.00
Date Collected: 08.13.14 10.30
Sample Depth: 40 ft

Analytical Method: BTEX by EPA 8021B

Tech: ARM

Prep Method: SW5030B

Analyst: ARM

% Moisture: 30.98

Seq Number: 948567

Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	ND	0.00144	mg/kg	08.18.14 19.48	U	1
Toluene	108-88-3	ND	0.00288	mg/kg	08.18.14 19.48	U	1
Ethylbenzene	100-41-4	ND	0.00144	mg/kg	08.18.14 19.48	U	1
m,p-Xylenes	179601-23-1	ND	0.00288	mg/kg	08.18.14 19.48	U	1
o-Xylene	95-47-6	ND	0.00144	mg/kg	08.18.14 19.48	U	1
Total Xylenes	1330-20-7	ND	0.00144	mg/kg	08.18.14 19.48	U	1
Total BTEX		ND	0.00144	mg/kg	08.18.14 19.48	U	1
Surrogate							
4-Bromofluorobenzene *	Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene *	460-00-4	93	%	80-120	08.18.14 19.48		
	540-36-3	105	%	80-120	08.18.14 19.48		



Certificate of Analytical Results 491572

Conestoga Rovers & Associates, Midland, TX

CEMC-Keel Federal Tank Battery

Sample Id: S-086493-081314-JMF-SB2 50'
Lab Sample Id: 491572-011

Matrix: Soil

Date Received: 08.15.14 12.00

Date Collected: 08.13.14 10.35

Sample Depth: 50 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Tech: JUM

Prep Method: E300P

Analyst: JUM

% Moisture: 17.34

Seq Number: 949014

Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	552	24.2	mg/kg	08.22.14 10.53		10

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture: 17.34

Analyst: ARM

Basis: Dry Weight

Seq Number: 948415

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C12 Gasoline Range Hydrocarbons	PHC612	ND	18.1	mg/kg	08.17.14 01.29	U	1
C12-C28 Diesel Range Hydrocarbons	PHCG1028	ND	18.1	mg/kg	08.17.14 01.29	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	18.1	mg/kg	08.17.14 01.29	U	1
Total TPH	PHC635	ND	18.1	mg/kg	08.17.14 01.29	U	1

Surrogate

Limits

Units

% Recovery

Cas Number

Flag

Analysis Date

1-Chlorooctane

111-85-3

%

70-135

08.17.14 01.29

o-Terphenyl

84-15-1

%

70-135

08.17.14 01.29



Certificate of Analytical Results 491572

Conestoga Rovers & Associates, Midland, TX

CEMC-Keel Federal Tank Battery

Sample Id: S-086493-081314-JMF-SB2 50'
Lab Sample Id: 491572-011
Matrix: Soil
Date Received: 08.15.14 12.00
Date Collected: 08.13.14 10.35
Sample Depth: 50 ft

Analytical Method: BTEX by EPA 8021B

Tech: ARM

Prep Method: SW5030B

Analyst: ARM

% Moisture: 17.34

Seq Number: 948567

Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	ND	0.00120	mg/kg	08.18.14 20.38	U	1
Toluene	108-88-3	ND	0.00241	mg/kg	08.18.14 20.38	U	1
Ethylbenzene	100-41-4	ND	0.00120	mg/kg	08.18.14 20.38	U	1
m,p-Xylenes	179601-23-1	ND	0.00241	mg/kg	08.18.14 20.38	U	1
o-Xylene	95-47-6	ND	0.00120	mg/kg	08.18.14 20.38	U	1
Total Xylenes	1330-20-7	ND	0.00120	mg/kg	08.18.14 20.38	U	1
Total BTEX		ND	0.00120	mg/kg	08.18.14 20.38	U	1
Surrogate							
4-Bromofluorobenzene *			%				
	Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
	460-00-4	91	%	80-120	08.18.14 20.38		
1,4-Difluorobenzene *	540-36-3	103	%	80-120	08.18.14 20.38		



