District I 1625 N. French Dr., Hobbs, NM 882490BBS OCD District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87440 16 2013 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources

Form C-141 Revised August 8, 2011

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

1220 S. St. Fran	cis Dr., Santa	a Fe, NM 87505	5	S	anta	Fe, NM 875	05		
		REC	Rele	ase Notifi	catio	on and Co	rrective A	ction	
						OPERAT			l Report 🛛 Final Repor
Name of Co	mpany C	hevron Envi	ronmenta	l Management	Co.	Contact Keg	gan Boyer		I
Address 14	00 Smith	Street Room	07076			Telephone N	lo. (713) 372-7	705	
Facility Nat	ne Centra	l Vacuum U	nit #342			Facility Type	e Reserve Pit		
Surface Ow	ner State	of New Mex	ico	Mineral (	Owner	r		API No.	30-025-38002
						443	DACE		
Unit Letter	Section	Township	Danga	Feet from the		Th/South Line	Feet from the	East/West Line	Country
A	36	17S	Range 34E	81.2	INOI	North	1186.4	East	County Lea
				0112	1			25400	
		7							
		Latitude	32.79868	89° N		Longitude_	103.5089	550° W	
				NAT	TIDI	E OF RELE	ASE		
Type of Rele	ase C141 s	ubmittal reque	ested by L				Release Unknow	vn Volume R	ecovered Unknown
Source of Re			contra of D				our of Occurrence		Hour of Discovery
Was Immedia	ate Notice (					If YES, To	Whom?		
			Yes 🗋	No 🛛 Not R	equire	d		20 	
By Whom?	-					Date and He			
Was a Water	course Read		Yes 🛛	No		If YES, Vol	lume Impacting t	he Watercourse.	
	5	pacted, Descri							
Describe Cau N/A	se of Proble	em and Reme	dial Action	n Taken.*					
Per NMOCD noting to kee Chevron Env	directives, o him informing ironmental	med. See attac Management	area of app hed Site C Company	roximately 85' X Closure Report (S documenting ren	eptemi nediati	ber 2013) submi on and closure a	tted by Conestog ctivities.	a Rovers & Associa	eking approved work start – ates (CRA) on behalf of
regulations al public health should their of or the environ	l operators or the envir perations h ument. In a	are required to conment. The ave failed to a	acceptance acceptance adequately CD accept	d/or file certain i e of a C-141 repo investigate and r	release ort by t remedia	notifications and the NMOCD ma ate contaminatio	d perform correc rked as "Final R on that pose a thr	tive actions for relea eport" does not relie eat to ground water,	ant to NMOCD rules and ases which may endanger eve the operator of liability surface water, human health mpliance with any other
Signature:	Heg.	Byr					OIL CON	SERVATION	DIVISION
Printed Name	: Kegan B	oyer				Approved by H	Environmental S	pecialist:	
Title: Project						Approval Date	:	Expiration D	Date:
E-mail Addre		ooyer@chevro		(713) 372-7705		Conditions of			Attached

\* Attach Additional Sheets If Necessary

HOBBS OCD



OCT 1 6 2013

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### **FINAL REPORT**

# CENTRAL VACUUM UNIT #342 RESERVE PIT CLOSURE REPORT (RP #2672)

Section 36, (Unit A), Township 17 South, Range 34 East Lea County, New Mexico

Prepared for: CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY

# Conestoga-Rovers & Associates 2135 South Loop 250 West

2135 South Loop 250 West Midland, Texas 79703 September 2013

073823 (3)



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### 1.0 INTRODUCTION

This Site Closure Report provides documentation associated with corrective actions at the Central Vacuum Unit #342, Lea County, New Mexico. The closure activities were documented and performed by Conestoga-Rovers & Associates (CRA) under the direction of Chevron Environmental Management Company (CEMC). A remediation permit number, RP 2672 was assigned to this project by the New Mexico Oil Conservation Division (NMOCD) Hobbs, New Mexico office. This report is an attachment to the Final C-141 Form submittal for RP #2672.

The Chevron Central Vacuum Unit #342 (hereafter referred to as the "Site"), is located in Section 36 (Unit A), Township 17 South, Range 34 East, Lea County, New Mexico (Figure 1).

The scope of work for the subject Site, corrective actions and corresponding activities was developed between CEMC, NMOCD and CRA personnel. CRA was responsible for the project management, general oversight of the reclamation activities and documentation of the field work. The agreed upon scope of services included:

- Obtaining proper site specific training, permits and involving appropriate stakeholders needed to conclude scope of work.
- Remove impacted soils excavated from the Site and transport to a Chevron approved waste facility.
- Implement soil boring program consisting of three (SB-1, SB-2 and SB-3) soil borings to a depth of 100 feet.
- Lay poly liner in an excavated pit area and backfill the excavation pit using clean topsoil transported from an off-site source.
- Provide final backfilling, grading, ripping and seed dispersal for the affected area of the Site.
- Prepare Site Closure documents for submittal with the Final C-141 Release Notification and Corrective Action Form to the NMOCD requesting site closure.

### 2.0 SITE HISTORY / ASSESSMENT

On April 7, 2010, Chevron submitted a C-144 Form proposing pit closure. The original C-144 closure plan for this reserve pit was on-site burial, however, that approach was rejected by the NMOCD. The original C-144 Form is attached as Appendix A. The Final C-144 form documenting remediation and pit closure activities has been submitted under separate cover to the NMOCD District I office. After a site inspection by the NMOCD, the agency requested that a C-141 Release Notification and Corrective Action Form should be filed by Chevron and consequently, a Remediation Permit number (RP#2672) was assigned to this project. The original C-141 Form is attached as Appendix B.

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

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

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

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

On April 8, 2013, CRA and Entact mobilized to the Site to begin excavation activities. A total of approximately 1,494 cubic yards (cy) of material was removed from the existing remedial excavation, with floor depths ranging from approximately 0 to 6 feet below ground surface (bgs).

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

On June 5, 2013, Tom Larson with CRA and Kegan Boyer with CEMC met with NMOCD staff to finalize the Site's soil assessment and restoration activities. Discussions from the meeting included review of previous NMOCD communications, May 2013 soil boring assessment/delineation data and remedial activities performed at the Site to date. CRA, CEMC and the NMOCD concluded that delineation efforts with regard to chloride impacts have been reached, and closure/remediation efforts were acceptable and to proceed with backfilling and lining activities. In addition, Final C-141 and C-144 reports were to be completed and submitted to NMOCD upon completion of field activities.

### 3.0 CORRECTIVE ACTIONS

The field implementation of the approved Site closure activities began on March 7, 2013. Entact of Pearland, Texas provided labor, heavy equipment and pit lining material. RWI of Hobbs, New Mexico provided haul trucks required for the field operations. CRA was responsible for the overall coordination of field operations, project management tasks and the safety of all CRA employees working on site. The proposed and approved field work activities were completed on June 29, 2013. A Site Chronology of the daily work activities is provided in Appendix C. Site photographs documenting work activities are presented in Appendix D. Certified Laboratory Reports for the 2013 soil sampling events are provided in Appendix E.

### 3.1 LINING AND BACKFILLING OF REMEDIAL EXCAVATIONS

Restoration activities at the Site began on June 24, 2013 with the staging of heavy equipment near the borrow pit and excavated pit areas. Backfill of the excavated pit areas began on June 25, 2013. Installation of excavated pit liner (20 mil) started and was completed on June 26, 2013 by Entact. RWI transported approximately 1,710 cubic yards (cy) of clean fill that was obtained from an off-site borrow pit owned by the Pearce Ranch Trust. Backfill activities were concluded on June 29, 2013, with the Site being graded to minimize erosion, ripped with heavy machinery and seeded with an approved native grass seed (BLM#4). On June 29, 2013, equipment was demobilized from the Site. Site restoration activities and locations are depicted on Figure 3. A site inspection on August 26, 2013 revealed vegetative growth (Appendix D, photos 13 and 14) over the restored area.

### 3.2 WASTE MANAGEMENT

CRA was responsible for managing waste associated with the 2013 project activities. Control Recovery, Inc. (CRI) landfill was utilized as a disposal facility for impacted soils. CRI is a NMOCD and Chevron-approved facility. A total of 1,494 cubic yards (cy) of materials were disposed of at CRI. The material was loaded into trucks provided by RWI. Each truck leaving the Site was provided with a uniquely numbered non-hazardous waste manifest to accompany each load. The manifest was signed by the generator (CEMC's agent), the transporter and finally by CRI landfill's representative. Table II provides disposal volumes (in cubic yards), as well as manifest and vehicle numbers for the waste material that was transported off of the Site. Waste manifest (electronic) copies are attached to this report in a CD as Appendix F.

### 4.0 SUMMARY

The agreed upon scope of work and closure plan activities for the reclamation of the Chevron CVU #342 (RP# 2672), Lea County, New Mexico has been completed. The following is a summary of project milestones and work performed:

- On April 7, 2010, Chevron submitted a C-144 Form proposing pit closure. The original C-144 closure plan for this reserve pit was onsite burial; however, that approach was rejected by the New Mexico Oil Conservation Commission (NMOCD). After a site inspection by the NMOCD, the agency requested that a C-141 Release Notification and Corrective Action Form should be filed by Chevron and consequently, a Remediation Permit number (RP#2672) was assigned to this project.
- On January 11, 2011, CRA, CEMC and AECOM met at the NMOCD District I Hobbs office to discuss the path forward at the Site. Topics of discussion included modifications (waste excavation and removal vs. onsite trench burial) to the 2010 closure workplan and objectives necessary to close the pit as directed by the NMOCD District I Hobbs office.
- Subsequent to the January 11, 2011 meeting between CRA, CEMC, AECOM and the NMOCD, a Closure Request Workplan prepared by CRA (April 13, 2011) on behalf of Chevron was submitted to the NMOCD.
- Subsequent to the Closure Request Workplan prepared by CRA (April 13, 2011), CRA, Chevron (David Pagano), and Mr. Geoffrey Leking met at the NMOCD District I Hobbs office on June 27, 2012 to discuss the path forward at the Site. Topics of discussion included the over-excavation of pit materials to depths of 4-5 feet, offsite disposal of pit materials to a NMOCD-permitted facility, delineation/confirmation sampling of the excavation floor, subsurface (as appropriate), site restoration tasks as proposed in the workplan, backfilling, lining, grading, seeding and closure documentation (C-141 Final and C-144 pit closure) being submitted upon NMOCD concurrence of vertical delineation of the Site.
- On March 27, 2013, CRA and Entact of Pearland, Texas mobilized to the Site to perform soil assessment activities. Heavy equipment was utilized to obtain soil samples from 1 foot, 4 feet and 6 feet below the existing liner.
- On April 3, 2013, CRA and CEMC personnel met with Geoffrey Leking with the NMOCD to discuss the status of this pit closure project and to propose vertical delineation approaches in association with existing conditions at the Site.
- On April 8, 2013, CRA and Entact mobilized to the Site to begin excavation activities. A total of approximately 1,494 cubic yards (cy) of material was

removed from the existing remedial excavation, with floor depths ranging from approximately 6 feet bgs.

- In May 2013, after discussions and approval from the NMOCD Hobbs District I offices, three soil borings (SB-1, SB-2 and SB-3) were installed within the existing remedial excavation to a depth of 100 feet below ground surface bgs. All three soil borings SB-1 (75'-4.94 mg/kg), SB-2 (80'-4.22 mg/kg) and SB-3 (90'-209 mg/kg) demonstrated decreasing chloride levels with depth to well below recommended remediation and delineation levels.
- On June 5, 2013, Tom Larson with CRA and Kegan Boyer with CEMC met with NMOCD staff to review delineation results and to finalize the Site's soil and restoration activities.
- On June 24, 2013, backfill activities began with preparation of equipment, Site and scope of work.
- On June 25, 2013, RWI began hauling clean backfill material to the reserve pit from an off-site borrow pit provided by the Pierce Ranch Trust.
- On June 26, 2013, installation of the 20-mil poly liner was installed and backfilling activities commenced atop the liner.
- On June 29, 2013, backfill activities were concluded by returning the construction affected areas to existing grade. The Site was then ripped and seeded using an approved native grass seed mixture (BLM#4). Demobilization of equipment and personnel from the Site concluded.
- On August 26, 2013, a site inspection revealed significant vegetative cover across the former reserve pit area.

### 5.0 SITE CLOSURE REQUEST

This Site Closure Report provides documentation of the Central Vacuum Unit #342 soil assessment activities involving the impacted soil areas and remedial correctional actions performed in accordance to the RP# 2672. This report is an attachment to the Final C-141 Form submittal for RP #2672. Based on NMOCD communication and corrective actions performed to date, CRA, on behalf of CEMC, respectfully requests the NMOCD to rule that no further action for this site is warranted. This Site Closure Report concludes the scope of work for this project. Please feel free to contact the CRA Midland office if there are any questions or additional information is required.

All of which is Respectfully Submitted,

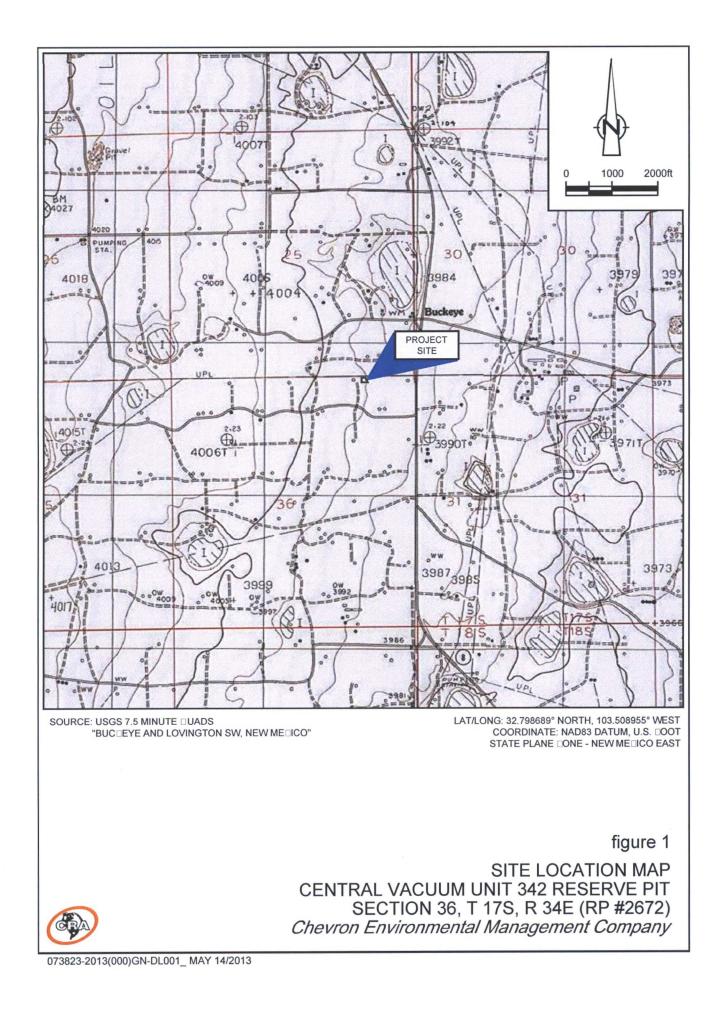
### **CONESTOGA-ROVERS & ASSOCIATES**

Thomas Clayon

Thomas C. Larson Midland Operations Manager

Gake Fing

Jake Ferenz Project Manager













10 g	נ	TABLE I	
	CENTRAL V	NALYTICAL SUMMARY ACUUM UNIT #342 IY, NEW MEXICO	
Sample ID	Sample Date	Depth (feet bgs)	Chloride
			(mg/kg)
NMOCD Recommend Levels (Total Ranking	ed Remediation Action Score = 10)		500
SB-1			
SB-1-5'	5/6/2013	5'	1,700
SB-1-10'	5/6/2013	10'	2,130
SB-1-20'	5/6/2013	20'	177
SB-1-40'	5/6/2013	40'	32.5
SB-1-50'	5/6/2013	50'	147
5B-1-75'	5/6/2013	75'	4.94
SB-1-100'	5/6/2013	100'	NA
SB-2			
SB-2-5'	5/6/2013	5'	3,860
5B-2-10'	5/6/2013	10'	4,420
5B-2-20'	5/6/2013	20'	2,510
5B-2-40'	5/6/2013	40'	4.83
SB-2-50'	5/6/2013	50'	2,460
5B-2-70'	5/6/2013	70'	412
5B-2-80'	5/6/2013	80'	4.22
5B-2-90'	5/6/2013	90'	NA
5B-2-100'	5/6/2013	100'	NA
SB-3			
6B-3-5'	5/7/2013	5'	142
5B-3-10'	5/7/2013	10'	685
5B-3-20'	5/7/2013	20'	1,400
5B-3-30'	5/7/2013	30'	3,420
5B-3-50'	5/7/2013	50'	1,210
SB-3-70'	5/7/2013	70'	431
5B-3-90'	5/7/2013	90'	209

Notes:

1. Chlorides analyzed by E300.0

2. NA - indicates sample was not analyzed

3. Highlighted cells indicated concentrations above regulatory guidelines

4. Chloride - RRALs based on NMOCD September 30, 2011 (DRAFT) guidance

Release Reporting and Corrective Actions Under Rule 29 & 30

Page 1 of 1

	CENTR	TABLE II VASTE INVENTORY RAL VACUUM UNIT #342 COUNTY, NEW MEXICO	
DATE	TRUCK NUMBER	MANIFEST NUMBER	QUANTITY OF WASTE cubic yards
4/9/2013	2	492809	18
4/9/2013	2	492757	18
4/9/2013	2	492708	18
4/9/2013	5	492688	18
4/9/2013	5	492741	18
4/9/2013	5	492800	18
4/9/2013	7	492746	18
4/9/2013	7	492694	18
4/9/2013	7	492795	18
4/9/2013	10	492812	18
4/9/2013	10	492752	18
4/9/2013	10	492705	18
4/9/2013	13	492691	18
4/9/2013	13	492745	18
4/9/2013	13	492801	18
4/9/2013	151	492689	18
4/9/2013	151	492742	18
4/9/2013	151	492792	18
4/9/2013	720	492802	18
4/9/2013	720	492754	18
4/9/2013	720	492702	18
4/10/2013	2	493129	18
4/10/2013	2	493028	18
4/10/2013	2	493074	18
4/10/2013	5	493016	18
4/10/2013	5	493061	18
4/10/2013	5	493117	18
4/10/2013	7	493123	18
4/10/2013	7	493069	18
4/10/2013	7	493024	18
4/10/2013	10	493119	18
4/10/2013	10	493064	18
4/10/2013	10	493019	18
4/10/2013	13	493022	18
4/10/2013	13	493067	18
4/10/2013	13	493122	18
4/10/2013	151	493110	18
4/10/2013	151	493062	18
4/10/2013	151	493017	18
4/10/2013	720	493015	18
4/10/2013	720	493063	18
4/10/2013	720	493116	18

Page 1 of 2

Page 2 of 2

	CENTR	VASTE INVENTORY RAL VACUUM UNIT #342	
DATE	TRUCK NUMBER	COUNTY, NEW MEXICO MANIFEST NUMBER	QUANTITY OF WASTE
4/11/2013	10	493361	cubic yards
4/11/2013	10	493417	18
4/11/2013	10	493316	18
4/11/2013	5	493414	18
4/11/2013	5	493306	18
4/11/2013	5	493363	18
4/11/2013	13	493416	18
4/11/2013	13	493360	18
4/11/2013	13	493308	18
4/11/2013	5	493307	18
4/11/2013	5	493415	18
4/11/2013	5	493355	18
4/11/2013	2	493419	18
4/11/2013	2	493364	18
4/11/2013	2	493319	18
4/11/2013	720	493418	18
4/11/2013	720	493368	18
4/11/2013	720	493318	18
4/11/2013	7	493413	18
4/11/2013	7	493359	18
4/11/2013	7	493312	18
4/12/2013	10	493630	18
4/12/2013	10	493683	18
4/12/2013	5	493628	18
4/12/2013	5	493673	18
4/12/2013	13	493627	18
4/12/2013	13	493679	18
4/12/2013	5	493675	18
4/12/2013	5	493625	18
4/12/2013	2	493631	18
4/12/2013	2	493678	18
4/12/2013	720	493676	18
4/12/2013	720	493629	18
4/12/2013	7	493626	18
4/12/2013	7	493674	18
4/13/2013	10	493869	18
4/13/2013	13	493868	18
4/13/2013	5	493864	18
4/13/2013	7	493858	18
4/13/2013	720	493863	18
4/13/2013	7	493866	18



Rodney Bailey Environmental Advisor Chevron North America Exploration and Production Mid Continent Business Unit/HES 15 Smith Rd Midland, Texas 79705 Office 432-687-7123 Cell 432-894-3519 Fax 866-569-5650

April, 7 2010

Mr. Larry Johnson NMOCD District Office 1625 N. French Drive Hobbs, New Mexico 88240

Re: Drilling Pits; Central Vacuum Unit 342 and New Mexico O-40, Closure Plans; CVU 342, S 36, T 17S, R 34 E, API # 30-025-38002 NM O-40, S 36, T 17S, R 34 E, API # 30-025-38140

Chevron would like to submit this work plan for the closure of drilling pits CVU 342 and NM O-40. Also attached are Pit closure form C-144 for each location.

- Chevron will excavate each pit and liner and store the material adjacent to the excavation.
- The soil beneath the temporary pit will be sampled to determine whether a release has occurred. If a release has occurred Chevron will excavate or blend the soil till closure limits stated in 19.15.17.13.(B) (1) (b) (i) are reached.
- · A 20 mil poly liner with welded seams will be placed in the excavation
- The previously excavated material will be returned to the pit, on top of the pit liner. The pit liner will be folded over the backfilled material. (original pit contents)
- A second pit liner will be placed on top of the back filled pit. Clean soil will be used as backfill
  on top of the liner. The center will be slightly mounded to promote rain water runoff and keep
  it from pooling in the center.
- Area will be contoured to match surrounding area
- Area will be seeded with NMOCD approved seed.

Chevron will began closure of these drilling pits as soon as we receive NMOCD approval.

If you have any questions please call me at 432-687-7123.

Respectfully,

Kodney Briley

Rodney Bailey Environmental Advisor Chevron North America

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 W District IV ncis Dr. Santa Fe NM 87505

State of New Mexico	
Energy Minerals and Natural Resource	25
Department	
Oil Conservation Division	
1220 South St. Francis Dr.	
Santa Fe, NM 87505	

Form C-144 July 21, 2008

1625 N. French Dr., Hobbs, NM 88240 <u>District II</u> 1301 W. Grand Avenue, Artesia, NM 88210 <u>District III</u> 1000 Rio Brazos Road, Aztec, NM 87410 <u>District IV</u> 1220 S. St. Francis Dr., Santa Fc, NM 87505	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.	
	Closed-Loop System, Below-Grade T	
Proposed Alt	ernative Method Permit or Closure P	lan Application
Closu	it of a pit, closed-loop system, below-grade tank, or ire of a pit, closed-loop system, below-grade tank, or fication to an existing permit ire plan only submitted for an existing permitted or used alternative method	or proposed alternative method
Instructions: Please submit one applic	ation (Form C-144) per individual pit, closed-loop syste	em, below-grade tank or alternative request
lease be advised that approval of this request does r invironment. Nor does approval relieve the operator	not relieve the operator of liability should operations result in of its responsibility to comply with any other applicable go	n pollution of surface water, ground water or the overnmental authority's rules, regulations or ordinances.
Derator: Chevron	OGRID #:	
Address: 15 Smith Rd	Midland Tx 19705	
Facility or well name: Constant U	Acuum Unit 342	
API Number: 30 - 025 - 386	OCD Permit Number:	
U/L or Qtr/Qtr Section3	6 Township 17.5 Range 34 E	County: LeA
Center of Proposed Design: Latitude	Longitude	NAD: 1927 1983
Surface Owner: 🗌 Federal 🗌 State 🗋 Private		
String-Reinforced		
3.		
intent)	<ul> <li>15.17.11 NMAC</li> <li>wcll Workover or Drilling (Applies to activities whi</li> <li>Haul-off Bins Other</li> </ul>	ich require prior approval of a permit or notice of
Lined Unlined Liner type: Thickness	mil LLDPE HDPE PVC	] Other
Liner Seams: Welded Factory Othe		
	f fluid:	
Tank Construction material:		and and a ff
	Visible sidewalls, liner, 6-inch lift and automatic ov	
	walls only Other	
Liner type: Thicknessn	nil 🗌 HDPE 🗌 PVC 🗌 Other	
s. <u>Alternative Method:</u> Submittal of an exception request is required. I	Exceptions must be submitted to the Santa Fe Environme	ental Bureau office for consideration of approval.

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

Chain link, six feet in height, two strands of barbed wire at top (Required if located within 1000 feet of a permanent residence, school, hospital, institution or church)

Four foot height, four strands of barbed wire evenly spaced between one and four feet

Alternate. Please specify\_

6.

