#### HOBBS OCD

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

#### State of New Mexico Energy Minerals and Natural Resources JUN 0 4 2013

Form C-141 Revised October 10, 2003

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

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

#### Release Notification and Corrective Action

						OPER	ATOR		Initi	al Report	$\boxtimes$	Final Rep
				tal Management			Dan Snyder					
				Houston, TX 7		Telephone 1						
Facility Nat	ne State	G SWD We	ell #1, Sit	te A and Site B		Facility Typ	e Salt Water	Dispos	sal			
Surface Ow	ner			Mineral C	Owner	State			Lease N	No. B-103	363-0	
				LOCA	ATION	OF RE	LEASE					
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Was a Watercourse Reached?						lume Impacting t	the Wate	ercourse.				
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Signature: -	D_	-1	2	h		OIL CONSERVATION DIVISION						
Printed Name	: Daniel Sn	yder				Approved by District Supervisor:						
Title: CEM	IC Project N	Manager				Approval Dat	e:		Expiration	Date:		
-mail Addre	ess: Danie	l.Snyder@che	vron.com			Conditions of	Approval:			Attached		
Date: May 1		ets If Necessa		ne: 713-449-6749	(m)	1.						



**Daniel Snyder** Remediation Project Manager Upstream Business Unit Chevron Environmental Management Company 1400 Smith Street, Rm 07-063 Houston, TX 77002 Tel 713 372 1055 Fax 281 561 3841 Daniel.Snyder@chevron.com

Mr. Geoffrey Leking Environmental Engineer - NMOCD District 1 1625 N. French Drive Hobbs, New Mexico 88240

HOBBS OCD

JUN 0 4 2013

Re:

Final C-141 and Site Closure Report – RP #1791 State G SWD Well #1, Site A and Site B Unit I and J, Section 9, T-14-S; R-33-E

RECEIVED

Lea County, New Mexico

Dear Mr. Leking:

Please find the enclosed Final C-141 and Site Closure Report for the subject Sites. Based on information provided, Chevron Environmental Management Company (CEMC) requests New Mexico Oil Conservation Division concurrence for no further action status regarding closure activities at these locations.

Should you have any questions regarding this please contact me at (713) 372-1055 or email me at Daniel.Snyder@chevron.com

Respectfully,

Chevron Environmental Management Company on behalf of Chevron U.S.A Inc.

Daniel Snyder

Daniel Snyder Remediation Project Manager Enclosures



HOBBS OCD

JUN 04 2013

RECEIVED

## SITE CLOSURE REPORT (RP No. 1791) 700

STATE G LEASE AND ADJACENT ABANDONED TANK BATTERY UNITS I & J, SECTION 9, TOWNSHIP 14 SOUTH, RANGE 33 EAST LEA COUNTY, NEW MEXICO

**Prepared For:** 

Daniel Snyder Chevron Environmental Management Company 1400 Smith St. Room 07063 Houston, Texas 77002

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MAY 2013 Ref. no. 042079 (6)

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#### 1.0 INTRODUCTION

This Site Closure Report (the "Report") is intended to demonstrate the merits of closure for two closely associated produced petroleum fluids release sites: The State G Lease (Site A) and the Adjacent Abandoned Tank Battery (Site B). This Report describes soil assessment and remedial excavation activities performed in 2012. These activities were conducted by Conestoga-Rovers & Associates (CRA), on behalf of Chevron Environmental Management Company (CEMC). Soil borings were advanced at Site A to further define the vertical extent of chloride impacts to soils. Remedial excavation activities were performed at both sites to remove hydrocarbon impacted soils.

The State G Lease (Site A) is located along Highway 457, approximately 13.7 miles north of the intersection of Highway 457 with US Highway 82, in Lea County, New Mexico. Site A also is located in Unit I, Section 9, Township 14 South, Range 33 East, and at coordinates 33° 07′ 04″ north latitude and 103° 36′ 49″ west longitude (see Figure 1A). A standing "dry hole" marker on Site A locates the plugged and abandoned (P&A'd) State G #1 well. This marker identified the operator of the lease as Tamarack Petroleum Company, Inc. Another standing marker identifies the location of a second P&A'd well designated Eclipse Oil & Gas, Inc. State G SWD #1 - also on Site A. That salt water disposal (SWD) well was associated with a 500 barrel (bbl) storage tank, which had been dismantled and removed.

The Adjacent Abandoned Tank Battery (Site B) is located approximately 730 feet west of Site A, on the east-west trending oilfield lease road abutting both sites. (Note that this oilfield lease road deadends into Highway 457 approximately 0.1 mile east of Site A, and this road is the main access to both sites.) Site B is in Unit J, Section 9, Township 14 South, Range 33 East, and at coordinates 33° 07′ 01″ north latitude and 103° 36′ 57″ west longitude (see Figure 1B). Site B was an abandoned tank battery with three tanks of unknown capacity and two heater-treaters, all of which have been dismantled and removed. A Site Details Map is provided as Figure 2.

Sites A and B are located in relatively flat, sandy and dry topography with some gently-rolling hills. The general area is rural rangeland, but numerous oil and gas production facilities dot the landscape. Native range grasses and scattered mesquite hummocks are the predominate ground cover. No surface water is mapped within a one-mile radius of either Site A or Site B. And no water well or windmill is located within 1,000 feet of either site.

CRA identified Section 9, T14S, R33E — the section containing Sites A and B -- on OCD's "Pit Rule Web Mapping Portal". A single groundwater supply well was mapped in Section 9, at the virtual center of the section. This well was designated "L04391", and its

depth to groundwater (DTW) was listed as 110 feet<sup>1</sup>. It is notable that Unit J – the 40-acre lot containing Site B corners on the center of the section where the water well is located. Therefore, it is reasonable to deduce that the depth to groundwater at Site B and also at Site A is approximately 110 feet.

Site A is located on property owned by the State of New Mexico. The New Mexico State Land Office (SLO) is the agency charged with management of these State lands. Chevron currently is the operator on the subject property, having leasehold from the State of New Mexico titled "State Trust SWD-032 Business Lease". Chevron is reported to be the successor in interest to Gulf Oil Company on this lease. Historical records indicate the last active operator of the lease was Eclipse Oil and Gas, Inc. (Eclipse). Therefore, response to environmental impacts to the property arguably would be the responsibility of Eclipse. However, CRA understands Eclipse is now a defunct entity, through bankruptcy. Therefore, SLO would look to the current leaseholder, Chevron, to affect remediation of impacts to the property.

Site B is located on a private surface estate reported to be owned in fee by Mr. Norman Hahn.

Previous reports submitted to OCD covering this project identified the depth to groundwater as being between 70 and 80 feet bgs. These depths were inferred from the New Mexico Office of the State Engineer and the Interstate Stream Commission document titled "New Mexico Water Resource Atlas", dated December 2002. Borings were advanced at Site A to a maximum depth of 85 feet bgs during these investigations; and no boring at Site A or Site B encountered Groundwater -- even at 85 feet.

#### 2.0 REGULATORY FRAMEWORK

The New Mexico Oil Conservation Division (OCD) exercises regulatory jurisdiction over oil and gas production operations in New Mexico. OCD's jurisdiction extends to regulating assessment and remediation of spills and releases of produced fluids – e.g., crude oil and brines. This project was conducted under the regulatory guidance of the OCD, which requires hydrocarbon-affected soils to be remediated such that the potential for future affects to groundwater or the environment are minimized. The OCD cleanup levels are determined on a site-by-site basis, and are based on ranking criteria outlined in the OCD publication titled "Guidelines for Remediation of Spills, Leaks, and Releases", dated August 13, 1993 (the "1993 Guidelines"). These ranking criteria guidelines are based on three site characteristics, consisting of 1) depth-to-groundwater (from base of affected soil), 2) well head protection radius distance (useable water sources), and 3) distance to surface water. The characteristics for a given site then define the Recommended Remediation Action Levels-Soils (RRALs) for specific contaminants of concern.

The table below illustrates the ranking criteria used by OCD. Entries in the tables reflect site-specific characteristics for the State G Lease sites:

#### RANKING CRITERIA AND SCORING

CHARACTERISTIC	SELECTION	SCORE
Depth to Groundwater <sup>2</sup>	>100 feet	0
Well head Protection Area	>1,000 feet	0
Distance to Surface Water	>1,000 feet	0

Total Score = 0

#### SOIL RECOMMENDED REMEDIATION ACTION LEVELS (RRALS)

CONTAMINANT OF CONCERN	>19 SCORE	10-19 SCORE	0-9 SCORE
Benzene (mg/kg)	10	10	10
Total BTEX (mg/kg)	50	50	50
Total TPH (mg/kg)	100	1,000	5,000

Based on the site characteristics and the 1993 Guidelines, Sites A and B have a ranking score of zero. Consequently, RRALs of 10 mg/kg for benzene, 50 mg/kg for total

The depth to groundwater in a nearby water supply well was measured to be 110 feet bgs.

benzene, toluene, ethylbenzene, and total xylenes (BTEX), and  $5,000 \, \text{mg/kg}$  for total petroleum hydrocarbons (TPH) were adopted as remediation targets at Sites A and B.

Note that the 1993 Guidelines specify no RRALs for chloride (Cl ) concentrations.

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#### 3.0 HISTORY OF THE SITES

Chevron received a notification letter dated May 10, 2005 from SLO detailing a leaking storage tank at Site A. The SLO requested CEMC to conduct a Site inspection and apply appropriate corrective action measures. On May 23, 2005, CEMC submitted a New Mexico Oil Conservation Division form titled *Release Notification and Corrective Action Form C-141* to OCD's Hobbs District Office. The C-141 form reported an estimated two barrels of produced fluids released.

CRA and CEMC personnel conducted a Site visit on June 10, 2005 to evaluate surface impacts at Site A, noting surface staining at an above-ground storage tank (AST) onsite (see Figure 3A). During the Site visit, an abandoned tank battery with visible surface soil staining also was discovered west of Site A approximately 570 feet – at Site B (see Figure 3B). Operations at this adjacent abandoned tank battery were reported to be a component of the State G Lease at Site A. Although the Site B location was not addressed in the SLO correspondence referenced previously, CEMC voluntarily elected to evaluate surface impacts at the Site B location as part of the soil assessment activities planned for Site A.

#### 3.1 AUGUST 24, 2005 SAMPLING EVENT

Soil assessment activities were performed on August 24, 2005. The following describes those soil assessment activities and summarizes findings:

Using air-rotary methods at Site A, White Drilling Company advanced three soil borings in the vicinity of the former tank battery where surface staining indicated a release (see Figure 3A). Soil boring SB-1 was advanced to 21 feet bgs; SB-2 was advanced to 26 feet bgs; and SB-3 was advanced to 31 feet bgs. A total of nine soil samples were collected at various depths from the three borings at Site A. The samples were screened by photoionization detector (PID) measurements of hydrocarbon vapor concentration.

In similar fashion and on even date, White Drilling Company also advanced two soil borings at Site B. The two borings were drilled where surface staining indicated a release of crude oil (see Figure 3B). Both borings SB-1 and SB-2 were advanced to 21-feet bgs. As at Site A, boring depths and locations were selected to maximize the opportunity to fully delineate the vertical and horizontal extent of hydrocarbon and chloride impacts. Seven soil samples, including a duplicate sample, were collected from varying depths within the two borings at Site B. The samples were screened by PID measurements of hydrocarbon vapor concentration. Also, a background sample of surface soil was collected in the vicinity of Site B.

The nine samples collected from Site A and the eight samples collected from Site B were submitted to Pace Analytical Services, Inc. laboratory (Pace), Saint Rose, Louisiana for analyses. These samples were analyzed for concentrations of the following <sup>3</sup>:

- Benzene, toluene, ethylbenzene and total xylenes (BTEX), by EPA Method 8021B.
- Total petroleum hydrocarbons (TPH), specified as DRO-diesel range organics (C10-C28) and GRO-gasoline range organics (C6-C10), by EPA Method 8015 Mod.
- Chlorides (Cl<sup>-</sup>), by EPA Method 325.2.

Results from these laboratory analyses for Site A and Site B are presented in Tables I and II, respectively. Detections in bold print on the tables indicate concentrations above analytical quantification limits, and highlighted detections represent concentrations exceeding the OCD RRALs. OCD has not established recommended remediation action levels for chloride concentrations.

Results of the BTEX analyses are discussed in the following:

• No sample submitted to the laboratory from Site A or Site B exhibited concentration results for total BTEX or for any BTEX constituent exceeding RRALs. The following results were reported by the laboratory for Site A: SB-2 [1-2 ft. bgs] registered concentrations of toluene, total xylenes and total BTEX above analytical quantification limits (see Figures 5A and 6A). And the following results were reported for Site B: Both SB-1 [1-2 ft. bgs] and SB-2 [1-2 ft. bgs] registered concentrations of ethylbenzene, total xylenes and total BTEX above analytical quantification limits (see Figures 5B and 6B). No BTEX was detected at or below the 5-6 ft. bgs interval at either Site A or Site B – confirming the very limited BTEX contamination to be confined to the upper five feet of the soil profile at both locations.

TPH exceedances and chloride analyses are discussed in the following:

- Total TPH was detected above RRALs in three samples: One shallow sample SB-2 [1-2 ft. bgs]) at Site A; and two shallow samples (SB-1 [1-2ft. bgs] and SB-2 [1-2 ft. bgs]) at Site B. No total TPH RRALs exceedances were registered at or below the 5-6 ft. bgs interval at either Site A or Site B -- confirming TPH contamination to be confined to the upper five feet of the soil profile at both locations.
- Chloride concentrations were detected above analytical quantification limits in all nine samples collected from Site A. The chloride concentrations ranged from

The background sample collected at Site B was analyzed only for chloride (CI ) concentration.

731 mg/kg in SB-3 [30-31 ft. bgs] to 7,470 mg/kg in SB-1 [1-2 ft. bgs]. Four of the seven boring samples, including the duplicate sample, collected from Site B exhibited concentrations above analytical quantification limits. Concentrations of chloride in the borings ranged from less than 250 mg/kg in SB-1 [20-21 ft. bgs] and SB-2 [20-21ft. bgs] to 1,310 mg/kg in SB-1 [5-6 ft. bgs]. The background sample concentration was reported by the laboratory to be less than 250 mg/kg.

In summary, the analytical results demonstrate regulated concentrations of hydrocarbons (TPH) were present only in the upper 5 feet of the profile at both Site A and Site B. However, elevated chloride concentrations were present at depth at Site A.

A report titled *Soil Assessment Report and Soil Remediation Workplan* was submitted to OCD and SLO in February 2006 detailing these assessment activities and results. That report proposed excavation activities at Sites A and B. OCD subsequently requested that separate C-141 forms be submitted for Sites A & B. The new C-141 forms were submitted in October 2007. OCD followed by issuing RP #1791 for the State G Lease. No separate "RP" number was ever provided by OCD for Site B.

#### 3.2 JUNE 10, 2008 SAMPLING EVENT

In response to OCD evaluations and comment, a follow-up soil remediation workplan, dated July 3, 2007, was submitted to OCD and SLO. Activities proposed in the workplan included:

- Excavate and remove hydrocarbon-impacted soil exhibiting concentrations above the RRALs at Site A and Site B.
- As requested by OCD, advance an additional soil boring to 50 feet bgs at Site A to further evaluate the vertical extent of chloride impacts.

Following approval of the workplan by OCD, CRA mobilized to Site A on June 10, 2008 and installed the additional soil boring to a total depth of 50 feet bgs. It was advanced in immediate proximity to the SB-1 soil boring at Site A - which exhibited the highest chloride concentrations in previous, shallower investigations. Discrete soil samples were collected at 5-foot intervals for the first 40 feet bgs. Samples from 40 to 50 feet bgs were collected at continuous 2-foot intervals to more conclusively evaluate the vertical extent of chloride impacts at depth.