Certificate of Analytical Results 491572

Conestoga Rovers & Associates, Midland, TX

CEMC-Keel Federal Tank Battery

Sample Id: S-086493-081314-JMF-SB2 60' Matrix: Soil Date Received: 08.15.14 12.00
Lab Sample Id: 491572-012 Date Collected: 08.13.14 10.40 Sample Depth: 60 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Tech: JUM Prep Method: E300P
Analyst: JUM % Moisture: 19.19
Seq Number: 949014 Date Prep: 08.21.14 17.00 Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	66.2	2.47	mg/kg	08.22.14 12.01		1

Analytical Method: TPH By SW8015 Mod

Tech: ARM Prep Method: TX1005P
Analyst: ARM % Moisture: 19.19
Seq Number: 948415 Date Prep: 08.15.14 16.00 Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C12 Gasoline Range Hydrocarbons	PHC612	ND	18.5	mg/kg	08.17.14 01.56	U	1
C12-C28 Diesel Range Hydrocarbons	PHCG1028	ND	18.5	mg/kg	08.17.14 01.56	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	18.5	mg/kg	08.17.14 01.56	U	1
Total TPH	PHC635	ND	18.5	mg/kg	08.17.14 01.56	U	1
Surrogate			%				
1-Chlorooctane		111-85-3	Recovery	Units	Analysis Date	Flag	
			111	%	08.17.14 01.56		
o-Terphenyl		84-15-1	113	%	08.17.14 01.56		



Certificate of Analytical Results 491572

Conestoga Rovers & Associates, Midland, TX

CEMC-Keel Federal Tank Battery

Sample Id: S-080493-081314-JMF-SB2 60'
Lab Sample Id: 491572-012
Analytical Method: BTEX by EPA 8021B
Tech: ARM
Analyst: ARM
Seq Number: 948567
Matrix: Soil
Date Collected: 08.13.14 10.40
Date Received: 08.15.14 12.00
Sample Depth: 60 ft
Prep Method: SW5030B
% Moisture: 19.19
Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	ND	0.00123	mg/kg	08.18.14 20.54	U	1
Toluene	108-88-3	ND	0.00247	mg/kg	08.18.14 20.54	U	1
Ethylbenzene	100-41-4	ND	0.00123	mg/kg	08.18.14 20.54	U	1
m,p-Xylenes	179601-23-1	ND	0.00247	mg/kg	08.18.14 20.54	U	1
o-Xylene	95-47-6	ND	0.00123	mg/kg	08.18.14 20.54	U	1
Total Xylenes	1330-20-7	ND	0.00123	mg/kg	08.18.14 20.54	U	1
Total BTEX		ND	0.00123	mg/kg	08.18.14 20.54	U	1
Surrogate							
4-Bromofluorobenzene *							
1,4-Difluorobenzene *							
	Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
	460-00-4	95	%	80-120	08.18.14 20.54		
	540-36-3	106	%	80-120	08.18.14 20.54		



Certificate of Analytical Results 491572

Conestoga Rovers & Associates, Midland, TX

CEMC-Keel Federal Tank Battery

Sample Id: **S-086493-081314-JMF-HA1** Matrix: Soil Date Received: 08.15.14 12.00
Lab Sample Id: 491572-013 Date Collected: 08.13.14 12.00 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Tech: JUM Prep Method: E300P
Analyst: JUM % Moisture: 4.62
Seq Number: 949014 Date Prep: 08.21.14 17.00 Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	40.2	2.10	mg/kg	08.22.14 12.24		1

Analytical Method: TPH By SW8015 Mod

Tech: ARM Prep Method: TX1005P
Analyst: ARM % Moisture: 4.62
Seq Number: 948415 Date Prep: 08.15.14 16.00 Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C12 Gasoline Range Hydrocarbons	PHC612	ND	15.7	mg/kg	08.17.14 02.25	U	1
C12-C28 Diesel Range Hydrocarbons	PHCG1028	147	15.7	mg/kg	08.17.14 02.25		1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	15.7	mg/kg	08.17.14 02.25	U	1
Total TPH	PHC635	147	15.7	mg/kg	08.17.14 02.25		1
Surrogate			%	Units	Analysis Date	Flag	
1-Chlorooctane	111-85-3		Recovery	%	08.17.14 02.25		
o-Terphenyl	84-15-1		111	%	08.17.14 02.25		
			112	%	08.17.14 02.25		