7

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

Screen Netting Other\_

Monthly inspections (If netting or screening is not physically feasible)

Signs: Subsection C of 19.15.17.11 NMAC

12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers

Signed in compliance with 19.15.3.103 NMAC

### Administrative Approvals and Exceptions:

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

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

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

Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

10. Siting Criteria (regarding permitting): 19.15.17.10 NMAC

Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of accept material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appro office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of a Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to dry above-grade tanks associated with a closed-loop system.	opriate district approval.	
Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Yes No	
<ul> <li>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).</li> <li>Topographic map; Visual inspection (certification) of the proposed site</li> </ul>	Yes No	
<ul> <li>Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.</li> <li>(Applies to temporary, emergency, or cavitation pits and below-grade tanks)</li> <li>Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</li> </ul>	□ Yes <del>□</del> No □ NA	
<ul> <li>Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.</li> <li>(Applies to permanent pits)</li> <li>Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</li> </ul>	I Yes I No NA	-
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	Yes No	
<ul> <li>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.</li> <li>Written confirmation or verification from the municipality; Written approval obtained from the municipality</li> </ul>	Yes No	
<ul> <li>Within 500 feet of a wetland.</li> <li>US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site</li> </ul>	Yes No	
<ul> <li>Within the area overlying a subsurface mine.</li> <li>Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division</li> </ul>	Yes No	
<ul> <li>Within an unstable area.</li> <li>Engineering measures incorporated into the design; NM Bureau of Geology &amp; Mineral Resources; USGS; NM Geological Society; Topographic map</li> </ul>	Yes INO	
Within a 100-year floodplain. - FEMA map	Yes No	

<sup>16.</sup> Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: (19.15.17.13.) Instructions: Please indentify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if a facilities are required.	D NMAC) more than two
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 ser	vice and operations?
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	c
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 sound provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate dist considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Just demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.	rict office or may be
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
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
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
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 INO
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 INO
<ul> <li>Within an unstable area.</li> <li>Engineering measures incorporated into the design; NM Bureau of Geology &amp; Mineral Resources; USGS; NM Geological Society; Topographic map</li> </ul>	Yes No
Within a 100-year floodplain. - FEMA map	Yes No
<ul> <li>13.</li> <li>On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure play a check mark in the box, that the documents are attached.</li> <li>Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC</li> <li>Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC</li> <li>Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.13 NMAC</li> <li>Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.13 NMAC</li> <li>Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC</li> <li>Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC</li> </ul>	

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): Koowey Briley	Title: Environsmental Advisor
Signature: Kodny BAiley	Date: 4-7-10
e-mail address: brile 29 @ cheven.com	Telephone: 432-684-7123
20. <u>OCD Approval</u> : Permit Application (including closure plan) Closure Plan	n (only) OCD Conditions (see attachment)
OCD Representative Signature:	Approval Date:
Title:	OCD Permit Number:
21. <u>Closure Report (required within 60 days of closure completion)</u> : Subsection K. Instructions: Operators are required to obtain an approved closure plan prior to a The closure report is required to be submitted to the division within 60 days of the section of the form until an approved closure plan has been obtained and the closure	implementing any closure activities and submitting the closure report. completion of the closure activities. Please do not complete this
22.	
Closure Method: Waste Excavation and Removal On-Site Closure Method Alternative If different from approved plan, please explain.	ve Closure Method 🔲 Waste Removal (Closed-loop systems only)
23. <u>Closure Report Regarding Waste Removal Closure For Closed-loop Systems T</u> <i>Instructions: Please indentify the facility or facilities for where the liquids, drillin</i> <i>two facilities were utilized.</i>	
	Disposal Facility Permit Number:
	Disposal Facility Permit Number:
Were the closed-loop system operations and associated activities performed on or in Yes (If yes, please demonstrate compliance to the items below) No	
Required for impacted areas which will not be used for future service and operation <ul> <li>Site Reclamation (Photo Documentation)</li> <li>Soil Backfilling and Cover Installation</li> <li>Re-vegetation Application Rates and Seeding Technique</li> </ul>	15:
24.         Closure Report Attachment Checklist: Instructions: Each of the following item 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	
25.	
Operator Closure Certification: I hereby certify that the information and attachments submitted with this closure rep belief. I also certify that the closure complies with all applicable closure requirements with all applicable closure requirements	nts and conditions specified in the approved closure plan.
Name (Print): ADdalley DAiley	Tille: <u>Envirenter</u> Advisor
Signature: Todawy Dras lay	Date: 4-7-10
e-mail address:	Telephone:

### State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

			Rel	ease Notifi	catio	on and Co	orrective A	ction		
						<b>OPERA</b>	ГOR	🛛 Initi	al Report 🗌 Fina	l Repo
Name of Co	ompany (	Chevron Env	ironment	al Management	Co.	Contact	Matt Hud	son		
Address	Address 1400 Smith Street Room 19001A						No. (713) 372	2-1046	2 million	
Facility Nat	me C	Central Vacua	um Unit #	#342	_	Facility Typ	e Reserve F	Pit API #30-02	25-38002	_
Surface Ow	ner State	of New Mex	tico	Mineral (	Owner	r		Lease	No.	
				LOCA	ATIO	ON OF REI	LEASE			
Unit Letter	Section	Township	Range	Feet from the	-	th/South Line	Feet from the	East/West Line	County	
Α	36	17 S	34 E	81.2	- t.,	North	1186.4	East	Lea	
		Lat	titude	32.798611		Longitude	-103.50916	57		
					TID	E OF REL				
Type of Rele	ase	C141 submitta	l requeste	d by L Johnson	UK		Release Unknow	vn Volume	Recovered Unknown	
Source of Re		Reserve Pit				Date and H	lour of Occurrence	ce Date and	Hour of Discovery	
Was Immedi	ate Notice		Yes 🗌	] No 🛛 Not R	equire	If YES, To	Whom?			
By Whom?						Date and H	Iour			
Was a Water	course Rea		Yes 🗵	No		If YES, Vo	olume Impacting	the Watercourse.		
		em and Reme l that a C141 b		n Taken.* d for this location	follov	wing a Site Insp	ection.			
Per NMOCD analytical res	directives, sults and clo	osure plan will	area of app be develo	proximately 85' x pped and submitte	d to th	ne District 1 offi	ice for review and	l approval.	diation plan including	
regulations a public health should their o or the enviro	ll operators or the envi operations l nment. In a	are required to ronment. The nave failed to a	o report an acceptance adequately OCD accept	nd/or file certain r ce of a C-141 report investigate and r	elease ort by t emedi	notifications and the NMOCD m ate contamination	nd perform correc arked as "Final R on that pose a thr e the operator of	ctive actions for rel eport" does not rel eat to ground wate responsibility for c	suant to NMOCD rules an eases which may endange ieve the operator of liabili r, surface water, human ho ompliance with any other	er ity ealth
							OIL CON	SERVATION	DIVISION	
Signature:										
Printed Name	e: Matt	Hudson				Approved by	District Supervis	or:	1. S. P. S. S. S.	2
Title:	Proje	ct Manager				Approval Dat	te:	Expiration	Date:	
E-mail Addre	ess: mhu	dson@chevror	n.com			Conditions of	Approval:		Attached	
Date:			Phone:	713-372-1046						

\* Attach Additional Sheets If Necessary

# Site Chronology - CVU #342 Reserve Pit Restoration Project

# Unit A, Section 36, T17S, R34E

March 7, 2013	Performed GPR Survey of the perimeter of the reserve pit. Identified
(Thursday)	one underground utility (metal pipe)
March 26, 2013	Received Vacuum FMT approval for Dig Plan to include soil
(Tuesday)	sampling and pit excavation.
March 27, 2013	Completed soil sample collection within pit area.
(Thursday)	
April 2, 2013 (Tuesday)	Receive soil sample results identifying elevated Chloride results 5'
	below the liner. Riley hydro-vac the areas identified as disturbed
	areas with GPR, no indication of underground pipes were found.
	Identified the electrical line from the solar panel to the well head.
April 4, 2013 (Thursday)	Equipment mobilize here from Chevron O State site
April 5, 2013 (Friday)	Entact shut down for work to complete offsite training requirement.
April 8, 2013 (Monday)	Completed dig plan, excavation permit, and permit to work. Begin
· · · · · · · · · · · · · · · · · · ·	back dragging pit material within the CVU 342 Pit. Material was
	excavated immediately below the liner and stockpiled within the pit
April 9, 2013 (Tuesday)	Entact began loading pit material with 20 cy belly dump trucks.
	Seven dump trucks transported approximately 378 cy of pit material
	(within three trips) for disposal within CRI Landfill (Hobbs, NM).
	Total waste hauled off to date included 378 cy.
April 10, 2013	Entact continued to load pit material with 7 x 20 cy belly dump
(Wednesday)	trucks. The trucks completed three trips, totaling 378 cy of pit
(	material disposed within CRI Landfill. Total waste hauled off to
	date includes 756 cy.
April 11, 2013	Entact continued to load pit material with 7 x 20 cy belly dump
(Thursday)	trucks. The trucks completed three trips, totaling 378 cy of pit
(lindiodicy)	material disposed within CRI Landfill. Total waste hauled off to
	date includes 1,134 cy.
April 12, 2013	Entact continued to load pit material with 7 x 20 cy belly dump
(Friday)	trucks. The trucks completed two trips, totaling 252 cy of pit
())	material disposed within CRI Landfill. Total waste hauled off to
	date includes 1,386 cy.
April 13, 2013	Entact continued to load pit material with 6 x 20 cy belly dump
(Saturday)	trucks. The trucks completed one trip, totaling 108 cy of pit material
(0.0000000))	disposed within CRI Landfill. Total waste hauled off to date is 1,494
	cy – hauling suspended. Plan to install borings at base of excavated
	pit to evaluate vertical extent of impacts.
April 15, 2013	Demobe equipment and secure site with barricade. Site field work
(Monday)	suspended.
April 25, 2013	Inspect excavation barricade – barricade in good condition.
(Thursday)	hopeet excuvation burneaue - burneaue in good condition.
(Inuisuay)	

May 6, 2013	Receive Vacuum FMT approval of dig plan and excavation permit to
(Monday)	work. CRA and Harrison and Cooper (H&C) mobilize to Site. SWA
	is issued for ramp construction. Completed sampling and soil
	borings SB-1 and SB-2 within excavated pit.
May 7, 2013	Receive Vacuum FMT excavation permit to work. CRA and H&C
(Tuesday)	mob to Site. Completed sampling and soil boring SB-3 from within
(,))	the excavated pit.
June 5, 2013	CRA (Tom Larson) and Kegan Boyer (CEMC) mob to NMOCD
(Wednesday)	District I, Hobbs office for meeting regarding closure activities.
June 24, 2013	On-Site personnel attend FMT contractor safety briefing. Site walk
(Monday)	through and discussion on backfilling activities. Mini-excavator
(monday)	arrives on-site. Flagging and barriers are erected on-site. Dozer
	arrives on-site and Entact performs inspections on equipment. Site
and the second second	secured at EOD.
June 25, 2013	On-site personnel attend FMT contractor safety briefing. Five belly
(Tuesday)	dump trucks arrive on-site. Receive Vacuum FMT PTW. The trucks
(I desudy)	complete 10 loads totaling 180 cy to date. Dozer equipment failure –
	mechanic on site for repair and parts are ordered. Site secured at
A Start Start Start	EOD.
June 26, 2013	On-site personnel attend FMT contractor safety briefing. Receive
	FMT PTW. Mini-excavator is used to continue backfill activities in
(Wednesday)	
	preparation for liner installation. Dozer is repaired and backfill
	activities are continued. Liner installation is completed (approx. 2.5
	rolls). Site secured at EOD.
June 27, 2013	On-site personnel attend FMT contractor safety briefing. Receive
(Thursday)	FMT PTW. Backfilling activities have resumed. RWI on-site with
Com R De The Land	four 18 cy dump trucks. Trucks completed 52 loads totaling, 936 cy
And Land The	for day and - 1,116 cy hauled to date. Site secured at EOD.
June 28, 2013	On-site personnel attend FMT contractor safety briefing. Receive
(Friday)	FMT PTW. SWA (lightning) 30 min. RWI on-site with four 18 cy
	belly dump trucks. Trucks completed 33 loads today. 14 loads for
- 2 The second second	today were caliche. Remaining 19 loads were top soil. Totaling 594
	cy for the day. Total project cubic yards hauled to date totaling –
	1,710. Soil hauling activities are concluded today. Borrow pit area is
	cleaned and returned to original grade. Site secured at EOD.
June 29, 2013	CRA on-Site field manager holds TGSM. FMT PTW received for
(Saturday)	daily work activities. Final grade and seeding activities performed
(cuturduy)	today. Backfill ripped, seeded and returned to original grade. Work
	completed at CVU-342. Mobilization to O-State #40 for a Monday
	(1 <sup>st</sup> ) a.m. start.
	(1 <sup>-</sup> ) a.m. statt.



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

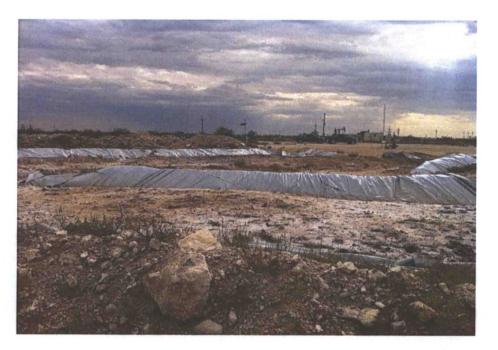


PHOTO 2: View of reserve pit facing southwest before any remedial work activities





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



PHOTO 4: View of excavation/waste removal activities





PHOTO 5: View of excavation activities



PHOTO 6: View of excavated reserve pit facing southeast





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



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



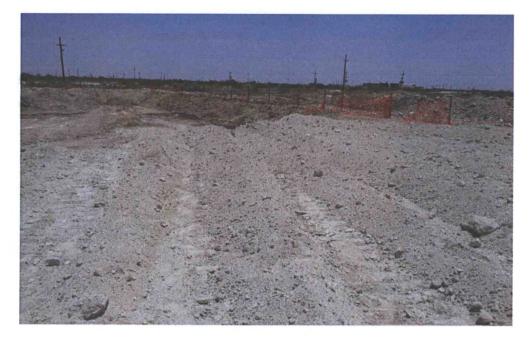


PHOTO 9: View of backfill activities facing northeast

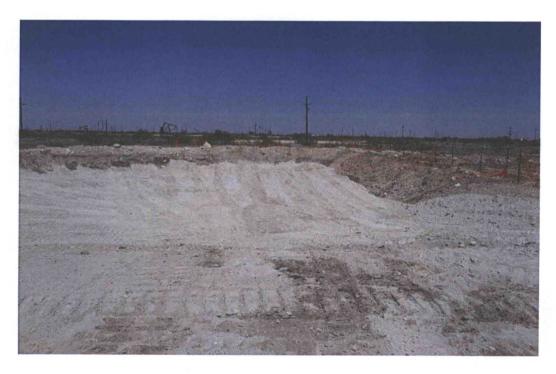


PHOTO 10: View of backfilling activities facing northeast, ready for liner material





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



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





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



PHOTO 14: View of final grading and seeding activities completed facing northeast. Flags are representative of entrance ramp location during remedial activities for the Site.





### ANALYTICAL RESULTS

Prepared by:

Lancaster

Laboratories

Prepared for:

Analysis Report

Lancaster Laboratories 2425 New Holland Pike Lancaster, PA 17605-2425 Conestoga-Rovers & Associates 13091 Pond Springs Road Austin TX 78729

April 01, 2013

Project: CVU 342 Pit

Submittal Date: 03/28/2013 Group Number: 1378598 PO Number: 4056668 Release Number: LEA COUNTY, NM State of Sample Origin: NM

Client Sample Description CVX-342-01 Composite Soil

🔅 eurofins

Lancaster Labs (LLI) # 6999648

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO ELECTRONIC COPY TO Conestoga-Rovers & Associates Conestoga-Rovers & Associates Attn: Ryan Kainer

Attn: Chris Knight

Respectfully Submitted,

Wendy a. Kom

Wendy A. Kozma Principal Specialist Group Leader

(717) 556-7257

🔅 eurofins

Lancaster Laboratories

**Analysis Report** 

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 •717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

### Sample Description: CVX-342-01 Composite Soil CVU 342 Pit - 073823

### Project Name: CVU 342 Pit

Collected: 03/27/2013 14:00 by CV

Submitted: 03/28/2013 08:45 Reported: 04/01/2013 16:16 LLI Group # 1378598 Account # 11713

LLI Sample # SW 6999648

Conestoga-Rovers & Associates 13091 Pond Springs Road Austin TX 78729

### 34201

CAT No.	Analysis Name		CAS Number	Dry Result	Dry Limit of Quantitation	Dilution Factor	
GC Vo	latiles	SW-846	8015B	mg/kg	mg/kg		
01638	TPH-GRO soil C6-C10		n.a.	0.4 J	1.4	25.64	
GC Vo	latiles	SW-846	8021B	mg/kg	mg/kg		
08179	Benzene		71-43-2	0.0037 J	0.0068	25.64	
08179	Ethylbenzene		100-41-4	0.0054 J	0.0068	25.64	
08179	Toluene		108-88-3	0.0034 J	0.0068	25.64	
08179	Total Xylenes		1330-20-7	0.0075 J	0.020	25.64	
GC Pe	troleum	SW-846	8015B	mg/kg	mg/kg		
Hydro	carbons						
08270	TPH-DRO soil C10-C28	8	n.a.	58	16	1	
GC Pe	troleum	SW-846	8015B modified	1 mg/kg	mg/kg		
Hydro	carbons						
05256	#4 Fuel Oil		68476-31-3	N.D.	16	1	
05256	Coal Tar Oil		8001-58-9	N.D.	16	1	
05256	Diesel/#2 Fuel		68334-30-5	14 J	16	1	
05256	#6 Fuel Oil		68553-00-4	N.D.	120	1	
05256	Gasoline		8006-61-9	N.D.	16	1	
05256	Kerosene		8008-20-6	N.D.	40	1	
05256	Mineral Spirits		8030-30-6	N.D.	40	1	
	Motor Oil		n.a.	N.D.	40	1	
that C8 ( Ther typi cont samp	of a hydrocarbon com n-octane) through C40 re is an unidentifiabl cally see Mineral Spi	ponent m: ) (n-tetra le product rits and, result of	ix calibration in a acontane) normal h t eluting in the ca for Kerosene in. the Diesel/#2 Fue	ydrocarbons. arbon range we would mos Fhis product is not l oil detected in this	t		
Wet C	hemistry	EPA 300	0.0	mg/kg	mg/kg		
07333	Chloride by IC (soli	id)	16887-00-6	21,800	13,100	1000	
Wet C	hemistry	SM 2540	G-1997	8	95		
00111	Moisture		n.a.	24.2	0.50	1	
				e sample after oven dryi reported above is on an			

#### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.



Lancaster Laboratories



LLI Sample # SW 6999648

LLI Group # 1378598

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

### Sample Description: CVX-342-01 Composite Soil CVU 342 Pit - 073823

Project Name: CVU 342 Pit

Collected: 03/27/2013 14:00 by CV

Submitted: 03/28/2013 08:45 Reported: 04/01/2013 16:16

Account # 11713 Conestoga-Rovers & Associates 13091 Pond Springs Road

34201

		Labora	atory Sa	ample Analys:	is Record			
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
01638	TPH-GRO soil C6-C10	SW-846 8015B	1	13087A16A	03/28/2013	20:57	Laura M Krieger	25.64
08179	BTEX by 8021	SW-846 8021B	1	13087A16A	03/28/2013	20:57	Laura M Krieger	25.64
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201308730547	03/28/2013	14:43	Mitchell R Washel	n.a.
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	130870011A	03/30/2013	15:53	Tracy A Cole	1
05256	TPH by GC-FID (Soils)	SW-846 8015B modified	1	130870010A	03/29/2013	12:52	Heather E Williams	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	130870011A	03/28/2013	19:00	Sally L Appleyard	1
04833	Extraction / Fuel TPH (Soils)	SW-846 3550B	1	130870010A	03/28/2013	19:00	Sally L Appleyard	1
07333	Chloride by IC (solid)	EPA 300.0	2	13088088201A	03/30/2013	21:39	Joseph E McKenzie	1000
01352	Deionized Water Extraction	EPA 300.0	1	13088088201A	03/29/2013	10:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13087820002B	03/28/2013	21:46	Scott W Freisher	1

Austin TX 78729

Lancaster Laboratories

# **Analysis Report**

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 •717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 3

### Quality Control Summary

Client Name: Conestoga-Rovers & Associates Reported: 04/01/13 at 04:16 PM

🔅 eurofins

Group Number: 1378598

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

### Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank <u>LOO</u>	Report <u>Units</u>	LCS <u>%REC</u>	LCSD <u>%REC</u>	LCS/LCSD Limits	RPD	<u>RPD Max</u>
Batch number: 13087A16A	Sample nur	mber(s): 699	99648					
Benzene	N.D.	0.0050	mg/kg	96		80-120		
Ethylbenzene	N.D.	0.0050	mg/kg	94		80-120		
Toluene	N.D.	0.0050	mg/kg	93		80-120		
TPH-GRO soil C6-C10	N.D.	1.0	mg/kg	74	77	67-119	3	30
Total Xylenes	N.D.	0.015	mg/kg	94		80-120		
Batch number: 130870010A	Sample nur	mber(s): 699	99648					
#4 Fuel Oil	N.D.	12.	mg/kg					
Coal Tar Oil	N.D.	12.	mg/kg					
Diesel/#2 Fuel	N.D.	12.	mg/kg	96		71-124		
#6 Fuel Oil	N.D.	90.	mg/kg					
Gasoline	N.D.	12.	mg/kg					
Kerosene	N.D.	12.	mg/kg					
Mineral Spirits	N.D.	12.	mg/kg					
Motor Oil	N.D.	30.	mg/kg					
Batch number: 130870011A	Sample nur	nber(s): 699	9648					
TPH-DRO soil C10-C28	N.D.	12.	mg/kg	88		76-120		
Batch number: 13088088201A	Sample nur	nber(s): 699	9648					
Chloride by IC (solid)	N.D.	10.0	mg/kg	106		90-110		
Batch number: 13087820002B	Sample nur	nber(s): 699	99648					
Moisture	-			100		99-101		

### Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD <u>%REC</u>	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 13087A16A Benzene Ethylbenzene Toluene Total Xylenes	Sample 95 95 93 94	number(s) 96 95 93 95	: 6999648 52-135 56-132 59-129 53-145	UNSPK: 9 8 8 9	P99654 30 30 30 30 30	11			
Batch number: 130870010A #4 Fuel Oil	Sample	number(s)	: 6999648	UNSPK:	34201	BKG: 342 N.D.	01 N.D.	0 (1)	20

\*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

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**Analysis Report** 

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### Quality Control Summary

Client Name: Conestoga-Rovers & Associates Reported: 04/01/13 at 04:16 PM

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Group Number: 1378598

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name Coal Tar Oil	MS <u>%REC</u>	MSD <u>%REC</u>	MS/MSD Limits	RPD	RPD MAX	BKG Conc N.D.		DUP Conc		DUP <u>RPD</u> 0 (1)	Dup RPD Max 20
Diesel/#2 Fuel	98		37-129			11	J	8.1	J	26* (1)	20
#6 Fuel Oil						N.D.		N.D.		0 (1)	20
Gasoline						N.D.		N.D.		0 (1)	20
Kerosene						N.D.		N.D.		0 (1)	20
Mineral Spirits						N.D.		N.D.		0 (1)	20
Motor Oil						N.D.		N.D.		0 (1)	20
Batch number: 130870011A	Sample	number(s)	: 6999648	UNSPK:	69996	48 BKG:	699	9648			
TPH-DRO soil C10-C28	88		30-159			44		33		29* (1)	20
Batch number: 13088088201A	Sample	number(s)	: 6999648	UNSPK:	69996	48 BKG:	699	9648			
Chloride by IC (solid)	10049 (2)		90-110			16,500		17,000	D	3 (1)	20
Batch number: 13087820002B	Sample	number(s)	: 6999648	BKG:	P99832	8					
Moisture						26.4		27.1		3	13

### Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

	Trifluorotoluene-F	Trifluorotoluene-P	
	Thiluoroloiuene-r	milluorotoiuene-P	
6999648	79	91	
Blank	88	98	
LCS	84	85	
LCSD	86		
MS		88	
MSD		90	
Limits:	(1 100	80 118	
Limits:	61-122	73-117	
Analysis	61-122 Name: TPH by G( mber: 1308700102	C-FID (Soils)	
Analysis	Name: TPH by GO	C-FID (Soils)	
Analysis Batch nu	Name: TPH by G0 mber: 1308700102	C-FID (Soils)	
Analysis Batch nu 6999648	Name: TPH by GG mber: 1308700107 Chlorobenzene	C-FID (Soils) Orthoterphenyl	
Analysis Batch nu 6999648 Blank	Name: TPH by GG mber: 1308700107 Chlorobenzene 67	C-FID (Soils) Orthoterphenyl 75	
Analysis Batch nu 6999648 Blank DUP	Name: TPH by GG mber: 1308700102 Chlorobenzene 67 69	C-FID (Soils) Orthoterphenyl 75 99	
Analysis	Name: TPH by GO mber: 1308700102 Chlorobenzene 67 69 63	C-FID (Soils) Orthoterphenyl 75 99 73	

Analysis Name: TPH-DRO soil C10-C28

\*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

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Page 3 of 3

### Quality Control Summary

Client Name: Conestoga-Rovers & Associates Reported: 04/01/13 at 04:16 PM Group Number: 1378598

Surrogate Quality Control

Batch number: 130870011A Orthoterphenyl

6999648	81		
Blank	99		
DUP	79		
LCS	101		
6999648 Blank DUP LCS MS	94		
Limits:	52-136		

\*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

## Environmental Services Analysis Request/Chain of Custody

Client: Conestoga-Rovers & Associates		1.		-	94,0	Matrix				4.25	A	nalyses	Real	leste	d		For Lab L	lse Only
Project Name/#: CVU 342 Pit - 073823	Site ID #:									-	-	reserva			-		SF #:	
	P.O. #:								0	0	0	Teserve					SCR #:	
				-	Sediment	Ground Surface			-	0	0		+					
Sampler: Christopher Vela	PWSID #			-	edin		1	ers	19	ne-					1	2.00	120	ation Codes
Phone #: 432-686-0086	Quote #:	÷., ;	-	-	0	1.1	12	tain			1				36-4	10	H = HCI	T = Thiosulfate
State where sample(s) were collected: New Me:	kico	_	-	(1)		Potable	20	Con	S.F.	300	6						N = HNO3	B = NaOH
	Colle	Collection and a size of the second s					Other:	Total # of Containers	TPH 8015	Chlorides 300	BTEX 8021						S = H <sub>2</sub> SO <sub>4</sub> O = Other	P = H <sub>3</sub> PO <sub>4</sub>
Sample Identification	Date	Time	Gra	Col	Soil	Water	Off	Tot	TPH	ChI	BTI	1.			2.		Ren	marks
CVX-342-01	3/27/13	1400		х	x		1	2	x	x	x	1.1						
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Date results are needed: 48 hrs			-		Relin	quished	by:	1		Da	ite	Time	_	eived b	y:		Date	Time
Rush results requested by (please check): E-M	1ail 🔽	Phor	ne [	] .			1	1	1		0	24				1	West?	1.2.32
E-mail Address: rkainer@craworld.com Phone: 432-686-0086					Relig	quished	by:			Da	te	Time	Rece	eived b	by:		Date	Time
Data Package Options (please check if required	-				Relin	quished I	by:	/		Da	te	Time	Rece	eived b	oy:	1	Date	Time
Type I (Validation/non-CLP) MA MCP				14	Relin	quished I	by	-		Da	te	Time	Rece	ived b	W.	2	Date	Time
Type III (Reduced non-CLP) CT RCP Type IV (CLP SOW) TX TRR	-	. Coll	quancu				Da	-	11110				rul	3/28/13	0845			
Type VI (Raw Data Only)		Relin	quished I	by Co	mme	rcial (	Carrier			$\mathcal{V}$	nchal	ind	10000	11-117	0575			
EDD Required? Yes No If yo			-	_					/								at 2.0	°C

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### **Explanation of Symbols and Abbreviations**

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
μg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	μL	microliter(s)
		pg/L	picogram/liter

< less than - The number following the sign is the <u>limit of quantitation</u>, the smallest amount of analyte which can be reliably determined using this specific test.

- > greater than
- J estimated value The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).
- ppm parts per million One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.
- ppb parts per billion
- Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

#### U.S. EPA CLP Data Qualifiers:

#### **Organic Qualifiers**

- A TIC is a possible aldol-condensation product
- B Analyte was also detected in the blank
- C Pesticide result confirmed by GC/MS
- D Compound quantitated on a diluted sample
- E Concentration exceeds the calibration range of the instrument
- N Presumptive evidence of a compound (TICs only)
- P Concentration difference between primary and confirmation columns >25%
- U Compound was not detected
- X,Y,Z Defined in case narrative

#### Inorganic Qualifiers

- B Value is <CRDL, but ≥IDL
- E Estimated due to interference
- M Duplicate injection precision not met
- N Spike sample not within control limits
- S Method of standard additions (MSA) used for calculation
- U Compound was not detected
- W Post digestion spike out of control limits
- Duplicate analysis not within control limits
- + Correlation coefficient for MSA < 0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

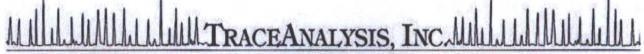
Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as "analyze immediately" are not performed within 15 minutes.

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Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

### Analytical and Quality Control Report

Ryan Kainer CRA-Midland 2135 South Loop 250 West Midland, TX, 79703

Report Date: April 1, 2013

Work Order: 13032812

Project Location: Lea Co., NM Project Name: CVU #342 Project Number: 073823

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

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
324798	CVX-342-01	soil	2013-03-27	14:00	2013-03-28

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.

This report consists of a total of 9 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Michael Al.

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

# **Report Contents**

~

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Laboratory Control Spikes           QC Batch 100150 - LCS (1)           QC Batch 100150 - MS (1)	 		<b>6</b> 6 6
Calibration Standards           QC Batch 100150 - CCV (1)           QC Batch 100150 - CCV (2)			
Appendix         Report Definitions         Laboratory Certifications         Standard Flags	 	<mark></mark>	8
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### **Case Narrative**

Samples for project CVU #342 were received by TraceAnalysis, Inc. on 2013-03-28 and assigned to work order 13032812. Samples for work order 13032812 were received intact at a temperature of 1.3 C.

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

		Prep	Prep	QC	Analysis
Test	Method	Batch	Date	Batch	Date
TPH 418.1	E 418.1	84842	2013-04-01 at 09:30	100150	2013-04-01 at 09:32

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 13032812 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.