The 13 soil samples collected from the 50-feet deep boring were submitted to TestAmerica Laboratories, Houston, Texas, for determination of chloride concentrations,

by Method SW-846 9056. Chloride concentrations ranged downward in the profile from 3,550 mg/kg in the sample collected at the 5-foot depth to 1,250 mg/kg at the 50-foot depth - thus exhibiting a decreasing pattern with depth (see laboratory data report in Appendix C, which is incorrectly labeled as SB-4). As requested, these analytical results were reported to OCD via email – no report was generated incorporating findings from this 50-feet-deep boring at Site A. The following tabulates the chloride concentrations reported by the laboratory for the 13 collected soil samples:

50-FEET DEEP BORING - CHLORIDE DATA

SAMPLE DEPTH (FT. BGS)	CHLORIDE CONCENTRATION (MG/KG)				
5	3,550				
10	3,780				
15	4,580				
20	2,360				
25	2,040				
30	1,390				
35	2,200				
40	1,930				
40 - 42	1,460				
42 - 44	1,500				
44 - 46	990				
46 - 48	1,070				
48 - 50	1,250				

OCD responded with comments, requiring more borings at Site A to further delineate chloride impacts vertically. At Site A and Site B, OCD also stated clay or synthetic liners would be required on the floor of the hydrocarbon excavations prior to backfilling.

#### 4.0 SITE CLOSURE ACTIVITIES IN 2012

On November 22, 2011, an updated report was submitted to OCD, titled *Updated Soil Assessment and Soil Remediation Workplan*. Additional soil borings were proposed at Site A to delineate the vertical extent of chloride impacts. Excavations at Sites A and B again were proposed to remove hydrocarbon-stained surface soils, with the addition of installing synthetic liners on the floor of the excavations prior to backfilling. The work plan was approved by OCD in December 2011.

Prior to commencement of field activities, a site-specific health and safety plan (HASP) was developed by CRA. During field activities, CRA and all subcontractors onsite conducted daily tailgate safety meetings, including discussions of hazards associated with the work tasks to be performed. CRA notified both OCD and the landowner, Norman Hahn, 48-hours prior to commencing field activities.

#### 4.1 BORING INSTALLATION AND SOIL SAMPLING

Following approval of the work plan, four soil boring locations at Site A were marked (see Figure 3). The utilities locating service was notified, and all utilities present in the area of anticipated surface intrusion were identified and marked.

On February 24, 2012, a soil boring was advanced at each of the four marked locations at Site A (see Figure 3). Using air-rotary methods, White Drilling Company installed soil borings SB-4, SB-5, SB-6 and SB-7. Each of the four borings was within the former tank battery spill area. SB-4, SB-5, and SB-6 were advanced to 80 feet bgs, while soil boring SB-7 was advanced to 85 feet bgs. As with all previous borings at Sites A and B, groundwater was not encountered in any of these four deepest borings. By examining drill cuttings, CRA continuously recorded lithology data on a boring log for each location. Copies of the Well Record and Logs are in Appendix A 4, and copies of the Soil Boring Logs are located in Appendix B.

A total of 64 discrete soil samples were collected at 5-foot intervals in each of the four soil borings at Site A – 16 samples from each boring. Half of each sample was enclosed in a Zip-Loc® bag; and the other half was containerized in a labeled, laboratory-supplied sample jar. Each bagged sample was allowed sufficient time for any petroleum hydrocarbon contamination to evolve volatile organic compounds (VOCs). At that point a headspace vapor concentration reading was obtained for each

The four (4) "Well Record & Log" report forms provided by White Drilling Company for SB-4, SB-5, SB-6 and SB-7 mistakenly designated the borings SB-2, SB-3, SB-4 and SB1a, respectively.

sample with a photo-ionization detector (PID). However, no PID reading exceeded zero for any of the 64 samples.

The jarred soil samples were placed immediately on ice in insulated coolers, chilling them to a temperature of approximately 4°C (40° F). The 64 samples were submitted to Xenco Laboratories, Inc. (Xenco), Odessa, Texas for analyses. Proper chain-of-custody documentation accompanied the samples. Xenco determined the chloride (CI) concentration in each soil sample by EPA Method 300. Copies of the certified analytical reports, chain-of-custody documentation, and detailed case narratives describing holding times are attached in Appendix C.

After drilling and soil sampling activities were completed, the borings were permanently plugged with a bentonite/grout mixture to prevent subsurface impacts by surface runoff.

#### 4.2 CHLORIDE (CL<sup>-</sup>) ASSESSMENT AT SITE A

Results of chloride analyses for the 64 soil samples collected in the four soil borings at Site A are presented in Table I. The chloride concentration-by-depth trends for each of the soil borings are in Appendix D.

The following summarizes findings from these chloride contamination assessments:

- Chloride concentrations registered a marked decreasing trend with depth in SB-5, SB-6, and SB-7.
- Concentrations of chloride in SB-4 increased with depth in a narrow and low range, to a high of 414 mg/kg at the 70 to 75 feet interval. At the 75 to 80 feet interval, the concentration exhibits a decreasing trend. The overall pattern of chloride concentrations in SB-4 is very different from the pattern in the other three borings; and no readings in SB-4 approach the highest levels in the other three borings. The sum of chloride concentrations in SB-4 also was significantly less than in any of the other three borings. This suggests this boring was advanced at a point outside the major brine spill location. Therefore, possible threats to groundwater are minimal at this boring location.
- The deepest depth interval for which soil samples were analyzed was the 75 to 80 feet depth bgs. A soil sample was analyzed for the 75 to 80 feet interval in each of the four borings: SB-4, SB-5, SB-6 and SB-7. The average for the chloride concentrations in the four samples collected at the 75 to 80 feet depth was 231 mg/Kg. Considering that the depth to groundwater in this general area is 110 feet bgs as indicated by the water supply well designated "L04391", which is

located in the same mapping unit (Unit "J") as Site B – a threat to groundwater from the brine spill at Site A is unlikely.

#### 4.3 EXCAVATION OF HYDROCARBON-CONTAMINATED SOILS AT SITE A AND SITE B

As discussed previously, soil borings were installed at Site A and Site B on August 24, 2005. The analytical results from samples collected in these borings demonstrated that regulated concentrations of hydrocarbons (TPH) were present only in the upper 5 feet of the profile at both Site A and Site B; thus the vertical extent of the hydrocarbon-impacted soils was delineated to a depth of 5 feet or less.

Excavation activities at Sites A and B commenced July 9 and continued through July 18, 2012. Site excavation activities were performed by Entact, LLC (Entact), Friendswood, Texas, supervised by CRA. All excavated hydrocarbon-contaminated soil was placed in roll-off boxes. The horizontal extents of the two excavation sites are depicted in Figure 4.

Confirmation samples of soils were collected from the sidewalls and floors throughout the excavation process. These samples were containerized in labeled, laboratory-supplied jars. The jarred soil samples were placed immediately on ice in insulated coolers, chilling them to a temperature of approximately 4°C (40° F). The seven samples each from Sites A and B were submitted to Xenco Laboratories, Inc., Odessa, Texas for analyses. Proper chain-of-custody documentation accompanied the samples. For each soil sample Xenco determined the TPH, specified as DRO-diesel range organics (C10-C28) and GRO-gasoline range organics (C6-C10), by EPA Method 8015B Mod. Results were reported on a dry-weight basis. These data are tabulated on Table III. Copies of the certified analytical reports, chain-of-custody documentation, and detailed case narratives describing holding times are attached in Appendix C.

Approximately 52 cubic yards of hydrocarbon-contaminated soil had been excavated from Site A when competent rock was encountered at 2.5 to 3 feet bgs. At this juncture, the TPH concentration at the north floor of Site A (6,980 mg/kg) was above the OCD RRALs of 5,000 mg/kg. Similarly, competent rock was encountered at 2.5 to 3 feet bgs following excavation of 20 cubic yards of hydrocarbon-contaminated soil from Site B. Also, oilfield piping limited horizontal excavation at Site B. On July 17, 2012, Mr. Geoffrey Leking with OCD was consulted concerning the limitations on further excavation encountered at Sites A and B. He advised that further excavation was not necessary at either site.

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Following this determination by OCD, synthetic liners were installed on the floor of the excavation at Site A and Site B. Clean topsoil was obtained from a neighboring landowner and trucked to the sites. Atop the synthetic liners, the two pits were backfilled with clean topsoil in compacted lifts to grade. Approximately 65 cubic yards and 35 cubic yards were used to backfill Site A and Site B, respectively. Final grading of construction-related surface areas was performed to mitigate wind erosion and facilitate re-vegetation.

The roll-off boxes containing the excavated hydrocarbon-contaminated soils were trucked to Sundance Service (Sundance), Eunice, New Mexico as a non-DOT-regulated material. The contaminated soils were disposed as RCRA-exempt waste at Sundance – a Chevron-approved waste facility. The bills of lading for the trucking are attached as Appendix E.

#### 5.0 SUMMARY OF FINDINGS

The following findings of these investigations support a decision on the part of the Oil Conservation Division to grant closure for Sites A and B at the State G Lease:

- The depth to groundwater in the general area of Sites A and B is 110 feet bgs as indicated by the water supply well designated "L04391", which is located in the same mapping unit (Unit "J") as Site B. Site A is located in an adjacent mapping unit (Unit "I")
- Four soil borings, designated SB-4, SB-5, SB-6 and SB-7, were installed within the spill area at Site A. SB-4, SB-5, and SB-6 were advanced to 80 feet bgs, while soil boring SB-7 was advanced to 85 feet bgs. As with all previous borings at Sites A and B, groundwater was not encountered in any of these four borings. Chloride concentrations registered a marked decreasing trend with depth in SB-5, SB-6, and SB-7. Concentrations of chloride in SB-4 increased with depth in a narrow and low range, to a high of 414 mg/kg at the 70 to 75 feet interval. At the 75 to 80 feet interval the concentration exhibits a decreasing trend. The overall pattern of chloride concentrations in SB-4 is very different from the pattern in the other three borings; and no readings in SB-4 approach the highest levels in the other three borings. The sum of chloride concentrations in SB-4 also was significantly less than in any of the other three borings. This suggests this boring was advanced at a point outside the major brine spill location. Therefore, possible threats to groundwater are minimal at this boring location.
- A soil sample was analyzed at the 75 to 80 feet interval at Site A in each of the four borings SB-4, SB-5, SB-6 and SB-7. The average for the chloride concentrations in these samples was 231 mg/Kg 5. The water table potentiometric surface in this general area is approximately 30 feet deeper (at 110 feet bgs) than the depth from which these samples were collected. This suggests that a threat to groundwater from the brine spill at Site A is vanishingly small. This conclusion is supported further by OCD's proposed 2011 remediation guidelines which would call for a chloride cleanup target of 250 mg/Kg in this circumstance.
- Soil borings were installed at Site A and Site B in 2005 to explore the horizontal and vertical extent of petroleum hydrocarbon impacts to soils. It was demonstrated in these investigations that regulated concentrations of petroleum hydrocarbons (TPH) were present only in the upper 5 feet of the profile at both Site A and Site B.

It is reasonable to average these data points, because the boring locations form a closely-spaced quadrangle spanning the brine-impacted area. This roughly spaced quadrangle is approximately 42 feet by 67 feet (42′ X 67′) on its sides (see Figure 3). This close spacing among sampling points supports averaging analytical results at a specific depth.

- Commencing in July, 2012, hydrocarbon-contaminated soil was excavated from Site A until competent rock was encountered at 2.5 to 3 feet bgs. At this juncture, the TPH concentration at the north floor of Site A (6,980 mg/kg) was above the OCD RRALs of 5,000 mg/kg. Similarly, competent rock was encountered at 2.5 to 3 feet bgs during excavation of hydrocarbon-contaminated soil at Site B. Also, oilfield piping limited horizontal excavation at Site B. On July 17, 2012, Mr. Geoffrey Leking with OCD was consulted concerning the limitations on further excavation encountered at Sites A and B. He advised that further excavation was not necessary at either site. Thus, OCD concluded at that point in time that adequate removal of hydrocarbon-impacted soils at the two sites had been affected.
- Following this determination by OCD, synthetic liners were installed on the floor of the excavations at Site A and Site B. Clean topsoil was obtained from a neighboring landowner and trucked to the sites. The two pits were backfilled, atop the synthetic liners, with clean topsoil installed in compacted lifts to grade. This completed remediation of hydrocarbon-impacted soils at Site A and Site B, thus completing OCD-approved closure activities at Site A and Site B.

Based on these findings, CRA recommends closure of the State G Sites A and B.

14

All of Which is Respectfully Submitted, CONESTOGA-ROVERS & ASSOCIATES

Hoy Bryson, DF, PG

Senior Environmental Scientist

Thomas C. Larson

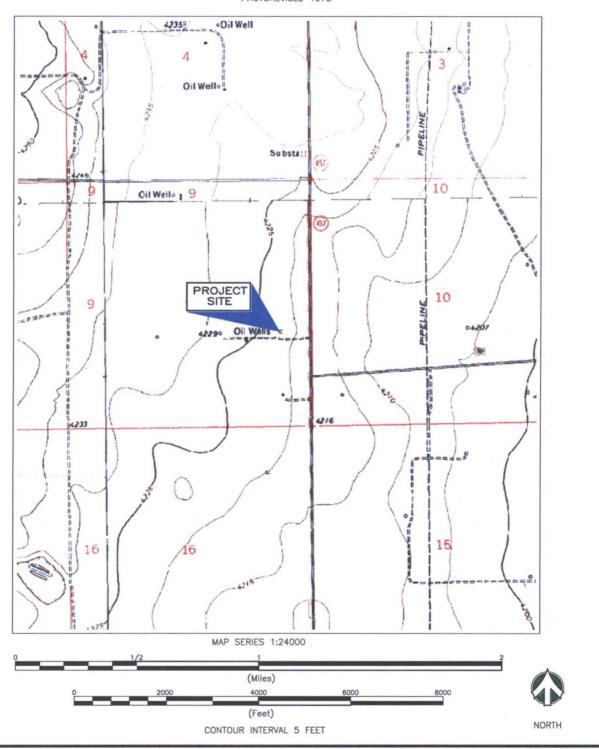
Midland Operations Manager

Thomas Clayon

#### FORT RANCH QUADRANGLE NEW MEXICO

LAT= 33° 07' 04" N LONG= 103° 36' 49" W

PHOTOREVISED 1973





SITE A LOCATION MAP - STATE "G"

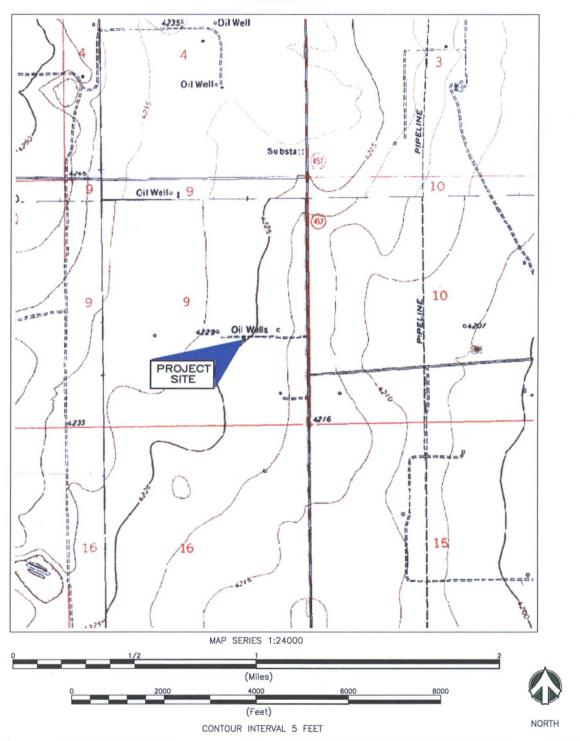
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY STATE G LEASE & ADJACENT ABANDONED TANK BATTERY LEA COUNTY, NEW MEXICO JOB No. 042079

FIGURE 1A

#### FORT RANCH QUADRANGLE NEW MEXICO

LAT= 33° 07' 01" N LONG= 103° 36' 57" W

PHOTOREVISED 1973





SITE B LOCATION MAP - ADJACENT ABANDONED TANK BATTERY

CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY STATE G LEASE & ADJACENT ABANDONED TANK BATTERY LEA COUNTY, NEW MEXICO JOB No. 042079