Certificate of Analytical Results 491572

Conestoga Rovers & Associates, Midland, TX

CEMC-Keel Federal Tank Battery

Sample Id: S-086493-081314-JMF-HA1

Lab Sample Id: 491572-013

Matrix: Soil

Date Received: 08.15.14 12.00

Date Collected: 08.13.14 12.00

Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ARM

% Moisture: 4.62

Analyst: ARM

Basis: Dry Weight

Seq Number: 948567

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	ND	0.00105	mg/kg	08.18.14 21.11	U	1
Toluene	108-88-3	ND	0.00209	mg/kg	08.18.14 21.11	U	1
Ethylbenzene	100-41-4	ND	0.00105	mg/kg	08.18.14 21.11	U	1
m,p-Xylenes	179601-23-1	ND	0.00209	mg/kg	08.18.14 21.11	U	1
o-Xylene	95-47-6	ND	0.00105	mg/kg	08.18.14 21.11	U	1
Total Xylenes	1330-20-7	ND	0.00105	mg/kg	08.18.14 21.11	U	1
Total BTEX		ND	0.00105	mg/kg	08.18.14 21.11	U	1
Surrogate							
1,4-Difluorobenzene *			%				
	Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
	540-36-3	107	%	80-120	08.18.14 21.11		
4-Bromofluorobenzene *	460-00-4	96	%	80-120	08.18.14 21.11		



Certificate of Analytical Results 491572

Conestoga Rovers & Associates, Midland, TX

CEMC-Keel Federal Tank Battery

Sample Id: **S-086493-081314-JMF-HA2** Matrix: Soil Date Received: 08.15.14 12.00
Lab Sample Id: 491572-014 Date Collected: 08.13.14 12.05 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Tech: JUM Prep Method: E300P
Analyst: JUM % Moisture: 24.76
Seq Number: 949014 Date Prep: 08.21.14 17.00 Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	140	13.3	mg/kg	08.22.14 12.46		5

Analytical Method: TPH By SW8015 Mod

Tech: ARM Prep Method: TX1005P
Analyst: ARM % Moisture: 24.76
Seq Number: 948415 Date Prep: 08.15.14 16.00 Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C12 Gasoline Range Hydrocarbons	PHC612	ND	19.9	mg/kg	08.17.14 02.54	U	1
C12-C28 Diesel Range Hydrocarbons	PHCG1028	55.0	19.9	mg/kg	08.17.14 02.54		1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	19.9	mg/kg	08.17.14 02.54	U	1
Total TPH	PHC635	55.0	19.9	mg/kg	08.17.14 02.54		1
Surrogate		Cas Number	Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane		111-85-3	111	%	70-135	08.17.14 02.54	
o-Terphenyl		84-15-1	114	%	70-135	08.17.14 02.54	



Certificate of Analytical Results 491572

Conestoga Rovers & Associates, Midland, TX

CEMC-Keel Federal Tank Battery

Sample Id: S-086493-081314-JMF-HA2

Lab Sample Id: 491572-014

Matrix: Soil

Date Received: 08.15.14 12.00

Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: ARM

Prep Method: SW5030B

Analyst: ARM

% Moisture: 24.76

Seq Number: 948567

Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	ND	0.00132	mg/kg	08.18.14 21.27	U	1
Toluene	108-88-3	ND	0.00265	mg/kg	08.18.14 21.27	U	1
Ethylbenzene	100-41-4	ND	0.00132	mg/kg	08.18.14 21.27	U	1
m,p-Xylenes	179601-23-1	ND	0.00265	mg/kg	08.18.14 21.27	U	1
o-Xylene	95-47-6	ND	0.00132	mg/kg	08.18.14 21.27	U	1
Total Xylenes	1330-20-7	ND	0.00132	mg/kg	08.18.14 21.27	U	1
Total BTEX		ND	0.00132	mg/kg	08.18.14 21.27	U	1
Surrogate							
4-Bromofluorobenzene *	Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene *	460-00-4	91	%	80-120	08.18.14 21.27		
	540-36-3	105	%	80-120	08.18.14 21.27		