Work Order: 13032812 CVU #342 Page Number: 4 of 9 Lea Co., NM

## **Analytical Report**

#### Sample: 324798 - CVX-342-01

TRPHC		Qs		164	mg/Kg	1	10.0
Parameter		Flag	Cert F	lesult	Units	Dilution	$\mathbf{RL}$
				RL			
Prep Batch:	84842		Sample Preparatio	n: 2013-04-	-01	Prepared By:	DS
QC Batch:	100150		Date Analyzed:	2013-04-	-01	Analyzed By:	,
Laboratory: Analysis:	Lubbock TPH 418.1		Analytical Method	E 418.1		Prep Method:	N/A

Work Order: 13032812 Page Number: 5 of 9 Report Date: April 1, 2013 Lea Co., NM 073823 CVU #342 **Method Blanks** Method Blank (1) QC Batch: 100150 QC Batch: 100150 Date Analyzed: 2013-04-01 Analyzed By: DS Prepared By: DS Prep Batch: 84842 QC Preparation: 2013-04-01 MDL Parameter Flag Cert Result Units  $\mathbf{RL}$ TRPHC < 5.72mg/Kg 10 Report Date: April 1, 2013 073823

Work Order: 13032812 CVU #342 Page Number: 6 of 9 Lea Co., NM

## Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

				LCS			Spike	Matrix			Rec.
Param		F	С	Result	Units	Dil.	Amount	Result			Limit
TRPHC				266	mg/Kg		250	< 5.72	106	80	0 - 12
Percent recovery is based	on the spik	e resu	lt. RP	D is based	on the sp	oike and sp	ike duplica	ate result.			
			LCS	D		Spike	Matrix	F	Rec.		RPI
	F	C	Resu	lt Units	Dil.	Amount	Result	Rec. L	imit R	PD	Limi
Param	T.	0									
TRPHC			259	mg/K	g 1	250 pike and sp	<5.72 vike duplica	104 80		3	20
TRPHC Percent recovery is based		e resu	259 lt. RP	mg/K D is based	g 1			104 80			20
Param TRPHC Percent recovery is based Matrix Spike (MS-1) QC Batch: 100150	on the spik	e resu	259 lt. RP	mg/K D is based	g 1 on the sp			104 80		3	
TRPHC Percent recovery is based <b>Matrix Spike (MS-1)</b> QC Batch: 100150	on the spik	e resu	259 lt. RP : 32479 Da	mg/K D is based 8	g 1 on the sp ed: 201	ike and sp		104 80	- 120	3 d By:	: DS
TRPHC Percent recovery is based <b>Matrix Spike (MS-1)</b> QC Batch: 100150	on the spik	e resu	259 lt. RP : 32479 Da	mg/K D is based 8 ate Analyz	g 1 on the sp ed: 201	oike and sp 3-04-01		104 80	- 120 Analyze Prepare	3 d By: d By:	
TRPHC Percent recovery is based <b>Matrix Spike (MS-1)</b> QC Batch: 100150	on the spik	e resu	259 lt. RP : 32479 Da	mg/K D is based 8 ate Analyz C Preparat	g 1 on the sp ed: 201	oike and sp 3-04-01	vike duplica	104 80 ate result.	- 120 Analyze Prepare	3 d By: d By:	: DS

D												
Param		F	C	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
TRPHC	Qs	Qs		362	$\mathrm{mg/Kg}$	1	250	164	79	80 - 120	4	20

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

Report Date: April 1, 2013 073823

Work Order: 13032812 CVU #342 Page Number: 7 of 9 Lea Co., NM

### **Calibration Standards**

Standard (CCV-1)

QC Batch	1001	.50		Date .	Analyzed:	2013-04-01		Analy	zed By: DS
					CCVs	CCVs	CCVs	Percent	
					True	Found	Percent	Recovery	Date
Param		Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
TRPHC				mg/Kg	100	112	112	80 - 120	2013-04-01

#### Standard (CCV-2)

QC Batch:	100150			Date .	Analyzed:	2013-04-01		Analy	zed By: DS
					CCVs	CCVs	CCVs	Percent	
					True	Found	Percent	Recovery	Date
Param	F	lag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
TRPHC				mg/Kg	100	110	110	80 - 120	2013-04-01

Work Order: 13032812 CVU #342 Page Number: 8 of 9 Lea Co., NM

### Appendix

### **Report Definitions**

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

### Laboratory Certifications

	Certifying	Certification	Laboratory
С	Authority	Number	Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704219-12-8	Lubbock

#### Standard Flags

- F Description
- B Analyte detected in the corresponding method blank above the method detection limit
- H Analyzed out of hold time
- J Estimated concentration
- Jb The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
- Je Estimated concentration exceeding calibration range.
- MI1 Split peak or shoulder peak
- MI2 Instrument software did not integrate
- MI3 Instrument software misidentified the peak
- MI4 Instrument software integrated improperly
- MI5 Baseline correction
- Qc Calibration check outside of laboratory limits.
- Qr RPD outside of laboratory limits
- Qs Spike recovery outside of laboratory limits.
- Qsr Surrogate recovery outside of laboratory limits.
- U The analyte is not detected above the SDL

#### Attachments

Report Date: April 1, 2013 073823

Work Order: 13032812 CVU #342 Page Number: 9 of 9 Lea Co., NM

The scanned attachments will follow this page.

Please note, each attachment may consist of more than one page.

Company Name: Address:		com	nc.	•		Lubi Te Fa	tock,T (808) (806)	en Ave exas 7 794-12 794-1 378-12	196 298			6	Mie	Basin Street, diand,Texas 7 fel (432) 689-8 ax (432) 689-8	19763 301		20	El Pa Tel Fax	10, Ta (915)		99922 443				2501 Carro	Mayes	Texas	Ste 10				
lddress:	Conestoga-Rovers & Ass	ociate	\$		Pho	ne #:				4	132-	686	-00	86		Γ		11	lin							EST		No.	,			
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Contact Person:	Ryan Kainer				E-m	ail:			rka	iner	a.c.	raw	ork	d.com					6010B / 200.													P
nvoice to:			SA	ME	AS A	BOV	E												1 1	Ŧ								Alkalini	Andan h			(Brider
Project #:	73823				Proj	ject Na	me:				C	VU 3	342	P2		824	124											PO-P	5			TOPT 3
Project Location: include state}	Buckeye, NM					apler nature:	0	l	5	/	A	d	Ø	A		8021B / 602 / 8260B / 624	80218 / 602 / 82608 / 824		a Cd Cr Pb Se Hg	Be Cd Cr Pb Se				524 700 Marc	LOUGESE	8		d NUCH	EC			UITER BY IN
		ERS	ount	L	M	ATRIX			PRE	SERV		VE		SAMP	LING	1802/	1 602 / B	826	O As Ba	A AB B	Vallan	89		82608 / 624	ADA 82	61A/60		1-				ILLING IT
LAB #	FIELD CODE	CONTAINERS	Volume/Amount	WATER	SOIL	AIR	10001	HCL	HNO3	NaOH	ICE	NONE		DATE	TIME		BTEX 80218	82700	Fotal Metals Ag As	TCLP Metals Ag As	CLP VOIRIBES	TCLP Pesticides		3C/MS Vol. 82608 / 624	PCB's BORS / ADB	esticides 8061A / 608	BOD, TSS, pH	Molsture Content	Ca, Mg.			i um Around Time if different from standard
- 1	VX-342-01	1	4 oz	-	x	4 0				2	×	2		3271			×	-	F			F	£	00		4		20	Z		48	
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6701 Aberdeen Avenue, Suite 9 200 East Sunset Road, Suite E 5002 Basin Street, Suite A1 (BioAquatic) 2501 Mayes Rd., Suite 100

Lubbock, Texas 79424 800-378-1296 806-El Paso, Texas 79922 915-Midland, Texas 79703 432-Suite 100 Carroliton, Texas 75006 972-E-Mail lab@traceanalysis.com WEB: www.traceanalysis.com

806-794-1296 FAX 806-794-1298 915-585-3443 FAX 915-585-4944 432-689-6301 FAX 432-689-6313 972-242-7750

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

### Analytical and Quality Control Report

Ryan Kainer CRA-Midland 2135 South Loop 250 West Midland, TX, 79703

Report Date: April 1, 2013

Work Order: 13032911

Project Location: Lea Co., NM Project Name: CVU #342 Project Number: 073823

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

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
324854	CVX-342-02	soil	2013-03-23	14:10	2013-03-28

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.

This report consists of a total of 9 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Michael al.

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

# **Report Contents**

Case Narrative	3
Analytical Report Sample 324854 (CVX-342-02)	<b>4</b> 4
Method Blanks QC Batch 100150 - Method Blank (1)	<b>5</b>
Laboratory Control Spikes           QC Batch 100150 - LCS (1)           QC Batch 100150 - MS (1)	6 6
Calibration Standards           QC Batch 100150 - CCV (1)           QC Batch 100150 - CCV (2)	7 7 7
Appendix         Report Definitions         Laboratory Certifications         Standard Flags	8
Attachments	

### Case Narrative

Samples for project CVU #342 were received by TraceAnalysis, Inc. on 2013-03-28 and assigned to work order 13032911. Samples for work order 13032911 were received intact at a temperature of 1.3 C.

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

		Prep	Prep	QC	Analysis
Test	Method	Batch	Date	Batch	Date
TPH 418.1	E 418.1	84842	2013-04-01 at 09:30	100150	2013-04-01 at 09:32

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 13032911 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.

Work Order: 13032911 CVU #342 Page Number: 4 of 9 Lea Co., NM

## **Analytical Report**

#### Sample: 324854 - CVX-342-02

Laboratory:	Lubbock							
Analysis:	TPH 418.1		Analytical 1	Method:	E 418.1		Prep Method:	N/A
QC Batch:	100150		Date Analy	zed:	2013-04-01		Analyzed By:	DS
Prep Batch:	84842		Sample Pre	paration:	2013-04-01		Prepared By:	DS
				Η	RL			
Parameter		Flag	Cert	Rest	ult	Units	Dilution	RL
TRPHC		Qs		1	55	mg/Kg	1	10.0

Work Order: 13032911 CVU #342 Page Number: 5 of 9 Lea Co., NM

## Method Blanks

Method Blank (1)	QC Batch: 100150				
QC Batch: 100150		Date Analyzed:	2013-04-01	Analyzed By:	DS
Prep Batch: 84842		QC Preparation:	2013-04-01	Prepared By:	DS
			MDL		
Parameter	Flag	Cert	Result	Units	RL
TRPHC		CARLEN STREET	<5.72	mg/Kg	10

Work Order: 13032911 CVU #342 Page Number: 6 of 9 Lea Co., NM

20

### Laboratory Control Spikes

#### Laboratory Control Spike (LCS-1)

Param		F	С	LCS Result	Units	Dil.	Spike Amount	Mat Res		lec.	Rec. Limit
TRPHC				266	mg/Kg	1	250	<5.	.72	106	80 - 120
Percent recovery	s based on the spike	e resu	lt. RPD	is based o	on the sp	oike and sp	ike duplica	ate resul	t.		
Percent recovery	s based on the spike		lt. RPD LCSD Result		on the sp Dil.	oike and sp Spike Amount	ike duplica Matrix Result	ate resul	t. Rec. Limit	RPD	RPD Limit

#### Matrix Spike (MS-1) Spiked Sample: 324798

QC Batch: Prep Batch:	100150 84842				e Analyze Preparati		3-04-01 3-04-01			Analyzed I Prepared I	
Param			F	С	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec.
TRPHC		Qs	Qs		347	mg/Kg	1	250	164	73	80 - 120
Percent recov	very is based on	n the spik	e resul			on the spi					
Param		F	C	MSD Resul		Dil.	Spike Amount	Matrix Result	Rec. Lin		RPD Limit

1 cu cuiti	*	e recoure	CIIIOO	L 11.	1 millio unio	recourt	1000.	LJIIIIU	ILL L
TRPHC Qs	Qs	362	mg/Kg	1	250	164	79	80 - 120	4
Percent recovery is based on the sp	ike r	esult. RPD	is based on	the s	pike and sp	ike duplic	ate res	ult.	

Report Date: April 1, 2013 073823

Work Order: 13032911 CVU #342 Page Number: 7 of 9 Lea Co., NM

## **Calibration Standards**

### Standard (CCV-1)

QC Batch: 10	00150		Date .	Analyzed:	2013-04-01		Analy	zed By: DS
				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
TRPHC			mg/Kg	100	112	112	80 - 120	2013-04-01

#### Standard (CCV-2)

QC Batch: 1	.00150		Date .	Analyzed:	2013-04-01		Analy	zed By: DS
				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
TRPHC			mg/Kg	100	110	110	80 - 120	2013-04-01

Work Order: 13032911 CVU #342 Page Number: 8 of 9 Lea Co., NM

### Appendix

### **Report Definitions**

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

### Laboratory Certifications

	Certifying	Certification	Laboratory
С	Authority	Number	Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704219-12-8	Lubbock

### Standard Flags

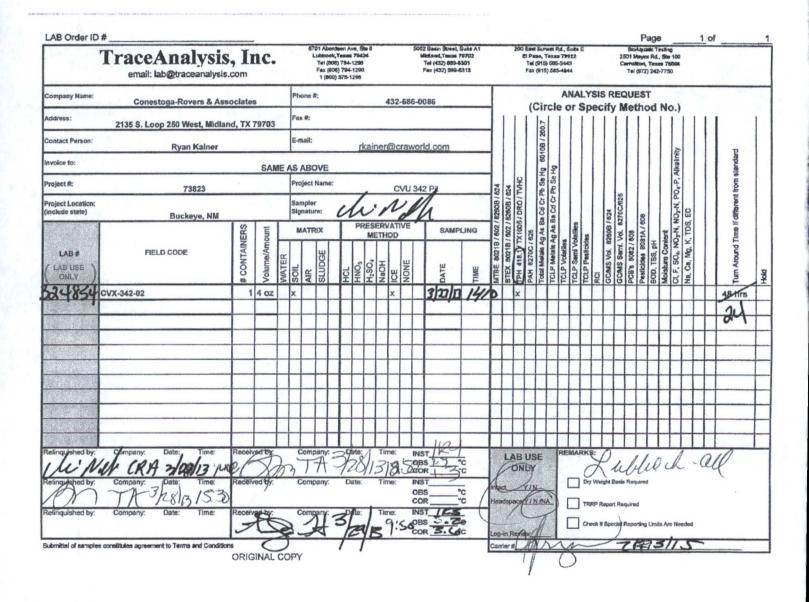
- F Description
- B Analyte detected in the corresponding method blank above the method detection limit
- H Analyzed out of hold time
- J Estimated concentration
- Jb The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
- Je Estimated concentration exceeding calibration range.
- MI1 Split peak or shoulder peak
- MI2 Instrument software did not integrate
- MI3 Instrument software misidentified the peak
- MI4 Instrument software integrated improperly
- MI5 Baseline correction
- Qc Calibration check outside of laboratory limits.
- Qr RPD outside of laboratory limits
- Qs Spike recovery outside of laboratory limits.
- Qsr Surrogate recovery outside of laboratory limits.
- U The analyte is not detected above the SDL

#### Attachments

Work Order: 13032911 CVU #342 Page Number: 9 of 9 Lea Co., NM

The scanned attachments will follow this page.

Please note, each attachment may consist of more than one page.





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Certifications

DBE NELAP DoD LELAP HUB NCTRCA WBE Kansas Oklahoma ISO 17025

### Analytical and Quality Control Report

Ryan Kainer **CRA-Midland** 2135 South Loop 250 West Midland, TX, 79703

Report Date: April 1, 2013

Work Order: 13032912 

Project Location: Lea Co., NM **Project Name:** CVU #342 **Project Number:** 073823

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

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
324855	CVX-342-03	soil	2013-03-27	14:20	2013-03-28

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.

This report consists of a total of 9 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Michael ale

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

# **Report Contents**

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Calibration Standards           QC Batch 100150 - CCV (1)           QC Batch 100150 - CCV (2)	 7 7 7
Appendix         Report Definitions         Laboratory Certifications         Standard Flags	 8
Attachments	 8

Page 2 of 9

### **Case Narrative**

Samples for project CVU #342 were received by TraceAnalysis, Inc. on 2013-03-28 and assigned to work order 13032912. Samples for work order 13032912 were received intact at a temperature of 1.3 C.

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

		Prep	Prep	QC	Analysis
Test	Method	Batch	Date	Batch	Date
TPH 418.1	E 418.1	84842	2013-04-01 at 09:30	100150	2013-04-01 at 09:32

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 13032912 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.

Report Date: April 1, 2013 073823

Work Order: 13032912 CVU #342 Page Number: 4 of 9 Lea Co., NM

## **Analytical Report**

#### Sample: 324855 - CVX-342-03

Analysis: QC Batch: Prep Batch:	TPH 418.1 100150 84842		Analytical M Date Analyz Sample Prep	ed: paration:			Prep Method: Analyzed By: Prepared By:	DS
Parameter		Flag	Cert	F Resu	RL ilt	Units	Dilution	RL
TRPHC TRPHC		F lag	Cert	Rest 33		mg/Kg	1	1

Work Order: 13032912 CVU #342 Page Number: 5 of 9 Lea Co., NM

## Method Blanks

Method Blank (1)	QC Batch: 100150				
QC Batch: 100150		Date Analyzed:	2013-04-01	Analyzed By:	DS
Prep Batch: 84842		QC Preparation:	2013-04-01	Prepared By:	DS
			MDL		
Parameter	Flag	Cert	Result	Units	RL
TRPHC		State and	<5.72	mg/Kg	10

Report Date: April 1, 2013 073823

Work Order: 13032912 CVU #342 Page Number: 6 of 9 Lea Co., NM

## Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

LCSSpikeMatrixReParamFCResultUnitsDil.AmountResultRec.LinTRPHC266mg/Kg1250<5.7210680 -Percent recovery is based on the spike result.RPD is based on the spike and spike duplicate result.ParamFCResultUnitsDil.AmountResultRec.RParamFCResultUnitsDil.AmountResultRec.InTRPHC259mg/Kg1250<5.7210480 - 12033Percent recovery is based on the spike result.RPD is based on the spike and spike duplicate result.Matrix Spike (MS-1)Spiked Sample:324798QC Batch:100150Date Analyzed:2013-04-01Analyzed By:Prep Batch:84842QC Preparation:2013-04-01Prepared By:MSSpikeMatrixReParamFCResultUnitsDil.AmountResultRec.Lin	D D 1 1 04040				te Analyze		3-04-01			Analyzed	
ParamFCResultUnitsDil.AmountResultRec.LinTRPHC266mg/Kg1250<5.7210680 -Percent recovery is based on the spike result.RPD is based on the spike and spike duplicate result.ParamFCResultUnitsDil.AmountResultRec.RParamFCResultUnitsDil.AmountResultRec.RParamFCResultUnitsDil.AmountResultRec.LParamFCResultUnitsDil.AmountResultRec.RParamFCResultUnitsDil.AmountResultRec.RParamFCResultRPD is based on the spike and spike duplicate result.NNNMatrixSpiked Sample:324798QCPreparation:2013-04-01Analyzed By:Prepared By:Prepared By:Prepared By:NParamFCResultUnitsDil.AmountResultRec.LinParamFCResultUnitsDil.AmountResultRec.LinParamFCResultUnitsDil.AmountResultRec.LinParamFCResultUnitsDil.AmountResultRec.LinParamFCResult<	rep Batch: 84842			QC	Preparatio	on: 201	3-04-01			Prepared	By: DS
ParamFCResultUnitsDil.AmountResultRec.LinTRPHC266mg/Kg1250 $< 5.72$ 10680 -Percent recovery is based on the spike result.RPD is based on the spike and spike duplicate result.ParamFCResultUnitsDil.AmountResultRec.RParamFCResultUnitsDil.AmountResultRec.RParamFCResultUnitsDil.AmountResultRec.LinTRPHC259mg/Kg1250 $< 5.72$ 10480 - 12033Percent recovery is based on the spike result.RPD is based on the spike and spike duplicate result.Matrix Spike (MS-1)Spiked Sample:324798QC Batch:100150Date Analyzed:2013-04-01Analyzed By:Prepared By:Prep Batch:84842QC Preparation:2013-04-01Prepared By:1ParamFCResultUnitsDil.AmountResultRec.LinParamFCResultUnitsDil.AmountResultRec.LinParamFCResultUnitsDil.AmountResultRec.LinParamFCResultUnitsDil.AmountResultRec.LinParamFCResultUnitsDil.AmountRe											
TRPHC $266 \text{ mg/Kg}$ 1 $250  < 5.72  106  80$ -         Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.       LCSD       Spike       Matrix       Rec.       R         Param       F       C       Result       Units       Dil.       Amount       Result       Rec.       R         Param       F       C       Result       Units       Dil.       Amount       Result       Rec.       R         TRPHC       259       mg/Kg       1       250       <5.72       104       80 - 120       3       3         Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.       Rec.       R       R         Matrix Spike (MS-1)       Spiked Sample:       324798       QC Preparation:       2013-04-01       Analyzed By:       Prep Batch:       100150       Date Analyzed:       2013-04-01       Prepared By:       100150       Prepared By:       1001					LCS			Spike	Matrix		Rec.
Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result. Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result. Rec. R Param F C Result Units Dil. Amount Result Rec. Limit RPD Li TRPHC 259 mg/Kg 1 250 <5.72 104 80 - 120 3 Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result. Matrix Spike (MS-1) Spiked Sample: 324798 QC Batch: 100150 Date Analyzed: 2013-04-01 Analyzed By: Prep Batch: 84842 QC Preparation: 2013-04-01 Prepared By: Percent recovery is based on the spike result Units Dil. Amount Result Rec. Lim TRPHC $q_8$ $q_8$ $347$ mg/Kg 1 250 164 73 80 - Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.			F	С							Limit
LCSDSpikeMatrixRec.R Rec.ParamFCResultUnitsDil.AmountResultRec.LimitRPDLimitTRPHC259mg/Kg1250<5.7210480 - 12033Percent recovery is based on the spike result.RPD is based on the spike and spike duplicate result.Matrix Spike (MS-1)Spiked Sample:324798QC Batch:100150Date Analyzed:2013-04-01Analyzed By:Prep Batch:84842QC Preparation:2013-04-01Prepared By:ParamFCResultUnitsDil.AmountResultRec.ParamFCResultUnitsDil.AmountResultRec.LimitParamFCResultUnitsDil.AmountResultRec.LimitParamFCResultUnitsDil.AmountResultRec.LimitPercent recovery is based on the spike result.RPD is based on the spike and spike duplicate result.Percent result.	<b>FRPHC</b>				266	mg/Kg	1	250	< 5.72	106	80 - 12
ParamFCResultUnitsDil.AmountResultRec.LimitRPDLiTRPHC259mg/Kg1250<5.72	Percent recovery is based	on the spike	e resu	lt. RPI	) is based o	on the sp	ike and sp	oike duplica	ate result.		
ParamFCResultUnitsDil.AmountResultRec.LimitRPDLiTRPHC259mg/Kg1250<5.72				LCSD			Spile	Motrix	D	00	RPE
TRPHC       259       mg/Kg       1       250 $< 5.72$ 104       80 - 120       3       5         Percent recovery is based on the spike result.       RPD is based on the spike and spike duplicate result.         Matrix Spike (MS-1)       Spiked Sample: $324798$ 2013-04-01       Analyzed By:       2013-04-01       Analyzed By:       2013-04-01       Prepared By:       2013-04-01       2013-04-01       2013-04-0	Daram	F	C			Dil	-				
Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.          Matrix Spike (MS-1)       Spiked Sample: 324798         QC Batch:       100150       Date Analyzed:       2013-04-01       Analyzed By:         Prep Batch:       84842       QC Preparation:       2013-04-01       Prepared By:         Param       F       C       Result       Units       Dil.       Amount       Result       Rec.       Lin         PARAM       Qs       Qs       347       mg/Kg       1       250       164       73       80 -		1	0								
Matrix Spike (MS-1)Spiked Sample: $324798$ QC Batch: $100150$ Date Analyzed: $2013-04-01$ Analyzed By:Prep Batch: $84842$ QC Preparation: $2013-04-01$ Prepared By:MSSpikeMatrixReParamFCResultUnitsDil.AmountResultRec.LinTRPHC $Q^8$ $Q^8$ 347mg/Kg12501647380 -Percent recovery is based on the spike result.RPD is based on the spike and spike duplicate result.	Parcent recovery is based	on the spike	rogu	It RPF	) is based (	on the en	ike and sn	ike duplice	to result		
Prep Batch: $84842$ QC Preparation: $2013-04-01$ Prepared By:MSSpikeMatrixReParamFCResultUnitsDil.AmountResultRec.LinTRPHC $Q_8$ $Q_8$ $347$ mg/Kg1 $250$ 1647380 -Percent recovery is based on the spike result.RPD is based on the spike and spike duplicate result.				004500							
MSSpikeMatrixReParamFCResultUnitsDil.AmountResultRec.LinCRPHC $Q_8$ $Q_8$ 347mg/Kg12501647380 -Percent recovery is based on the spike result.RPD is based on the spike and spike duplicate result.	Matrix Spike (MS-1)	Spiked Sa	mple:	324798							
ParamFCResultUnitsDil.AmountResultRec.LinITRPHC $Q_8$ $Q_8$ $347$ $mg/Kg$ 1 $250$ $164$ $73$ $80$ Percent recovery is based on the spike result.RPD is based on the spike and spike duplicate result.		Spiked Sa	mple:			d: 201	3-04-01			Analyzed	By: DS
$\frac{\Gamma R P H C}{\Gamma R P H C} = \frac{Q_8}{Q_8} = \frac{Q_8}{Q_8} = \frac{347}{mg/Kg} = \frac{1}{250} = \frac{164}{164} = \frac{73}{73} = \frac{80}{80} = \frac{1}{164} = \frac{1}$	QC Batch: 100150	Spiked Sa	mple:	Dat	te Analyze					U	
Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.	QC Batch: 100150	Spiked Sa	mple:	Dat	te Analyzed Preparatio			Spike	Matrix	U	
	QC Batch: 100150 Prep Batch: 84842	Spiked Sa		Da QC	te Analyzea Preparatio MS	on: 201	3-04-01			Prepared	By: DS
	QC Batch: 100150 Prep Batch: 84842 Param		F	Da QC	te Analyzee Preparatie MS Result	on: 201 Units	3-04-01 Dil.	Amount	Result	Prepared Rec.	By: DS Rec.
	QC Batch: 100150 Prep Batch: 84842 Param FRPHC	Qs	F	Dat QC C	te Analyzee Preparatie MS Result 347	on: 201 Units mg/Kg	3-04-01 Dil. 1	Amount 250	Result 164	Prepared Rec.	By: DS Rec. Limit

				MSD			Spike	Matrix		Rec.		RPD
Param		$\mathbf{F}$	C	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
TRPHC	Qs	Qs		362	mg/Kg	1	250	164	79	80 - 120	4	20

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

Work Order: 13032912 CVU #342 Page Number: 7 of 9 Lea Co., NM

### **Calibration Standards**

### Standard (CCV-1)

QC Batch: 100150			Date	Analyzed:	2013-04-01		Analy	Analyzed By: DS		
				CCVs	CCVs	CCVs	Percent			
				True	Found	Percent	Recovery	Date		
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed		
TRPHC	Sec. 1		mg/Kg	100	112	112	80 - 120	2013-04-01		

#### Standard (CCV-2)

QC Batch: 10	Date .	Analyzed:	2013-04-01		Analyzed By: DS			
				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
TRPHC	Sec. El .		mg/Kg	100	110	110	80 - 120	2013-04-01

Work Order: 13032912 CVU #342 Page Number: 8 of 9 Lea Co., NM

### Appendix

#### **Report Definitions**

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

### Laboratory Certifications

	Certifying	Certification	Laboratory
$\mathbf{C}$	Authority	Number	Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704219-12-8	Lubbock

### **Standard Flags**

- F Description
- B Analyte detected in the corresponding method blank above the method detection limit
- H Analyzed out of hold time
- J Estimated concentration
- Jb The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
- Je Estimated concentration exceeding calibration range.
- MI1 Split peak or shoulder peak
- MI2 Instrument software did not integrate
- MI3 Instrument software misidentified the peak
- MI4 Instrument software integrated improperly
- MI5 Baseline correction
- Qc Calibration check outside of laboratory limits.
- Qr RPD outside of laboratory limits
- Qs Spike recovery outside of laboratory limits.
- Qsr Surrogate recovery outside of laboratory limits.
- U The analyte is not detected above the SDL

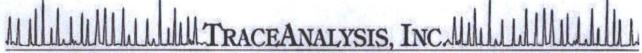
#### Attachments

Work Order: 13032912 CVU #342

Page Number: 9 of 9 Lea Co., NM

The scanned attachments will follow this page. Please note, each attachment may consist of more than one page.