FIGURE 1B

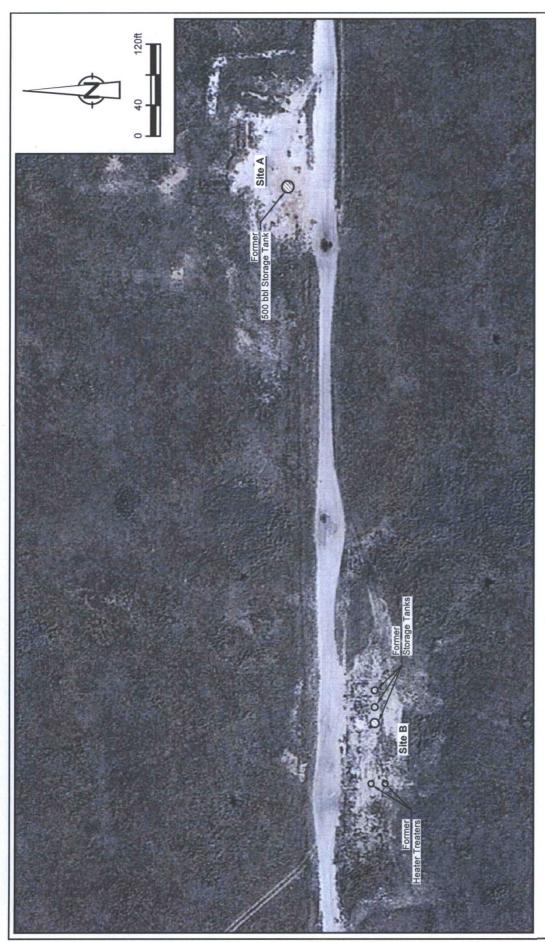


figure 2

SITE DETAILS MAP CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY STATE G LEASE & ADJACENT ABANDONED TANK BATTERY Lea County, New Mexico



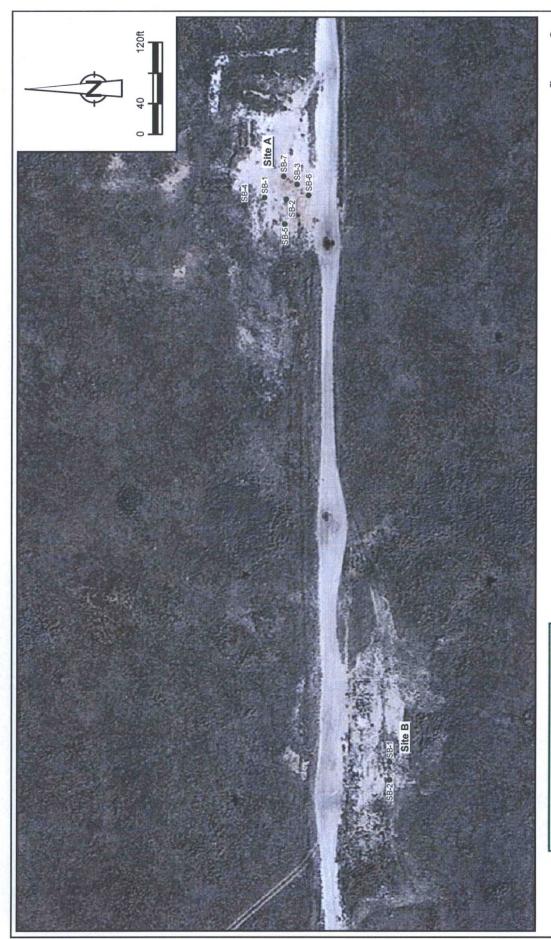


figure 3

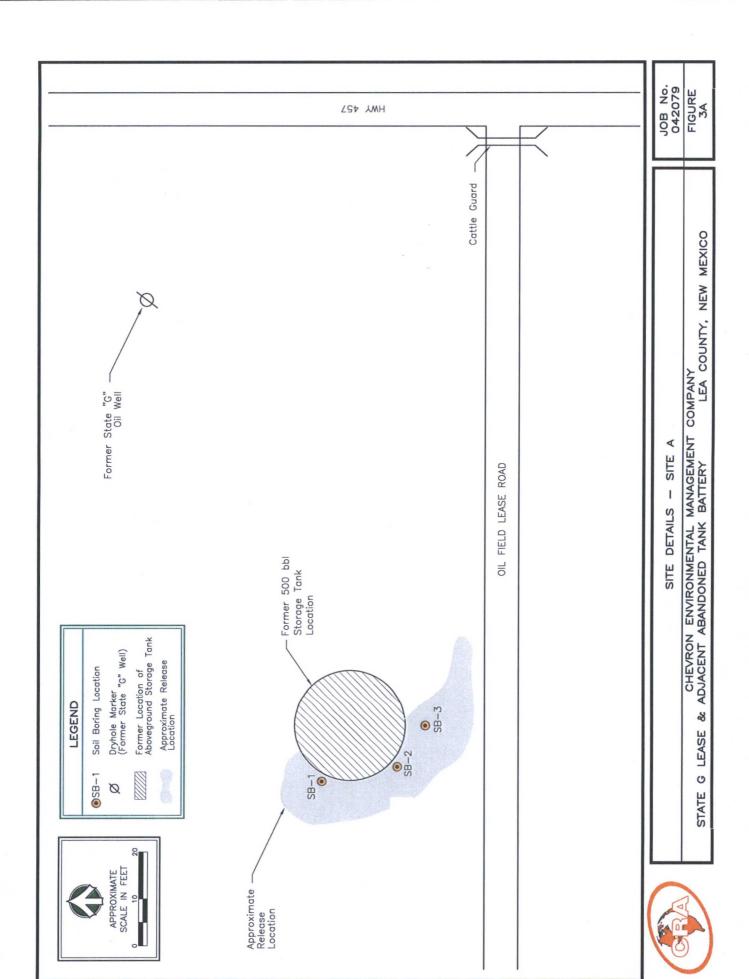
SOIL BORING LOCATIONS
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
STATE G LEASE & ADJACENT ABANDONED TANK BATTERY
Lea County, New Mexico



LEGEND

Soil Boring Location

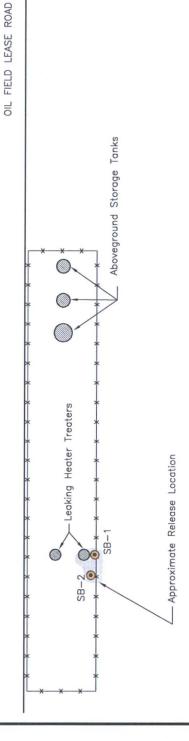
042079-00(006)GN-DL001 DEC 15/2012







Site A 570' east of Site B east fence.





JOB No.	FIGURE
042079	3B
SITE DETAILS — SITE B	CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY STATE G LEASE & ADJACENT ABANDONED TANK BATTERY  LEA COUNTY, NEW MEXICO



figure 4

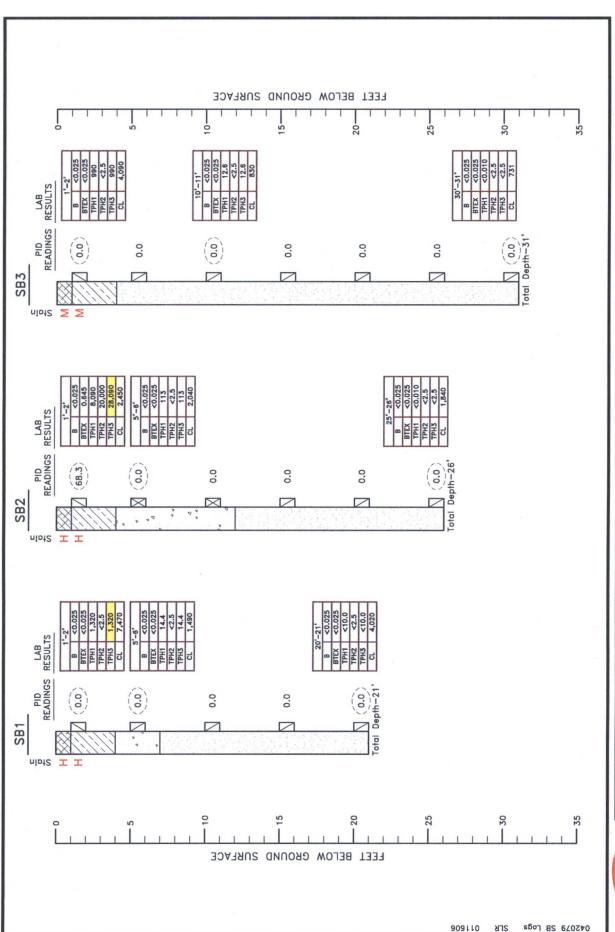
EXCAVATION LOCATIONS CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY STATE G LEASE & ADJACENT ABANDONED TANK BATTERY Lea County, New Mexico



LEGEND

**Excavation Limits** 

042079-00(006)GN-DL001 DEC 15/2012





JOB No. 042079

FIGURE 5A





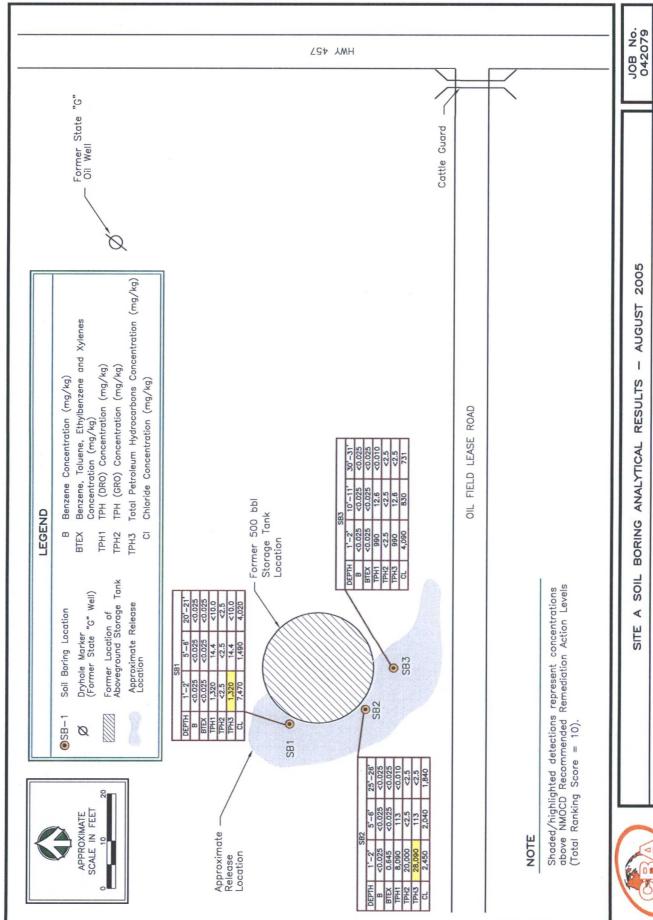


909110

SLR

042079 SB Logs

STATE

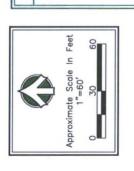




STATE

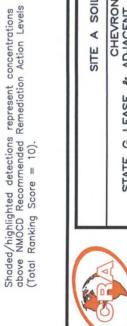
LEA COUNTY, NEW MEXICO - AUGUST 2005 COMPANY CHEVRON ENVIRONMENTAL MANAGEMENT ADJACENT ABANDONED TANK BATTERY SITE A SOIL BORING ANALYTICAL RESULTS જ G LEASE

FIGURE 6A



		LEGEND	Q7
●SB-1	Soil Boring Location	В	Benzene Concentration (mg/kg)
Ø	Dryhole Marker (Former State "G" Well)	BTEX	Benzene, Toluene, Ethylbenzene and Xylenes Concentration (mg/kg)
	Former Location of Aboveground Storage Tank	TPH1 TPH2	TPH (DRO) Concentration (mg/kg) TPH (GRO) Concentration (mg/kg)
	Approximate Release Location	TPH3 CI	13 Total Petroleum Hydrocarbons Concentration (mg/kg) Cl Chloride Concentration (mg/kg)

Site A 570' east of Site B east fence.		•
	OIL FIELD LEASE ROAD	
		SET Treaters  SB1  SB1  SB1  Aboveground Storage Tanks  SB1  SB1  Aboveground Storage Tanks  SB1  Aboveground Storage Tanks  SB1  SB1  Aboveground Storage Tanks  SB1  Aboveground Storage Tanks  SB1  SB1  SB2  SB3  SB3  SB3  SB3  SB3  SB3  SB4  Aboveground Storage Tanks
SB2 DEPTH 1'-2' 5'-6' DUP(5'-6') 20'-21' B <0.025 <0.025 <0.025 <0.025 BTEX 0.934 <0.025 <0.025 <0.025 TPH 5,730 2.53 331 <0.010 TPH2 30.200 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5	317 584	SB2



SITE A SOIL BORING ANALYTICAL RESULTS — AUGUST 2005	CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY STATE G LEASE & ADJACENT ABANDONED TANK BATTERY  LEA COUNTY, NEW MEXICO
	STATE

JOB No. 042079 FIGURE 6B

NOTE

TABLE I Page 1 of 2

# SOIL ANALYTICAL SUMMARY CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY SITE A NEW MEXICO STATE "G" TANK BATTERY LEA COUNTY, NEW MEXICO

Sample	D. of the	CI. D	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	TOTAL BTEX		H (8015B Modif		Chloride
ID	Depth (feet)	Sample Date	(	(constant)		(	(con flor)	DRO	GRO	(GRO/DRO)	
			(mg/kg)	(mg/kg)	(mg/kg) diation Action Le	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg
			10	mmenueu Keme		evers (Totat Kani	50			5,000	
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
SB-1	(1-2)	8/24/05	<0.025	<0.025	<0.025	<0.025	<0.025	1,320	<2.5	1,320	7,470
	(5-6)	8/24/05	<0.025	<0.025	< 0.025	<0.025	<0.025	14.4	<2.5	14.4	1,490
	(20-21)	8/24/05	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<2.5	<10.0	4,020
SB-2	(1-2)	8/24/05	<0.025	0.204	<0.025	0.441	0.645	8,090	20,000	28,090	2,450
	(5-6)	8/24/05	< 0.025	< 0.025	<0.025	<0.025	<0.025	113	<2.5	113	2,040
	(25-26)	8/24/05	<0.025	<0.025	<0.025	< 0.025	<0.025	< 0.010	<2.5	<2.5	1,840
SB-3	(1-2)	8/24/05	<0.025	<0.025	<0.025	< 0.025	<0.025	990	<2.5	990	4,090
	(10-11)	8/24/05	<0.025	<0.025	<0.025	<0.025	<0.025	12.6	<2.5	12.6	830
	(30-31)	8/24/05	< 0.025	<0.025	<0.025	< 0.025	<0.025	<0.010	<2.5	<2.5	731
SB-4	(0-5)	2/24/12									18.9
	(5-10)	2/24/12									24.3
	(10-15)	2/24/12									70.6
	(15-20)	2/24/12									96.2
	(20-25)	2/24/12				****					158
	(25-30)	2/24/12									204
	(30-35)	2/24/12									314
	(35-40)	2/24/12									333
	(40-45)	2/24/12									357
	(45-50)	2/24/12									326
	(50-55)	2/24/12									370
	(55-60)	2/24/12									279
	(60-65)	2/24/12									291
	(65-70)	2/24/12									371
SB-4	(70-75)	2/24/12									414
	(75-80)	2/24/12									395
SB-5	(0-5)	2/24/12									365
	(5-10)	2/24/12									189
	(10-15)	2/24/12									437
	(15-20)	2/24/12									868
	(20-25)	2/24/12									990
	(25-30)	2/24/12									627
	(30-35)	2/24/12									414
	(35-40)	2/24/12									411
	(40-45)	2/24/12									373
	(45-50)	2/24/12						****			380
	(50-55)	2/24/12									641
	(55-60)	2/24/12									500
	(60-65)	2/24/12									463
	(65-70)	2/24/12									398
	(70-75) (75-80)	2/24/12 2/24/12									428 365
SB-6	(0-5)	2/24/12									1,110
	(5-10)	2/24/12							****		1,530
	(10-15)	2/24/12									1,170
	(15-20)	2/24/12									965
	(20-25)	2/24/12									1,040
	(25-30)	2/24/12									857
	(30-35)	2/24/12									886
	(35-40)	2/24/12									934
	(40-45)										716
S (Cont.)	(40-45)	2/24/12 2/24/12									297
6 (Cont.)											
	(50-55)	2/24/12									209