Certificate of Analytical Results 491572

Conestoga Rovers & Associates, Midland, TX

CEMC-Keel Federal Tank Battery

Sample Id: **S-086493-081314-JMF-HA3** Matrix: Soil Date Received: 08.15.14 12.00
Lab Sample Id: 491572-015 Date Collected: 08.13.14 12.10 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Tech: JUM Prep Method: E300P
Analyst: JUM % Moisture: 25.25
Seq Number: 949014 Date Prep: 08.21.14 17.00 Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	104	13.4	mg/kg	08.22.14 13.09		5

Analytical Method: TPH By SW8015 Mod

Tech: ARM Prep Method: TX1005P
Analyst: ARM % Moisture: 25.25
Seq Number: 948415 Date Prep: 08.15.14 16.00 Basis: Dry Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C12 Gasoline Range Hydrocarbons	PHC612	ND	20.0	mg/kg	08.17.14 03.20	U	1
C12-C28 Diesel Range Hydrocarbons	PHCG1028	241	20.0	mg/kg	08.17.14 03.20		1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	20.0	mg/kg	08.17.14 03.20	U	1
Total TPH	PHC635	241	20.0	mg/kg	08.17.14 03.20		1
Surrogate		Cas Number	Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane		111-85-3	109	%	70-135	08.17.14 03.20	
o-Terphenyl		84-15-1	115	%	70-135	08.17.14 03.20	



Certificate of Analytical Results 491572

Conestoga Rovers & Associates, Midland, TX

CEMC-Keel Federal Tank Battery

Sample Id: S-086493-081314-JMF-HA3

Lab Sample Id: 491572-015

Matrix: Soil

Date Received: 08.15.14 12.00

Date Collected: 08.13.14 12.10

Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ARM

% Moisture: 25.25

Analyst: ARM

Basis: Dry Weight

Seq Number: 948567

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	ND	0.00133	mg/kg	08.18.14 21.44	U	1
Toluene	108-88-3	ND	0.00266	mg/kg	08.18.14 21.44	U	1
Ethylbenzene	100-41-4	ND	0.00133	mg/kg	08.18.14 21.44	U	1
m,p-Xylenes	179601-23-1	ND	0.00266	mg/kg	08.18.14 21.44	U	1
o-Xylene	95-47-6	ND	0.00133	mg/kg	08.18.14 21.44	U	1
Total Xylenes	1330-20-7	ND	0.00133	mg/kg	08.18.14 21.44	U	1
Total BTEX		ND	0.00133	mg/kg	08.18.14 21.44	U	1
Surrogate			%				
1,4-Difluorobenzene *	Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
	540-36-3	99	%	80-120	08.18.14 21.44		
4-Bromofluorobenzene *	460-00-4	91	%	80-120	08.18.14 21.44		



Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit	SDL Sample Detection Limit	LOD Limit of Detection
PQL Practical Quantitation Limit	SQL Method Quantitation Limit	LOQ Limit of Quantitation
DL Method Detection Limit		

NC Non-Calculable

+ NELAC certification not offered for this compound.