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Company Name:	Conestoga-Rovers & Ass	ociate	\$		Phone #: 4					432-686-0086													LYSIS REQUEST Specify Method No.)											
Address:	2135 S. Loop 250 West, Midlan	d, TX	79703		Fax #																			y 14					1		1			
Contact Person:	Ryan Kainer	-			E-mail: rkainer@craworld.com						00108/2000																							
Invoice to:			SA	MEA	SA	BO	/E																							Alkelinity			andan	COR FORMA
Project #:	73823				Proj	ject Na	ame:					cv	/U 3	42	Pit		924	124	TNHC	100 40	Ph Se Hg									PO.P.			- munit	5
Project Location: (include state)	Buckeye, NM			Sampler Signature: 1 1 Not				1 80828	8021B / 602 / 8260B / 824	TX1005 / DRO / TVHC	1010	a cd cr Pb				124	700/825		8		NO-N.P	EC		Time if different from standard										
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6701 Aberdeen Avenue, Suite 9 200 East Sunset Road, Suite E 5002 Basin Street, Suite A1 (BioAquatic) 2501 Mayes Rd., Suite 100

Lubbock, Texas 79424 800-378-1296 El Paso, Texas 79922 Midland, Texas 79703 Carroliton, Texas 75006 E-Mail lab@traceanalysis.com

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915-585-3443 FAX 915-585-4944 FAX 432+689+6313

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Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

### Analytical and Quality Control Report

Ryan Kainer **CRA-Midland** 2135 South Loop 250 West Midland, TX, 79703

Report Date: April 1, 2013

Work Order: 13032913 

Project Location: Lea Co., NM **Project Name:** CVU #342 **Project Number:** 073823

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

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
324856	CVX-342-SP	soil	2013-03-27	14:30	2013-03-28

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.

This report consists of a total of 9 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Michael ()

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

# **Report Contents**

Case Narrative	3
Analytical Report Sample 324856 (CVX-342-SP)	<b>4</b> 4
Method Blanks QC Batch 100150 - Method Blank (1)	<b>5</b> 5
Laboratory Control Spikes           QC Batch 100150 - LCS (1)           QC Batch 100150 - MS (1)	6 6
Calibration Standards           QC Batch 100150 - CCV (1)           QC Batch 100150 - CCV (2)	7 7
Appendix         Report Definitions         Laboratory Certifications         Standard Flags	8 8
Attachments	8

### **Case Narrative**

Samples for project CVU #342 were received by TraceAnalysis, Inc. on 2013-03-28 and assigned to work order 13032913. Samples for work order 13032913 were received intact at a temperature of 1.3 C.

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

		Prep	Prep	QC	Analysis
Test	Method	Batch	Date	Batch	Date
TPH 418.1	E 418.1	84842	2013-04-01 at 09:30	100150	2013-04-01 at 09:32

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 13032913 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.

Work Order: 13032913 CVU #342 Page Number: 4 of 9 Lea Co., NM

# **Analytical Report**

## Sample: 324856 - CVX-342-SP

Laboratory:	Lubbock							
Analysis:	TPH 418.1		Analytical	Method:	E 418.1		Prep Method:	N/A
QC Batch:	100150		Date Analy	zed:	2013-04-01		Analyzed By:	DS
Prep Batch:	84842		Sample Pre	paration:	2013-04-01		Prepared By:	DS
				I	RL			
Parameter		Flag	Cert	Res	ult	Units	Dilution	RL
TRPHC		Qs,U		<10	0.0	mg/Kg	1	10.0

Work Order: 13032913 CVU #342 Page Number: 5 of 9 Lea Co., NM

# Method Blanks

Method Blank (1)	QC Batch: 100150				
QC Batch: 100150 Prep Batch: 84842		Date Analyzed: QC Preparation:	2013-04-01 2013-04-01	Analyzed By: Prepared By:	
Parameter	Flag	Cert	MDL Result	Units	RL
TRPHC			<5.72	m mg/Kg	10

Report Date: April 1, 2013 073823

Work Order: 13032913 CVU #342 Page Number: 6 of 9 Lea Co., NM

## Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

				LCS			Spike	M	atrix		Rec.
Param		F	С	Result	Units	Dil.	Amount			Rec.	Limit
TRPHC				266	mg/Kg	1	250	<	5.72	106	80 - 120
	on the spike	e resu	lt. RPD	is based o	on the si	oike and su	ike duplica	ate resi	ult.		
Percent recovery is based of Param TRPHC	on the spike F	e resu C	lt. RPD LCSD Result		on the sp Dil.	oike and sp Spike Amount	ike duplica Matrix Result <5.72	ate rest Rec.	ult. Rec. Limit 80 - 120	RPD	RPD Limit 20

Matrix Spike (MS-1)	Spiked Sample: 324798
---------------------	-----------------------

QC Batch: 100150 Prep Batch: 84842					Analyzed Preparatio		3-04-01 3-04-01				alyzed B pared B	e
Param			F	СН	MS Result	Units	Dil.	Spike Amount		atrix esult F	Rec.	Rec. Limit
TRPHC	Qs	1	Qs		347	mg/Kg	1	250	1	164	73	80 - 120
Percent recovery is based on t	he sp	oike :	result	. RPD i	s based o	n the sp	ike and sp	ike duplica	ate resu	ılt.		
				MSD			Spike	Matrix		Rec.		RPD
Param		$\mathbf{F}$	$\mathbf{C}$	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
TRPHC	Qs	Qs		362	mg/Kg	1	250	164	79	80 - 120	4	20

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

Work Order: 13032913 CVU #342 Page Number: 7 of 9 Lea Co., NM

# **Calibration Standards**

## Standard (CCV-1)

QC Batch: 10	0150		Date	Analyzed:	2013-04-01		Analy	zed By: DS
				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
TRPHC			mg/Kg	100	112	112	80 - 120	2013-04-01

## Standard (CCV-2)

QC Batch:	100150		Date	Analyzed:	2013-04-01		Analy	zed By: DS
				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
TRPHC			mg/Kg	100	110	110	80 - 120	2013-04-01

Work Order: 13032913 CVU #342 Page Number: 8 of 9 Lea Co., NM

## Appendix

## **Report Definitions**

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

## Laboratory Certifications

	Certifying	Certification	Laboratory
$\mathbf{C}$	Authority	Number	Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704219-12-8	Lubbock

## **Standard Flags**

- F Description
- B Analyte detected in the corresponding method blank above the method detection limit
- H Analyzed out of hold time
- J Estimated concentration
- Jb The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
- Je Estimated concentration exceeding calibration range.
- MI1 Split peak or shoulder peak
- MI2 Instrument software did not integrate
- MI3 Instrument software misidentified the peak
- MI4 Instrument software integrated improperly
- MI5 Baseline correction
- Qc Calibration check outside of laboratory limits.
- Qr RPD outside of laboratory limits
- Qs Spike recovery outside of laboratory limits.
- Qsr Surrogate recovery outside of laboratory limits.
- U The analyte is not detected above the SDL

## Attachments

Work Order: 13032913 CVU #342 Page Number: 9 of 9 Lea Co., NM

The scanned attachments will follow this page.

Please note, each attachment may consist of more than one page.

	# 13032-91 TraceAnalysis email: lab@traceanalysis	, I	nc			Lui T Fi	Aberde bbock, el (808) ax (806) 1 (800)	794-1 794-1	79424 1298 1298				M	! Basin Street, : idtand, Texas 7 Fel (432) 689-6 Fax (432) 689-6	79703	_		Te	aso, " H (915	set Ro Texas ) 585-1 ) 585-1	79922				2501 M	Aquat	Rd., S Texas	te 100 75006		<u>1</u> of		
Company Name:	Conestoga-Rovers & Ass	ociate	s		Pho	ne #:					432	2-686	6-00	086					Ci			Sp								2.1		
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LAB # ( LAB USE ONLY )	FIELD CODE	# CONTAINERS	Volume/Amount	WATER	SOIL	AIR	SLUDGE	HCL	HNO <sub>3</sub>	H2SO4	ICE	NONE		DATE	TIME	MTBE 80218	BTEX 8021B	TPH 418.1)	Total Metals Ag As	TCLP Metals Ag As	TCLP Volatiles	ICLP Pesticides		GCIMIS VOL. 82001	PCB's 8082/608	Pesticides 8081A/	BOD, TSS, pH	CI, F, SO., NO3-1	Na, Ca, Mg, K, TDS,		Turn Around Time If different from standard	Houd
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ubmittal of samples	constitutes agreement to Terms and Condition	ORIG	SIMAL	0	PY			7	1							Car	nier #	1	P		2	ð	~	2	4	8		2	7	21	15	_

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 •717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

### ANALYTICAL RESULTS

Prepared by:

Lancaster

Laboratories

Prepared for:

**Analysis Report** 

Lancaster Laboratories 2425 New Holland Pike Lancaster, PA 17605-2425 Conestoga-Rovers & Associates 13091 Pond Springs Road Austin TX 78729

April 01, 2013

Project: CVU 342 Pit

Submittal Date: 03/28/2013 Group Number: 1378599 PO Number: 4056668 Release Number: LEA COUNTY, NM State of Sample Origin: NM

Client Sample Description CVX-342-02 Composite Soil

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Lancaster Labs (LLI) # 6999649

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO ELECTRONIC COPY TO Conestoga-Rovers & Associates Conestoga-Rovers & Associates Attn: Ryan Kainer Attn: Chris Knight

Respectfully Submitted,

Wendy a. Kom

Wendy A. Kozma Principal Specialist Group Leader

(717) 556-7257

🛟 eurofins

Lancaster Laboratories

# **Analysis Report**

Account

LLI Sample # SW 6999649 LLI Group # 1378599

# 11713

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

#### Sample Description: CVX-342-02 Composite Soil CVU 342 Pit - 073823

#### Project Name: CVU 342 Pit

Collected: 03/27/2013 14:10 by CV

Submitted: 03/28/2013 08:45 Reported: 04/01/2013 16:16 Conestoga-Rovers & Associates 13091 Pond Springs Road Austin TX 78729

#### 34202

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation	Dilution Factor
GC Vo	latiles SW-846	8015B	mg/kg	mg/kg	
01638	TPH-GRO soil C6-C10	n.a.	18	1.3	25.38
GC Vo	Latiles SW-846	8021B	mg/kg	mg/kg	
08179	Benzene	71-43-2	0.0050 J	0.0064	25.38
08179	Ethylbenzene	100-41-4	0.14	0.0064	25.38
08179	Toluene	108-88-3	0.032	0.0064	25.38
08179	Total Xylenes	1330-20-7	0.29	0.019	25.38
GC Pet	croleum SW-846	8015B	mg/kg	mg/kg	
Hydrod	carbons				
08270	TPH-DRO soil C10-C28	n.a.	80	15	1
GC Pet	croleum SW-846	8015B modified	mg/kg	mg/kg	
Iydrod	carbons				
05256	#4 Fuel Oil	68476-31-3	N.D.	15	1
	Coal Tar Oil	8001-58-9	N.D.	15	1
05256	Diesel/#2 Fuel	68334-30-5	41	15	1
	#6 Fuel Oil	68553-00-4	N.D.	110	1
	Gasoline	8006-61-9	N.D.	15	1
05256	Kerosene	8008-20-6	N.D.	15	1
05256	Mineral Spirits	8030-30-6	N.D.	15	1
	Motor Oil	n.a.	N.D.	38	1
that C8 (1 There typic cont: samp	quantitation is based on peak of a hydrocarbon component m n-octane) through C40 (n-tetr e is an unidentifiable produc cally see Mineral Spirits and ributing to overall result of le. The QC limits for Minera rdingly.	ix calibration in a acontane) normal hy t eluting in the ca /or Kerosene in. T the Diesel/#2 Fuel	range that includes drocarbons. rbon range we would most his product is not oil detected in this		
Wet Ch	memistry EPA 30	0.0	mg/kg	mg/kg	
	Chloride by IC (solid)	16887-00-6	31,200	12,500	1000
Wet Ch	memistry SM 254	0 G-1997	8	×	
00111	Moisture	n.a.	21.3	0.50	1
	"Moisture" represents the lo 103 - 105 degrees Celsius. T as-received basis.			at	

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.





2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 •717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

#### Sample Description: CVX-342-02 Composite Soil CVU 342 Pit - 073823

#### Project Name: CVU 342 Pit

Collected: 03/27/2013 14:10 by CV

Submitted: 03/28/2013 08:45 Reported: 04/01/2013 16:16 LLI Sample # SW 6999649 LLI Group # 1378599 Account # 11713

Conestoga-Rovers & Associates 13091 Pond Springs Road Austin TX 78729

### 34202

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
01638	TPH-GRO soil C6-C10	SW-846 8015B	1	13087A16A	03/29/2013	13:30	Laura M Krieger	25.38
08179	BTEX by 8021	SW-846 8021B	1	13087A16A	03/29/2013	13:30	Laura M Krieger	25.38
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201308730547	03/28/2013	14:45	Mitchell R Washel	n.a.
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	130870011A	03/30/2013	14:53	Tracy A Cole	1
05256	TPH by GC-FID (Soils)	SW-846 8015B modified	1	130870010A	03/29/2013	15:09	Heather E Williams	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	130870011A	03/28/2013	19:00	Sally L Appleyard	1
04833	Extraction / Fuel TPH (Soils)	SW-846 3550B	1	130870010A	03/28/2013	19:00	Sally L Appleyard	1
07333	Chloride by IC (solid)	EPA 300.0	2	13088088201A	03/30/2013	22:24	Joseph E McKenzie	1000
01352	Deionized Water Extraction	EPA 300.0	1	13088088201A	03/29/2013	10:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13087820002B	03/28/2013	21:46	Scott W Freisher	1

# **Analysis Report**

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 3

## Quality Control Summary

Client Name: Conestoga-Rovers & Associates Reported: 04/01/13 at 04:16 PM

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Group Number: 1378599

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

## Laboratory Compliance Quality Control

Analysis Name	Blank <u>Result</u>	Blank LOQ	Report <u>Units</u>	LCS <u>%REC</u>	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 13087A16A	Sample numb	er(s): 699	99649					
Benzene	N.D.	0.0050	mg/kg	96		80-120		
Ethylbenzene	N.D.	0.0050	mg/kg	94		80-120		
Toluene	N.D.	0.0050	mg/kg	93		80-120		
TPH-GRO soil C6-C10	N.D.	1.0	mg/kg	74	77	67-119	3	30
Total Xylenes	N.D.	0.015	mg/kg	94		80-120		
Batch number: 130870010A	Sample numb	$er(s) \cdot 690$	99649					
#4 Fuel Oil	N.D.	12.	mg/kg					
Coal Tar Oil	N.D.	12.	mg/kg					
Diesel/#2 Fuel	N.D.	12.	mg/kg	96		71-124		
#6 Fuel Oil	N.D.	90.	mg/kg					
Gasoline	N.D.	12.	mg/kg					
Kerosene	N.D.	12.	mg/kg					
Mineral Spirits	N.D.	12.	mg/kg					
Motor Oil	N.D.	30.	mg/kg					
Batch number: 130870011A	Sample numb	er(s): 699	99649					
TPH-DRO soil C10-C28	N.D.	12.	mg/kg	88		76-120		
Batch number: 13088088201A	Sample numb	er(s): 699	99649					
Chloride by IC (solid)	N.D.	10.0	mg/kg	106		90-110		
Batch number: 13087820002B	Sample numb	er(s): 699	99649					
Moisture	- Pro mana	,		100		99-101		

#### Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS <u>%REC</u>	MSD %REC	MS/MSD Limits	RPD	RPD <u>MAX</u>	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 13087A16A Benzene Ethylbenzene Toluene Total Xylenes	Sample 95 95 93 94	number(s) 96 95 93 95	: 6999649 52-135 56-132 59-129 53-145	UNSPK: 9 8 8 9	P99654 30 30 30 30 30	41			
Batch number: 130870010A #4 Fuel Oil	Sample	number(s)	: 6999649	UNSPK:	34201	BKG: 34201 N.D.	N.D.	0 (1)	20

\*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.



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Page 2 of 3

## Quality Control Summary

Client Name: Conestoga-Rovers & Associates Reported: 04/01/13 at 04:16 PM

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Group Number: 1378599

Sample Matrix Quality Control in conjunction with the matrix spike

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u> Coal Tar Oil	MS MSD <u>%REC</u> <u>%REC</u>	MS/MSD Limits RPD	RPD BKG <u>MAX</u> <u>Conc</u> N.D.	DUP Conc N.D.	DUP <u>RPD</u> 0 (1)	Dup RPD <u>Max</u> 20
Diesel/#2 Fuel #6 Fuel Oil Gasoline	98	37-129	11 N.D. N.D.	J 8.1 J N.D. N.D.	26* (1) 0 (1) 0 (1)	20 20 20
Kerosene Mineral Spirits			N.D.	N.D.	0 (1)	20
Motor Oil			N.D. N.D.	N.D. N.D.	0 (1) 0 (1)	20 20
Batch number: 130870011A	Sample numbe:	r(s): 6999649 UNSP	K: P999648 BKG: 1	P999648		
TPH-DRO soil C10-C28	88	30-159	44	33	29* (1)	20
Batch number: 13088088201A	Sample numbe:	r(s): 6999649 UNSP	K: P999648 BKG: 1	P999648		
Chloride by IC (solid)	10049 (2)	90-110	16,500	17,000	3 (1)	20
Batch number: 13087820002B	Sample number	r(s): 6999649 BKG	: P998328			
Moisture			26.4	27.1	3	13

### Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

	Trifluorotoluene-F	Trifluorotoluene-P	
6999649	77	75	
Blank	88	98	
LCS	84	85	
LCSD	86		
MS		88	
MSD		90	
	and the second se		The second s
Limits:	61-122	73-117	
Analysis	Name: TPH by G	C-FID (Soils)	
Analysis		C-FID (Soils)	
Analysis	Name: TPH by Go mber: 1308700102	C-FID (Soils) A	
Analysis Batch nu 6999649	Name: TPH by G mber: 1308700107 Chlorobenzene	C-FID (Soils) A Orthoterphenyl	
Analysis Batch nu 6999649 Blank	Name: TPH by G mber: 1308700100 Chlorobenzene	C-FID (Soils) Orthoterphenyl 78	
Analysis Batch nu 6999649 Blank DUP	Name: TPH by G mber: 1308700102 Chlorobenzene 62 69	C-FID (Soils) A Orthoterphenyl 78 99	
Analysis Batch nu	Name: TPH by GG mber: 1308700102 Chlorobenzene 62 69 63	C-FID (Soils) A Orthoterphenyl 78 99 73	

Analysis Name: TPH-DRO soil C10-C28

\*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

Analysis Report

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## Quality Control Summary

Client Name: Conestoga-Rovers & Associates Reported: 04/01/13 at 04:16 PM Group Number: 1378599

Surrogate Quality Control

Batch number: 130870011A Orthoterphenyl

6999649	85		
6999649 Blank DUP LCS	99		
DUP	79		
LCS	101		
MS	94		

Limits: 52-136

\*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

# Environmental Services Analysis Request/Chain of Custody

Laboratories		A	Acct. #	111	12	Grou	up #	12	107	077	8	Sample #	6	199	671		
Client: Conestoga-Rovers & Associates	1.4	-	- 212		M	latrix				571	A	nalyses	Req	uestea	d	For Lab U	se Only
Project Name/#: CVU 342 Pit - 073823	Site ID #:		1					5	12		P	reserva	tion	Codes	5	SF #:	
Project Manager: Ryan Kainer	P.O. #:	-		1		ace			0	0	0				111	SCR #:	
Sampler: Christopher Vela	PWSID #:			Cadimant	Ground	Surface		5								Preserva	ation Codes
Phone #: 432-686-0086	Quote #:			Cont				iner								H = HCI	T = Thiosulfate
State where sample(s) were collected: New Mex	ico		4		ple	ES	12.1	onta	1	300		100				N = HNO3	B = NaOH
and stands and	Colle	ction		Composite				Total # of Containers	TPH 8015	Chlorides 30	BTEX 8021					S = H <sub>2</sub> SO <sub>4</sub> O = Other	P = H <sub>3</sub> PO <sub>4</sub>
Sample Identification	Date	Time	Grab	Con		Water	Other:	Tota	TPH	CH	BTE					Ren	narks
CVX-342-02	1/2/17	1410	1.1.1	x	-			2	x	x	x						
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Date results are needed: 48 hrs	ail 🗸			- ~		oneur	Jy.			Du		Time			1	Duit	Time
Rush results requested by (please check): E-M E-mail Address: rkainer@craworld.com	all 🗹	Phon		Re	lingui	ished I	by:	1.10	-	Da	te	Time	Rec	eived b	V:	Date	Time
E-mail Address: <u>rkainer@craworld.com</u> Phone: 432-686-0086						-	1								din lite		1121-20
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Type III (Reduced non-CLP) CT RCP				Re	linqui	ished b	by:		-	Da	te	Time	Rec	eiyed b	y: 4	Date	Time
Type IV (CLP SOW) TX TRRP													$\left(\right)$	delo	nakalles	3/28/13	0845
Type VI (Raw Data Only)				Re	linqui	ished b	by Co	mme	rcial C	Carrier	:		ľ	-14	Strate al	1012 301 00	13432
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## **Explanation of Symbols and Abbreviations**

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
С	degrees Celsius	F	degrees Fahrenheit
meg	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
hg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	μL	microliter(s)
		pg/L	picogram/liter

< less than - The number following the sign is the <u>limit of quantitation</u>, the smallest amount of analyte which can be reliably determined using this specific test.

- > greater than
- J estimated value The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).
- **ppm** parts per million One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.
- ppb parts per billion
- Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

## U.S. EPA CLP Data Qualifiers:

## **Organic Qualifiers**

- A TIC is a possible aldol-condensation product
- B Analyte was also detected in the blank
- C Pesticide result confirmed by GC/MS
- D Compound quantitated on a diluted sample
- E Concentration exceeds the calibration range of the instrument
- N Presumptive evidence of a compound (TICs only)
- P Concentration difference between primary and confirmation columns >25%
- U Compound was not detected
- **X,Y,Z** Defined in case narrative

### Inorganic Qualifiers

- B Value is <CRDL, but ≥IDL
- E Estimated due to interference
- M Duplicate injection precision not met
- N Spike sample not within control limits
- S Method of standard additions (MSA) used for calculation
- U Compound was not detected
- W Post digestion spike out of control limits
- Duplicate analysis not within control limits
- Correlation coefficient for MSA < 0.995</li>

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as "analyze immediately" are not performed within 15 minutes.

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### ANALYTICAL RESULTS

Prepared by:

Lancaster

Laboratories

Prepared for:

Analysis Report

Lancaster Laboratories 2425 New Holland Pike Lancaster, PA 17605-2425 Conestoga-Rovers & Associates 13091 Pond Springs Road Austin TX 78729

April 01, 2013

Project: CVU 342 Pit

Submittal Date: 03/28/2013 Group Number: 1378600 PO Number: 4056668 Release Number: LEA COUNTY, NM State of Sample Origin: NM

Client Sample Description CVX-342-03 Composite Soil

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Lancaster Labs (LLI) # 6999650

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO ELECTRONIC COPY TO Conestoga-Rovers & Associates Conestoga-Rovers & Associates Attn: Ryan Kainer

Attn: Chris Knight

Respectfully Submitted,

Wendy a. Long

Wendy A. Kozma Principal Specialist Group Leader

(717) 556-7257

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Lancaster Laboratories



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#### Sample Description: CVX-342-03 Composite Soil CVU 342 Pit - 073823

#### Project Name: CVU 342 Pit

Collected: 03/27/2013 14:20 by CV

Submitted: 03/28/2013 08:45 Reported: 04/01/2013 16:17 LLI Sample # SW 6999650 LLI Group # 1378600 Account # 11713

Conestoga-Rovers & Associates 13091 Pond Springs Road Austin TX 78729

## 34203

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation	Dilution Factor
GC Vo	latiles SW-84	6 8015B	mg/kg	mg/kg	
01638	TPH-GRO soil C6-C10	n.a.	13	1.4	25.18
GC Vo	latiles SW-84	6 8021B	mg/kg	mg/kg	
08179	Benzene	71-43-2	0.0044 J	0.0068	25.18
08179	Ethylbenzene	100-41-4	0.086	0.0068	25.18
08179	Toluene	108-88-3	0.017	0.0068	25.18
08179	Total Xylenes	1330-20-7	0.18	0.020	25.18
		6 8015B	mg/kg	mg/kg	
Hydro	carbons				
08270	TPH-DRO soil C10-C28	n.a.	91	16	1
GC Pe	troleum SW-84	6 8015B modified	mg/kg	mg/kg	
Hydro	carbons				
05256	#4 Fuel Oil	68476-31-3	N.D.	16	1
05256	Coal Tar Oil	8001-58-9	N.D.	16	1
05256	Diesel/#2 Fuel	68334-30-5	88	16	1
05256	#6 Fuel Oil	68553-00-4	N.D.	120	1
05256	Gasoline	8006-61-9	N.D.	16	1
05256	Kerosene	8008-20-6	N.D.	16	1
05256	Mineral Spirits	8030-30-6	N.D.	16	1
05256	Motor Oil	n.a.	N.D.	41	1
that C8 ( Ther typi cont samp	quantitation is based on pea of a hydrocarbon component n-octane) through C40 (n-tet e is an unidentifiable producally see Mineral Spirits ar ributing to overall result c le. The QC limits for Miner rdingly.	mix calibration in a racontane) normal hy ct eluting in the ca d/or Kerosene in. T f the Diesel/#2 Fuel	range that includes drocarbons. rbon range we would most his product is not oil detected in this		
Wet C	hemistry EPA 3	00.0	mg/kg	mg/kg	
07333	Chloride by IC (solid)	16887-00-6	33,500	13,500	1000
Wet C	hemistry SM 25	40 G-1997	%	8	
00111	Moisture	n.a.	26.1	0.50	1
	"Moisture" represents the 1 103 - 105 degrees Celsius. as-received basis.			at	

#### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples. 🔅 eurofins

Lancaster Laboratories



LLI Sample # SW 6999650 LLI Group # 1378600

Account # 11713

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### Sample Description: CVX-342-03 Composite Soil CVU 342 Pit - 073823

### Project Name: CVU 342 Pit

Collected: 03/27/2013 14:20 by CV

Submitted: 03/28/2013 08:45 Reported: 04/01/2013 16:17 Conestoga-Rovers & Associates 13091 Pond Springs Road Austin TX 78729

34203

		Labor	atory Sa	ample Analys	is Record			
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
01638	TPH-GRO soil C6-C10	SW-846 8015B	1	13087A16A	03/29/2013	14:08	Laura M Krieger	25.18
08179	BTEX by 8021	SW-846 8021B	1	13087A16A	03/29/2013	14:08	Laura M Krieger	25.18
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201308730547	03/28/2013	14:47	Mitchell R Washel	n.a.
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	130870011A	03/30/2013	16:33	Tracy A Cole	1
05256	TPH by GC-FID (Soils)	SW-846 8015B modified	1	130870010A	03/29/2013	16:40	Heather E Williams	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	130870011A	03/28/2013	19:00	Sally L Appleyard	1
04833	Extraction / Fuel TPH (Soils)	SW-846 3550B	1	130870010A	03/28/2013	19:00	Sally L Appleyard	1
07333	Chloride by IC (solid)	EPA 300.0	2	13088088201A	03/30/2013	22:40	Joseph E McKenzie	1000
01352	Deionized Water Extraction	EPA 300.0	1	13088088201A	03/29/2013	10:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13087820002B	03/28/2013	21:46	Scott W Freisher	1

# **Analysis Report**

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## Quality Control Summary

Client Name: Conestoga-Rovers & Associates Reported: 04/01/13 at 04:17 PM

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Group Number: 1378600

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

### Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank <u>LOQ</u>	Report <u>Units</u>	LCS %REC	LCSD <u>%REC</u>	LCS/LCSD Limits	RPD	RPD Max
Batch number: 13087A16A	Sample nu	mber(s): 69	99650					
Benzene	N.D.	0.0050	mg/kg	96		80-120		
Ethylbenzene	N.D.	0.0050	mg/kg	94		80-120		
Toluene	N.D.	0.0050	mg/kg	93		80-120		
TPH-GRO soil C6-C10	N.D.	1.0	mg/kg	74	77	67-119	3	30
Total Xylenes	N.D.	0.015	mg/kg	94		80-120		
Batch number: 130870010A	Sample nu	mber(s): 69	99650					
#4 Fuel Oil	N.D.	12.	mg/kg					
Coal Tar Oil	N.D.	12.	mg/kg					
Diesel/#2 Fuel	N.D.	12.	mg/kg	96		71-124		
#6 Fuel Oil	N.D.	90.	mg/kg					
Gasoline	N.D.	12.	mg/kg					
Kerosene	N.D.	12.	mg/kg					
Mineral Spirits	N.D.	12.	mg/kg					
Motor Oil	N.D.	30.	mg/kg					
Batch number: 130870011A	Sample nu	mber(s): 69	99650					
TPH-DRO soil C10-C28	N.D.	12.	mg/kg	88		76-120		
Batch number: 13088088201A	Sample nu	mber(s): 69	99650					
Chloride by IC (solid)	N.D.	10.0	mg/kg	106		90-110		
Batch number: 13087820002B	Sample nu	mber(s): 69	99650					
Moisture				100		99-101		

### Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS <u>%REC</u>	MSD <u>%REC</u>	MS/MSD Limits	RPD	RPD MAX	BKG <u>Conc</u>		DUP Conc	DUP RPD	Dup RPD Max
Batch number: 13087A16A	Sample	number(s)	: 6999650	UNSPK:	P99654	11				
Benzene	95	96	52-135	9	30					
Ethylbenzene	95	95	56-132	8	30					
Toluene	93	93	59-129	8	30					
Total Xylenes	94	95	53-145	9	30					
Batch number: 130870010A #4 Fuel Oil	Sample	number(s)	: 6999650	UNSPK:	34201	BKG: N.D.	34201	N.D.	0 (1)	20

\*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.