TABLE I Page 2 of 2

#### SOIL ANALYTICAL SUMMARY CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY NEW MEXICO STATE "G" TANK BATTERY

#### LEA COUNTY, NEW MEXICO

			Benzene	Toluene	Ethyl-Benzene	Total Xylenes	TOTAL BTEX	TP	H (8015B Modij	fied)	Chlorides
Sample ID	Depth (feet)	Sample Date	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	DRO (mg/kg)	GRO (mg/kg)	(GRO/DRO) (mg/kg)	(mg/kg)
								(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
			NMOCD Reco	mmended Reme	diation Action Le	evels (Total Ran	king Score = 0)	100			
			10				50			5,000	
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	(60-65)	2/24/12									97
	(65-70)	2/24/12									31
	(70-75)	2/24/12									18.2
	(75-80)	2/24/12									18.1
SB-7	(0-5)	2/24/12									432
	(5-10)	2/24/12									832
	(10-15)	2/24/12									1,650
	(15-20)	2/24/12									1,500
	(20-25)	2/24/12									1,460
	(25-30)	2/24/12									1,080
	(30-35)	2/24/12									980
	(35-40)	2/24/12									972
	(40-45)	2/24/12									1,000
	(45-50)	2/24/12									975
	(50-55)	2/24/12									1,310
	(55-60)	2/24/12									1,190
	(60-65)	2/24/12									1,040
	(65-70)	2/24/12									348
	(70-75)	2/24/12									164
	(75-80)	2/24/12						****			154

#### Notes:

- BTEX analyses by EPA Method 8021B
   TPH analyzed by EPA Method 8015B Mod
   Chlorides analyzed by EPA Method 325.2
   Bold concentrations above lab reporting limits
   Highlighted cells indicated concentrations above RRALs

# TABLE II

# SOIL ANALYTICAL SUMMARY CHEVRON ENVIRONMENTAL MANAGEMMENT COMPANY SITE B

# ADJACENT ABANDONED TANK BATTERY LEA COUNTY, NEW MEXICO

CHUCK	ng/kg) (mg/kg)						5 1		
GRO (GRO/DRO)	(mg/kg) (mg/kg) 5000								
DRO	core = 0)	core = 0) mg/kg	(mg/kg)     mg/kg	(mg/kg)  mg/kg 25,100 145	"core = 0) "mg/kg 25,100 145 15.3	(mg/kg)     mg/kg   25,100   145   15.3   5,730	core = 0)   mg/kg 25,100 145 15,3 5,730 253	.core = 0) .core = 0) .core = 0) .core = 10 .25,100 .145 .15,3 .5,730 .253 .331	.core = 0) .core = 0) .core = 0) .core = 10 .25,100 .145 .15,3 .5,730 .253 .331 .<0.010
BIEX (mg/kg)	ded Remediation Action Levels (Total Ranking Score = 0)	tal Ranking Sco 50 mg/kg	tal Ranking Scc 50 mg/kg 0.609	######################################	tal Ranking Scc 50 mg/kg 0.609 <0.025	### Ranking Scc	### Ranking Scc	### Ranking Scc	### Ranking Sco   50   0.609   <0.025   <0.025   <0.025   <0.025   <0.025   <0.025
te Xylenes () (mg/kg)	ion Levels (Tot	ion Levels (Tot	ion Levels (Tot	ion Levels (Tot mg/kg mg/kg 0.416	ion Levels (Tot mg/kg 0.416	ion Levels (Tot mg/kg 0.416	ion Levels (Tot  mg/kg  0.416		

### Notes:

- 1. BTEX analyses by EPA Method 8021B.
- 2. TPH analyzed by EPA Method 8015B Mod.
  - 3. Chlorides analyzed by EPA Method 325.2
- 4. Bold concentrations above lab reporting limits.
- 5. Highlighted cells indicated concentrations above RRALs
  - 6. NS Not sampled

#### TABLE III

#### SOIL ANALYTICAL SUMMARY CEMC EXCAVATION SITE A AND B NEW MEXICO STATE G TANK BATTERY LEA COUNTY, NEW MEXICO

				TI	PH (8015B Mo	dified)	Percent
Sample ID	Date	Depth	Chlorides	DRO	GRO	(GRO/DRO)	Moisture
		(feet)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(%)
Site A - NW Wall	7/10/2012	0-2.5	1,210	941	<17.0	941	11.9
Site A - NE Wall	7/10/2012	0-2.5	377	925	<16.3	925	8.15
Site A - SW Wall	7/11/2012	0-2.5	685	1410	<83.3	1410	10.3
Site A - SW Wall	7/13/2012	0-2.5	2,820	548	<15.9	548	5.95
Site A - SE Wall	7/11/2012	0-2.5	1,190	272	<18.5	272	19.2
Site A - N Floor	7/11/2012	0-2.5	1,470	6980	<97.5	6980	23.2
Site A - S Floor	7/11/2012	0-2.5	794	598	<17.4	598	14
Site B - NW Wall	7/11/2012	0-2.5	78.1	809	<16.7	809	10.1
Site B - NE Wall	7/11/2012	0-2.5	53.2	1710	<82.7	1710	9.77
Site B - NE Wall	7/13/2012	0-2.7	40	1020	<16.0	1020	6.22
Site B - SW Wall	7/11/2012	0-2.5	293	2940	18.5	2958.5	7.83
Site B - SW Wall	7/13/2012	0-2.6	430	1060	19.5	1060	6.14
Site B - SE Wall	7/11/2012	0-2.5	106	820	<17.1	820	12.5
Site B - Floor	7/11/2012	0-2.5	111	580	25.4	605.4	12.3

#### Notes:

- 1. TPH analyzed by EPA Method 8015B Mod.
- $2. \ \ Bold\ concentrations\ above\ lab\ reporting\ limits.$
- 3. Highlighted cells indicate concentrations above RRALs.

#### RECEIVED



#### WELL RECORD & LOG

#### OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

#### MAY 19 2012

#### Midland

	POD NUME	BER (WEL	LNU	IMBER)				OSE FILE NU	MBER(S)				
NO	SB-4												
1. GENERAL AND WELL LOCATION	WELL OW	VER NAM	(E(S)			No. of Contract of		PHONE (OPTI	ONAL)				
CA	7-11-24-00 - 21 - C A		A 150 PM	mental Mana	gement Co			THOME (OTT.	or in my				
CO			-	THE RESERVE OF THE PARTY OF THE	gement oo.			2					
E	WELL OW				0.44			CITY		STATE		ZIP	
WE	1400 Sr	nith Si	t., F	IDU 140/190	0-1A			Houston		TX	11	002	
9	WELI				DEGREES	MINUTES SEC	ONDS						
A	LOCATI		1 47	THE INC	33	7	1.90 N	* ACCURACY	REQUIRED: ONE TE				
RA.	(FROM C	-	LAI	TTUDE		The second second	742 22 22	* DATUM RE	QUIRED: WGS 84				
NE	112772723	1	LON	GITUDE	103	36	48.70 W	VIC. (10) 80	3 7 2			4	
GE	DESCRIPT	ION REL	ATIN	G WELL LOCATION	TO STREET ADDRES	SS AND COMMON LAND	MARKS						
÷	State G												
									The second of				
	(2,5 ACI	RE)	9	(10 ACRE)	(40 ACRE)	(160 ACRE)	SECTION		TOWNSHIP	NORTH	RANGE	<b>✓</b> EAST	
A.L.	1,	4		1/4	1/4	1/4		9	14	SOUTH	33	☐ west	
ON	SUBDIVISI	ON NAMI	Е				LOT NUM	IBER	BLOCK NUMBER		UNIT/TRA	CT	
T											1	& J	
2. OPTIONAL	HYDROGR	APHIC SU	JRVE	Y					MAP NUMBER		TRACT NU	JMBER	
7	12.817 645								The second second		28-07 8000		
	LICENSE N	Z		NAME OF LICEN				NAME OF WELL DRILLING COMPANY					
	WD-	1456		John W. Wh	ite				White Drilling Company, Inc.				
	DRILLING	STARTEL	)	DRILLING ENDE	D DEPTH OF COM	PTH OF COMPLETED WELL (FT) BORE HOLE DEPTH (F)				DEPTH WATER FIRST ENCOUNTERED (FT)			
Z	02/2	4/12		02/24/12			1	30.0	Dry				
CIO									STATIC WATER LE	VEL IN COM	PLETED WEI	L (FT)	
3. DRILLING INFORMATION	COMPLETED WELL IS: ARTESIAN V DRY HOLE SHALLOW (UNCONFINED)						Dry						
OR													
NF	DRILLING	FLUID:		<b>✓</b> AIR	MUD	ADDITIVES - SI	ECIFY:				4727115		
GI	DRILLING	METHOD	):	<b>✓</b> ROTARY	HAMMER	CABLE TOOL	OTHE	R - SPECIFY:					
E	DEPT	H (FT)		BORE HOLE	1 (	CASING	COM	NECTION INSIDE DIA. CASING WAL				SLOT	
SIL	FROM	ТО	-	DIA. (IN)		ATERIAL		(CASING)	CASING (IN)		NESS (IN)	SIZE (IN)	
D.	TROM	10				The second second				-			
10	- I	Z								-			
		-					-						
										A-W			
	DEPT	H (FT)		THICKNESS	FC	DRMATION DESCRI	PTION OF P	RINCIPAL W	ATER-BEARING	STRATA		YIELD	
TA							CAVITIES O	R FRACTURE ZOI	NES)		(GPM)		
											7.		
SI							10.0						
N									, , ,	41	-		
AR					-		4	50					
BE		and,	-	- II-III W - VI - V	-								
ER													
WATER BEARING STRA	METHOD L	SED TO	ESTIN	MATE YIELD OF W.	ATER-BEARING STRA	ATA			TOTAL ESTIMATE	D WELL YIEL	LD (GPM)		
4. W													
-	135 material to												
	FOR OUR	18 (1991)	****	TION					THE PARTY OF	nn e roo	01-1-2	(0.108)	
	FOR OSE	INTER	NAL	USE					WELL RECO	KD & LOG	(Version 6)	9/08)	

FOR OSE INTERNAL USE		WELL RECORD & LOG (Version 6/9/08)
FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		PAGE 1 OF 2

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AT CORRECT RECORD OF THE ABOURD SISCHIBED HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AT CORRECT RECORD OF THE ABOURD SISCHIBED HOLE AND THAT HE OR SISE WILL FILE THIS WELL RECORD WITH THE STATE ENGINE THE PERMIT HOLDER WITH YEAD AS A FATER COMPLETION OF WELL DRILLING:    0.0	JMP	ТҮРЕ О	F PUMP:	☐ SUBMEI		☐ JET ☐ CYLINDER	☐ NO PUMP – WELL NOT EQUIPPED☐ OTHER – SPECIFY:	4		
DEPTH (FT) THICKNESS COLOR AND TYPE OF MATERIAL ENCOUNTERED WATEROM TO (FT) (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)  10.0 16.0 16.0 16.0 Caliche.  16.0 78.0 62.0 Light brown sand.   YES 78.0 80.0 2.0 Light brown sand w/gravel.   YES   YES    178.0 80.0 2.0 Light brown sand w/gravel.   YES   YES    178.0 YES   YES   YES   YES    178.0 YES   YES   YES   YES    178.0 YES   YES   YES   YES   YES    178.0 YES   YES   YES   YES   YES    178.0 YES   YES   YES   YES   YES   YES    178.0 YES   YES   YES   YES   YES    178.0 YES   Y	AND PU	ANNULAR					MATERIAL TYPE AND SIZE			
DEPTH (FT) THICKNESS (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)  BEAR  O.0 16.0 16.0 16.0 Caliche.  16.0 78.0 62.0 Light brown sand.  178.0 80.0 2.0 Light brown sand w/gravel.  178.0 90.0 16.0 16.0 1945  178.0 195.0 1945  1945	SEAL	SEAL	AND	80.0	0.0	6.0	Bentonite Pellets	23 sacks	Hand	d Mix
FROM TO (FT) (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)  BEAR  0.0 16.0 16.0 16.0 Caliche.   YES  16.0 78.0 62.0 Light brown sand.   YES  78.0 80.0 2.0 Light brown sand w/gravel.   YES    YES   YE										-
FROM TO (FT) (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)  BEAR  0.0 16.0 16.0 16.0 Caliche.   YES  16.0 78.0 62.0 Light brown sand.   YES  78.0 80.0 2.0 Light brown sand w/gravel.   YES    YES   YE		DEPT	H (FT)	THICK	NESS		COLOR AND TYPE OF MATERIAL ENCOUNT	TERED	WA	TED
THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AFTER CORRECT RECORD OF THE ABOUTD SCRIBED HIGH. BAND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINE THE PERMIT HOLDER WHILE AFTER COMPLETION OF WELL DRILLING:    180			I					A CONTRACTOR OF THE CONTRACTOR	BEARING?	
78.0 80.0 2.0 Light brown sand w/gravel.		0.0	16.0	16	.0		Caliche.		☐ YES	☑ NO
OUT THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AT CORRECT RECORD OF THE ABOUT DISCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINE THE PERMIT HOLDER WITH THE PERMIT HOLDER WITH THE PERMIT HOLDER WITH THE PERMIT HOLDER WITH THE P		16.0	78.0	62	.0		Light brown sand.		☐ YES	☑ NO
ONT THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AT CORRECT RECORD OF THE ABOVED RECORDED HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AT THE PERMIT HOLDER WITHIN TO DAYS AFTER COMPLETION OF WELL DRILLING:    YES		78.0	80.0	2.	0		Light brown sand w/gravel.		☐ YES	☑ NO
DEFINITION OF THE ABOVE DISCARGE AND DRAWDOWN OVER THE TESTING PERIOD.  THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AT CORRECT RECORD OF THE ABOVE DAS AFTER COMPLETION OF WELL DRILL FLIE THIS WELL RECORD WITH THE STATE ENGINE THE PERMIT HOLDER WITH THE									☐ YES	□NO
WELL TEST    METHOD:   BAILER   PUMP   AIR LIFT   OTHER SPECIFY:   TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING START TIME, END THAN AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.    ADDITIONAL STATEMENTS OR EXPLANATIONS:   THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINE THE PERMIT HOLDER WITHING DAYS AFTER COMPLETION OF WELL DRILLING:   4/20/2012	TI									□ NO
WELL TEST    METHOD:   BAILER   PUMP   AIR LIFT   OTHER SPECIFY:   TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING START TIME, END THAN AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.    ADDITIONAL STATEMENTS OR EXPLANATIONS:   THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINE THE PERMIT HOLDER WITHING DAYS AFTER COMPLETION OF WELL DRILLING:   4/20/2012	FWE							***********		□NO
WELL TEST    METHOD:   BAILER   PUMP   AIR LIFT   OTHER SPECIFY:   TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING START TIME, END THAN AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.    ADDITIONAL STATEMENTS OR EXPLANATIONS:   THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINE THE PERMIT HOLDER WITHING DAYS AFTER COMPLETION OF WELL DRILLING:   4/20/2012	0.0									□ NO
WELL TEST    METHOD:   BAILER   PUMP   AIR LIFT   OTHER SPECIFY:   TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING START TIME, END THAN AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.    ADDITIONAL STATEMENTS OR EXPLANATIONS:   THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINE THE PERMIT HOLDER WITHING DAYS AFTER COMPLETION OF WELL DRILLING:   4/20/2012	07.7									□ NO
WELL TEST    METHOD:   BAILER   PUMP   AIR LIFT   OTHER SPECIFY:   TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING START TIME, END THAN AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.    ADDITIONAL STATEMENTS OR EXPLANATIONS:   THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINE THE PERMIT HOLDER WITHING DAYS AFTER COMPLETION OF WELL DRILLING:   4/20/2012	OGIC									□ NO
WELL TEST    METHOD:   BAILER   PUMP   AIR LIFT   OTHER SPECIFY:   TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING START TIME, END THAN AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.    ADDITIONAL STATEMENTS OR EXPLANATIONS:   THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINE THE PERMIT HOLDER WITHING DAYS AFTER COMPLETION OF WELL DRILLING:   4/20/2012	T03									□ NO
WELL TEST    METHOD:   BAILER   PUMP   AIR LIFT   OTHER SPECIFY:    TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING START TIME, END THE AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.    ADDITIONAL STATEMENTS OR EXPLANATIONS:    THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AT THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:    4/20/2012	6. G			, . , . ,						□ NO
ATTACH ADDITIONAL PAGES AS NEEDED TO FULLY DESCRIBE THE GEOLOGIC LOG OF THE WELL    METHOD:   BAILER   PUMP   AIR LIFT   OTHER - SPECIFY:   TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING START TIME, END THAND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.    ADDITIONAL STATEMENTS OR EXPLANATIONS:   THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE ATTHE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING: 4/20/2012										□NO
ATTACH ADDITIONAL PAGES AS NEEDED TO FULLY DESCRIBE THE GEOLOGIC LOG OF THE WELL    WELL TEST					***					□NO
ATTACH ADDITIONAL PAGES AS NEEDED TO FULLY DESCRIBE THE GEOLOGIC LOG OF THE WELL  WELL TEST  WELL TEST  TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING START TIME, END THE AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.  ADDITIONAL STATEMENTS OR EXPLANATIONS:  THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE ATTHE PERMIT HOLDER WITHIN SO DAYS AFTER COMPLETION OF WELL DRILLING:  4/20/2012										□NO
ATTACH ADDITIONAL PAGES AS NEEDED TO FULLY DESCRIBE THE GEOLOGIC LOG OF THE WELL    METHOD:   BAILER   PUMP   AIR LIFT   OTHER – SPECIFY:   TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING START TIME, END THE AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.   ADDITIONAL STATEMENTS OR EXPLANATIONS:    THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DISSCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINE THE PERMIT HOLDER WITHING DAYS AFTER COMPLETION OF WELL DRILLING:   4/20/2012									YES	□NO
WELL TEST    METHOD:   BAILER   PUMP   AIR LIFT   OTHER - SPECIFY:									☐ YES	□NO
WELL TEST  TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING START TIME, END THE AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.  ADDITIONAL STATEMENTS OR EXPLANATIONS:  THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DISCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINE THE PERMIT HOLDER WITHINGO DAYS AFTER COMPLETION OF WELL DRILLING:  4/20/2012				ATTACH	ADDITION	AL PAGES AS NE	EDED TO FULLY DESCRIBE THE GEOLOGIC	LOG OF THE WELL	1	
THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOUT DISCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINE THE PERMIT HOLDER WITHIN TO DAYS AFTER COMPLETION OF WELL DRILLING:  4/20/2012				METHOD:	BAILE	R PUMP	☐ AIR LIFT ☐ OTHER – SPECIFY:			
THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DISCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINE THE PERMIT HOLDER WITHINGO DAYS AFTER COMPLETION OF WELL DRILLING:  4/20/2012	L INF	WELL	TEST	TEST RESU AND A TAE	LTS - ATTA	CH A COPY OF D	ATA COLLECTED DURING WELL TESTING, IND DRAWDOWN OVER THE TESTING PERI	INCLUDING START TI OD.	ME, END TI	IME,
THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOUT DISCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINE THE PERMIT HOLDER WITHIN TO DAYS AFTER COMPLETION OF WELL DRILLING:  4/20/2012	ONA	ADDITION	IAL STATEN	MENTS OR EXPL	ANATIONS:					
THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINE THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:  4/20/2012	DITIO									
THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DISCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINE THE PERMIT HOLDER WITHINGO DAYS AFTER COMPLETION OF WELL DRILLING:  4/20/2012	AD									
THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINE THE PERMIT HOLDER WITHINGO DAYS AFTER COMPLETION OF WELL DRILLING:  4/20/2012	ST &									
THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINE THE PERMIT HOLDER WITHIN 60 DAYS AFTER COMPLETION OF WELL DRILLING:  4/20/2012	7. TE									
CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINE THE PERMIT HOLDER WITHIN 00 DAYS AFTER COMPLETION OF WELL DRILLING:  4/20/2012	(									
THE PERMIT HOLDER WITHINGO DAYS AFTER COMPLETION OF WELL DRILLING:  4/20/2012	RE	THE UNI	DERSIGNI T RECOR	ED HEREBY O	CERTIFIES T	HAT, TO THE BE	ST OF HIS OR HER KNOWLEDGE AND BELI THAT HE OR SHE WILL FILE THIS WELL R	EF, THE FOREGOING IS ECORD WITH THE STA	S A TRUE A	ND EER AND
4/20/2012	ATU	THE PER	MIT HOL	DER WITHIN	20 DAYS AI	FTER COMPLETION	ON OF WELL DRILLING:			
% SIGNATURE OF DRILLED DATE	IGN			1			4/20/2012			
SIGNATURE OF DRILLER DATE	86			SIGNATUR	E OF DRILL	ER	DATE		***	,