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

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		(602) 437-0330

**Conestoga Rovers & Associates**
CEMC-Keel Federal Tank Battery**Analytical Method: Inorganic Anions by EPA 300/300.1**

Seq Number: 949014 Matrix: Solid Prep Method: E300P
MB Sample Id: 660405-1-BLK LCS Sample Id: 660405-1-BKS Date Prep: 08.21.14
LCSD Sample Id: 660405-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<2.00	50.0	49.3	99	50.2	100	80-120	2	20	mg/kg	08.22.14 03:20	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 949014 Matrix: Soil Prep Method: E300P
Parent Sample Id: 491568-011 MS Sample Id: 491568-011 S Date Prep: 08.21.14

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	23600	25600	53300	116	80-120	mg/kg	08.22.14 04:28	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 949014 Matrix: Soil Prep Method: E300P
Parent Sample Id: 491572-006 MS Sample Id: 491572-006 S Date Prep: 08.21.14

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	<2.98	74.6	88.1	118	80-120	mg/kg	08.22.14 09:00	

Analytical Method: Percent Moisture

Seq Number: 948660 Matrix: Solid
MB Sample Id: 948660-1-BLK

Parameter

MB Result	Units	Analysis Date	Flag
ND	%	08.19.14 12:00	

Analytical Method: Percent Moisture

Seq Number: 948660 Matrix: Soil
Parent Sample Id: 491572-007 MD Sample Id: 491572-007 D

Parameter

Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
22.9	23.2	1	20	%	08.19.14 12:00	

Analytical Method: Percent Moisture

Seq Number: 948660 Matrix: Soil
Parent Sample Id: 491631-001 MD Sample Id: 491631-001 D

Parameter

Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
1.15	1.24	8	20	%	08.19.14 12:00	



QC Summary 491572



Conestoga Rovers & Associates

CEMC-Keel Federal Tank Battery

Analytical Method: TPH By SW8015 Mod

Seq Number: 948415

MB Sample Id: 660156-1-BLK

Matrix: Solid

Prep Method: TX1005P

Date Prep: 08.15.14

LCSD Sample Id: 660156-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
-----------	--------------	-----------------	---------------	-------------	----------------	--------------	--------	------	--------------	-------	------------------	------

C6-Cl2 Gasoline Range Hydrocarbons

<15.0

1000

963

96

1120

112

70-135

15

35

mg/kg

08.16.14 18:33

C12-C28 Diesel Range Hydrocarbons

<15.0

1000

1140

114

1140

114

70-135

0

35

mg/kg

08.16.14 18:33

SurrogateMB
%Rec

Flag

LCS
%RecLCS
FlagLCSD
%RecLCSD
Flag

Limits

Units

Analysis
Date

1-Chlorooctane

112

115

115

129

125

70-135

70-135

%

08.16.14 18:33

o-Terphenyl

115

115

129

123

70-135

70-135

%

08.16.14 18:33

Analytical Method: TPH By SW8015 Mod

Seq Number: 948415

Parent Sample Id: 491572-002

Matrix: Soil

Prep Method: TX1005P

Date Prep: 08.15.14

MSD Sample Id: 491572-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
-----------	------------------	-----------------	--------------	------------	---------------	-------------	--------	------	--------------	-------	------------------	------

C6-Cl2 Gasoline Range Hydrocarbons

<15.4

1030

995

97

1030

101

70-135

3

35

mg/kg

08.16.14 20:23

C12-C28 Diesel Range Hydrocarbons

<15.4

1030

1190

116

1210

119

70-135

2

35

mg/kg

08.16.14 20:23

SurrogateMS
%RecMS
FlagMSD
%RecMSD
Flag

Limits

Units

Analysis
Date

1-Chlorooctane

116

121

117

70-135

70-135

%

08.16.14 20:23

o-Terphenyl

121

112

112

70-135

70-135

%

08.16.14 20:23

Analytical Method: BTEX by EPA 8021B

Seq Number: 948567

MB Sample Id: 660247-1-BLK

Matrix: Solid

Prep Method: SW5030B

Date Prep: 08.18.14

LCSD Sample Id: 660247-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
-----------	--------------	-----------------	---------------	-------------	----------------	--------------	--------	------	--------------	-------	------------------	------