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Page 2 of 3

## Quality Control Summary

Client Name: Conestoga-Rovers & Associates Reported: 04/01/13 at 04:17 PM

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Group Number: 1378600

## Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name Coal Tar Oil	MS %REC	MSD <u>%REC</u>	MS/MSD Limits	RPD	RPD MAX	BKG Conc		DUP Conc N.D.		DUP <u>RPD</u> 0 (1)	Dup RPD Max 20
Diesel/#2 Fuel	98		37-129			11	J	8.1	J	26* (1)	20
#6 Fuel Oil Gasoline						N.D. N.D.		N.D. N.D.		0 (1) 0 (1)	20 20
Kerosene						N.D.		N.D.		0 (1)	20
Mineral Spirits						N.D.		N.D.		0 (1)	20
Motor Oil						N.D.		N.D.		0 (1)	20
Batch number: 130870011A	Sample	number(s)	: 6999650	UNSPK	P9996	48 BKG:	P999	9648			
TPH-DRO soil C10-C28	88		30-159			44		33		29* (1)	20
Batch number: 13088088201	A Sample	number(s)	: 6999650	UNSPK	P9996	48 BKG:	P999	9648			
Chloride by IC (solid)	10049 (2)		90-110			16,500		17,000	)	3 (1)	20
Batch number: 13087820002	B Sample	number(s)	: 6999650	BKG:	P99832	8					
Moisture	1					26.4		27.1		3	13

### Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

	Trifluorotoluene-F	Trifluorotoluene-P		
6999650	82	85	 	-
Blank	88	98		
LCS	84	85		
LCSD	86	00		
MS		88		
MSD		90		
Analysis	61-122 Name: TPH by G	73-117 C-FID (Soils)		
Limits: Analysis Batch nu	Name: TPH by G mber: 130870010	C-FID (Soils) A		
Analysis	Name: TPH by G	C-FID (Soils)		
Analysis Batch nu	Name: TPH by G mber: 130870010	C-FID (Soils) A		
Analysis Batch nu 6999650	Name: TPH by G mber: 130870010 Chlorobenzene	C-FID (Soils) A Orthoterphenyl		
Analysis Batch nu 6999650 Blank	Name: TPH by G mber: 130870010 Chlorobenzene 74	C-FID (Soils) A Orthoterphenyl 83		
Analysis Batch nu 6999650 Blank DUP	Name: TPH by G mber: 130870010 Chlorobenzene 74 69	C-FID (Soils) A Orthoterphenyl 83 99		
Analysis	Name: TPH by G mber: 130870010 Chlorobenzene 74 69 63	C-FID (Soils) A Orthoterphenyl 83 99 73		

Analysis Name: TPH-DRO soil C10-C28

\*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.



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## Quality Control Summary

Client Name: Conestoga-Rovers & Associates Reported: 04/01/13 at 04:17  $\rm PM$ 

Group Number: 1378600

Surrogate Quality Control

Batch number: 130870011A Orthoterphenyl

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6999650	90			
6999650 Blank DUP LCS MS	99			
DUP	79			
LCS	101			
MS	94			

Limits: 52-136

\*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

# Environmental Services Analysis Request/Chain of Custody

eurofins Lancaster Laboratories		,	Acct. #	1171	3 Gro	up#	137	860	0		Sample # _	6999	650	)	_	
Client: Conestoga-Rovers & Associates		- 24	AN S		Matrix				Analyses Requested						For Lab U	se Only
Project Name/#: CVU 342 Pit - 073823	Site ID #:									F	reserva	tion Co	des		SF #:	
Project Manager: Ryan Kainer	P.O. #:			Tt	ace ind			0	0	0					SCR #:	
Sampler: Christopher Vela	PWSID #:	1.1	- 11	Sediment	Ground Surface										Preserva	tion Codes
Phone #: 432-686-0086	Quote #:			Sed			ner								H = HCI	T = Thiosulfate
State where sample(s) were collected: New Me	exico				ES Ble		ontai		0						N = HNO3	B = NaOH
	Colle	ction	9	Soil S		er:	Total # of Containers	TPH 8015	Chlorides 300	X 8021					S = H <sub>2</sub> SO <sub>4</sub> O = Other	P = H <sub>3</sub> PO <sub>4</sub>
Sample Identification	Date	Time	Grab	Soil	Water	Other:	Tota	TPH	CH	BTEX					Rer	narks
CVX-342-03	3/27/13	1420		x x	1.19		2	х	x	х	9 - C	100				A COM
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Turnaround Time Requested (TAT) (please che (Rush TAT is subject to Lancaster Laboratorie			Rush [		nquished				Da 3/2	ate 7/13	Time 4:77	Receive	ed by:		Date	Time
Date results are needed: 48 hrs		21	12	Reli	nquished	by:			Da	ate	Time	Receive	ed by:		Date	Time
Rush results requested by (please check): E-	Mail 🗸	Phor	ne 🗌		-	194		11				×			4	
E-mail Address: <u>rkainer@craworld.com</u> Phone: 432-686-0086				Reli	nquished	by:	/	/	Da	ate	Time	Receive	ed by:		Date	Time
Data Package Options (please check if required Type I (Validation/non-CLP) MA MCI	-		1	Reli	nquished	by:			Pa	ate	Time	Receive	1.20		Date	Time
Type III (Reduced non-CLP)         CT RCF           Type IV (CLP SOW)         TX TRR	_			Reli	nquished	by:			Da	ate	Time	Receive	ed by:	o Nesll	3/28/13	Time 0845
Type VI (Raw Data Only)         Image: Constraint of the second seco	ves, format: _			Reli	nquished	by Co FedE		/	Carrie Other	r:				pon receipt	20	_°C
Eurofi	ns Lancaster La	aboratories,	Inc. • 242	25 New	Holland Pil	ke, Lar	caste	r, PA	17601	• 717-	656-2300				Issued by Dept.	40 Management

Page 7 of 8

a by Dept. 40 Management 7045.01

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## **Explanation of Symbols and Abbreviations**

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
С	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
ha	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	μL	microliter(s)
		pg/L	picogram/liter

< less than - The number following the sign is the <u>limit of quantitation</u>, the smallest amount of analyte which can be reliably determined using this specific test.

- > greater than
- J estimated value The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).
- **ppm** parts per million One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.
- ppb parts per billion
- Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.
- U.S. EPA CLP Data Qualifiers:

Α

### **Organic Qualifiers**

- TIC is a possible aldol-condensation product
- B Analyte was also detected in the blank
- C Pesticide result confirmed by GC/MS
- D Compound quantitated on a diluted sample
- E Concentration exceeds the calibration range of the instrument
- N Presumptive evidence of a compound (TICs only)
- P Concentration difference between primary and confirmation columns >25%
- U Compound was not detected
- X,Y,Z Defined in case narrative

## **Inorganic Qualifiers**

- B Value is <CRDL, but ≥IDL
- E Estimated due to interference
- M Duplicate injection precision not met
- N Spike sample not within control limits
- S Method of standard additions (MSA) used for calculation
- U Compound was not detected
- W Post digestion spike out of control limits
- \* Duplicate analysis not within control limits
- + Correlation coefficient for MSA < 0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

3768.07 Page 8 of 8 2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 •717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

#### ANALYTICAL RESULTS

Prepared by:

Lancaster

Laboratories

Prepared for:

Analysis Report

Lancaster Laboratories 2425 New Holland Pike Lancaster, PA 17605-2425 Conestoga-Rovers & Associates 13091 Pond Springs Road Austin TX 78729

April 02, 2013

Project: CVU 342 Pit

Submittal Date: 03/28/2013 Group Number: 1378603 PO Number: 4056668 Release Number: LEA COUNTY, NM State of Sample Origin: NM

<u>Client Sample Description</u> CVX-342-SP Composite Soil Trip Blank Water

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Lancaster Labs (LLI) # 6999656 6999657

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO ELECTRONIC COPY TO Conestoga-Rovers & Associates

Conestoga-Rovers & Associates

Attn: Ryan Kainer Attn: Chris Knight

Respectfully Submitted,

Wendy a. Lonn

Wendy A. Kozma Principal Specialist Group Leader

(717) 556-7257

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Lancaster Laboratories



Account

LLI Sample # SW 6999656

# 11713

LLI Group # 1378603

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#### Sample Description: CVX-342-SP Composite Soil CVX 342 Pit - 073823

#### Project Name: CVU 342 Pit

Collected: 03/27/2013 14:30 by CV

Submitted: 03/28/2013 08:45 Reported: 04/02/2013 11:12 Conestoga-Rovers & Associates 13091 Pond Springs Road Austin TX 78729

#### 342SP

CAT No. Analysi:	s Name	CAS Number	Dry Result		Dry Limit of Quantitation	Dilution Factor
GC Volatiles	SW-846	8015B	mg/kg		mg/kg	
01638 TPH-GRO	soil C6-C10	n.a.	N.D.		1.1	25.8
GC Volatiles	SW-846	8021B	mg/kg		mg/kg	
08179 Benzene		71-43-2	N.D.		0.0053	25.8
08179 Ethylber	nzene	100-41-4	N.D.		0.0053	25.8
08179 Toluene		108-88-3	N.D.		0.0053	25.8
08179 Total X	lenes	1330-20-7	N.D.		0.016	25.8
GC Petroleum	SW-846	8015B	mg/kg		mg/kg	
Hydrocarbons						
08270 TPH-DRO	soil C10-C28	n.a.	5.1	J	12	1
GC Petroleum	SW-846	8015B modified	mg/kg		mg/kg	
Hydrocarbons						
05256 #4 Fuel	Oil	68476-31-3	N.D.		12	1
05256 Coal Tar	c Oil	8001-58-9	N.D.		12	1
05256 Diesel/	‡2 Fuel	68334-30-5	4.6	J	12	1
05256 #6 Fuel	Oil	68553-00-4	N.D.		92	1
05256 Gasoline	2	8006-61-9	N.D.		12	1
05256 Kerosene	2	8008-20-6	N.D.		12	1
05256 Mineral		8030-30-6	N.D.		12	1
05256 Motor 0:		n.a.	N.D.		31	1
that of a hyd	ion is based on peak rocarbon component m through C40 (n-tetr	ix calibration in a	range th	hat includes		
Wet Chemistr	Y EPA 30	0.0	mg/kg		mg/kg	
07333 Chloride	e by IC (solid)	16887-00-6	490		204	20
Wet Chemistr	y SM 254	0 G-1997	%		96	
00111 Moisture	2	n.a.	2.2		0.50	1
103 - 10	re" represents the lo 05 degrees Celsius. T ived basis.				at	

#### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record									
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor	
01638	TPH-GRO soil C6-C10	SW-846 8015B	1	13087A16A	03/28/2013	21:35	Laura M Krieger	25.8	
08179	BTEX by 8021	SW-846 8021B	1	13087A16A	03/28/2013	21:35	Laura M Krieger	25.8	
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201308730547	03/28/2013	14:48	Mitchell R Washel	n.a.	





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### Sample Description: CVX-342-SP Composite Soil CVX 342 Pit - 073823

#### Project Name: CVU 342 Pit

Collected: 03/27/2013 14:30 by CV

Submitted: 03/28/2013 08:45 Reported: 04/02/2013 11:12

LLI	Sample	#	SW 6999656
LLI	Group	#	1378603
Acco	ount	#	11713

Conestoga-Rovers & Associates 13091 Pond Springs Road Austin TX 78729

### 342SP

		Labora	atory Sa	ample Analys:	is Record				
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor	
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	130870011A	03/30/2013	15:13	Tracy A Cole	1	
05256	TPH by GC-FID (Soils)	SW-846 8015B modified	1	130870010A	03/29/2013	15:55	Heather E Williams	1	
07004	Extraction - DRO (Soils)	SW-846 3550B	1	130870011A	03/28/2013	19:00	Sally L Appleyard	1	
04833	Extraction / Fuel TPH (Soils)	SW-846 3550B	1	130870010A	03/28/2013	19:00	Sally L Appleyard	1	
07333	Chloride by IC (solid)	EPA 300.0	1	13088088201A	03/30/2013	22:55	Joseph E McKenzie	20	
01352	Deionized Water Extraction	EPA 300.0	1	13088088201A	03/29/2013	10:00	Joseph E McKenzie	1	
00111	Moisture	SM 2540 G-1997	1	13087820002B	03/28/2013	21:46	Scott W Freisher	1	

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**Analysis Report** 

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#### Sample Description: Trip Blank Water CVX 342 Pit - 073823

## Project Name: CVU 342 Pit

Collected: 03/27/2013

Submitted: 03/28/2013 08:45 Reported: 04/02/2013 11:12 LLI Sample # WW 6999657 LLI Group # 1378603 Account # 11713

Conestoga-Rovers & Associates 13091 Pond Springs Road Austin TX 78729

CAT No.	Analysis Name	CAS Nu	As Received mber Result	As Received Limit of Quantitation	Dilution Factor	
GC Vo	latiles	SW-846 8021B	mg/l	mg/l		
02102	Benzene	71-43-	2 N.D.	0.0010	1	
02102	Ethylbenzene	100-41	-4 N.D.	0.0010	1	
02102	Toluene	108-88	-3 N.D.	0.0010	1	
02102	Total Xylenes	1330-2	0-7 N.D.	0.0030	1	

#### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

		Labor	atory Sa	mple Analysi	s Record		
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02102	Method 8021 Water Master	SW-846 8021B	1	13087B53A	03/29/2013 17:17	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13087B53A	03/29/2013 17:17	Catherine J Schwarz	1

# **Analysis Report**

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Page 1 of 3

## Quality Control Summary

Client Name: Conestoga-Rovers & Associates Reported: 04/02/13 at 11:12 AM

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Group Number: 1378603

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

### Laboratory Compliance Quality Control

Analysis Name	Blank <u>Result</u>	Blank LOQ	Report <u>Units</u>	LCS <u>%REC</u>	LCSD <u>%REC</u>	LCS/LCSD Limits	RPD	<u>RPD Max</u>
Batch number: 13087A16A	Sample nu	mber(s): 69	99656					
Benzene	N.D.	0.0050	mg/kg	96		80-120		
Ethylbenzene	N.D.	0.0050	mg/kg	94		80-120		
Toluene	N.D.	0.0050	mg/kg	93		80-120		
TPH-GRO soil C6-C10	N.D.	1.0	mg/kg	74	77	67-119	3	30
Total Xylenes	N.D.	0.015	mg/kg	94		80-120		
Batch number: 13087B53A	Sample nu	mber(s): 69	99657					
Benzene	N.D.	0.0010	mg/l	105		80-120		
Ethylbenzene	N.D.	0.0010	mg/l	106		80-120		
Toluene	N.D.	0.0010	mg/l	104		80-120		
Total Xylenes	N.D.	0.0030	mg/l	109		80-120		
Batch number: 130870010A	Sample nu	mber(s): 69	99656					
#4 Fuel Oil	N.D.	12.	mg/kg					
Coal Tar Oil	N.D.	12.	mg/kg					
Diesel/#2 Fuel	N.D.	12.	mg/kg	96		71-124		
#6 Fuel Oil	N.D.	90.	mg/kg					
Gasoline	N.D.	12.	mg/kg					
Kerosene	N.D.	12.	mg/kg					
Mineral Spirits	N.D.	12.	mg/kg					
Motor Oil	N.D.	30.	mg/kg					
Batch number: 130870011A	Sample nur	mber(s): 699	99656					
TPH-DRO soil C10-C28	N.D.	12.	mg/kg	88		76-120		
Batch number: 13088088201A	Sample nur	mber(s): 699	99656					
Chloride by IC (solid)	N.D.	10.0	mg/kg	106		90-110		
Batch number: 13087820002B	Sample nur	mber(s): 699	99656					
Moisture				100		99-101		

### Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS <u>%REC</u>	MSD <u>%REC</u>	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 13087A16A Benzene	Sample 95	number(s 96	): 6999656 52-135	UNSPK: 9	P9965	541			

\*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.



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Page 2 of 3

## Quality Control Summary

Client Name: Conestoga-Rovers & Associates Reported: 04/02/13 at 11:12 AM

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Group Number: 1378603

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u> Ethylbenzene Toluene Total Xylenes	MS         MSD           %REC         %REC           95         95           93         93           94         95	Ms/MSD           Limits         RPD           56-132         8           59-129         8           53-145         9	RPD         BKG           MAX         Conc           30         30           30         30	DUP Conc	DUP RPD	Dup RPD <u>Max</u>
Batch number: 13087B53A Benzene Ethylbenzene Toluene Total Xylenes	Sample number(s 109 108 111 110 109 107 114 112	): 6999657 UNSPK 80-130 1 80-133 1 80-133 1 80-132 1	: P998998 30 30 30 30 30			
Batch number: 130870010A #4 Fuel Oil Coal Tar Oil Diesel/#2 Fuel #6 Fuel Oil Gasoline Kerosene Mineral Spirits Motor Oil	Sample number(s 98	): 6999656 UNSPK 37-129	: 34201 BKG: 34201 N.D. N.D. 11 J N.D. N.D. N.D. N.D. N.D. N.D. N.D. N.D	N.D. N.D.	0 (1) 0 (1) 26* (1) 0 (1) 0 (1) 0 (1) 0 (1) 0 (1)	20 20 20 20 20 20 20 20 20
Batch number: 130870011A TPH-DRO soil C10-C28	Sample number(s 88	): 6999656 UNSPK 30-159	: P999648 BKG: P99 44	99648 33	29* (1)	20
Batch number: 13088088201A Chloride by IC (solid)	Sample number(s 10049 (2)	): 6999656 UNSPK 90-110	: P999648 BKG: P99 16,500	99648 17,000	3 (1)	20
Batch number: 13087820002B Moisture	Sample number(s	): 6999656 BKG:	P998328 26.4	27.1	3	13

#### Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

	Name: Method 802 mber: 13087A16A	1 Soil Master	
Bacchi ilu	Trifluorotoluene-F	Trifluorotoluene-P	
6999656	86	98	
Blank	88	98	
LCS	84	85	
LCSD	86		
MS		88	
MSD		90	
Limits:	61-122	73-117	

Analysis Name: Method 8021 Water Master

\*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

**Analysis Report** 

Group Number: 1378603

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## Quality Control Summary

Client Name: Conestoga-Rovers & Associates Reported: 04/02/13 at 11:12 AM

Surrogate Quality Control

Batch number: 13087B53A Trifluorotoluene-P

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the state of the	dua norte e		5.59		
6999657	80				
Blank	80				
LCS	81				
MS	81				
MSD	81				
Limits:	51-120			1.1.1	
Analysis Batch nur	Name: TPH by GC- nber: 130870010A	FID (Soils)			
	Chlorobenzene	Orthoterphenyl			
6999656	76	96			
Blank	69	99			
DUP	63	73			
LCS	76	94			
MS	88	83			
Limits:	46-131	51-127			
Analysis	Name: TPH-DRO so	il C10-C28			
Batch nur	aber: 130870011A				
	Orthoterphenyl				
6999656	94				
Blank	99				
DUP	79				
LCS	101				
MS	94				
Limits:	52-136			1.1	

\*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

# Environmental Services Analysis Request/Chain of Custody

Curofins Lancaster Laboratories		,	Acct. #	117	13	Grou	up #	137	186	03		Sample	e#	69	990	65	6-5	7	
Client: Conestoga-Rovers & Associates						Matrix		Analyse				ses	s Requested				For Lab U	For Lab Use Only	
Project Name/#: CVU 342 - 073823 Site ID #:							1	Preservation Codes				SF #:							
Project Manager: Ryan Kainer	P.O. #:				ŧ	nd a			0	0	0	1.5						SCR #:	
Sampler: Christopher Vela	PWSID #:				Sediment	Ground Surface							1					Preserva	ation Codes
Phone #: 432-686-0086	Quote #:				Sed			ners										H = HCI	T = Thiosulfate
State where sample(s) were collected: New Mex	ico					ES Be		ntai		0								N = HNO3	B = NaOH
	Colle	ction	٩	bos	2	Potable NPDES	er:	Total # of Containers	TPH 8015	Chlorides 300	X 8021							S = H <sub>2</sub> SO <sub>4</sub> O = Other	P = H <sub>3</sub> PO <sub>4</sub>
Sample Identification	Date	Time	Grab	5	Soil	Water	Other:	Tot	HdT	Chic	BTEX							Ren	narks
CVX-342-SP	3/24	5 1430		х	х			2	х	x	х								
											-			1.					
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Date results are needed: 48 hrs				Ŕ	elin	quished	by:			Da	ate	Tir	ne	Rece	eived	by:		Date	Time
Rush results requested by (please check): E-M	ail 🗸	Phor	ne 🗌		/	\							1						
E-mail Address: <u>rkainer@craworld.com</u> Phone: 432-686-0086					Relin	quished	by:			Da	ate	Tir	me	Rece	eived b	by:		Date	Time
Data Package Options (please check if required)					Relina	quished I	by:	/		Da	ate	Tir	ne	Rece	eived b	by:		Date	Time
Type I (Validation/non-CLP)														1					
Type III (Reduced non-CLP)         CT RCP           Type IV (CLP SOW)         TX TRRP-13					Relind	quished I	by:			Da	ite	Tir	ne	Rece	lived b	by:	anest	Date 3/28/13	Time 0845
Type IV (CLP SOW) TX TRRP Type VI (Raw Data Only)	-13 🔲			R	elina	quished I	by Co	mme	rcial (	Carrie	r:		-	V	a	Vouq	~ [1. 301	1-112	
	s, format:			-	PS	•	FedE		/	Other				Tem	peratu	ure up	on receip	t 2,C	) <sub>°C</sub>
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## **Explanation of Symbols and Abbreviations**

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
С	degrees Celsius	Ĕ	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
рd	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	μL	microliter(s)
		pg/L	picogram/liter

< less than - The number following the sign is the <u>limit of quantitation</u>, the smallest amount of analyte which can be reliably determined using this specific test.

- > greater than
- J estimated value The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).
- **ppm** parts per million One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.
- ppb parts per billion
- Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

## U.S. EPA CLP Data Qualifiers:

## **Organic Qualifiers**

- A TIC is a possible aldol-condensation product
- B Analyte was also detected in the blank
- C Pesticide result confirmed by GC/MS
- D Compound quantitated on a diluted sample
- E Concentration exceeds the calibration range of the instrument
- N Presumptive evidence of a compound (TICs only)
- P Concentration difference between primary and confirmation columns >25%
- U Compound was not detected
- X,Y,Z Defined in case narrative

## Inorganic Qualifiers

- B Value is <CRDL, but ≥IDL
- E Estimated due to interference
- M Duplicate injection precision not met
- N Spike sample not within control limits
- S Method of standard additions (MSA) used for calculation
- U Compound was not detected
- W Post digestion spike out of control limits
- \* Duplicate analysis not within control limits
- + Correlation coefficient for MSA < 0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

## Analytical Report 462651

for

**Conestoga Rovers & Associates** 

**Project Manager: Tom Larson** 

## CEMC CVU 342

## 073823

## 16-MAY-13

Collected By: Client





## 12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046): Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD ( L10-135) Louisiana (04176), USDA (P330-07-00105)

> Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900) Xenco-Lakeland: Florida (E84098) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX) Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757) Xenco Tucson (EPA Lab code: AZ00989): Arizona (AZ0758)



16-MAY-13

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

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

## **Tom Larson:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 462651. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 462651 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully. Kms Boah

Kelsey Brooks Project Manager

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XENCO Laboratories

## Sample Cross Reference 462651



## Conestoga Rovers & Associates, Midland, TX

## CEMC CVU 342

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



## CASE NARRATIVE

Client Name: Conestoga Rovers & Associates Project Name: CEMC CVU 342



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

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

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

## None

Analytical non conformances and comments: Batch: LBA-913372 Inorganic Anions by EPA 300/300.1 E300

Batch 913372, Chloride recovered below QC limits in the Matrix Spike. Samples affected are: 462651-020. The Laboratory Control Sample for Chloride is within laboratory Control Limits

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

Batch 913623, Chloride recovered below QC limits in the Matrix Spike. Samples affected are: 462651-019, -022, -008, -021, -010, -011, -013, -009, -012, -018, -014, -006, -017. The Laboratory Control Sample for Chloride is within laboratory Control Limits



#### Certificate of Analysis Summary 462651 Conestoga Rovers & Associates, Midland, TX Project Name: CEMC CVU 342



Project Id: 073823 Contact: Tom Larson Project Location: New Mexico

Date Received in Lab: Tue May-07-13 04:50 pm Report Date: 16-MAY-13

oject Location: New Mexico								report	. as meet	10 11111 10			
								Project Ma	nager:	Kelsey Brook	s		
	Lab Id:	462651-	001	462651-0	002	462651-0	003	462651-0	004	462651-0	005	462651-0	06
Analysis Requested	Field Id:	SB-1 5	5'	SB-1 1	0'	SB-1 20	D'	SB-1 4	0'	SB-1 5	0'	SB-1 75	5'
Analysis Requested	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-06-13	13:25	May-06-13	13:40	May-06-13	13:45	May-06-13	13:55	May-06-13	14:10	May-06-13	14:25
Inorganic Anions by EPA 300/300.1	Extracted:	May-09-13	14:00	May-09-13	14:00	May-09-13	14:00	May-09-13	14:00	May-09-13	14:00	May-10-13	08:00
	Analyzed:	May-09-13	17:09	May-09-13	17:31	May-09-13	17:53	May-09-13	18:15	May-09-13	19:20	May-10-13	10:57
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	R
Chloride		1700	41.8	2130	41.1	177	4.28	32.5	3.10	147	4.19	4.94	3.0
Percent Moisture	Extracted:												
	Analyzed:	May-08-13	15:15	May-08-13	15:15	May-08-13	15:15	May-08-13	15:15	May-08-13	15:15	May-08-13	15:15
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RI
Percent Moisture		4.20	1.00	2.66	1.00	6.54	1.00	3.34	1.00	4.52	1.00	2.34	1.0

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Kelsey Brooks Project Manager

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#### Certificate of Analysis Summary 462651 Conestoga Rovers & Associates, Midland, TX Project Name: CEMC CVU 342



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

Project Id: 073823 Contact: Tom Larson Project Location: New Mexico

roject Location: New Mexico								Report	Date:	16-MAY-13			
								Project Ma	nager:	Kelsey Brook	s		
	Lab Id:	462651-	007	462651-0	800	462651-0	009	462651-0	010	462651-0	011	462651-0	012
Analysis Requested	Field Id:	SB-1 1	00'	SB-2 5		SB-2 1	0'	SB-2 20	0'	SB-2 4	<b>D'</b>	SB-2 5	50'
Analysis Kequesieu	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
A CONTRACT OF	Sampled:	May-06-13	14:35	May-06-13	15:20	May-06-13	15:25	May-06-13	15:35	May-06-13	15:38	May-06-13	15:40
Inorganic Anions by EPA 300/300.1	Extracted:			May-10-13	08:00	May-10-13	08:00	May-10-13	08:00	May-10-13	08:00	May-10-13	08:00
Service States and States an	Analyzed:			May-10-13	11:41	May-10-13	10:14	May-10-13	12:02	May-10-13	12:24	May-10-13	13:29
States of the state of the second second	Units/RL:			mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride				3860	103	4420	106	2510	41.9	4.83	3.81	2460	41.8
Percent Moisture	Extracted:						-						
a start of the second second second	Analyzed:	May-08-13	15:15	May-08-13	15:15	May-08-13	15:15	May-08-13	15:15	May-08-13	15:15	May-08-13	15:15
The second second second	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		3.77	1.00	3.07	1.00	5.30	1.00	4.56	1.00	21.2	1.00	4.31	1.00