FOR OSE INTERNAL USE	WELL RECORD & LOG (Version 6/9/08)			
FILE NUMBER	POD NUMBER	TRN NUMBER		
LOCATION		PAGE 2 OF 2		



# WELL RECORD & LOG

# OFFICE OF THE STATE ENGINEER

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_													
NO	POD NUMB	BER (WEI	LL NUMBER)		100,00				OSE FILE NUI	MBER(S)	* WH * DE		
1. GENERAL AND WELL LOCATION	WELL OWN	NER NAM	IE(S)						PHONE (OPTI-	ONAL)			
OC.	Chevror	n Envi	ronmental N	/lanage	ement Co.								
TT	WELL OWN	NER MAI	LING ADDRESS					-	CITY		STATE		ZIP
WEI	1400 Sn	nith S	t., HDU 140	/1900-	1A				Houston		TX	77	002
Q.	WELL	T		D	DEGREES	MINUTES	SECO	ONDS					
LA	LOCATION	- 1	LATITUDE		33	7		1.90 N	* ACCURACY	REQUIRED: ONE TEN	TH OF A SE	COND	
ERA	(FROM O	(PS)	LONGITUDE		103	36	4	8.70 W	* DATUM RE	QUIRED: WGS 84			
EN	DESCRIPT	ION REL		CATION T	O STREET ADDRES								
1.0	State G												
	(2.5 ACR	(E)	(10 ACRE)		(40 ACRE)	(160 ACR)	E)	SECTION		TOWNSHIP	NORTH	RANGE	✓ EAST
AL	1/	4	1/4		1/4	1/2	4		9	14	SOUTH	33	WEST
ION	SUBDIVISIO	ON NAM	Е					LOT NUM	IBER	BLOCK NUMBER		UNIT/TRA	
OPTIONAL				/								1	& J
2. (	HYDROGR	APHIC SU	JRVEY							MAP NUMBER		TRACT NU	JMBER
	LICENSE N				D DRILLER				-	NAME OF WELL DE			
		1456	John W							White Drilling			
	DRILLING:	STARTEI 24/12	DRILLING		DEPTH OF COM	PLETED WELL (F	T)		LE DEPTH (FT)	DEPTH WATER FU	IST ENCOUN Dry		
ION	02/2	4/12	UZIZ	+/ 12					0.0	STATIC WATER LE			f (FT)
DRILLING INFORMATION	COMPLETE	ED WELL	IS: ARTE	SIAN	✓ DRY HOLE	SHALLO	W (UNC	ONFINED)		STATIC WATER LE	Dry		J. (F1)
NFO	DRILLING	FLUID:	✓ AIR		MUD	ADDITIV	ES - SP	ECIFY:					
IG E	DRILLING	METHOD	e ROTA	RY	HAMMER	CABLET	COOL	OTHE	ER - SPECIFY:				
T	DEPT	H (FT)	BORE	HOLE	(	CASING		CONI	NECTION	INSIDE DIA.	CASING	G WALL	SLOT
ORII	FROM	ТО	DIA.	(IN)	M	ATERIAL		TYPE	(CASING)	CASING (IN)	THICKN	NESS (IN)	SIZE (IN)
3.1	4												
											-		
A		H (FT)	THICK		FC					ATER-BEARING S			YIELD
	FROM	ТО	(F)	)		(INCLUDE V	VATER	-BEARING	CAVITIES	R FRACTURE ZON	(ES)		(GPM)
STR													
NG										F 74, 1			
AR											1 1/4		
R BE											ξ. ·	1	
4. WATER BEARING STRAT	METHOD	ISED TO	ESTIMATE VIELI	OFWAT	ER-BEARING STRA	TA			V	TOTAL ESTIMATE	WELL VIE	D (GPM)	
WA	METHOD	JOED TO	ESTEMATE TILLI	OF WAT	EK-DEAKH TO DIKA					TOTAL ESTEMATE	WELL TILL	ob (ot m)	
4.													
	EOD OGE	INTER	NAL LICE							WELL RECO	RD & LOC	(Version 6	(9/08)
	FILE NU		NAL USE			POD	NUMB	ER		TRN NUMBE		( VCISION O	7/00)
	LOCATIO											PAGE 10	OF 2
												1	-

JMP	TYPE O	F PUMP:	□ SUBMER □ TURBIN		☐ JET ☐ CYLINDER	☐ NO PUMP WELL NOT EQUIPPED☐ OTHER SPECIFY:			
SEAL AND PUMP	ANNU	II.AR	DEPTH FROM	TO	BORE HOLE DIA. (IN)	MATERIAL TYPE AND SIZE	AMOUNT (CUBIC FT)	METHO PLACE	
SEAL	SEAL GRAVE	AND	80.0	0.0	6.0	Bentonite Pellets	23 sacks	Hand	Mix
16									
	DEPTI	H (FT)	THICK	NESS		COLOR AND TYPE OF MATERIAL ENCOUNT	ERED	WA	ΓER
	FROM	TO	(F)	Γ)	(INCL)	JDE WATER-BEARING CAVITIES OR FRACT	URE ZONES)	BEAR	ING?
	0.0	16.0	16	.0		Caliche.		☐ YES	☑ NO
	16.0	78.0	62			Light brown sand.		YES	☑ NO
	78.0	80.0	2.	0		Light brown sand w/gravel.		YES	☑ NO
								☐ YES	□ NO
TI								☐ YES	□ NO
6. GEOLOGIC LOG OF WELL								YES	□ NO
0 0								YES	□ NO
07								YES	□ NO
)GIC								YES	□ NO
)TO:								YES	□NO
GE.								YES	□ NO
•								YES	□ NO
								YES	□ NO
								YES	□ NO
								YES	□NO
								YES	□NO
			1777 I OV	1 DDITTON	AL DACED AGNE	TOPIN TO EVEL V DECORDE THE OPEN AND	I AA AF MIR I MIL I	YES	□ NO
						EDED TO FULLY DESCRIBE THE GEOLOGIC	LOG OF THE WELL		
FO	WELL	TEST	METHOD:	BAILE		☐ AIR LIFT ☐ OTHER – SPECIFY:			
AL IN	W L L L	TEST	AND A TAB	LTS - ATTA SLE SHOWI	CH A COPY OF D NG DISCHARGE A	ATA COLLECTED DURING WELL TESTING, AND DRAWDOWN OVER THE TESTING PERI	INCLUDING START TI OD.	ME, END TI	ME,
7. TEST & ADDITIONAL INFO	ADDITION	AL STATEN	MENTS OR EXPL	ANATIONS:					,
SIGNATURE	THE UNI CORREC THE PER	DERSIGNI T RECOR MIT HOL	ED HEREBY O D OF THE AB DER WITHIN	CERTIFIES TO OVE DESCRI 20 DAYS AT	THAT, TO THE BE RIBED HOLE AND FTER COMPLETION	ST OF HIS OR HER KNOWLEDGE AND BELIF THAT HE OR SHE WILL FILE THIS WELL RI ON OF WELL DRILLING: 4/20/2012	EF, THE FOREGOING I ECORD WITH THE STA	S A TRUE A	ND EER AND
8. SIG				-					
40		-	SIGNATUR	E OF DRILL	ER	DATE			

FOR OSE INTERNAL USE		WELL RECORD & LOG (Version 6/9/08)	
FILE NUMBER	POD NUMBER	TRN NUMBER	
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FILE NUMBER

LOCATION

# WELL RECORD & LOG

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7		BER (WEI	LL NUMBER)	aga garan ana ang aga anan			OSE FILE NU	MBER(S)			
IOI	SB-2	NED MAN	45(0)				PARONIE (OPER				
GENERAL AND WELL LOCATION	Chevro		ronmental Mar	nagement Co.			PHONE (OPTI	ONAL)			
LL	WELL OW	NER MAI	LING ADDRESS				CITY		STATE		ZIP
WEL	1400 Sr	mith S	t., HDU 140/19	000-1A			Houston		TX	77	002
Q.	WELI	. [		DEGREES	MINUTES SEC	ONDS					
LA	LOCATI	1	LATITUDE	33	7	1.90 N	* ACCURACY	REQUIRED: ONE TEN	TH OF A SEC	COND	
ERA	(FROM C	GPS)	LONGITUDE	103	36	18.70 W	* DATUM RE	QUIRED: WGS 84			<i>.</i>
I. GEN	DESCRIPT State G		ATING WELL LOCAT	ON TO STREET ADDRE	SS AND COMMON LAND	MARKS					
	(2.5 ACI	RE)	(10 ACRE)	(40 ACRE)	(160 ACRE)	SECTION		TOWNSHIP		RANGE	
3	į,	1/4	1/4	1/4	1/4		9	14	NORTH SOUTH	33	EAST WEST
OPTIONAL	SUBDIVISI	ON NAM		-		LOT NUM	1BER	BLOCK NUMBER		UNIT/TRA	CT
PTI											& J
2.0	HYDROGR	APHIC S	URVEY					MAP NUMBER		TRACT NU	MBER
				140.00					,		
	LICENSE N			ENSED DRILLER				NAME OF WELL DE			
		-1456	John W. V					White Drilling			
	DRILLING	STARTE 24/12	D DRILLING ENT		IPLETED WELL (FT)	1	EE DEPTH (FT)	DEPTH WATER FIL	RST ENCOUN		
ION	0212	24/12	02/24/1	2		,	50.0	STATIC WATER LE			L (FT)
3. DRILLING INFORMATION	COMPLETI	ED WELL	IS: ARTESIA	V ✓ DRY HOLE	SHALLOW (UNC	CONFINED)			Dry		
(FO)	DRILLING	FLUID:	✓ AIR	MUD	ADDITIVES - SP	ECIFY:					
IG II	DRILLING	метног	D: ▼ ROTARY	HAMMER	CABLE TOOL	OTHE	ER - SPECIFY:				
CLIN	DEPT	'H (FT)	BORE HOL	E	CASING	CON	NECTION	INSIDE DIA.	CASING	G WALL	SLOT
DRII	FROM	ТО	DIA. (IN)	М	ATERIAL	TYPE	(CASING)	CASING (IN)	THICKN	NESS (IN)	SIZE (IN)
3.											
_		L									
A.	FROM	TO TO	THICKNES (FT)	SS F	ORMATION DESCRI (INCLUDE WATER						(GPM)
RAT	PROM	10	(-1)		(CECEE HATEL	- Dillill	0.11111000				,
SST								¥			
SING											
EAL											
ER B								1. 100 中華	V*!-		
4. WATER BEARING STRAT	метноо ц	USED TO	ESTIMATE YIELD OF	WATER-BEARING STR.	ATA			TOTAL ESTIMATE	WELL YIEL	.D (GPM)	
	EOD OST	C INFEED	RNAL USE					WELL RECO	DD & LOC	(Maraian 6)	10/08)

POD NUMBER

TRN NUMBER

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MP	TYPE O	F PUMP:	☐ SUBMER		☐ JET ☐ CYLINDER	☐ NO PUMP – WELL NOT EQUIPPED☐ OTHER – SPECIFY:			
SEAL AND PUMP	ANNI	JLAR	DEPTH FROM	I (FT)	BORE HOLE DIA. (IN)	MATERIAL TYPE AND SIZE	AMOUNT (CUBIC FT)	METH PLACE	
5. SEAL		AND	80.0	0.0	6.0	Bentonite Pellets	23 sacks	Hand	d Mix
	DEPT	H (FT)	THICK	NESS		COLOR AND TYPE OF MATERIAL ENCOUNT	TERED	WA	TER
	FROM	TO	(F)	Γ)	(INCLU	DE WATER-BEARING CAVITIES OR FRACT	URE ZONES)	BEAR	UNG?
	0.0	16.0	16.	.0		Caliche.		☐ YES	☑ NO
	16.0	78.0	62	.0		Light brown sand.		☐ YES	☑ NO
	78.0	80.0	2.	0		Light brown sand w/gravel.		☐ YES	☑ NO
								☐ YES	□ NO
3								☐ YES	□ NO
GEOLOGIC LOG OF WELL								☐ YES	□ NO
OF								☐ YES	□ NO
07				44				☐ YES	□ NO
GIC								☐ YES	□ NO
010								☐ YES	□NO
GEC								☐ YES	□ NO
.6								☐ YES	□ NO
								☐ YES	□NO
								☐ YES	□NO
								☐ YES	□ NO
								☐ YES	□ NO
								☐ YES	□NO
			ATTACH	ADDITION	AL PAGES AS NE	EDED TO FULLY DESCRIBE THE GEOLOGIC	LOG OF THE WELL		
0			METHOD:	BAILE	R DUMP	☐ AIR LIFT ☐ OTHER – SPECIFY:		4000	
IONAL INFO	WELL	TEST	TEST RESU AND A TAB	LTS - ATTA	CH A COPY OF D	ATA COLLECTED DURING WELL TESTING, ND DRAWDOWN OVER THE TESTING PERI	INCLUDING START TO OD.	ME, END T	IME,
ION	ADDITION	IAL STATEM	MENTS OR EXPL	ANATIONS:					
ADDIT									
(AD									
ST &									
7. TEST									
7							MARK MICH. M. (1994)		
£3	THE UNI	DERSIGN	ED HEREBY C	CERTIFIES T	гнат, то тне ве	ST OF HIS OR HER KNOWLEDGE AND BELL	EF, THE FOREGOING I	S A TRUE A	ND
UR	CORRECTHE PER	T RECOR MIT HOL	D OF THE AB DER WITHIN	OVE DESC 20 DAYS A	RIBED HOLE AND FTER COMPLETION	THAT HE OR SHE WILL FILE THIS WELL R ON OF WELL DRILLING:	ECORD WITH THE STA	ATE ENGIN	EER AND
SIGNATURE		<	11			4/20/2012			
SIG			117			4/20/2012			
ಯ			SIGNATUR	E OF DRILL	LER	DATE			
			100.00						