Benzene

<0.00100

0.100

0.107

107

0.102

102

70-130

5

35

mg/kg

08.18.14 15:23

Toluene

<0.00200

0.100

0.107

107

0.0997

100

70-130

7

35

mg/kg

08.18.14 15:23

Ethylbenzene

<0.00100

0.100

0.115

115

0.108

108

71-129

6

35

mg/kg

08.18.14 15:23

m,p-Xylenes

<0.00200

0.200

0.226

113

0.210

105

70-135

7

35

mg/kg

08.18.14 15:23

o-Xylene

<0.00100

0.100

0.106

106

0.0985

99

71-133

7

35

mg/kg

08.18.14 15:23

SurrogateMB
%Rec

Flag

LCS
%RecLCS
FlagLCSD
%RecLCSD
Flag

Limits

Units

Analysis
Date

1,4-Difluorobenzene

100

83

100

94

106

80-120

80-120

%

08.18.14 15:23

4-Bromofluorobenzene

83

83

86

86

80-120

80-120

%

08.18.14 15:23



Conestoga Rovers & Associates
CEMC-Keel Federal Tank Battery

Analytical Method: BTEX by EPA 8021B

Seq Number: 948905

MB Sample Id: 660434-1-BLK

Prep Method: SW5030B

Date Prep: 08.21.14

LCS Sample Id: 660434-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCS Flag	LCS Result	LCS %Rec	LCS Flag	MSD Result	MSD %Rec	MSD Flag	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0960	96		0.102	102		0.102	102		70-130	6	35	mg/kg	08.21.14 15:06	
Toluene	<0.00200	0.100	0.0936	94		0.0994	99		0.0994	99		70-130	6	35	mg/kg	08.21.14 15:06	
Ethylbenzene	<0.00100	0.100	0.0982	98		0.103	103		0.103	103		71-129	5	35	mg/kg	08.21.14 15:06	
m,p-Xylenes	<0.00200	0.200	0.191	96		0.199	100		0.199	100		70-135	4	35	mg/kg	08.21.14 15:06	
o-Xylene	<0.00100	0.100	0.0956	96		0.0993	99		0.0993	99		71-133	4	35	mg/kg	08.21.14 15:06	

Surrogate

1,4-Difluorobenzene
4-Bromofluorobenzene

MS	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
102	102		99		80-120	%	08.21.14 15:06
98	98		94		80-120	%	08.21.14 15:06

Analytical Method: BTEX by EPA 8021B

Seq Number: 948567

Parent Sample Id: 491572-002

Prep Method: SW5030B

Date Prep: 08.18.14

MSD Sample Id: 491572-002 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MS Flag	MSD Result	MSD %Rec	MSD Flag	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00102	0.102	0.0979	96		0.102	100		70-130	4	35	mg/kg	08.18.14 15:55	
Toluene	<0.00205	0.102	0.0986	97		0.103	101		70-130	4	35	mg/kg	08.18.14 15:55	
Ethylbenzene	<0.00102	0.102	0.106	104		0.110	108		71-129	4	35	mg/kg	08.18.14 15:55	
m,p-Xylenes	<0.00205	0.205	0.206	100		0.215	105		70-135	4	35	mg/kg	08.18.14 15:55	
o-Xylene	<0.00102	0.102	0.0966	95		0.101	99		71-133	4	35	mg/kg	08.18.14 15:55	

Surrogate

1,4-Difluorobenzene
4-Bromofluorobenzene

MS	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
102	102		102		80-120	%	08.18.14 15:55
100	100		101		80-120	%	08.18.14 15:55