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Certificate of Analysis Summary 462651 Conestoga Rovers & Associates, Midland, TX Project Name: CEMC CVU 342



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

Project Id: 073823 Contact: Tom Larson Project Location: New Mexico

oject Location: New Mexico								Report	Date:	16-MAY-13			
ojett Location. New Mexico								<b>Project Ma</b>	nager:	Kelsey Brook	S		
	Lab Id:	462651-	013	462651-0	014	462651-0	015	462651-0	016	462651-0	17	462651-0	18
Analysis Requested	Field Id:	SB-2 7	0'	SB-2 8	0'	SB-2 9	0'	SB-2 10	00'	SB-3 5		SB-3 10	0"
Analysis Requested	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-06-13	15:45	May-06-13	15:55	May-06-13	16:05	May-06-13	16:15	May-07-13	09:50	May-07-13	10:00
Inorganic Anions by EPA 300/300.1	Extracted:	May-10-13	08:00	May-10-13	08:00					May-10-13	08:00	May-10-13	08:00
	Analyzed:	May-10-13	13:51	May-10-13	14:13					May-10-13	16:01	May-10-13	16:23
	Units/RL:	mg/kg	RL	mg/kg	RL					mg/kg	RL	mg/kg	RI
Chloride		412	10.7	4.22	3.29					142	4.31	685	21.
Percent Moisture	Extracted:												
	Analyzed:	May-08-13	15:15	May-08-13	16:20	May-08-13	16:20	May-08-13	16:20	May-08-13	16:20	May-08-13	16:20
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RI
Percent Moisture		6.44	1.00	19.1	1.00	5.13	1.00	6.82	1.00	7.22	1.00	7.15	1.0

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Kelsey Brooks Project Manager

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Project Id: 073823

**Certificate of Analysis Summary 462651** Conestoga Rovers & Associates, Midland, TX Project Name: CEMC CVU 342



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

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

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#### Conestoga Rovers & Associates, Midland, TX

Sample Id:	SB-1 5'		Matri	x: Soil		I	Date Received: 05.	07.13 16.5	0
Lab Sample Id:	462651-001		Date Collected	1: 05.06	.13 13.25				
Analytical Metho	d: Inorganic A	nions by EPA 300/30	00.1				Prep Method: E3	00P	
Tech:	AMB						% Moisture: 4.2		
Analyst:	AMB		Date	Prep:	05.09.13 14.00		Basis: Dr	Weight	
Seq Number:	913609								
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	1700	41.	8	mg/kg	05.09.13 17.09		20
Analytical Metho	d: Percent Mo	isture							
Tech:	SHSM						% Moisture:		
Analyst:	WRU						Basis: We	t Weight	

Seq Number:	913266								
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil	
Percent Moisture		TMOIST	4.20	1.00	%	05.08.13 15.15		1	





#### Conestoga Rovers & Associates, Midland, TX

											_
Sample Id:	SB-	1 10'		Matri	x: Soil		I	Date Received: 05.	07.13 16.5	50	
Lab Sample Id:	462	651-002	I	Date Collected	d: 05.06	.13 13.40					
Analytical Metho	od:	Inorganic A	Anions by EPA 300/30	0.1				Prep Method: E3	00P		
Tech:		AMB						% Moisture: 2.6	6		
Analyst:		AMB		Date	Prep:	05.09.13 14.00		Basis: Dr	Weight		
Seq Number:		913609									
Parameter	1		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil	
Chloride			16887-00-6	2130	41.1	1	mg/kg	05.09.13 17.31		20	

Analytical Method:	Percent Moi	isture						
Tech:	SHSM					% Moisture:		
Analyst:	WRU					Basis: We	et Weight	
Seq Number:	913266							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture		TMOIST	2.66	1.00	%	05.08.13 15.15		1





### Conestoga Rovers & Associates, Midland, TX

Sample Id:	SB-1 20'		Matri	x: Soil		I	Date Received: 05.	07.13 16.5	50
Lab Sample Id:	462651-003	I	Date Collected	d: 05.06	.13 13.45				
Analytical Method	: Inorganic A	nions by EPA 300/30	0.1				Prep Method: E3	00P	
Tech:	AMB						% Moisture: 6.5	4	
Analyst:	AMB		Date	Prep:	05.09.13 14.00		Basis: Dry	Weight	
Seq Number:	913609								
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	177	4.28	3	mg/kg	05.09.13 17.53		2

Analytical Method:	Percent Mois	ture						
Tech:	SHSM					% Moisture:		
Analyst:	WRU					Basis: We	et Weight	
Seq Number:	913266							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture		TMOIST	6.54	1.00	%	05.08.13 15.15		1





#### Conestoga Rovers & Associates, Midland, TX

Sumple rui	SB-1 40' 462651-004	Date		ix: Soil ed: 05.06	.13 13.55	Ι	Date Received: 05.	07.13 16.5	0
Analytical Method Tech: Analyst: Seq Number:	: Inorganic An AMB AMB 913609	ions by EPA 300/300.1		Prep:	05.09.13 14.00		Prep Method: E30 % Moisture: 3.3 Basis: Dry	4	
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	32.5	3.10	)	mg/kg	05.09.13 18.15		1.5

Analytical Method:	Percent Mois	ture						
Tech:					% Moisture:			
Analyst:	WRU					Basis: We	et Weight	
Seq Number:	913266							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture		TMOIST	3.34	1.00	%	05.08.13 15.15		1





### Conestoga Rovers & Associates, Midland, TX

SB-1 50'	Matri	x: Soil		Date Received: 05.07.13 16.50				
462651-005	Date Collected: 05.06.13 14.10							
		00.1				Prep Method: E3	00P	
Tech: AMB					% Moisture: 4.52			
AMB		Date	Prep:	05.09.13 14.00		Basis: Dry	y Weight	
913609								
	Cas Number	Result	RL		Units	Analysis Date	Flag	Di
	16887-00-6	147	4.19		mg/kg	05.09.13 19.20		1
	462651-005 d: Inorganic A AMB AMB	462651-005 d: Inorganic Anions by EPA 300/3 AMB AMB 913609 Cas Number	462651-005 Date Collecter d: Inorganic Anions by EPA 300/300.1 AMB AMB Date 913609 Cas Number Result	462651-005     Date Collected: 05.06.       d:     Inorganic Anions by EPA 300/300.1       AMB     AMB       AMB     Date Prep:       913609     Cas Number     Result	462651-005         Date Collected: 05.06.13 14.10           d:         Inorganic Anions by EPA 300/300.1           AMB         Date Prep:         05.09.13 14.00           913609         Cas Number         Result         RL	462651-005       Date Collected: 05.06.13 14.10         d:       Inorganic Anions by EPA 300/300.1         AMB       Date Prep:       05.09.13 14.00         913609       Cas Number       Result       RL       Units	462651-005       Date Collected: 05.06.13 14.10         d:       Inorganic Anions by EPA 300/300.1       Prep Method: E3         AMB       % Moisture: 4.5         AMB       Date Prep: 05.09.13 14.00       Basis: Drg         913609       Cas Number       Result       RL	462651-005       Date Collected: 05.06.13 14.10         d:       Inorganic Anions by EPA 300/300.1       Prep Method: E300P         AMB       % Moisture: 4.52         AMB       Date Prep: 05.09.13 14.00       Basis: Dry Weight         913609       Cas Number       Result       RL       Units       Analysis Date       Flag

Analytical Method:	Percent Mois	sture						
Tech:	SHSM					% Moisture:		
Analyst:	WRU					Basis: We	et Weight	
Seq Number:	913266							
Parameter		Cas Number	Result	RL	 Units	Analysis Date	Flag	Dil
Percent Moisture		TMOIST	4.52	1.00	%	05.08.13 15.15		1





#### Conestoga Rovers & Associates, Midland, TX

Sample Id:         SB-1 75'           Lab Sample Id:         462651-006				x: Soil d: 05.06.13 14.25	Ι	Date Received: 05.	.07.13 16.5	0
Analytical Method: Tech:	Inorganic A AMB	nions by EPA 300/30	00.1			Prep Method: E3 % Moisture: 2.3		
Analyst: Seq Number:	AMB 913623		Date	Prep: 05.10.13 0	8.00	Basis: Dr	y Weight	
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	4.94	3.07	mg/kg	05.10.13 10.57		1.5

Analytical Method:	Percent Mois	ture								
Tech:	SHSM				% Moisture:					
Analyst:	WRU					Basis: We	t Weight			
Seq Number:	913266									
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil		
Percent Moisture		TMOIST	2.34	1.00	%	05.08.13 15.15		1		





#### Conestoga Rovers & Associates, Midland, TX

CEMC CVU 342

Sample Id:         SB-1 100'           Lab Sample Id:         462651-007			Matri Date Collecte	x: Soil d: 05.06.13 14	4.35	Date Received: 05.07.13 16.50					
Analytical Method	d: Percent Moi	sture									
Tech:	SHSM						% Moisture:				
Analyst:	Analyst: WRU						Basis: We	et Weigh	t		
Seq Number:	913266										
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil		
Percent Moisture		TMOIST	3.77	1.00		%	05.08.13 15.15		1		

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#### Conestoga Rovers & Associates, Midland, TX

Sample Id: Lab Sample Id:				x: Soil d: 05.06	.13 15.20	Ι	Date Received: 05.	07.13 16.5	50
Analytical Metho Tech: Analyst: Seq Number:	d: Inorganic A AMB AMB 913623	Anions by EPA 300/30	00.1 Date	Prep:	05.10.13 08.00		Prep Method: E3 % Moisture: 3.0 Basis: Dry	7	
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	3860	103	3	mg/kg	05.10.13 11.41		50

Analytical Method:	Percent Moi	isture									
Tech:	SHSM				% Moisture:						
Analyst:	WRU					Basis: Wet Weight					
Seq Number:	913266										
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil		
Percent Moisture		TMOIST	3.07	1.00		%	05.08.13 15.15		1		





### Conestoga Rovers & Associates, Midland, TX

Sample Id: SB-2 10'			Matri	x: Soil		Date Received: 05.07.13 16.50				
Lab Sample Id:					13 15.25			.07.15 1		
Analytical Metho	od: Inorganic A	nions by EPA 300/3	00.1				Prep Method: E3			
Tech:	AMB						% Moisture: 5.3			
Analyst:	AMB		Date	Prep:	05.10.13 08.00		Basis: Dr	y Weight	t	
Seq Number:	913623									
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil	
Chloride		16887-00-6	4420	106		mg/kg	05.10.13 10.14		50	

Analytical Method:	Percent Mois	ture						
Tech:	SHSM					% Moisture:		
Analyst:	WRU					Basis: We	t Weight	
Seq Number:	913266							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture		TMOIST	5.30	1.00	%	05.08.13 15.15		1





#### Conestoga Rovers & Associates, Midland, TX

Sample Id: SI	B-2 20'		Matri	ix: Soil		I	Date Received: 05.	.07.13 16.50	
Lab Sample Id: 40	62651-010		Date Collecte	d: 05.06.	13 15.35				
Analytical Method:	Inorganic A	nions by EPA 300/3	00.1				Prep Method: E3	00P	
Tech:	AMB						% Moisture: 4.5	6	
Analyst:	AMB		Date	Prep:	05.10.13 08.00		Basis: Dr	y Weight	
Seq Number:	913623								
Parameter	en e	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	2510	41.9		mg/kg	05.10.13 12.02		20

Analytical Method:	Percent Mo	oisture								
Tech:	SHSM					% Moisture:				
Analyst:	WRU					Basis: Wet Weight				
Seq Number:	913266									
Parameter	1	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil		
Percent Moisture		TMOIST	4.56	1.00	%	05.08.13 15.15		1		





### Conestoga Rovers & Associates, Midland, TX

SB-2 40'						and the second sec		
		Matri	x: Soil		D	ate Received: 05.	07.13 16.	50
462651-011		Date Collected	1: 05.06.13	15.38				
Inorganic Ani	ions by EPA 300/3	00.1				Prep Method: E3	00P	
AMB						% Moisture: 21.	2	
AMB		Date	Prep: 05	.10.13 08.00		Basis: Dry	Weight	
913623								
	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
	16887-00-6	4.83	3.81		mg/kg	05.10.13 12.24		1.:
	Inorganic Ani AMB AMB	Inorganic Anions by EPA 300/3 AMB AMB 913623 Cas Number	Inorganic Anions by EPA 300/300.1         AMB         AMB         Date 1         913623         Cas Number	Inorganic Anions by EPA 300/300.1 AMB AMB Date Prep: 05 913623 Cas Number Result RL	Inorganic Anions by EPA 300/300.1AMBAMBDate Prep:05.10.13 08.00913623Cas NumberResultRL	Inorganic Anions by EPA 300/300.1AMBAMBDate Prep:05.10.13 08.00913623Cas NumberResultRLUnits	Inorganic Anions by EPA 300/300.1       Prep Method: E30         AMB       % Moisture: 21.         AMB       Date Prep:       05.10.13 08.00         913623       Basis: Dry	Inorganic Anions by EPA 300/300.1       Prep Method: E300P         AMB       % Moisture: 21.2         AMB       Date Prep:       05.10.13 08.00         913623       Cas Number       Result         Result       RL       Units       Analysis Date       Flag

Percent Moisture		TMOIST	21.2	1.00	%	05.08.13 15.15		1	
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil	
Seq Number:	913266								
Analyst:	WRU					Basis: We	et Weight	t	
Tech:	SHSM					% Moisture:			
Analytical Method:	Percent Mo	isture							





### Conestoga Rovers & Associates, Midland, TX

Sumple fui	B-2 50'			rix: Soil		D	ate Received: 05.	.07.13 16.5	0	
Lab Sample Id: 40	52651-012	Dat	te Collect	ed: 05.06	5.13 15.40					
Analytical Method:	Inorganic A	nions by EPA 300/300.1	l				Prep Method: E3	00P		
Tech: ·	AMB						% Moisture: 4.3	1		
Analyst:	AMB		Date	e Prep:	05.10.13 08.00		Basis: Dry	y Weight		
Seq Number:	913623									
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil	
Chloride		16887-00-6	2460	41.	8	mg/kg	05.10.13 13.29		20	

Analytical Method:	Percent Mois	sture						
Tech:	SHSM					% Moisture:		
Analyst:	WRU					Basis: We	t Weight	t
Seq Number:	913266							
Parameter	• .	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture		TMOIST	4.31	1.00	%	05.08.13 15.15		1





### Conestoga Rovers & Associates, Midland, TX

Sample Id:	SB-2 70'		Matri	x: Soil		Ľ	Date Received: 05.07.13 16.50			
Lab Sample Id:	462651-013		Date Collected	d: 05.06	.13 15.45					
Analytical Metho	od: Inorganic A	nions by EPA 300/3	00.1				Prep Method: E3	00P		
Tech:	AMB						% Moisture: 6.4	4		
Analyst:	AMB		Date	Prep:	05.10.13 08.00		Basis: Dr	y Weight		
Seq Number:	913623									
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Di	
Chloride		16887-00-6	412	10.	7	mg/kg	05.10.13 13.51			

Analytical Method:	Percent Mois	ture						
Tech:	SHSM					% Moisture:		
Analyst:	WRU					Basis: We	et Weight	
Seq Number:	913266							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture		TMOIST	6.44	1.00	%	05.08.13 15.15		1





### Conestoga Rovers & Associates, Midland, TX

Sample Id:	SB-2 80'		Matri	x: Soil		Date Received: 05.07.13 16.50			
Lab Sample Id:	462651-014		Date Collected	d: 05.06	.13 15.55				
Analytical Metho	d: Inorganic A	nions by EPA 300/3	00.1				Prep Method: E3	00P	
Tech:	AMB						% Moisture: 19.	.1	
Analyst:	AMB		Date	Prep:	05.10.13 08.00		Basis: Dr	y Weight	
Seq Number:	913623								
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	4.22	3.2	9	mg/kg	05.10.13 14.13		1.33

Analytical Method: Tech: Analyst: Seq Number:	Percent Moi SHSM WRU 913266	sture			% Moisture: Basis: Wet Weight					
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil		
Percent Moisture		TMOIST	19.1	1.00	%	05.08.13 16.20		1		





#### Conestoga Rovers & Associates, Midland, TX

Sample Id: Lab Sample Id:	SB-2 90' 462651-015		Matri Date Collecte	x: Soil d: 05.06.13 1	6.05	Date Received: 05.07.13 16.5			
Analytical Metho	d: Percent Mo	isture							
Tech:	SHSM						% Moisture:		
Analyst:	WRU						Basis: We	et Weight	
Seq Number:	913266								
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Percent Moisture		TMOIST	5.13	1.00		%	05.08.13 16.20		1





#### Conestoga Rovers & Associates, Midland, TX

Sumpre rai	-2 100' 2651-016			x: Soil 1: 05.06.13 16.15	D	ate Received: 05.	07.13 16.5	0
Analytical Method: Tech:	Percent Moisture					% Moisture:		
Analyst:	WRU					Basis: We	t Weight	
Seq Number:	913266							
Parameter	Cas	Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture	TMO	DIST	6.82	1.00	%	05.08.13 16.20		1





#### Conestoga Rovers & Associates, Midland, TX

Sample Id: Lab Sample Id:	SB-3 5' 462651-017		Matri Date Collecte	x: Soil	12 00 50	Ι	Date Received: 05.	07.13 16.	50
Analytical Metho Tech: Analyst: Seq Number:		nions by EPA 300/3			05.10.13 08.00		Prep Method: E3 % Moisture: 7.2 Basis: Dry	2	
Parameter Chloride	713023	<b>Cas Number</b> 16887-00-6	Result 142	<b>RL</b> 4.31		Units mg/kg	<b>Analysis Date</b> 05.10.13 16.01	Flag	Dil 2

Analytical Method:	Percent Mois	ture						
Tech:	SHSM					% Moisture:		
Analyst:	WRU					Basis: We	t Weight	
Seq Number:	913266							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture		TMOIST	7.22	1.00	%	05.08.13 16.20		1





### Conestoga Rovers & Associates, Midland, TX

Sumpre rut	-3 10' 2651-018		Matriz Date Collected	x: Soil	12 10 00	D	Date Received: 05.	07.13 16.50	
Analytical Method:		nions by EPA 300/30		a: 05.07.	.13 10.00		Prep Method: E3	00P	
Tech:	AMB						% Moisture: 7.1		
Analyst:	AMB		Date	Prep:	05.10.13 08.00		Basis: Dry	Weight	
Seq Number:	913623								
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	685	21.5	5	mg/kg	05.10.13 16.23		10

Analytical Method:	Percent Mois	sture						
Tech:	SHSM					% Moisture:		
Analyst:	WRU					Basis: We	et Weight	
Seq Number:	913266							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture		TMOIST	7.15	1.00	%	05.08.13 16.20		1





### Conestoga Rovers & Associates, Midland, TX

Sample Id:	SB-3 20'		Matrix: Soil				Date Received: 05.07.13 16.50		
Lab Sample Id:	462651-019		Date Collected	d: 05.07.	13 10.05				
Analytical Metho	od: Inorganic A	Anions by EPA 300/30	00.1				Prep Method: E3	00P	
Tech:	AMB						% Moisture: 5.6	3	
Analyst:	AMB		Date	Prep:	05.10.13 08.00		Basis: Dry	Weight	
Seq Number:	913623								
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Di
Chloride		16887-00-6	1400	42.4	L .	mg/kg	05.10.13 16.44		2

Analytical Method:	Percent Mois	ture						
Tech:	SHSM					% Moisture:		
Analyst:	WRU					Basis: We	t Weight	
Seq Number:	913267							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture		TMOIST	5.63	1.00	%	05.08.13 16.45		1





### Conestoga Rovers & Associates, Midland, TX

										_
Sample Id:	SB-3 30'		Matr	ix: Soil		D	Date Received: 05.07.13 16.50			
Lab Sample Id:	462651-020	1	Date Collecte	ed: 05.07.	13 10.10					
Analytical Method	l: Inorganic A	nions by EPA 300/30	0.1				Prep Method: E3	00P		
Tech:	AMB						% Moisture: 6.9	4		
Analyst:	AMB		Date	Prep:	05.09.13 16.00		Basis: Dr	y Weight		
Seq Number:	913372									
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil	-
Chloride		16887-00-6	3420	43.0		mg/kg	05.10.13 04.06		20	

Analytical Method:	Percent Mois	sture						
Tech:	SHSM					% Moisture:		
Analyst:	WRU					Basis: We	et Weight	
Seq Number:	913267							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture		TMOIST	6.94	1.00	%	05.08.13 16.45		1





### Conestoga Rovers & Associates, Midland, TX

Sample Id:	SB-3 50'		Matri	x: Soil		Date Received: 05.07.13 16.50			
Lab Sample Id:	462651-021		Date Collecte	d: 05.07.1	13 10.15				
Analytical Method	: Inorganic A	nions by EPA 300/3	00.1				Prep Method: E3	00P	
Tech:	AMB						% Moisture: 5.1	9	
Analyst:	AMB		Date	Prep:	05.10.13 08.00		Basis: Dr	y Weight	
Seq Number:	913623								
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	1210	21.1		mg/kg	05.10.13 17.06		10
Analytical Method	ercent Mo	isture							

Tech: Analyst:	SHSM WRU					% Moisture: Basis: We	t Weight	
Seq Number:	913267							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture		TMOIST	5.19	1.00	%	05.08.13 16.45		1





### Conestoga Rovers & Associates, Midland, TX

Sample Id:	SB	-3 70'		Matri	x: Soil		Г	Date Received: 05.	07 13 16 5	0
Lab Sample Id:		2651-022		Date Collecte		.13 10.30			07.10 10.0	
Analytical Meth	od:	Inorganic A	nions by EPA 300/30	00.1				Prep Method: E3	00P	
Tech:		AMB						% Moisture: 2.9	7	
Analyst:		AMB		Date	Prep:	05.10.13 08.00		Basis: Dr	Weight	
Seq Number:		913623								
Parameter	1		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride			16887-00-6	431	10.	3	mg/kg	05.10.13 18.12		5

Analytical Method:	Percent Mo	isture						
Tech:	SHSM					% Moisture:		
Analyst:	WRU					Basis: We	t Weight	
Seq Number:	913267							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture		TMOIST	2.97	1.00	%	05.08.13 16.45		1
Percent Moisture		TMOIST	2.97	1.00	%	05.08.13 16.45		1





## Conestoga Rovers & Associates, Midland, TX

Sample Id: Lab Sample Id:	SB-3 90' 462651-023			x: Soil d: 05.07.13 10.35	Γ	Date Received: 05.07.13 16.50				
			Bute concete							
Analytical Metho	d: Percent Mo	oisture								
Tech:	SHSM					% Moisture:				
Analyst:	WRU					Basis: We	et Weight			
Seq Number:	913267									
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil		
Percent Moisture		TMOIST	4.09	1.00	%	05.08.13 16.45		1		



## **Flagging Criteria**

- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantiation 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

PQL Practical Quantitation Limit MQL Method Quantitation Limit

LOD Limit of Detection

**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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Final 1.001



QC Summary 462651



## **Conestoga Rovers & Associates**

Analytical Method: Seq Number: MB Sample Id:	Inorganic Anions b 913609 637998-1-BLK	oy EPA 300		Matrix: mple Id:	Solid 637998-1	-BKS		Prep Method: E300P Date Prep: 05/09/2013 LCSD Sample Id: 637998-1-BSD				
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<2.00	50.0	51.5	103	51.4	103	80-120	0	20	mg/kg	05/09/13 15:21	
Analytical Mathed	Inorgania Anione b	V FPA 300	/300 1					D-	on Moth	d. E20	0.D	
Seq Number:	Inorganic Anions b 913372	y 121 A 500.		Matrix:	Solid			Pr	ep Metho Date Pro		9/2013	
MB Sample Id:	637855-1-BLK		LCS San	nple Id:	637855-1-	BKS		LCSI			355-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<2.00	50.0	51.6	103	51.7	103	80-120	0	20	mg/kg	05/09/13 22:41	
Seq Number:	Inorganic Anions b 913623	y EPA 300/	1	Matrix:		DVG			ep Metho Date Pro	ep: 05/1	0/2013	
MB Sample Id:	638012-1-BLK	6. 11			638012-1-		1		•		)12-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<2.00	50.0	51.6	103	51.2	102	80-120	1	20	mg/kg	05/10/13 09:10	
Analytical Method:	In constants Andreas In											
Sea Number	0	y EPA 300		Matrix	Soil			Pr	ep Metho Date Pre			
Seq Number: Parent Sample Id:	913609 462609-001	y EPA 300	]	Matrix: nple Id:	Soil 462609-00	)1 S		Pre	ep Metho Date Pro		0P 9/2013	
	913609	y EPA 300 Spike Amount	]			)1 S	Limits	Pro	•			Flag
Parent Sample Id:	913609 462609-001 Parent	Spike	MS San MS	nple Id: MS		)1 S	<b>Limits</b> 80-120	Pr	•	ep: 05/0	9/2013 Analysis	Flag
Parent Sample Id: Parameter	913609 462609-001 Parent Result	Spike Amount	MS San MS Result	nple Id: MS %Rec		)1 S		Pr	•	ep: 05/0 Units	9/2013 Analysis Date	Flag
Parent Sample Id: Parameter Chloride Analytical Method: Seq Number:	913609 462609-001 Parent Result <2.66 Inorganic Anions b 913372	Spike Amount 66.5	MS San MS Result 78.5	mple Id: MS %Rec 118 Matrix:	462609-00 Soil				•	ep: 05/0 Units mg/kg od: E300	9/2013 Analysis Date 05/09/13 16:26	Flag
Parent Sample Id: Parameter Chloride Analytical Method:	913609 462609-001 Parent Result <2.66	Spike Amount 66.5	MS San MS Result 78.5	mple Id: MS %Rec 118 Matrix:	462609-00				Date Pro	ep: 05/0 Units mg/kg od: E300	9/2013 Analysis Date 05/09/13 16:26	Flag Flag



QC Summary 462651



#### **Conestoga Rovers & Associates**

				CEIVIC CVU 34	2			
Analytical Method: Seq Number:	<b>Inorganic Anions</b> 913372	by EPA 300		k: Soil		Prep Method: E30 Date Prep: 05/0	00P 09/2013	
Parent Sample Id:	462827-001		MS Sample Id	1: 462827-001 S				
Parameter	Parent Result		MS M Result %Re		Limits	Units	Analysis Date	Flag
Chloride	98.1	112	213 10	3	80-120	mg/kg	05/09/13 23:46	
Analytical Method:		by EPA 300	/300.1			Prep Method: E30	OP	
Seq Number:	913623			c: Soil		Date Prep: 05/1	10/2013	
Parent Sample Id:	462651-009		MS Sample Id	l: 462651-009 S				
Parameter	Parent Result		MS M Result %Re		Limits	Units	Analysis Date	Flag
Chloride	4420	2640	7130 10	3	80-120	mg/kg	05/10/13 10:36	
Analytical Method:	Inorganic Anions	by EPA 300	/300.1			Prep Method: E30	OP	
Seq Number:	913623			c: Soil			10/2013	
Parent Sample Id:	462711-003		MS Sample Id	l: 462711-003 S				
Parameter	Parent Result		MS MS Result %Re		Limits	Units	Analysis Date	Flag
Chloride	5590	6310	5840	4	80-120	mg/kg	05/10/13 15:18	х
Analytical Method:	Percent Moisture							
Seq Number:	913266		Matrix	: Solid				
				l: 913266-1-BLK				
D			MB			Units	Analysis	Flag
Parameter			Result				Date	Flag
Percent Moisture			ND			%	05/08/13 15:15	
Analytical Method:	Percent Moisture							
Seq Number:	913267		Matrix	: Solid				
Sec. Sec.				: 913267-1-BLK				
Parameter			MB Result			Units	Analysis Date	Flag
Percent Moisture			ND			%	05/08/13 16:45	