FOR OSE INTERNAL USE		WELL RECORD & LOG (Version 6/9/0	08)
FILE NUMBER	POD NUMBER	TRN NUMBER	
LOCATION		PAGE 2 OF	2



LOCATION

ION	POD NUME SB-1a	BER (WE	LLNU	JMBER)					OSE FILE NUI	MBER(S)			
GENERAL AND WELL LOCATION	WELL OWN				agement Co.				PHONE (OPTI	ONAL)			
LI	WELL OW	NER MA	LING	ADDRESS					CITY		STATE	1	ZIP
WEL	1400 Sr	mith S	t., F	IDU 140/19	00-1A				Houston		TX	77	002
N	WELI	L	-		DEGREES	MINUTES	SECONI	OS					
AL A	LOCATI		LAT	TTUDE	33	7	1.	90 N		REQUIRED: ONE TEN	NTH OF A SEC	COND	
NER	(FROM C	iPS)	LON	IGITUDE	103	36	48.	70 W	* DATUM RE	QUIRED: WGS 84			
1. GE	State G		ATIN	G WELL LOCATI	ON TO STREET ADDRI	ESS AND COMMON I	LANDMA	RKS					
	(2.5 ACF	RE)		(10 ACRE)	(40 ACRE)	(160 ACRE)		SECTION		TOWNSHIP		RANGE	_
AL	,	/4		1/4	1/4	1/4			9	14	NORTH SOUTH	33	✓ EAST WEST
2. OPTIONAL	SUBDIVISI	ON NAM	Œ	•				LOT NUM	IBER	BLOCK NUMBER	,,,,,	UNIT/TRA	
PI													& J
2. (	HYDROGR	APHIC S	URVE	EY						MAP NUMBER		TRACT NU	MBER
	LICENSE N	UMBER		NAME OF LICE	NSED DRILLER					NAME OF WELL DI	RILLING CON	/PANY	
	WD-	1456		John W. W	hite					White Drilling	Compar	ny, Inc.	
	DRILLING		D	DRILLING END	1	PLETED WELL (FT)			LE DEPTH (FT)	DEPTH WATER FI	RST ENCOUN	TERED (FT)	
NO	02/2	24/12		02/24/12	2			3	35.0		Dry		
3. DRILLING INFORMATION	COMPLETE	ED WELI	. <b>IS</b> :	ARTESIAN	✓ DRY HOLE	SHALLOW	(UNCON	FINED)		STATIC WATER LE	VEL IN COM Dry		L (FT)
VFOI	DRILLING	FLUID:		<b>✓</b> AIR	MUD	ADDITIVE	S – SPECI	FY:					
II 9N	DRILLING	METHO	D:	<b>✓</b> ROTARY	HAMMER	CABLE TO	OOL	ОТНЕ	ER - SPECIFY:				
T	DEPT	H (FT)		BORE HOL	Е	CASING		CON	NECTION	INSIDE DIA.	CASING	G WALL	SLOT
DRII	FROM	TO	)	DIA. (IN)	M	IATERIAL			(CASING)	CASING (IN)		IESS (IN)	SIZE (IN)
3,											- Carrier Control		
						- Constitution of the Cons							
	DEPT	H (FT)				ODMATION DES	CD INC	ON OF B	DINOIDAL W	ATER REARINGS	TDATA		
V.			_	THICKNES (FT)	S					ATER-BEARING S R FRACTURE ZON			(GPM)
RAT	FROM	TO		(11)		(INCLUDE W)	411.K-D	CAKING	CAVILLES O	KTRACTURE ZOI	vEO)		(01.11)
ST													1.0
ING	1. 12										7		
AR										1 1. 1.	· · · · · · · · · · · · · · · · · · ·		
BE												Y	
rer													
4. WATER BEARING STRATA	METHOD U	SED TO	ESTI	MATE YIELD OF	WATER-BEARING STR	ATA				TOTAL ESTIMATE	O WELL YIEL	.D (GPM)	
										1			
	FOR OSE		RNAI	LUSE		1 505 111	IMPED			WELL RECO		(Version 6/	9/08)

PAGE 1 OF 2

MP	ТҮРЕ О	F PUMP:	☐ SUBMER☐ TURBINI		☐ JET ☐ CYLINDER	☐ NO PUMP – WELL NOT EQUIPPED☐ OTHER – SPECIFY:			
SEAL AND PUMP	ANNI	ULAR	DEPTH FROM	TO	BORE HOLE DIA. (IN)	MATERIAL TYPE AND SIZE	AMOUNT (CUBIC FT)	METH	
EAL	SEAL	AND L PACK	85.0	0.0	6.0	Bentonite Pellets	25 sacks	Hand	Mix
5. S	GRAVE	LPACK							
							1		
	DEPT		THICK		Į.	COLOR AND TYPE OF MATERIAL ENCOUN'I DDE WATER-BEARING CAVITIES OR FRACT		WA'	TER UNG?
	FROM	TO	(F7		(INCL		UKE ZUNES)		
	0.0	16.0	16.			Caliche.		YES	☑ NO
	16.0	78.0	62.			Light brown sand.		YES	☑ NO
	78.0	85.0	7.0	J		Light brown sand w/gravel.		☐ YES	☑ NO
,								YES	□ NO
ELL								YES	□NO
)F W								YES	□NO
90						······································		YES	□NO
ICL								YES	□NO
500								☐ YES	□NO
GEOLOGIC LOG OF WELL								YES	□ NO
9.0								YES	□ NO
								☐ YES	□ NO
								☐ YES	□NO
								☐ YES	□ NO
					***************************************			☐ YES	□ NO
- [								☐ YES	□ NO
			ATTACH	ADDITION	AL PAGES AS NE	EDED TO FULLY DESCRIBE THE GEOLOGIC	LOG OF THE WELL		
0			METHOD:	BAILE	R DUMP	☐ AIR LIFT ☐ OTHER – SPECIFY:			
TIONAL INFO	WELL	TEST				ATA COLLECTED DURING WELL TESTING, AND DRAWDOWN OVER THE TESTING PERI		ME, END T	IME,
IONA	ADDITION	NAL STATEM	MENTS OR EXPL	ANATIONS:					
ADDIT									,
& AD									
7. TEST									
RE	THE UN	DERSIGN T RECOR	D OF THE AB	OVE DESC	RIBED HOLE AND	ST OF HIS OR HER KNOWLEDGE AND BELI THAT HE OR SHE WILL FILE THIS WELL R	EF, THE FOREGOING I ECORD WITH THE STA	S A TRUE A	ND EER AND
ATU			DER WITHIN	20 DAYS A	FTER COMPLETION	ON OF WELL DRILLING:			
SIGNATURE		•	H	-	-	4/20/2012			
% S.S.			SIGNATUR	E OF DRILI	LER	DATE			

FOR OSE INTERNAL USE		WELL RECORD & LOG (Version 6/9/08)
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SOIL BORING LOG Project: 42079 File No.: 42079 Date: 2/24/2012 No. SB-4 **Drilling Co.:** White Drilling Supervisor: Bo Atkins Client: CEMC Type Rig: Air Rotary Logged by: Desiree Crenshaw FIELD DATA LABORATORY TEST DATA **BORING DATA** Results Reported in mg/kg Screen Interval Water Level Photo-Sampling Total TPH (C6-C35) Ionization Depth Benzene Ethyl-benzene **Foluene** Kylenes Detection (feet) Reading (ppm) Start Time: 9:50 am Finish Time: 10:00 am Caliche 0 18.9 5 . 24.3 0 10 70.6 0 15 Light brown sand 96.2 0 20 158 0 25 204 0 30 314 0 35 333 0 40 X Water First Noted Stratification is Inferred And May Not be Exact. Soil Classification Based on Visual-Manual Procedure Sampling Interval Analyzed Sample page 1 of 2

**SOIL BORING LOG** File No.: Project: 42079 42079 Date: 2/24/2012 White Drilling No. SB-5 **Drilling Co.:** Supervisor: Bo Atkins Client: CEMC Type Rig: Air Rotary Logged by: Desiree Crenshaw LABORATORY TEST DATA FIELD DATA **BORING DATA** Results Reported in mg/kg Screen Interval Water Level Photo-Sampling Total TPH (C6-C35) Ionization Depth Toluene Ethyl-benzene Benzene Detection (feet) Reading (ppm) Start Time: 10:20 am Finish Time: 10:38 am Caliche 365 0 5 189 0 10 437 0 15 Light brown sand 868 0 20 990 0 25 627 0 30 414 0 35 411 0 40 X Water First Noted Stratification is Inferred And May Not be Exact. Soil Classification Based on Visual-Manual Procedure Sampling Interval Analyzed Sample page 1 of 2

**SOIL BORING LOG** Project: 42079 File No.: 42079 2/24/2012 Date: **Drilling Co.:** No. SB-6 White Drilling Supervisor: Bo Atkins Client: cemc Type Rig: Air Rotary Logged by: Desiree Crenshaw LABORATORY TEST DATA FIELD DATA **BORING DATA** Results Reported in mg/kg Screen Interval Water Level Photo-Total TPH (C6-C35) Ionization Depth Chlorides Benzene Ethyl-benzene **Toluene** (ylenes Detection (feet) Reading (ppm) Start Time: 10:40 am Finish Time: 11:04 am 716 0 45 297 0 50 209 0 55 10.2 0 Light Brown Sand 60 97 0 65 31 0 70 18.2 0 75 18.1 0 Light Brown Sand with gravel Total Depth = 80 feet 80 Water First Noted Sampling Interval

X

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



Analyzed Sample



**SOIL BORING LOG** File No.: Project: 42079 42079 2/24/2012 Date: White Drilling No. SB-7 **Drilling Co.:** Supervisor: Bo Atkins Client: CEMC Type Rig: Air Rotary Logged by: Desiree Crenshaw FIELD DATA LABORATORY TEST DATA **BORING DATA** Results Reported in mg/kg Screen Interval Water Level Photo-Sampling Total TPH (C6-C35) Ionization Depth Chlorides Ethyl-benzene Benzene **Foluene** (feet) Detection Reading (ppm) Start Time: 9:10 am Finish Time: 9:41 am Caliche 432 0 5 832 0 10 1,650 0 15 Light brown sand 1,500 0 20 -1,460 0 25 1,080 0 30 980 0 35 972 0 40 X Water First Noted Stratification is Inferred And May Not be Exact. Soil Classification Based on Visual-Manual Procedure Sampling Interval Analyzed Sample page 1 of 2

# ANALYTICAL REPORT

JOB NUMBER: 355329
Project ID: STATE G LEASE NM 042079

Prepared For:

Conestoga-Rovers and Associates 2135 S. Loop 250 West Midland, TX 79707

Attention: Todd Wells

Date: 06/26/2008

Signature

Name: Sachin G. Kudchadkar

Title: Project Manager III

E-Mail: sachin.kudchadkar@testamericainc.com

Date

TestAmerica Laboratories, Inc

6310 Rothway Drive Houston, TX 77040

PHONE: 713-690-4444

## SAMPLE INFORMATION

Date: 06/26/2008

Job Number:: 355329 Customer..: Conestoga-Rovers and Associates Attn....: Todd Wells

Project Number......: 99007835 Customer Project ID...: STATE G LEASE NM 042079 Project Description...: Analytical

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
355329-1	SB-4 5'	Soil	06/02/2008	14:45	06/10/2008	09:35
355329-2	SB-4 10'	Soil	06/02/2008	14:50	06/10/2008	09:35
355329-3	SB-4 15'	Soil	06/02/2008	14:55	06/10/2008	09:35
355329-4	SB-4 20'	Soil	06/02/2008	15:00	06/10/2008	09:35
355329-5	SB-4 25'	Soil	06/02/2008	15:05	06/10/2008	09:35
355329-6	SB-4 30'	Soil	06/02/2008	15:10	06/10/2008	09:35
355329-7	SB-4 35'	Soil	06/02/2008	15:15	06/10/2008	09:35
355329-8	SB-4 40'	Soil	06/02/2008	15:20	06/10/2008	09:35
355329-9	SB-4 40-42'	Soil	06/02/2008	14:25	06/10/2008	09:35
355329-10	SB-4 42-44'	Soil	06/02/2008	14:30	06/10/2008	09:35
355329-11	SB-4 44-46'	Soil	06/02/2008	14:35	06/10/2008	09:35
355329-12	SB-4 46-48'	Soil	06/02/2008	15:40	06/10/2008	09:35
355329-13	SB-4 48-50'	Soil	06/02/2008	15:45	06/10/2008	09:35

σ	1118		DT DATE/TIME TECH	06/23/08 1533 sur
Date:06/26/2008	Todd Wells		BATCH	400631
Date:0	ATTN:		UNITS	mg/Kg
			NOITUTIO	01
<b>ω</b>		): 355329-1 :: 06/10/2008 :: 09:35	R	04
RESULT	SE NM 04	Laboratory Sample ID: 355329-1 Date Received: 06/10/2008 Time Received: 09:35	MDL	
Y	: STATE G LEASE NM	Labora Date R Time R	O FLAGS	
LABORATOR	PROJECT:		SAMPLE RESULT	3550
н				
	ates		PARAMETER/TEST DESCRIPTION	
Job Number: 355329	CUSTOMER: Conestoga-Rovers and Associates	Customer Sample ID: SB-4 5' Date Sampled: 06/02/2008 Time Sampled: 14:45 Sample Matrix: Soil	PARAMETER/TES	Chloride, Soil
Job	CUSTOMER: Conesto	Customer Sa Date Sample Time Sample Sample Matr	TEST METHOD	SW-846 9056   Ch

\* In Description = Dry Wgt.