Analytical Method: BTEX by EPA 8021B

Seq Number: 948905

Parent Sample Id: 491557-005

Prep Method: SW5030B

Date Prep: 08.21.14

MS Sample Id: 491557-005 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MS Flag	MSD Result	MSD %Rec	MSD Flag	Limits	Units	Analysis Date	Flag
Benzene	<0.00110	0.110	0.0927	84		0.0927	84		70-130	mg/kg	08.21.14 15:39	
Toluene	<0.00220	0.110	0.0910	83		0.0910	83		70-130	mg/kg	08.21.14 15:39	
Ethylbenzene	<0.00110	0.110	0.0953	87		0.0953	87		71-129	mg/kg	08.21.14 15:39	
m,p-Xylenes	<0.00220	0.220	0.186	85		0.186	85		70-135	mg/kg	08.21.14 15:39	
o-Xylene	<0.00110	0.110	0.0912	83		0.0912	83		71-133	mg/kg	08.21.14 15:39	

Surrogate

1,4-Difluorobenzene
4-Bromofluorobenzene

MS	MS %Rec	MS Flag	Limits	Units	Analysis Date
102	102		80-120	%	08.21.14 15:39
100	100		80-120	%	08.21.14 15:39



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Client / Reporting Information		Project Information		Analytical Information												Matrix Codes	
Company Name / Branch: CRA - Austin		Project Name/Number: 086493														A = Air S = Soil/Sed/Solid GW = Ground Water DW = Drinking Water P = Product SW = Surface water SL = Sludge WW = Waste Water W = Wipe O = Oil WW = Waste Water	
Company Address: 13091 Pond Springs Road		Project Location: CEMC - Keel Federal Tank Battery															
Suite A100, Austin, TX 78729		Invoice To:															
Email: jferenz@eraworld.com (512) 506-8803		PO Number:															
Project Contact: Jake Ferenz / Chris Knight																	
Samplers's Name: John Ferguson																	
No.	Field ID / Point of Collection	Collection	Number of preserved bottles												Field Comments		
		Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE			
1	S-086493-081314-JNF-SB2	50'	1035	8/13/14	S	1								X	✓	✓	
2	S-086493-081314-JNF-SB2	60'	8/13/14	1040	S	1								X	✓	✓	
3	S-086493-081314-JNF-HA1	1'	8/13/14	1200	S	1								✓	✓	✓	
4	S-086493-081314-JNF-HA2	1'	8/13/14	1205	S	1								✓	✓	✓	
5	S-086493-081314-JNF-HA3	1'	8/13/14	1210	S	1								✓	✓	✓	
6																	
7																	
8																	
9																	
10																	
Turnaround Time (Business days)		Data Deliverable Information		Notes:													
☐ Same Day TAT ☐ 5 Day TAT		☐ Level II Std QC ☐ Level IV (Full Data Pkg /raw data)															
☐ Next Day EMERGENCY ☐ 7 Day TAT		☐ Level III Std QC+ Forms ☐ TRRP Level IV															
☐ 2 Day EMERGENCY ☐ Contract TAT		☐ Level 3 (CLP Forms) ☐ UST / RG -411															
☐ 3 Day EMERGENCY		☐ TRRP Checklist															
TAT Starts Day received by Lab, if received by 3:00 pm		FED-EX / UPS: Tracking #															
SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY																	
Relinquished by Sampler:		Date Time:		Received By:		Relinquished By:		Date Time:		Received By:							
1		8/15/14 1200		1		2		8/15/14 1200		2							
Relinquished by:		Date Time:		Received By:		Relinquished By:		Date Time:		Received By:							
3				3		4				4							
Relinquished by:		Date Time:		Received By:		Custody Seal #		Preserved where applicable		On Ice		Cooler Temp.		Thermo. Corr. Factor			
5				5						X							

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to XENCO Laboratories and its affiliates, subcontractors and assigns XENCO's standard terms and conditions of service unless previously negotiated under a fully executed client contract.



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Conestoga Rovers & Associates

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Date/ Time Received: 08/15/2014 12:00:00 PM

Temperature Measuring device used :

Work Order #: 491572

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Kelsey Brooks
Kelsey Brooks

Date: 08/15/2014

Checklist reviewed by:

Kelsey Brooks
Kelsey Brooks

Date: 08/15/2014

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
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District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 62013

CONDITIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 62013
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Closure Report Approved.	3/31/2022