QC Summary 462651



#### **Conestoga Rovers & Associates**

<b>Analytical Method:</b>	Percent Moisture							
Seq Number:	913266	Matrix:	Soil					
Parent Sample Id:	462609-001	MD Sample Id:	462609-001 D					
	n i	100		0/ 101	n nnn	Tinite	4	
Parameter	Parent Result	MD Result		%R	PD RPD Limit	Units	Analysis Date	Flag

Analytical Method: Seq Number: Parent Sample Id:	<b>Percent Moisture</b> 913267 462651-019	Matrix: MD Sample Id:					
Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Percent Moisture	5.63	6.47	14	20	%	05/08/13 16:45	

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**ANALYSIS REQUEST & CHAIN OF CUSTODY RECORD** 

Final 1.001

Work     Sampling       Sampling     Time       Sampling     Time       Sampling     Time       Signature     Signature       Signature     Composite       Composite     Composite       Container Size     Container Size       Container Size     Container Type       VOA: Full-List BTEX-MTBE EtOH Oxyg VOHs VO       VOA: PP TCL DW Appdx-1 Appdx-2 CALL Oth       PAHs SIM 8310 8270       TX-1005 DRO GRO MA EPH MA VPH       SVOCs: Full-List DW BN&AE TCLP PP Appdx-2       OC Pesticides PCBs Herbicides OP Pesticides       Metais: RCRA-8 RCRA-4 Pb 13PP 23TAL Appdx 1 A       SPLP - TCLP (Metals VOCs SVOCs Pest. Herb.       EDB / DBCP	R. Sc. TN, UT Other       A. Sc. TN, UT Other         A. Sc. TN, UT Other       A. Sc. TN, UT Other         A. Sc. TN, UT Other       Pasults o         IPPricing:       IPM and         IPPricing:       Provide with Final Report I invoice with Final Report I invoice must have a P.O. No:         IPPricing:       Provide with Final Report I invoice must have a P.O. No:         ID       Sampling         Imme       Signature         Signature       Signature         ISM Matrix       Depth         Date       Signature         ISM Matrix       ISM Matrix         Composite       ISM Matrix         VOA: Full-List BTEX-MTBE EtOH Oxyg VOHs VOAs         VOA: PP TCL DW Appdx-1 Appdx-2 CALL Other:         PAHs SIM 8310 8270         TX-1005 DRO GRO MA EPH MA VPH         SVOCs: Full-List DW BN& TCLP PP Appdx-2 CALL         OC Pesticides PCBs Herbicides OP Pesticides         Metals: RCRA-8 RCRA-4 Pb 13PP 23TAL Appdx1 Appdx2         SPLP - TCLP (Metals VOCs SVOCs Pest. Herb. PCBs)         EDB / DBCP		and Sign) Date & Time	A       A	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	70 70 70 70 57 57 57 70 (Initials and Sign) $C_{1}$	3 4 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
Bar DL       Sample       Invoice with Final Report       Invoice with Final Report         Bar DL       GW       DW       OAPP       MOLs       RLS       Per-Contract       CLP       Accounting       Invoice with Final Report       Invoice with Final Report <td< td=""><td>B-2       A. SC, TN, UT Other         A. SC, TN, UT Other       PResults to         Preservatives       Po. No:         Sampling       Time         Depth       Rt. See Lab PM         Matrix       Container Size         Container Size       Container Type         VOA: Full-List BTEX-MTBE EtOH Oxyg VOHs VOAs         VOA: Full-List BTEX-MTBE EtOH Oxyg VOHs VOAs         VOA: FPP TCL DW Appdx-1 Appdx-2 CALL Other:         PAHs SIM 8310 8270         TX-1005 DRO GRO MA EPH MA VPH         SVOCS: Full-List DW BN&amp;AE TCLP PP Appdx-2 CALL         OC Pesticides PCBs Herbicides OP Pesticides         Metals: RCRA-8 RCRA-4 Pb 13PP 23TAL Appdx 1 Appdx 2         SPLP - TCLP (Metals VOCs SVOCs Pest. Herb. PCBs)         EDB / DBCP</td><td></td><td></td><td></td><td></td><td>-</td><td></td></td<>	B-2       A. SC, TN, UT Other         A. SC, TN, UT Other       PResults to         Preservatives       Po. No:         Sampling       Time         Depth       Rt. See Lab PM         Matrix       Container Size         Container Size       Container Type         VOA: Full-List BTEX-MTBE EtOH Oxyg VOHs VOAs         VOA: Full-List BTEX-MTBE EtOH Oxyg VOHs VOAs         VOA: FPP TCL DW Appdx-1 Appdx-2 CALL Other:         PAHs SIM 8310 8270         TX-1005 DRO GRO MA EPH MA VPH         SVOCS: Full-List DW BN&AE TCLP PP Appdx-2 CALL         OC Pesticides PCBs Herbicides OP Pesticides         Metals: RCRA-8 RCRA-4 Pb 13PP 23TAL Appdx 1 Appdx 2         SPLP - TCLP (Metals VOCs SVOCs Pest. Herb. PCBs)         EDB / DBCP					-	
Sample ID       Image       Sampling       Per-Contract       CLP       Accounting       Inc. Invoice with Final Report       Inc. Invoice with Final Report         No       NW QAPP       AGCEE       NAVY       DOE       DOD       Value         No       Po. No:       Po. No:       Po. No:       Call for P.O.         No       No       Po. No:       Call for P.O.         No       Signature       Signature       Call for P.O.         Natrix       Composite       Call for P.O.       Call for P.O.         Container Size       Signature       Container Size       Container Size         YOA: Full-List BTEX-MTBE EtOH Oxyg VOHs VO       VOA: PP TCL DW Appdx-1 Appdx-2 CALL Oth         PAHs SIM 8310 8270       8270         TX-1005 DRO GRO MA EPH MA VPH       SVOCs: Full-List DW BN&AE TCLP PP Appdx-2         OC Pesticides PCBs Herbicides OP Pesticides         Metals: RCRA-8 RCRA-4 Pb 13PP 23TAL Appdx 1 A         SPLP - TCLP (Metals VOCs SVOCs Pest. Herb.         EDB / DBCP	Sample ID       Image: Sample ID       Sampling       Invoice with Final Report       Invoice with Final Report         Image: Sample ID       Sampling       Per-Contract       CLP       AGCEE       NAVY       DILS       Image: Signature         Sampling       Time       Signature       Pol. No:       Pol. No:       Pactor Invoice with Final Report       Invoice with Final Report       Invoice with Final Report         Depth       Signature       Signature       Signature       Call for P.O.       Call for P.O.         Depth       Signature       Signature       Composite       Call PMI       Call for P.O.         Preservatives       VOA: Full-List BTEX-MTBE EtOH Oxyg VOHs VOAs       VOA: PP TCL DW Appdx-1 Appdx-2 CALL Other:         PAHs       SIM       8310       8270         TX-1005       DRO GRO MA EPH MA VPH       SVOCs: Full-List       DW BN&AE TCLP PP Appdx-2 CALL         OC Pesticides       PCBs Herblicides       OP Pesticides       Matrix         SPLP - TCLP       (Metals VOCs SVOCs Pest. Herb. PCBs)       EDB / DBCP	*		- 0		2	12
Image: Signature       Image: Signature         Signature       Signature	Image: State: TX, AL, FL, GA, LA, MS, NC, Proj. Marager (PM)         A, SC, TN, UT Other         A, SC, TN, UT Other         A, SC, TN, UT Other         P. Contract         Image: Contract         CLP         AGCEE         NAVY         DLS         GW         DW         QAPP         MDLS         Results to         Per-Contract         CLP         AGCEE         NAVY         DOE         DOD         USACE OTHER:         Call for P.O.         BTEX-MTBE         EtOH         OXY         DV         DW         Appdx-1         Appdx-2         CALL         OTHER:         BN8AE         TCLP         PP         Appdx-1         Appdx-2         CALL         OTHER:         BN8AE         TCLP         PP         Appdx-2         CALL         OTHER:         CRO         MA EPH         DW		VOA: Full-List E VOA: PP TCL PAHs SIM 8 TX-1005 DRO SVOCs: Full-List OC Pesticides I Metals: RCRA-8	Grab # Containers Container Size Container Type	Depth ft' In" m Matrix	Sampling Date 2013	Sample ID
al DLs (GW DW QAPP MDLs RLs See Lab PM Included Call PM)       P.O. No:       P.O. No:         Per-Contract CLP AGCEE NAVY DOE DOD USACE OTHER:       Call for P.O.         -MTBE EtOH Oxyg VOHs VC         Appdx-1 Appdx-2 CALL Oth         8270         O MA EPH MA VPH         V BN&AE TCLP PP Appdx-2         S Herblcides OP Pesticides         CAL P 13PP 23TAL Appdx 1 A         s VOCs SVOCs Pest. Herb.	A, SC, TN, UT Other A, SC, TN, UT Other PM and PM and PO. NO: PO. NO: Call for P.O. AGCEE NAVY DOE DOD USACE OTHER: Call for P.O. ADD USACE OTHER: CALL Other: 8270 D MA EPH MA VPH V BN&AE TCLP PP Appdx-2 CALL Appdx-1 Appdx-2 CALL Other: 8270 D MA EPH MA VPH V BN&AE TCLP PP Appdx-2 CALL A Herbicides OP Pesticides CA-4 Pb 13PP 23TAL Appdx1 Appdx2 s VOCs SVOCs Pest. Herb. PCBs)	-	DW 310 GRC DV PCBs RCF		Signature		Sampler Name
VPricing: Accounting Invoice with Final Report Invoice with Final Report Invoice must have a P.O. P.O. No: Invoice must have a P.O. Call for P.O. Call for P.O. Doxyg VOHs VO podx-2 CALL Oth MA VPH CLP PP Appdx-2 OP Pesticides 23TAL Appdx 1 A DCs Pest. Herb.	Workson     URT     DEVCTIEAN     Foil Manager (PM)       VPricing:     PM and     PM and       PO. No:     PO. No:     Fax No:       VPricing:     P.O. No:     Call for P.O.       VOTA     P.O. No:     Call for P.O.       VPricing:     P.O. No:     Call for P.O.       VPR     P.O. No:     Call for P.O. <td></td> <td>Appdx-1 Ap 8270 O MA EPH M V BN&amp;AE TO s Herbicides RA-4 Pb 13PP</td> <td>ed Call PM)</td> <td>POE DOD</td> <td>CLP AGCEE W QAPP MDLs</td> <td>QAPP Per-Contrac Special DLs (GW )</td>		Appdx-1 Ap 8270 O MA EPH M V BN&AE TO s Herbicides RA-4 Pb 13PP	ed Call PM)	POE DOD	CLP AGCEE W QAPP MDLs	QAPP Per-Contrac Special DLs (GW )
Yet     Creating       Accounting     Invoice with Final Report       Invoice with Final Report     Invoice must have a P.O.       VOHs     VO       CALL     Oth       PH     P       Appdx 1       Apest.       Herb.	State: TX, AL, FL, GA, LA, MS, NC,       Proj. Marager (PM)         A, SC, TN, UT Other       Image: Comparison of the comparison of th		MA VI CLP F OP F 23TAI		No:	DOV CI EAN	
	Proj. Manager (PM) 0 ( 0 SOW DAs er: CALL ppdx2 PCBs)	-	CALL Oth PH PP Appdx-2 Pesticides _ Appdx 1 A	voice must have a P.O.			Bill to:
Isly done at XENCO Project ID TAT: ASAP 5h 12h 24h 48h 3d It is typically 5-7 Working Days for lev			Lab ONLY: 4624	one	Phone	See Por	Company-City

ANALISIS KENUESI & UNMIN UF UUUIUU I ILUUIU

5)	a, (c	1) Joularler	Relinquished by (Initi						X 90	1 76	58-3 50	Sample ID	Sampler Name	Special DLs (GW DW QAPP MDLs	QAPP Per-Contract C		Invoice to Accounting Bill to:	E-mail Results to	NJ, PA, SC, TN, UT Other	Project Name-Location	Company-City
		2	(Initials and Sign)						*	-	1 5-7	Sampling Date 2813	-		CLP AGCEE NAVY		lnc.	UPM and	GA, LA, MS, NC, er	Previously	See A
		5-7-13	Date & Ti						Stal	Ofal	1015	Time 2013	Signature	RLs See Lab PM	-Fill Waste-Disp	0	Invoice with Final Report		Proj. Memager (PM	done at XENCO	1 de
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4			and S		+		-		$\rightarrow$			VOA: Full-List	BTEX	-MTBE	EtOH	Oxyo	VOH	s VC	DAs	= =	F
4			Sign)		1								DW		x-1 App				er:	TAT: ASAP 5h 12h It is typically 5-7 Work	Lab Only:
1												PAHs SIM	8310	8270						ASA	nly:
2												TX-1005 DRO	GR	O MA	EPH M	A VF	РΗ	9.51		y 5-7	
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16:57			Time		-	-	-					Metals: RCRA-8			10123					- OU	160
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hereby requested. Rush Charges and Collection Fees are pre-approved if needed.	until paid. Samples will be held 30 days after final report is e-mailed unless	Otherwise agreed on writing. Reports are the Intellectual Property of XENCO	0.0									Sample Clean-L	ips ar	e pre-a	pproved		eaea		Remarks		

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

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**ANALYSIS REQUEST & CHAIN OF CUSTODY RECORD** 

Final 1.001



### **XENCO Laboratories**



#### Prelogin/Nonconformance Report- Sample Log-In

	Client: Conestoga Rovers & Associates	Acceptable Temperature Range: 0 - 6 degC							
1	Date/ Time Received: 05/07/2013 04:50:00 PM	Air and Metal samples Acceptable Range: Ambient							
1	Work Order #: 462651	Temperature Measuring device used :							
	Sample Recei	pt Checklist Comments							
	#1 *Temperature of cooler(s)?	6							
	#2 *Shipping container in good condition?	Yes							
	#3 *Samples received on ice?	Yes							
	#4 *Custody Seals intact on shipping container/ cooler?	Yes							
	#5 Custody Seals intact on sample bottles?	Yes							
	#6 *Custody Seals Signed and dated?	Yes							
	#7 *Chain of Custody present?	Yes							
	#8 Sample instructions complete on Chain of Custody?	Yes							
	#9 Any missing/extra samples?	No							
	#10 Chain of Custody signed when relinquished/ received?	Yes							
	#11 Chain of Custody agrees with sample label(s)?	Yes							
	#12 Container label(s) legible and intact?	Yes							
	#13 Sample matrix/ properties agree with Chain of Custody'	? Yes							
	#14 Samples in proper container/ bottle?	Yes							
	#15 Samples properly preserved?	Yes							
	#16 Sample container(s) intact?	Yes							
	#17 Sufficient sample amount for indicated test(s)?	Yes							
	#18 All samples received within hold time?	Yes							
	#19 Subcontract of sample(s)?	Yes							
	#20 VOC samples have zero headspace (less than 1/4 inch	bubble)? Yes							

#21 <2 for all samples preserved with HNO3,HCL, H2SO4?

#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH? Yes

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

PH Device/Lot#: Analyst:

Checklist completed by: Muss Horak Kelsey Brooks Checklist reviewed by: Muss Horak Kelsey Brooks

Date: 05/08/2013

Yes

Date: 05/08/2013

# Analytical Report 462651

for

**Conestoga Rovers & Associates** 

Project Manager: Tom Larson

### CEMC CVU 342

073823

#### 21-MAY-13

Collected By: Client





#### 12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046): Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD ( L10-135) Louisiana (04176), USDA (P330-07-00105)

> Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900) Xenco-Lakeland: Florida (E84098) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX) Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757) Xenco Tucson (EPA Lab code: AZ00989): Arizona (AZ0758)



21-MAY-13

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

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

#### Tom Larson:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 462651. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 462651 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

espectfully. Kms Boah

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 462651



#### Conestoga Rovers & Associates, Midland, TX

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



### CASE NARRATIVE



Client Name: Conestoga Rovers & Associates Project Name: CEMC CVU 342

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

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

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-913372 Inorganic Anions by EPA 300/300.1 E300

Batch 913372, Chloride recovered below QC limits in the Matrix Spike. Samples affected are: 462651-020. The Laboratory Control Sample for Chloride is within laboratory Control Limits

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

Batch 913623, Chloride recovered below QC limits in the Matrix Spike. Samples affected are: 462651-019, -022, -008, -021, -010, -011, -013, -009, -012, -018, -023, -014, -006, -017.

The Laboratory Control Sample for Chloride is within laboratory Control Limits



Certificate of Analysis Summary 462651 Conestoga Rovers & Associates, Midland, TX Project Name: CEMC CVU 342



Project Id: 073823 Contact: Tom Larson Project Location: New Mexico

Date Received in Lab: Tue May-07-13 04:50 pm Report Date: 21-MAY-13

oject Location: New Mexico								Project Ma	nager:	Kelsey Brook	s		
	Lab Id:	462651-	001	462651-0	002	462651-0	003	462651-0	004	462651-0	05	462651-0	006
Analysis Requested	Field Id:	SB-1 :	5*	SB-1 1	0'	SB-1 20	0'	SB-1 4	<b>D'</b>	SB-1 50	)'	SB-1 75	5'
Analysis Kequestea	Depth:				1200						100		
	Matrix:	SOIL		SOIL	1.15	SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-06-13	13:25	May-06-13	13:40	May-06-13	13:45	May-06-13	13:55	May-06-13	14:10	May-06-13	14:25
Inorganic Anions by EPA 300/300.1	Extracted:	May-09-13	14:00	May-09-13	14:00	May-09-13	14:00	May-09-13	14:00	May-09-13	14:00	May-10-13	08:00
	Analyzed:	May-09-13	17:09	May-09-13	17:31	May-09-13	17:53	May-09-13	18:15	May-09-13	19:20	May-10-13	10:57
A Laker and a low	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RI
Chloride		1700	41.8	2130	41.1	177	4.28	32.5	3.10	147	4.19	4.94	3.0
Percent Moisture	Extracted:				1					1.	100		
	Analyzed:	May-08-13	15:15	May-08-13	15:15	May-08-13	15:15	May-08-13	15:15	May-08-13	15:15	May-08-13	15:15
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		4.20	1.00	2.66	1.00	6.54	1.00	3.34	1.00	4.52	1.00	2.34	1.0

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Kelsey Brooks Project Manager

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# Certificate of Analysis Summary 462651

Conestoga Rovers & Associates, Midland, TX

Project Name: CEMC CVU 342



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

Project Id: 073823 Contact: Tom Larson Project Location: New Mexico

Contact: 1 om Larson												-	
roject Location: New Mexico								Report	Date:	21-MAY-13			
offer Docation New Mexico								Project Ma	nager:	Kelsey Brook	s		
	Lab Id:	462651-0	007	462651-0	08	462651-0	09	462651-0	010	462651-0	011	462651-0	012
An alurin Demonstral	Field Id:	SB-1 10	0'	SB-2 5	.	SB-2 10	y.	SB-2 2	0'	SB-2 4	o' '	SB-2 50	0'
Analysis Requested	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	,
	Sampled:	May-06-13	14:35	May-06-13	15:20	May-06-13	15:25	May-06-13	15:35	May-06-13	15:38	May-06-13	15:40
Inorganic Anions by EPA 300/300.1	Extracted:	÷.		May-10-13	08:00	May-10-13	08:00	May-10-13	08:00	May-10-13	08:00	May-10-13	08:00
	Analyzed:			May-10-13	11:41	May-10-13	10:14	May-10-13	12:02	May-10-13	12:24	May-10-13	13:29
	Units/RL:			mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride	2			3860	103	4420	106	2510	41.9	4.83	3.81	2460	41.8
Percent Moisture	Extracted:							1 A.					
	Analyzed:	May-08-13	15:15	May-08-13	15:15	May-08-13	15:15	May-08-13	15:15	May-08-13	15:15	May-08-13	15:15
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		3.77	1.00	3.07	1.00	5.30	1.00	4.56	1.00	21.2	1.00	4.31	1.00

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Kelsey Brooks Project Manager

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Laboratories Project Id: 073823		Conestoga	Rover	many sis 's & Assoc ame: CEM	ciates,	Midland,		1			6	0	
Contact: Tom Larson roject Location: New Mexico			É.				Dat	Report	Date:	Tue May-07-1 21-MAY-13 Kelsey Brook		pm	
	Lab Id:	462651-	013	462651-0	014	462651-0	015	462651-0	016	462651-0	017	462651-0	)18
Analysis Requested	Field Id: Depth:	SB-2 7	0'	SB-2 8	o'	SB-2 9	0'	SB-2 10	00'	SB-3 5		SB-3 10	)'
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-06-13	15:45	May-06-13	15:55	May-06-13	16:05	May-06-13	16:15	May-07-13	09:50	May-07-13	10:00
Inorganic Anions by EPA 300/300.1	Extracted: Analyzed:	May-10-13 May-10-13		May-10-13 May-10-13						May-10-13 May-10-13		May-10-13 May-10-13	
	Units/RL:	mg/kg	RL	mg/kg	RL					mg/kg	RL	mg/kg	RL
Chloride		412	10.7	4.22	3.29	1.11	- 1 A			142	4.31	685	21.5
Percent Moisture	Extracted:		12.1			1. C				CONCEPT R	19.00	and the	
	Analyzed:	May-08-13	15:15	May-08-13	16:20	May-08-13	16:20	May-08-13	16:20	May-08-13	16:20	May-08-13	16:20
Martin States	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		6.44	1.00	19.1	1.00	5.13	1.00	6.82	1.00	7.22	1.00	7.15	1.00

Certificate of Analysis Summary 462651

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#### Certificate of Analysis Summary 462651 Conestoga Rovers & Associates, Midland, TX

Project Name: CEMC CVU 342



Project Id: 073823 Contact: Tom Larson Project Location: New Mexico

Date Received in Lab: Tue May-07-13 04:50 pm Report Date: 21-MAY-13

								<b>Project Ma</b>	nager:	Kelsey Brooks	S	
	Lab Id:	462651-0	019	462651-0	20	462651-0	)21	462651-0	)22	462651-0	23	
Analysis Requested	Field Id:	SB-3 2	0'	SB-3 30	y'	SB-3 50	D'	SB-3 70	0'	SB-3 90	)'	
Analysis Requested	Depth:											
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		
	Sampled:	May-07-13	10:05	May-07-13	10:10	May-07-13	10:15	May-07-13	10:30	May-07-13	10:35	
Inorganic Anions by EPA 300/300.1	Extracted:	May-10-13	08:00	May-09-13	16:00	May-10-13	08:00	May-10-13	08:00	May-13-13	10:00	
	Analyzed:	May-10-13	16:44	May-10-13	04:06	May-10-13	17:06	May-10-13	18:12	** ** ** *	**	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
Chloride		1400	42.4	3420	43.0	1210	21.1	431	10.3	209	4.17	
Percent Moisture	Extracted:											
	Analyzed:	May-08-13	16:45	May-08-13	16:45	May-08-13	16:45	May-08-13	16:45	May-08-13	16:45	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	
Percent Moisture	1	5.63	1.00	6.94	1.00	5.19	1.00	2.97	1.00	4.09	1.00	

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### Conestoga Rovers & Associates, Midland, TX

-1 5'		Matri	ix: Soil		I	Date Received: 05.	07.13 16.5	0
2651-001		Date Collecte	d: 05.06	.13 13.25				
Inorganic An	ions by EPA 300/30	00.1				Prep Method: E3	00P	
AMB						% Moisture: 4.2		
AMB		Date	Prep:	05.09.13 14.00		Basis: Dr	Weight	
913609								
	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
	16887-00-6	1700	41.	8	mg/kg	05.09.13 17.09		20
Percent Moist	ture							
SHSM						% Moisture:		
WRU						Basis: We	t Weight	
913266								
	AMB AMB 913609 Percent Moist SHSM WRU	2651-001 Inorganic Anions by EPA 300/30 AMB AMB 913609 Cas Number 16887-00-6 Percent Moisture SHSM WRU	2651-001 Date Collecte Inorganic Anions by EPA 300/300.1 AMB AMB Date 913609 Cas Number Result 16887-00-6 1700 Percent Moisture SHSM WRU	2651-001 Date Collected: 05.06 Inorganic Anions by EPA 300/300.1 AMB AMB Date Prep: 913609 Cas Number Result RL 16887-00-6 1700 41. Percent Moisture SHSM WRU	Date Collected: 05.06.13 13.25         Inorganic Anions by EPA 300/300.1         AMB       AMB         AMB       Date Prep:       05.09.13 14.00         913609       Cas Number       RL         16887-00-6       1700       41.8         Percent Moisture         SHSM       WRU	Date Collected: 05.06.13 13.25         Inorganic Anions by EPA 300/300.1         AMB       AMB         AMB       Date Prep:       05.09.13 14.00         913609       05.09.13 14.00       913609         Cas Number       Result       RL       Units         16887-00-6       1700       41.8       mg/kg         Percent Moisture         SHSM       WRU       VIIII	Zd51-001Date Collected: 05.06.13 13.25Inorganic Anions by EPA 300/300.1Prep Method: E3AMB% Moisture: 4.2AMBDate Prep:05.09.13 14.00913609Basis: DryCas NumberResultRLUnitsAnalysis Date16887-00-6170041.8mg/kg05.09.13 17.09Percent MoistureSHSM% Moisture:Basis: WeWRUBasis: We	Date Collected: 05.06.13 13.25         Inorganic Anions by EPA 300/300.1       Prep Method: E300P         AMB       % Moisture: 4.2       %         AMB       Date Prep:       05.09.13 14.00       Basis: Dry Weight         913609       Eas Number       RL       Units       Analysis Date       Flag         16887-00-6       1700       41.8       mg/kg       05.09.13 17.09         Percent Moisture         SHSM       % Moisture:       % Moisture:         WRU       % Moisture:       Basis: Weight

and the second se			and the second se		and the second se	and the second second		_
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil	
Percent Moisture	TMOIST	4.20	1.00	%	05.08.13 15.15		1	





#### Conestoga Rovers & Associates, Midland, TX

Sample Id:	SB-1 10'		Matri	x: Soil		I	Date Received: 05.	07.13 16.5	50
Lab Sample Id:	462651-002		Date Collected	d: 05.06.	13 13.40				
Analytical Metho	d: Inorganic A	nions by EPA 300/3	00.1				Prep Method: E3	00P	
Tech:	AMB						% Moisture: 2.6	6	
Analyst:	AMB		Date	Prep:	05.09.13 14.00		Basis: Dr	y Weight	
Seq Number:	913609								
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	2130	41.1		mg/kg	05.09.13 17.31		20
Analytical Metho	d: Percent Moi	isture							
Tech:	SHSM						% Moisture:		
Analyst:	WRU						Basis: We	t Weight	
Seq Number:	913266								
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil

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





### Conestoga Rovers & Associates, Midland, TX

Sample Id: SI	B-1 20'		Matri	ix: Soil		Ι	Date Received: 05.	07.13 16.5	0	
Lab Sample Id: 40	52651-003	Dat	e Collecte	d: 05.06.1	13 13.45					
Analytical Method:	Inorganic An	ions by EPA 300/300.1					Prep Method: E3	00P		
Tech:	AMB						% Moisture: 6.5	4		
Analyst:	AMB		Date	Prep:	05.09.13 14.00		Basis: Dr	Weight		
Seq Number:	913609									
Parameter	a she in	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil	
Chloride		16887-00-6	177	4.28		mg/kg	05.09.13 17.53		2	
Analytical Method:	Percent Moist	ture								
Tech:	SHSM						% Moisture:			
Analyst:	WRU						Basis: We	t Weight		

Seq Number:	913266							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture		TMOIST	6.54	1.00	%	05.08.13 15.15		1





1

### Conestoga Rovers & Associates, Midland, TX

Seq Number:	913266								
Analyst:	WRU						Basis: We	t Weight	
Tech:	SHSM						% Moisture:		
Analytical Metho	d: Percent Mois	sture							
Chloride		16887-00-6	32.5	3.10		mg/kg	05.09.13 18.15		1.5
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Seq Number:	913609								
Analyst:	AMB		Date	Prep:	05.09.13 14.00		Basis: Dr	y Weight	
Tech:	AMB						% Moisture: 3.3	4	
Analytical Metho	d: Inorganic A	nions by EPA 300/3	00.1				Prep Method: E3	00P	
Lab Sample Id:	462651-004		Date Collected	d: 05.06.	13 13.55				
Sample Id:	SB-1 40'		Matri	x: Soil		1	Date Received: 05.	.07.13 16.5	0