	Job Number: 355329	LABORATOR		[-7]			Date:06/26/2008	26/2008			
CUSTOMER: Cone	CUSTOMER: Conestoga-Rovers and Associates	PROJECT:	T: STATE G LEASE NM	M 04			ATTN: To	Todd Wells	v)		
Customer Date San Time San Sample M	Customer Sample ID: SB-4 10' Date Sampled: 06/02/2008 Time Sampled: 14:50 Sample Matrix: Soil		Laboratory Date Recei Time Recei	Laboratory Sample ID: 355 Date Received: 06/ Time Received: 09:	355329-2 06/10/2008 09:35						
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAGS   M	MDL	RL DIL	DILUTION	UNITS	BATCH D	DT DAT	DATE/TIME	TECH
SW-846 9056	Chloride, Soil	3780			10		mg/Kg 40	400631	06/23	06/23/08 1620 sur	ns
	* In Description = Dry Wgt.		Page 3								

			TECH	36 sur
			DATE/TIME	06/23/08 1636 sur
8	1118		占	
Date:06/26/2008	Todd Wells		BATCH	400631
Date:0	ATTN:		UNITS	mg/Kg
			DILUTION	10
vo		Laboratory Sample ID: 355329-3 Date Received: 06/10/2008 Time Received: 09:35	R	04
SOL	04	mple ID:		
것	G LEASE NM (	atory Sar Received Received	MDL	
H E S	STATE G LE	Labor Date 1 Time 1	O FTAGS	
B O K A I O K I	PROJECT: STATE		SAMPLE RESULT	4580
3			SA	
			ESCRIPTION	
329	1 Associates	1 15' 22/2008 55	PARAMETER/TEST DESCRIPTION	
Job Number: 355329	CUSTOMER: Conestoga-Rovers and Associates	Customer Sample ID: SB-4 15' Date Sampled: 06/02/2008 Time Sampled: 14:55 Sample Matrix: Soil	PARAN	Chloride, Soil
Job	nestoc	er Sar amplec amplec Matri		ੁੱਚ 
	ISTOMER: COI	Custome Date Si Time Si Sample	TEST METHOD	SW-846 9056

5329 LABORATORY TEST RESULTS Date: 06/26/2008	nd Associates PROJECT: STATE G LEASE NM 04 AITN: Todd Wells	-4 20' Laboratory Sample ID: 355329-4 /02/2008 Date Received: 06/10/2008 Time Received: 09:35	SAME	1 2360 400631 06/23/08 1651 surr
Job Number: 355329	CUSTOMER: Conestoga-Rovers and Associates	Customer Sample ID: SB-4 20' Date Sampled: 06/02/2008 Time Sampled: 15:00 Sample Matrix: Soil	PARAMETER/TEST DESCRIPTION	Chloride, Soil
	CUSTOMER: Cone	Custome: Date San Time San Sample N	TEST METHOD	SW-846 9056

Job Number: 355329	LABORATO	RY TEST	RESUL	S		Date:0	Date:06/26/2008	œ.		
CUSTOMER: Conestoga-Rovers and Associates	PROJE	PROJECT: STATE G LEASE NM	NM 04			ATTN:	Todd Wells	115		
Customer Sample ID: SB-4 25' Date Sampled: 06/02/2008 Time Sampled: 15:05 Sample Matrix: Soil		Laborator Date Rece Time Rece	y Sample II ived	Laboratory Sample ID: 355329-5 Date Received: 06/10/2008 Time Received 09:35						
TEST METHOD   PARAMETER/TEST DESCRIPTION	TION SAMPLE RESULT	O FTAGS	MDL	R	DILUTION	CILINO	BATCH	70	DATE/TIME	TECH
SW-846 9056   Chloride, Soil	2040			04	2	mg/Kg	400631	1/90	06/23/08 1707 sux	Sur
* In Description = Dry Wgt.		Page 6								

	Job Number: 355329	LABORATOR	Y TEST	RESUL	S		Date:06	Date:06/26/2008			
CUSTOMER: Cone	CUSTOMER: Conestoga-Rovers and Associates	PROJECT	PROJECT: STATE G LEA	G LEASE NM 04			ATIN:	Todd Wells	ls		
Customer Date San Time San	Customer Sample ID: SB-4 30' Date Sampled: 06/02/2008 Time Sampled: 15:10 Sample Matrix: Soil		Labora Date R Time R	tory Sample eccived	Laboratory Sample ID: 355329-6 Date Received: 06/10/2008 Time Received: 09:35						
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAGS	MDL	RL	DILUTION	UNITS	BATCH 1	DIT. DI	DATE/TIME	TECH
SW-846 9056	Chloride, Soil	1390			04	10	mg/Kg	400631	90	06/23/08 1723 sur	Sur .
	* In Description = Dry Wgt.		Page 7								

			TECH	Sur .
			DATE/TIME	06/23/08 1809 sur
	Lls		 	0
Date:06/26/2008	Todd Wells		BATCH	400631
Date:0	ATIN:		CIVILLS	mg/Kg
			DILUTION	10
ω		: 355329-7 : 06/10/2008 : 09:35	RL	04
RESULT	3 NM 04	Laboratory Sample ID: Date Received	MDL	
T E S T	PROJECT: STATE G LEASE NM	Laboratc Date Rec Time Rec	Q FLAGS	
LABORATORY	PROJECT:		SAMPLE RESULT	2200
	nd Associates	SB-4 35' 06/02/2008 15:15 Soil	PARAMETER/TEST DESCRIPTION	
Job Number: 355329	stoga-Rovers a	Customer Sample ID: SB-4 35' Date Sampled: 06/02/2008 Time Sampled: 15:15 Sample Matrix: Soil	   PAR	Chloride, Soil
	CUSTOMER: Conestoga-Rovers and Associates	Customer Date Sam Time Sam Sample M	TEST METHOD	SW-846 9056

\* In Description = Dry Wgt.

			TECH	тя	
			DATE/TIME T	06/23/08 1825 sur	
_ m	118		_ E		
Date:06/26/2008	Todd Wells		BATCH	400631	
Date:0	ATTN:		CINITIS	mg/Kg	
			DILUTION	10	
S		D: 355329-8 .: 06/10/2008 .: 09:35	R	0 4	
RESUL	G LEASE NM 04	Laboratory Sample ID: 355329-8 Date Received 06/10/2008 Time Received 09:35	MDL		
Y TEST	PROJECT: STATE G LE	Labor Date Time	Q FIAGS		Page 9
ABORATOR	PROJECT		SAMPLE RESULT	1930	
L					
Job Number: 355329	CUSTOMER: Conestoga-Rovers and Associates	Customer Sample ID: SB-4 40' Date Sampled: 06/02/2008 Time Sampled: 15:20 Sample Matrix: Soil	PARAMETER/TEST DESCRIPTION	Chloride, Soil	* In Description = Dry Wgt.
	CUSTOMER: CON	Custome: Date San Time San Sample 1	TEST METHOD	SW-846 9056	

			TECH	ms
			DATE/TIME	06/23/08 1841 sur
80	ells		占	
Date:06/26/2008	Todd Wells		BATCH	400631
Date:0	ATTN:		UNITES	mg/Kg
			DILUTION	01
S		Laboratory Sample ID: 355329-9 Date Received: 06/10/2008 Time Received: 09:35	R	0
RESULT	E NM 04	Laboratory Sample ID: Date Received	MDL	
E S S	STATE G LEASE	Laborat Date Red Time Red	O FLAGS	
ABORATORY	PROJECT: STATE		SAMPLE RESULT	1460
H				
355329	CUSTOMER: Conestoga-Rovers and Associates	SB-4 40-42' 06/02/2008 14:25 Soil	PARAMETER/TEST DESCRIPTION	oil.
Job Number: 355329	stoga-Rovers	Customer Sample ID: SB-4 40-42' Date Sampled: 06/02/2008 Time Sampled: 14:25 Sample Matrix: Soil	1 P7	Chloride, Soil
	CUSTOMER: Cone	Customer Date Sam Time Sam Sample M	TEST METHOD	SW-846 9056

Job Number: 355329	LABORATOR	E S E	D S	ю Н		Date:0	Date:06/26/2008		
CUSTOWER: Conestoga-Rovers and Associates  Customer Sample ID: SB-4 42-44'  Date Sampled: 06/02/2008  Time Sampled: 14:30  Sample Matrix Sail	PROJECT	PROJECT: STATE G LE Labor Date Time	G LEASE NM 04 Laboratory Sample ID: Date Received	ID: 355329-10 : 06/10/2008		ATTN:	Todd Wells	ls	
PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	O FIAGS	MDL	 R	DILUTION	UNITS	BATCH	DT DATE/TIME	IME TECH
Chloride, Soil	1500			40	01	mg/Kg			9
* In Description = Dry Wgt.		Page 11							

			TECH	ns sm	
			DATE/TIME	06/24/08 1923	
800	Todd Wells		H DT	4	
6/26/2	Todd		BATCH	400714	
Date:06/26/2008	ATTN:		UNITS	mg/Kg	
			DILUTION	10	
		55329-11 5/10/2008 9:35	R	04	
S		 90 90			
RESUL	SE NM 04	Laboratory Sample ID: 355329-11 Date Received: 06/10/2008 Time Received: 09:35	MDL		
TEST	PROJECT: STATE G LEASE NM	Labora Date F Time F	O FIAGS		
LABORATORY	PROJECT:		SAMPLE RESULT	066	
Job Number: 355329	CUSTOMER: Conestoga-Rovers and Associates	Customer Sample ID: SB-4 44-46' Date Sampled: 06/02/2008 Time Sampled: 14:35 Sample Matrix: Soil	PARAMETER/TEST DESCRIPTION	Chloride, Soil	
Job	onestoc	mer Sam Samplec Samplec e Matri	- I		
	CUSTOMER: C	Custa Date Time Sampl	TEST METHOD	SW-846 9056	

	Job Number: 355329	LABORATOR	YTEST	RESUL	S		Date:0	Date:06/26/2008	ω		
CUSTOMER: Cone	CUSTOMER: Conestoga-Rovers and Associates	PROJECT	PROJECT: STATE G LEASE NM	3 NM 04			ATTN:	Todd Wells	118		
Custome: Date Sar Time San Sample h	Customer Sample ID: SB-4 46-48' Date Sampled: 06/02/2008 Time Sampled: 15:40 Sample Matrix: Soil		Laborato Date Rec Time Rec	ory Sample I Seived	Laboratory Sample ID: 355329-12 Date Received: 06/10/2008 Time Received: 09:35						
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	O FIAGS	MDL	RL	DILUTION	STINO	BATCH		DATE/TIME	TECH
SW-846 9056	Chloride, Soil	1070			04	01	mg/Kg	400714	9	06/24/08 2010 sux	Sums C
	* In Description = Dry Wgt.		Page 13								

			TECH	SUE
			DATE/TIME	06/24/08 2026 sur
8	1118		E	
Date:06/26/2008	Todd Wells		BATCH	400714
Date:(	ATTN:		UNITS	mg/Kg
			DILUTION	10
S		ID: 355329-13 : 06/10/2008 : 09:35	R	04
ST RESUL	STATE G LEASE NM 04	Laboratory Sample ID: 355329-13 Date Received: 06/10/2008 Time Received: 09:35	MDL	
Y	: STATE G	La Da Ti	O FLAGS	
LABORATOR	PROJECT:		SAMPLE RESULT	1250
П				
			IPTION	
355329	CUSTOMER: Conestoga-Rovers and Associates	Customer Sample ID: SB-4 48-50' Date Sampled: 06/02/2008 Time Sampled: 15:45 Sample Matrix: Soil	PARAMETER/TEST DESCRIPTION	Soil
Job Number: 355329	stoga-Rover	Sample ID: pled pled		Chloride, Soil
	CUSTOMER: Cone	Customer Date Sar Time Sar Sample M	TEST METHOD	SW-846 9056

\* In Description = Dry Wgt.

Job Number.: 355329

Report Date.: 06/26/2008

CUSTOMER: Conestoga-Rovers and Associates PROJECT: STATE G LEASE NM 042079 ATIN: Todd Wells

Met	chod Descri	ption: Ion	Chromatography	Analysis		: 400631 4			de: BRO	
QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Limits F	Date	Time
ICV		WCS50001	19.624		20.00		98.1	90.0-110.	06/23/2008	
ICB			0						06/23/2008	
	40063121		0						06/23/2008	
LCS	40063121	WCS50001	19.799		20.00		99.0	90.0-110.	06/23/2008	
DU	355329-1		0.1361			0.1322	0.0039	0.6000	06/23/2008	
MS	355329-1	WCS49722	9.9655		10.000000	0.1322	98.3	90-110	06/23/2008	
CCV		WCS50001	19.760		20.00		98.8	90.0-110.	06/23/2008	
CCB			0						06/23/2008	
	355497-4		0.3235			0.3493	0.0258	0.6000	06/23/2008	
	355497-4	WCS49722	10.218		10.000000	0.3493	98.7	90-110	06/23/2008	
CCV		WCS50001	19.903		20.00		99.5	90.0-110.	06/23/2008	
CCB			0						06/23/2008	
	40063121		0						06/23/2008	
	40063121	WCS50001	19.820		20.00		99.1	90.0-110.	06/23/2008	
	355529-1		0			0	0	1	06/23/2008	
	355529-1	WCS49722	9.6678		10.000000	0	96.7	90-110	06/23/2008	
CCV		WCS50001	19.841		20.00		99.2	90.0-110.	06/23/2008	
CCB			0						06/24/2008	
CCV		WCS50001	19.613		20.00		98.1	90.0-110.	06/24/2008	0302
CCB			0						06/24/2008	
CCV		WCS50001	19.870		20.00		99.3	90.0-110.	06/24/2008	
CCB			0						06/24/2008	
BK			0						06/24/2008	
BK			0						06/24/2008	
BK			0						06/24/2008	
BK			0						06/24/2008	
CCV		WCS50001	19.710		20.00		98.5	90.0-110.	06/24/2008	0902
CCB			0						06/24/2008	
ICV		WCS50001	20.015		20.00		100.1	90.0-110.	06/24/2008	1820
ICB			0						06/24/2008	
	40071421		0						06/24/2008	
	40071421	WCS50001	19.666		20.00		98.3	90.0-110.	06/24/2008	
	355329-11		0.0558			0	0.0558	0.6000	06/24/2008	
	355329-11		9.8441		10.000000	0	98.4	90-110	06/24/2008	
CCV		WCS50001	19.660		20.00		98.3	90.0-110.	06/24/2008	
CCB			0						06/24/2008	
	355908-1		0			0	0	1	06/24/2008	
	355908-1	WCS49722	9.4824		10.000000	0	94.8	90-110	06/25/2008	
CCV		WCS50001	19.798		20.00		99.0	90.0-110.	06/25/2008	
CCB		*********	0		00.00		00 1	00 0 110	06/25/2008	
CCV		WCS50001	19.629		20.00		98.1	90.0-110.	06/25/2008	
CCB	05.6005.6		0			•	•		06/25/2008	
	356027-2		0		40.000000	0	0	1	06/25/2008	
	356027-2	WCS49722	9.3677	0	10.000000	0	93.7	90-110	06/25/2008	
CCV		WCS50001	19.592		20.00		98.0	90.0-110.	06/25/2008	
CCB			0						06/25/2008	0518

Job Number.: 355329

Report Date.: 06/26/2008

CUSTOMER: Conestoga-Rovers and Associates PROJECT: STATE G LEASE NM 042079

Met	thod Descrip	ption: Ion	Chromatography	Analysis		: m				: sur le.: CHL	
QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result *	Limits	F	Date	Time
ICV		WCS50001	19.455		20.00		97.3	90.0-110.	_	06/23/2008	
ICB			0							06/23/2008	
MB	40063121		0							06/23/2008	
	40063121	WCS50001	19.705		20.00		98.5	90.0-110.		06/23/2008	
DU	355329-1		35.203			35.530	0.9	20		06/23/2008	
MS	355329-1	WCS49722	42.068		10.000000	35.530	65.4	90-110			
CCV		WCS50001	19.691		20.00		98.5	90.0-110.		06/23/2008	
CCB			0							06/23/2008	
DU	355497-4		34.929			35.244	0.9	20		06/23/2008	
MS	355497-4	WCS49722	42.330		10.000000	35.244	70.9			06/23/2008	
CCV		WCS50001	19.746		20.00		98.7	90.0-110.		06/23/2008	
CCB			0							06/23/2008	
MB	40063121		0							06/23/2008	
	40063121	WCS50001	19.662		20.00		98.3	90.0-110.		06/23/2008	
DU	355529-1		7.3962			7.3392	0.8	20		06/23/2008	
MS	355529-1	WCS49722	16.909		10.000000	7.3392	95.7	90-110		06/23/2008	
CCV		WCS50001	19.746		20.00		98.7	90.0-110.		06/23/2008	
CCB		*****	0.1964		00.00		0.7. 0	00 0 110		06/24/2008	
CCV		WCS50001	19.458		20.00		97.3	90.0-110.		06/24/2008	
CCB			0		00.00		00.0	00 0 110		06/24/2008	
CCV		WCS50001	19.787		20.00		98.9	90.0-110.		06/24/2008	
CCB			0							06/24/2008	
BK			0							06/24/2008	
BK			0							06/24/2008	
BK			0							06/24/2008	
BK		F700F0001	19.597		20.00		07.6	00 0 110		06/24/2008	
CCV		WCS50001	19.512		20.00		97.6	90.0-110.		06/24/2008	
CCB		F700E0001	0.2003		20.00		07.4	00 0 110		06/24/2008	
ICV		WCS50001	19.486		20.00		97.4	90.0-110.		06/24/2008	
ICB	40071421		0.2099							06/24/2008 06/24/2008	
MB	40071421	MCCEOOO1	19.528		20.00		97.6	90.0-110.		06/24/2008	
DU	355329-11	WC550001	9.7094		20.00	9.8612	1.6	20		06/24/2008	
MS		WCS49722	19.719		10.000000	9.8612	98.6	90-110		06/24/2008	
CCV	355329-11	WCS49722 WCS50001	19.583		20.00	9.0012	97.9	90.0-110.		06/24/2008	
CCB		WC550001	0.1922		20.00		31.3	90.0-110.		06/24/2008	
	355908-1		7.4526			7.2819	2.3	20		06/24/2008	
MS	355908-1	WCS49722	16.820		10.000000	7.2819	95.4	90-110		06/25/2008	
CCV	333900-1	WCS50001	19.526		20.00	7.2019	97.6	90.0-110.		06/25/2008	
CCB		MC220001	0		20.00		37.0	50.0-110.		06/25/2008	
CCV		WCS50001	19.463		20.00		97.3	90.0-110.		06/25/2008	
CCB		11000001	0.2195		20.00		31.3	50.0-110.		06/25/2008	
DU	356027-2		0.9914			1.4367	0.4453	0.5000		06/25/2008	
MS	356027-2	WCS49722	9.3208	0.9914	10.000000	1.4367	78.8		Δ	06/25/2008	
CCV	330021 2	WCS50001	19.516	0.5514	20.00	1.4507	97.6	90.0-110.	2.1	06/25/2008	
CCB			0		20.00		2	30.0 110.		06/25/2008	