	Cas Humber	Result	KL	Chits	
Percent Moisture	TMOIST	3.34	1.00	%	05.08.13 15.15





### Conestoga Rovers & Associates, Midland, TX

Sample Id: SB	-1 50'		Matri	x: Soil		L	Date Received: 05.	.07.13 16.5	0	
Lab Sample Id: 462					.13 14.10					
Analytical Method:	Inorganic A	nions by EPA 300/300	.1				Prep Method: E3	00P		
Tech:	AMB						% Moisture: 4.5	2		
Analyst:	AMB		Date	Prep:	05.09.13 14.00		Basis: Dr	y Weight		
Seq Number:	913609									
Parameter	- ·	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil	
Chloride		16887-00-6	147	4.19	)	mg/kg	05.09.13 19.20		2	

Analytical Method:	Percent Moi	isture							
Tech:	SHSM					% Moisture:			
Analyst:	WRU					Basis: We	t Weight		
Seq Number:	913266								
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil	
Percent Moisture		TMOIST	4.52	1.00	%	05.08.13 15.15		1	





#### Conestoga Rovers & Associates, Midland, TX

Sample Id:	SB-1 75'		Matri	x: Soil		I	Date Received: 05.07.13 16.50				
Lab Sample Id:	462651-006		Date Collected	d: 05.06	.13 14.25						
Analytical Metho	d: Inorganic A	nions by EPA 300/3	00.1				Prep Method: E3	00P			
Tech:	AMB						% Moisture: 2.3	4			
Analyst:	AMB		Date	Prep:	05.10.13 08.00		Basis: Dr	y Weight			
Seq Number:	913623										
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil		
Chloride		16887-00-6	4.94	3.07	7	mg/kg	05.10.13 10.57		1.5		
Analytical Metho	d: Percent Moi	sture									
Tech:	SHSM						% Moisture:				
Analyst:	WRU						Basis: We	et Weight			
Seg Number:	913266										

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





#### Conestoga Rovers & Associates, Midland, TX

Sample Id:         SB-1 100'           Lab Sample Id:         462651-007				x: Soil d: 05.06.13 14.35	D	Date Received: 05	.07.13 16.	50	
Analytical Method:	nalytical Method: Percent Moisture			u. 05.00.15 14.55					
Tech:	SHSM					% Moisture:			
Analyst:	WRU					Basis: We	et Weight		
Seq Number:	913266								
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil	
Percent Moisture		TMOIST	3.77	1.00	%	05.08.13 15.15		1	





#### Conestoga Rovers & Associates, Midland, TX

Sample Id: Lab Sample Id:	SB-2 5' 462651-008		Matri Date Collected	x: Soil d: 05.06	.13 15.20	Ι	Date Received: 05.07.13 16.5			
Analytical Metho	od: Inorganic	Anions by EPA 300/3	00.1				Prep Method: E3			
Tech:	AMB						% Moisture: 3.0	7		
Analyst:	AMB		Date	Prep:	05.10.13 08.00		Basis: Dr	y Weight		
Seq Number:	913623									
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil	_
Chloride		16887-00-6	3860	103	3	mg/kg	05.10.13 11.41		50	

Analytical Method:	Percent Moist	ure						
Tech:	SHSM					% Moisture:		
Analyst:	WRU					Basis: We	t Weight	
Seq Number:	913266							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture		TMOIST	3.07	1.00	%	05.08.13 15.15		1





### Conestoga Rovers & Associates, Midland, TX

Sumple rui				x: Soil	12 15 25	Ľ	Date Received: 05.	07.13 16.5	0
Lab Sample Id: 4	Dat	e Collected	d: 05.06.)	13 15.25					
Analytical Method:	Inorganic A	nions by EPA 300/300.1					Prep Method: E3	00P	
Tech:	AMB						% Moisture: 5.3		
Analyst:	AMB		Date	Prep:	05.10.13 08.00		Basis: Dry	Weight	
Seq Number:	913623								
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	4420	106		mg/kg	05.10.13 10.14		50

Analytical Method:	Percent Mois	ture						
Tech:	SHSM					% Moisture:		
Analyst:	WRU					Basis: We	et Weigh	it
Seq Number:	913266							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture		TMOIST	5.30	1.00	%	05.08.13 15.15		1





### Conestoga Rovers & Associates, Midland, TX

Sample Id:	SB-2 20'	Matri	x: Soil		Date Received: 05.07.13 16.50				
Lab Sample Id:	462651-010		Date Collected: 05.06.13 15.35						
Analytical Metho	d: Inorganic A	nions by EPA 300/3	00.1				Prep Method: E3	00P	
Tech:	AMB						% Moisture: 4.5	6	
Analyst:	AMB		Date	Prep:	05.10.13 08.00		Basis: Dr	y Weight	
Seq Number:	913623								
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	2510	41.9		mg/kg	05.10.13 12.02		20

Analytical Method:	Percent Mo	isture						
Tech:	SHSM					% Moisture:		
Analyst:	WRU					Basis: We	t Weight	
Seq Number:	913266							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture		TMOIST	4.56	1.00	%	05.08.13 15.15		1





### Conestoga Rovers & Associates, Midland, TX

Sample Id: SI	B-2 40'		Matrix	Matrix: Soil			Date Received: 05.07.13 16.50		
Lab Sample Id: 40	62651-011		Date Collected: 05.06.13 15.38						
Analytical Method:	Inorganic Ar	nions by EPA 300/3	00.1				Prep Method: E3	00P	
Tech:	AMB						% Moisture: 21.	2	
Analyst:	AMB		Date 1	Prep:	05.10.13 08.00		Basis: Dr	y Weight	1.1.1
Seq Number:	913623								
Parameter	1.1	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	4.83	3.81		mg/kg	05.10.13 12.24		1.

Analytical Method:	Percent Mois	ture					
Tech:	SHSM				% Moisture:		
Analyst:	WRU				Basis: We	et Weight	t
Seq Number:	913266						
Parameter		Cas Number	Result RL	Units	Analysis Date	Flag	Dil
Percent Moisture		TMOIST	21.2 1.00	%	05.08.13 15.15		1





#### Conestoga Rovers & Associates, Midland, TX

Sample Id:	SB-2 50'		Matri	Matrix: Soil			Date Received: 05.07.13 16.50			
Lab Sample Id:	462651-012		Date Collected:			.06.13 15.40				
Analytical Method	d: Inorganic Ar	nions by EPA 300/30	0.1				Prep Method: E3	00P		
Tech:	AMB						% Moisture: 4.3	1		
Analyst:	AMB		Date	Prep:	05.10.13 08.00		Basis: Dry	Weight		
Seq Number:	913623									
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil	
Chloride		16887-00-6	2460	41.8		mg/kg	05.10.13 13.29		20	
Analytical Method	: Percent Mois	sture								

Tech:	SHSM								
Analyst:	WRU					t Weight			
Seq Number:	913266								
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil	
Percent Moisture		TMOIST	4.31	1.00	%	05.08.13 15.15		1	





### Conestoga Rovers & Associates, Midland, TX

-											_
	Sample Id:	SB-2 70'		Matri	x: Soil		D	Date Received: 05.07.13 16.50			
	Lab Sample Id:	462651-013		Date Collected: 05.06.13 15.45							
	Analytical Method	d: Inorganic A	Anions by EPA 300/3	00.1				Prep Method: E3	00P		
	Tech:	AMB						% Moisture: 6.4	4		
	Analyst:	AMB		Date	Prep:	05.10.13 08.00		Basis: Dr	y Weight		
	Seq Number:	913623									
	Parameter	en de la companya de	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil	
	Chloride		16887-00-6	412	10.7		mg/kg	05.10.13 13.51		5	

Analytical Method:	Percent Mois	sture						
Tech:	SHSM							
Analyst:	WRU					Basis: We	et Weight	
Seq Number:	913266							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture		TMOIST	6.44	1.00	%	05.08.13 15.15		1





#### Conestoga Rovers & Associates, Midland, TX

Sample Id:	SB-2 80'		Matrix: Soil				Date Received: 05.07.13 16.50			
Lab Sample Id:	462651-014		Date Collecte	d: 05.06.1	13 15.55					
Analytical Metho	d: Inorganic A	nions by EPA 300/3	00.1				Prep Method: E3	00P		
Tech:	AMB						% Moisture: 19.	1		
Analyst:	AMB		Date	Prep:	05.10.13 08.00		Basis: Dr	Weight		
Seq Number: 913623										
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil	
Chloride		16887-00-6	4.22	3.29		mg/kg	05.10.13 14.13		1.3	

Analytical Method:	Percent Mo	isture								
Tech:	SHSM					% Moisture:				
Analyst:	WRU					Basis: We	Basis: Wet Weight			
Seq Number:	913266									
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil		
Percent Moisture		TMOIST	19.1	1.00	%	05.08.13 16.20		1		





#### Conestoga Rovers & Associates, Midland, TX

Sample Id:	SB-2 90'		Matri	ix: Soil		Γ	Date Received: 05	.07.13 16.:	50
Lab Sample Id:	462651-015		Date Collected: 05.06.13 16.05						
Analytical Metho	d: Percent Mo	isture							
Tech:	SHSM						% Moisture:		
Analyst:	WRU						Basis: We	et Weight	
Seq Number:	913266								
Parameter	1.00	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Percent Moisture		TMOIST	5.13	1.00		%	05.08.13 16.20		1





#### Conestoga Rovers & Associates, Midland, TX

Sample Id: Lab Sample Id:	SB-2 100' 462651-016			x: Soil d: 05.06.13 16.1:		Date Received: 05.07.13 1					
Analytical Metho	d: Percent Moi	sture									
Tech: SHSM						% Moisture:					
Analyst:	WRU					Basis: Wet Weight					
Seq Number:	913266										
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil			
Percent Moisture		TMOIST	6.82	1.00	%	05.08.13 16.20		1			





### Conestoga Rovers & Associates, Midland, TX

		(	CEMC CVU 342						
Sample Id: SB-3 5'		Matri	x: Soil	I	Date Received: 05.07.13 16.50				
Lab Sample Id: 462651-017		Date Collecte	d: 05.07.13 09.50						
Analytical Method: Inorgani	c Anions by EPA 300/3	00.1			Prep Method: E3	300P			
Tech: AMB					% Moisture: 7.2	22			
Analyst: AMB		Date	Prep: 05.10.13 08	.00	Basis: Dr	y Weight			
Seq Number: 913623									
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil		
Chloride	16887-00-6	142	4.31	mg/kg	05.10.13 16.01		2		
Analytical Method: Percent 1	Moisture								

oisture:				
% Moisture:				
Basis: We	et Weight			
alysis Date	Flag	Dil		
8.13 16.20		1		
	alysis Date		alysis Date Flag Dil	





#### Conestoga Rovers & Associates, Midland, TX

Sample Id:	SB-3 10'		Matri	x: Soil		]	Date Received: 05.07.13 16.50			
Lab Sample Id:	D	ate Collecte	d: 05.07.1	13 10.00						
Analytical Method	l: Inorganic Ar	nions by EPA 300/300	.1				Prep Method: E3	00P		
Tech:	AMB						% Moisture: 7.1	5		
Analyst:	AMB		Date	Prep:	05.10.13 08.00	Basis: Dry Weight				
Seq Number:	913623									
Parameter		Cas Number	Result	RL	1.1	Units	Analysis Date	Flag	Dil	
Chloride		16887-00-6	685	21.5		mg/kg	05.10.13 16.23		10	
A										
Analytical Method		sture								
Tech:	SHSM						% Moisture:			
Analyst:	WRU						Basis: We	t Weight		
Seq Number:	913266									

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





### Conestoga Rovers & Associates, Midland, TX

Sample Id: S	B-3 20'		Matri	x: Soil		D	Date Received: 05.07.13 16.50		
Lab Sample Id: 462651-019			Date Collected	d: 05.07	.13 10.05				
Analytical Method:	Inorganic A	00.1				Prep Method: E3	00P		
Tech:	AMB	AMB					% Moisture: 5.6	3	
Analyst:	AMB	AMB			05.10.13 08.00		Basis: Dr	y Weight	
Seq Number:	913623								
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag I	
Chloride		16887-00-6	1400	42.4	4	mg/kg	05.10.13 16.44		

Analytical Method:	Percent Mo	isture						
Tech:	SHSM					% Moisture:		
Analyst:	WRU					Basis: We	et Weight	
Seq Number:	913267							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture		TMOIST	5.63	1.00	%	05.08.13 16.45		1





### Conestoga Rovers & Associates, Midland, TX

Sample Id:	SB-3 30'		Matrix: Soil				Date Received: 05.07.13 16.50			
Lab Sample Id:	462651-020	D	Date Collecte	d: 05.07.	13 10.10					
Analytical Metho	d: Inorganic A	nions by EPA 300/300	).1				Prep Method: E3	00P		
Tech:	AMB						% Moisture: 6.9	4		
Analyst:	AMB		Date	Prep:	05.09.13 16.00		Basis: Dr	y Weight		
Seq Number:	913372									
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil	
Chloride		16887-00-6	3420	43.0		mg/kg	05.10.13 04.06		20	

Analytical Method:	Percent Mois	ture						
Tech:	SHSM					% Moisture:		
Analyst:	WRU					Basis: We	t Weight	
Seq Number:	913267							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture		TMOIST	6.94	1.00	%	05.08.13 16.45		1





#### Conestoga Rovers & Associates, Midland, TX

Sample Id: SI	B-3 50'		Matr	ix: Soil	I	Date Received: 05	07.13 16.	50
Lab Sample Id: 46	52651-021		Date Collecte	ed: 05.07.13 10.15				
Analytical Method:	Inorganic Ar	nions by EPA 300/3	00.1			Prep Method: E3	00P	
Tech:	AMB					% Moisture: 5.1	9	
Analyst:	AMB		Date	Prep: 05.10.13 0	8.00	Basis: Dr	weight	
Seq Number:	913623							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	1210	21.1	mg/kg	05.10.13 17.06		10
Analytical Method:	Percent Mois	ture						
Tech:	SHSM					% Moisture:		
Analyst:	WRU					Basis: We	t Weight	
Seq Number:	913267							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Percent Moisture		TMOIST	5.19	1.00	%	05.08.13 16.45		1





#### Conestoga Rovers & Associates, Midland, TX

Sample Id: S	B-3 70'		Matri	x: Soil		Date Received: 05.07.13 16.50				
Lab Sample Id: 4	62651-022		Date Collected	d: 05.07.13	10.30					
Analytical Method:	Inorganic Ar	tions by EPA 300/3	00.1				Prep Method: E3	00P		
Tech:	AMB						% Moisture: 2.9	7		
Analyst:	AMB		Date	Prep: 05	.10.13 08.00		Basis: Dr	y Weight		
Seq Number:	913623									
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Di	
Chloride		16887-00-6	431	10.3		mg/kg	05.10.13 18.12			
Analytical Method:	Percent Mois	ture								
Tech:	SHSM						% Moisture:			
Analyst:	WRU						Basis: We	t Weight		
Seq Number:	913267									
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Di	





#### Conestoga Rovers & Associates, Midland, TX

Sample Id:	SB-3 90'		Matri	ix: Soil		Date Received: 05.07.13 16.50			
Lab Sample Id:	462651-023		Date Collecte	d: 05.07	.13 10.35				
Analytical Method	d: Inorganic A	nions by EPA 300/3	00.1				Prep Method: E3	00P	
Tech:	AMB						% Moisture: 4.0	19	
Analyst:	AMB		Date	Prep:	05.13.13 10.00		Basis: Dr	y Weight	
Seq Number:	913623								
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	209	4.17	1	mg/kg	05.10.13 18.33		2
Analytical Method	: Percent Moi	isture							
Tech:	SHSM						% Moisture:		
Analyst:	WRU						Basis: We	t Weight	
Seq Number:	913267								
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Percent Moisture		TMOIST	4.09	1.00		%	05.08.13 16.45		1



# **Flagging Criteria**



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantiation 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
- PQL Practical Quantitation Limit MQL Method Quantitation Limit

LOD Limit of Detection 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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QC Summary 462651



### **Conestoga Rovers & Associates**

Analytical Method:	0	Anions b	y EPA 300	/300.1					Pı	ep Metho			
Seq Number:	913609			_	Matrix:					Date Pre	*		
MB Sample Id:	637998-1-	BLK		LCS Sa	mple Id:	637998-1	-BKS		LCS	D Sample	Id: 6379	998-1-BSD	
Parameter		MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride		<2.00	50.0	51.5	103	51.4	103	80-120	0	20	mg/kg	05.09.13 15:21	
Analytical Method:	Inorganic	Anionsh	W FPA 300	/300 1					P	ep Metho	od: E300	)P	
Seq Number:	913372	Autous	y LI A 500	/500.1	Matrix:	Solid			FI	Date Pre			
MB Sample Id:	637855-1-	BLK		LCS Sa		637855-1	-BKS		LCS		-	355-1-BSD	
Parameter		MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride		<2.00	50.0	51.6	103	51.7	103	80-120	0	20	mg/kg	05.09.13 22:41	
The second second	11.												
Analytical Method:	0	Anions b	y EPA 300	/300.1		0.111			Pr	ep Metho			
Seq Number:	913623			LCCC	Matrix:		DVC		LCC	Date Pre	-		
MB Sample Id:	638012-1-					638012-1						)12-1-BSD	
Parameter		MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride		<2.00	50.0	51.6	103	51.2	102	80-120	1	20	mg/kg	05.10.13 09:10	
Analytical Method:	Inorganic	Anions b	y EPA 300	/300.1					Pr	ep Metho	d: E300	)P	
Seq Number:	913609				Matrix:	Soil				Date Pre	ep: 05.09	9.13	
Parent Sample Id:	462609-00	1		MS Sar	mple Id:	462609-0	01 S						
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec			Limits			Units	Analysis Date	Flag
Chloride		<2.66	66.5	78.5	118			80-120			mg/kg	05.09.13 16:26	
Analytical Method:	Inorganic	Anions b	y EPA 300	/300.1					Pr	ep Metho	d: E300	P	
Seq Number:	913372				Matrix:	Soil				Date Pre	p: 05.09	9.13	
Parent Sample Id:	462651-02	0		MS Sat	nple Id:	462651-02	20 S						
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec			Limits			Units	Analysis Date	Flag
Chloride		3420	1070	4390	91			80-120			mg/kg	05.10.13 04:28	



QC Summary 462651



#### **Conestoga Rovers & Associates**

Analytical Method: Seq Number: Parent Sample Id:	Inorganic Anions by 913372 462827-001	FPA 300/		Matrix: mple Id:	Soil 462827-001 S		Prep Method: Date Prep:	E300 05.0		
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec		Limits	I	Jnits	Analysis Date	Flag
Chloride	98.1	112	213	103		80-120	n	ng/kg	05.09.13 23:46	
Analytical Method: Seq Number:	Inorganic Anions by 913623	EPA 300/		Matrix:	Soil		Prep Method: Date Prep:	E300		
Parent Sample Id:	462651-009				462651-009 S		Date Hep.	05.1	0.15	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec		Limits	, i	Jnits	Analysis Date	Flag
Chloride	4420	2640	7130	103		80-120	n	ng/kg	05.10.13 10:36	
Seq Number: Parent Sample Id:	Inorganic Anions by 913623 462711-003 Parent	EPA 300/ Spike		Matrix: nple Id: <b>MS</b>	Soil 462711-003 S	Limits	Prep Method: Date Prep:	E300 05.1 Jnits		
Parameter	Result	Amount	Result	%Rec					Date	Flag
Chloride Analytical Method: Seq Number:	5590 Percent Moisture 913266	6310		4 Matrix:		80-120	n	ng/kg	05.10.13 15:18	Х
				nple Id:	913266-1-BLK					
Parameter			MB Result				l	Jnits	Analysis Date	Flag
Percent Moisture			ND					%	05.08.13 15:15	
Analytical Method: Seq Number:	Percent Moisture 913267			Matrix: nple Id:	Solid 913267 <b>-1-</b> BLK					
Parameter			MB Result				ı	Jnits	Analysis Date	Flag
Percent Moisture			ND					%		



#### QC Summary 462651



#### Conestoga Rovers & Associates CEMC CVU 342

Analytical Method:Percent MoistureSeq Number:913266Parent Sample Id:462609-001ParameterParent ResultPercent Moisture<1.00</td>

Matrix: Soil MD Sample Id: 462609-001 D MD Result <1.00

%RPDRPD<br/>LimitUnits<br/>UnitsAnalysis<br/>DateFlag<br/>Date020%05.08.13 15:15U

<b>Analytical Method:</b>	Percent Moisture				
Seq Number:	913267				
Parent Sample Id:	462651-019				
Parameter	Parent Result				
Percent Moisture	5.63				

Matrix: Soil MD Sample Id: 462651-019 D MD Result 6.47

%RPD	RPD Limit	Units	Analysis Date	Flag
14	20	%	05.08.13 16:45	

) Clear (C), Plastic (P), Various (V)	(1000			a new man	A A A A A A A A A A A A A A A A A A A			A A A A A A A A A A A A A A A A A A A			i amon landi ana		
	<4C) (C), None (NA), See Label (L), Other (O) Cont Type: Glass Amb (A), Glass (	(C) (C), None (N. Cont. Tyj		&NaOH	HNO3 pH-2 (N), Asbc Acid&NaOH (A), ZnAc&NaOH (Z), (Cool, (1), 500ml (5), Tedlar Bag (B), Various (V), Other	Acid&NaO ag (B), Va	(N), Asbc Tedlar B	3 pH<2 (	), HNO	2SO4 pH<2 (S	Preservatives: Various (V), HCl pH<2 (H), H2SO4 pH<2 (S), Cont. Size: 4oz (4), 8oz (8), 32oz (32), 40ml VOA (40), 1L	es: Various (V), 4oz (4), 8oz (8)	reservativ ont. Size:
ion Fees are pre-approved if need	1. Schereby requested. Rush Charges and Collection Fees are pre-approved if needed.	. thereby reques	7/13/6	5	na	when	5	6)Krr					5)
r final report is e-mailed unless	until paid. Samples will be held 30 days after final report is e-mailed unless	until paid. San						4)				1	3)
Otherwise agreed on writing. Reports are the Intellectual Property of XENCO	eed on writing. Reports are the	Otherwise agr						(2)	16513	シーフィタ	RY	1920	= A
Cooler Temp: 6.0 °C	ars per COC:	Total Containers per COC:	Date & Time	D	nd Sign)	to (Initials and	Relinquished to	Reling	ne	Date & Time	and Sign)	hed by (Initials	Relinquished by
X		V				AA	¥	F	K	1535	R	20'	*
X										1525		10'	_
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X					-					1410		50'	
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X		×				CC	1 402	×	ŝ	1325	121375-6	-1 5'	50-
TATASAP 5h Addn: PAH abo Hold Samples ( Sample Clean-u		SPLP-TCLP ( EDB/DBCP	OC Pesticides Metals: RCRA-8	PAHs SIM ( TX-1005 DRO SVOCs: Full-Lis	VOA: PP TCL	Container Type Preservatives	# Containers Container Size	Composite Grab	Depth ft' In" m Matrix	Time	Sampling Date 2013	Sample ID	ŝ
ve Surcha			PCBs RCR				2	162	2	Signature	Em / aven	4	Sampler Name
rges			Her A-4 I	MA			II PM)	ded Call	1 Included	See Lab PM	APP MDLs RLs	S (GW DW QAPP	Special DLs
'L W, will app			bicides Pb 13PF	EPH	dx-1 A	NMACD		1 -	D USA	NAVY DOE DOD	AGCEE		DAPP Pe
mg/Kg y and a			OP 23TA			for P.O.	DW TRRP	NPDES D		P.O. No: Land-Fill Waste-Disp	DRY-CLEAN Land-	UST	Quote/Pricing: Reg Program:
and the second		300	Pesticide L Appda	PH PR Ann	g VOH	ZA)	Invoice must have a	nvoice mu	1.1.1.1.1	ith Final Report	Inc. Invoice with	Accounting	Invoice to Bill to:
		1	x1 Aj	dr 0			Fax No:			Ucom	fra war	and to	E-mail Results
lit			opdx2	CALL			M	Run	Jer (PM)	Proj. Manager	10r	; TX, AL, FL, GA, ; TN, UT Other	Proj. State: TX, AL, NJ, PA, SC, TN, UT
	104 Zid Standard IAT is project specific 10+ Working days for level III and IV data.	48h 3a ba /a ys for level II and	TAT: ASAP 5h 12h 24h 4k It is typically 5-7 Working Days	ASAP 5h bically 5-7 V	It is typica	23	738	0	NCO	□ Previously done at XENCO	NI	CEMC CV	CEV
	2	65	46			0.	6086	Ro	Phon	×	ridians	V P Silv	Company-Sity

**ANALYSIS REQUEST & CHAIN OF CUSTODY RECORD** 

Final 1.002

Vibrois (V), HDJHHC (N), HDJ HHC (N), HD		3 5)	100			10	9	00	7	6	UN	4	ω	N	1	1000	Sa	sp	8	P	Bill	ī	Ţ	23	1 3	0							
By done at XENCO     Project ID     TMT:     ASUP On at XENCO     Project ID       Proj. Marting     Fraz No::     Call for P.O.     Fax No::     Call for P.O.       Po. No::     Call for P.O.     Fax No::     Call for P.O.       Po. No::     Call for P.O.     Fax No::     Call for P.O.       Signature     Fax No::     Call for P.O.     Fax No::     Call for P.O.       Signature     Fax No::     Call for P.O.     Fax No::     Call for P.O.       Signature     Fax No::     Call for P.O.     Fax No::     Call for P.O.       Signature     Fax No::     Call for P.O.     Fax No::     Call for P.O.       Signature     Signature     Fax No::     Containers     Containers       Signature     Signature     Fax No::     Containers     Containers       Signature     Signature     Containers     Containers     Containers       Signature     Containers     Containers     Containers     Containers       Signature     Containers <td< th=""><th>Preservatives: Various (V), I</th><th></th><th>Inc</th><th>1</th><th>Ьу</th><th>J 30'</th><th>201</th><th>1 10</th><th>ىل</th><th>V 105'</th><th>701</th><th>Ad'</th><th>10'</th><th>1 561</th><th>12</th><th>Sample ID</th><th>mpler Name</th><th>(GW</th><th>ntract</th><th></th><th></th><th></th><th></th><th>, PA, SC, TN, UT Other</th><th>oject Name-Location</th><th>ompany-City</th></td<>	Preservatives: Various (V), I		Inc	1	Ьу	J 30'	201	1 10	ىل	V 105'	701	Ad'	10'	1 561	12	Sample ID	mpler Name	(GW	ntract					, PA, SC, TN, UT Other	oject Name-Location	ompany-City							
Phone       Lib Only:       Lib Only:         ENCO       Project ID       TAT: ASAP 5n       TAT	HCI pH<2 (H), H			11	and Sign)	e		-	5-7	*				-	5-10	Sampling Date 2013		MDLs	AGCEE	1		Inc. Invoice v	PM and	, LA, MS, NC,		See Por							
Phone       Introduce       Introduce <thintroduce< th=""> <thintroduce< th=""></thintroduce<></thintroduce<>	2SO4 pH<2 (\$				Date & Ti	1610	1005	1960	950	1615	1605	1555	1545	1540	1578		Signature		10			vith Final Repo		1 3	ly done at XE	-							
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ANALTOIS KENUESI & UNMIN OF VUVINE I INVOIN

**ANALYSIS REQUEST & CHAIN OF CUSTODY RECORD** 



Work Order #: 462651

### **XENCO Laboratories**



Prelogin/Nonconformance Report- Sample Log-In

Client: Conestoga Rovers & Associates Date/ Time Received: 05/07/2013 04:50:00 PM

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

**Temperature Measuring device used :** 

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

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

Analyst:

PH Device/Lot#:

Date: 05/08/2013

Checklist completed by: Murshoah Kelsey Brooks Checklist reviewed by: Murshoah Kelsey Brooks

Date: 05/08/2013