Job Number.: 355329

Report Date.: 06/26/2008

CUSTOMER: Conestoga-Rovers and Associates PROJECT: STATE G LEASE NM 042079

Met	thod Descri	ption: Ion	Chromatography	Analysis		: m				: sur e.: FL	
QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	Limits	F	Date	Time
ICV		WCS50001	8.9651		10.00		89.7	90.0-110.	G	06/23/2008	1430
ICB			0							06/23/2008	
	40063121		0							06/23/2008	
	40063121	WCS50001	9.2773		10.00	nen erenen	92.8	90.0-110.		06/23/2008	
	355329-1		0.1075			0.1088	0.0013	0.3000		06/23/2008	
	355329-1	WCS49722	1.4814		2.000000	0.1088	68.6	90-110	A	06/23/2008	
CCV		WCS50001	9.4913		10.00		94.9	90.0-110.		06/23/2008	
CCB			0							06/23/2008	
	355497-4		0			0	0	0		06/23/2008	
	355497-4	WCS49722	1.4175		2.000000	0	70.9	90-110	A	06/23/2008	
CCV		WCS50001	9.6360		10.00		96.4	90.0-110.		06/23/2008	
CCB			0							06/23/2008	2046
	40063121		0							06/23/2008	
	40063121	WCS50001	9.5985		10.00		96.0	90.0-110.		06/23/2008	
	355529-1		0.2054			0.1737	0.0317	0.3000		06/23/2008	
	355529-1	WCS49722	1.6284		2.000000	0.1737	72.7	90-110	A	06/23/2008	
CCV		WCS50001	9.8331		10.00		98.3	90.0-110.		06/23/2008	
CCB			0							06/24/2008	
CCV		WCS50001	9.7506		10.00		97.5	90.0-110.		06/24/2008	
CCB			0		40.00		00.1			06/24/2008	
CCV		WCS50001	9.8086		10.00		98.1	90.0-110.		06/24/2008	
CCB			0							06/24/2008	
BK			0							06/24/2008	
BK			0							06/24/2008	
BK			0							06/24/2008	
BK		F700F0001	0		10.00		04.0	00 0 110		06/24/2008	
CCV		WCS50001	9.4848		10.00		94.8	90.0-110.		06/24/2008	
CCB		MODE 0001	0 8.9843		10.00		89.8	90.0-110.	0	06/24/2008	
ICV ICB		WCS50001	0		10.00		89.8	90.0-110.	G	06/24/2008	
	40071421		0							06/24/2008	
	40071421	WCS50001	9.2992		10.00		93.0	90.0-110.		06/24/2008	
	355329-11	WC550001	0		10.00	0	0	0		06/24/2008	
CCV	333323-11	WCS50001	9.8669		10.00	0	98.7	90.0-110.		06/24/2008	
CCB		WC550001	0		10.00		50.7	30.0 110.		06/24/2008	
	355908-1		0.2173			0.2088	0.0085	0.3000		06/24/2008	
	355908-1	WCS49722	1.6806		2.000000	0.2088	73.6	90-110	Δ	06/25/2008	
CCV	333300 1	WCS50001	9.7836		10.00	0.2000	97.8	90.0-110.		06/25/2008	
CCB			0					2010 2201		06/25/2008	
CCV		WCS50001	9.6000		10.00		96.0	90.0-110.		06/25/2008	
CCB			0							06/25/2008	
	356027-2		0			0	0	0		06/25/2008	
	356027-2	WCS49722	1.7012	0	2.000000	0	85.1	90-110	Α	06/25/2008	
CCV		WCS50001	9.6252		10.00		96.3	90.0-110.		06/25/2008	
CCB			0							06/25/2008	

Job Number.: 355329

Report Date.: 06/26/2008

CUSTOMER: Conestoga-Rovers and Associates PROJECT: STATE G LEASE NM 042079

Me	thod Descri	ption: Ion	846 9056 Chromatography rogen, Nitrate a	Analysis as N (NO3-N)		: m			de: NO3	
QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result *	Limits F	Date	Time
ICV ICB MB	40063121	WCS50001	10.254 0 0	2	10.0		102.5	90.0-110.	06/23/2008 06/23/2008 06/23/2008	1446
	40063121 355329-1	WCS50001	10.404		10.0	0	104.0	90.0-110. 0	06/23/2008	1517
MS	355329-1	WCS49722	1.9243		2.000000	0	96.2	90-110	06/23/2008	1604
CCV CCB		WCS50001	10.374		10.0		103.7	90.0-110.	06/23/2008 06/23/2008	1754
	355497-4		0		No. of the last of	0	0	0	06/23/2008	
MS	355497-4	WCS49722	1.9491		2.000000	0	97.5	90-110	06/23/2008	
CCV CCB MB	40063121	WCS50001	10.430 0 0		10.0		104.3	90.0-110.	06/23/2008 06/23/2008 06/23/2008	2046
DU	40063121 355529-1		10.427		10.0	0.0998	104.3 0.0998	90.0-110. 0.2500	06/23/2008 06/23/2008	2117
MS	355529-1	WCS49722	1.9565		2.000000	0.0998	92.8	90-110	06/23/2008	
CCV		WCS50001	10.431		10.0		104.3	90.0-110.	06/23/2008	0009
CCV CCB CCV		WCS50001	10.288 0 10.409		10.0		102.9	90.0-110.	06/24/2008	0317
CCB BK BK BK BK			0 0 0 0				104.1	90.0-110.	06/24/2008 06/24/2008 06/24/2008 06/24/2008 06/24/2008 06/24/2008	0625 0712 0743 0815 0846
CCV CCB		WCS50001	10.427 0		10.0		104.3	90.0-110.	06/24/2008 06/24/2008	0917
ICV ICB MB	40071421	WCS50001	10.318 0 0		10.0		103.2	90.0-110.	06/24/2008 06/24/2008 06/24/2008	1836 1852
	40071421 355329-11	WCS50001	10.393 0.0999		10.0	0	103.9	90.0-110. 0.2500	06/24/2008 06/24/2008	
MS	355329-11	WCS49722	1.9777		2.000000	0	98.9	90-110	06/24/2008	1954
CCV CCB		WCS50001	10.364		10.0		103.6	90.0-110.	06/24/2008 06/24/2008	2128
DU	355908-1		0.1329			0.1456	0.0127	0.2500	06/24/2008	
MS CCV CCB	355908-1	WCS49722 WCS50001	1.9572 10.381 0		2.000000	0.1456	90.6 103.8	90-110 90.0-110.	06/25/2008 06/25/2008 06/25/2008	0020
CCV		WCS50001	10.336		10.0		103.4	90.0-110.	06/25/2008 06/25/2008	0344
DU	356027-2		0.1553			0.1785	0.0232	0.2500	06/25/2008	0415
MS CCV	356027-2	WCS49722 WCS50001	1.9608 10.322	0.1553	2.000000 10.0	0.1785	89.1 103.2	90-110 A 90.0-110.	06/25/2008 06/25/2008	
CCB			0						06/25/2008	0518

Job Number.: 355329

Report Date.: 06/26/2008

CUSTOMER: Conestoga-Rovers and Associates PROJECT: STATE G LEASE NM 042079

Met	thod Descri		846 9056 Chromatography rogen, Nitrite a		Units Batch(s)		de: NO2			
QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F	Date	Time
ICV		WCS50001	9.6569		10.0		96.6	90.0-110.	06/23/2008	
ICB			0						06/23/2008	
	40063121		0						06/23/2008	
	40063121	WCS50001	9.7997		10.0	141	98.0	90.0-110.	06/23/2008	
DU	355329-1		0			0	0	0	06/23/2008	
MS	355329-1	WCS49722	2.0621		2.000000	0	103.1	90-110	06/23/2008	
CCV		WCS50001	9.7605		10.0		97.6	90.0-110.	06/23/2008	
CCB			0						06/23/2008	
	355497-4		0			0	0	0	06/23/2008	
MS	355497-4	WCS49722	2.0512		2.000000	0	102.6	90-110	06/23/2008	
CCV		WCS50001	9.7956		10.0		98.0	90.0-110.	06/23/2008	
CCB			0						06/23/2008	
	40063121		0						06/23/2008	
	40063121	WCS50001	9.7710		10.0		97.7	90.0-110.	06/23/2008	
	355529-1		0			0	0	0	06/23/2008	
	355529-1	WCS49722	1.7881		2.000000	0	89.4	90-110 A		
CCV		WCS50001	9.7951		10.0		98.0	90.0-110.	06/23/2008	
CCB			0						06/24/2008	
CCV		WCS50001	9.6510		10.0		96.5	90.0-110.	06/24/2008	0302
CCB			0.0757						06/24/2008	
CCV		WCS50001	9.7552		10.0		97.6	90.0-110.	06/24/2008	
CCB			0						06/24/2008	0625
BK			0						06/24/2008	0712
BK			0						06/24/2008	
BK			0						06/24/2008	
BK			0						06/24/2008	0846
CCV		WCS50001	9.6575		10.0		96.6	90.0-110.	06/24/2008	0902
CCB			0						06/24/2008	
ICV		WCS50001	9.7204		10.0		97.2	90.0-110.	06/24/2008	1820
ICB			0						06/24/2008	1836
	40071421		0						06/24/2008	
	40071421	WCS50001	9.6858		10.0		96.9	90.0-110.	06/24/2008	
	355329-11		0			0	0	0	06/24/2008	
	355329-11	WCS49722	1.8418		2.000000	0	92.1	90-110	06/24/2008	
CCV		WCS50001	9.7469		10.0		97.5	90.0-110.	06/24/2008	
CCB			0						06/24/2008	
	355908-1		0			0	0	0	06/24/2008	
	355908-1	WCS49722	1.7763		2.000000	0	88.8		06/25/2008	
CCV		WCS50001	9.6992		10.0		97.0	90.0-110.	06/25/2008	
CCB			0						06/25/2008	
CCV		WCS50001	9.6595		10.0		96.6	90.0-110.	06/25/2008	
CCB			0						06/25/2008	
DU	356027-2		0			0	0	0	06/25/2008	0415
MS	356027-2	WCS49722	1.6938	0	2.000000	0	84.7	90-110 A	06/25/2008	
CCV		WCS50001	9.6543		10.0		96.5	90.0-110.	06/25/2008	0502
CCB			0						06/25/2008	0518

Job Number.: 355329

Report Date.: 06/26/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: STATE G LEASE NM 042079

Me	thod Descri	ption: Ion	Chromatography	Analysis		: 400631 4				: sur le.: SO4	
QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result *	Limits	F	Date	Time
ICV		WCS50001	19.243	7 -	20.00		96.2	90.0-110.	_	06/23/2008	
ICB			0							06/23/2008	
MB	40063121		0							06/23/2008	
LCS	40063121	WCS50001	19.225		20.00		96.1	90.0-110.		06/23/2008	
DU	355329-1		0.8904			0.9813	0.0909	0.5000		06/23/2008	1549
MS	355329-1	WCS49722	10.029		10.000000	0.9813	90.5	90-110		06/23/2008	1604
CCV		WCS50001	19.438		20.00		97.2	90.0-110.		06/23/2008	1738
CCB			0							06/23/2008	1754
DU	355497-4		0.2225			0.1875	0.0350	0.5000		06/23/2008	1943
MS	355497-4	WCS49722	9.7019		10.000000	0.1875	95.1	90-110		06/23/2008	1959
CCV		WCS50001	19.549		20.00		97.7	90.0-110.		06/23/2008	2030
CCB			0							06/23/2008	
MB	40063121		0							06/23/2008	
	40063121	WCS50001	19.695		20.00		98.5	90.0-110.		06/23/2008	
DU	355529-1	110000001	1.7846		20.00	1.7966	0.0120	0.5000		06/23/2008	
MS	355529-1	WCS49722	11.234		10.000000	1.7966	94.4	90-110		06/23/2008	
CCV	333323 1	WCS50001	19.367		20.00	1.7500	96.8	90.0-110.		06/23/2008	
CCB		WCDJOOOI	0		20.00		30.0	30.0-110.		06/24/2008	
CCV		WCS50001	19.345		20.00		96.7	90.0-110.		06/24/2008	
CCB		WC330001	0		20.00		30.7	90.0-110.		06/24/2008	
		FZCCE 0001	19.559		20.00		07.0	00 0 110		06/24/2008	
CCV		WCS50001	0		20.00		97.8	90.0-110.			
CCB										06/24/2008	
BK			0.1292							06/24/2008	
BK			0.2787							06/24/2008	
BK			0							06/24/2008	
BK			0		00.00					06/24/2008	
CCV		WCS50001	19.529		20.00		97.6	90.0-110.		06/24/2008	
CCB			0							06/24/2008	
ICV		WCS50001	18.954		20.00		94.8	90.0-110.		06/24/2008	
ICB			0							06/24/2008	
MB	40071421		0							06/24/2008	
LCS	40071421	WCS50001	19.667		20.00		98.3	90.0-110.		06/24/2008	1907
DU	355329-11		0.3445			0.2612	0.0833	0.5000		06/24/2008	1939
MS	355329-11	WCS49722	9.7946		10.000000	0.2612	95.3	90-110		06/24/2008	1954
CCV		WCS50001	19.514		20.00		97.6	90.0-110.		06/24/2008	2128
CCB			0.0340							06/24/2008	2144
DU	355908-1		29.938			30.087	0.5	20		06/24/2008	2349
MS	355908-1	WCS49722	38.074		10.000000	30.087	79.9	90-110	A	06/25/2008	0005
CCV		WCS50001	19.549		20.00		97.7	90.0-110.		06/25/2008	
CCB			0							06/25/2008	0036
CCV		WCS50001	19.384		20.00		96.9	90.0-110.		06/25/2008	
CCB			0							06/25/2008	
MS	356027-2	WCS49722	9.2607	0.7095	10.000000	0.0761	91.8	90-110		06/25/2008	
CCV		WCS50001	19.526		20.00		97.6	90.0-110.		06/25/2008	
CCB			0							06/25/2008	

#### QUALITY ASSURANCE METHODS

#### REFERENCES AND NOTES

Report Date: 06/26/2008

#### REPORT COMMENTS

- 1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.
- 2) Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.
- 3) According to 40CFR Part 136.3, pH, Chlorine Residual, and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field, (e.g. pH Field) they were not analyzed immediately, but as soon as possible on laboratory receipt.

  4) For all USACE projects, the QC limits are based on "mean +/- 2 sigma", which are the warning limits.

#### General Information:

- Cresylic Acid is the combination of o,m and p-Cresol. The combination is reported as the final result.
- m-Cresol (3-Methylphenol) and p-Cresol (4-methylphenol) co-elute. The result of the two is reported as either m&p-cresol or as 4-methylphenol (p-cresol).
- m-Xylene and p-Xylene co-elute. The result of the two is reported as m,p-Xylene.
- N-Nitrosodiphenylamine decomposes in the gas chromatograph inlet forming dipheylamine and, consequently, may be detected as diphenylamine.
- Methylene Chloride and Acetone are recognized potential laboratory contaminants. Its presence in the sample up to five times the amount reported in the blank may be attributed to laboratory contamination.
- Trimethysilyl (Diazomethane) is used to esterify acid herbicides in Method SW-846 8151A.
- For Inorganic analyses, duplicate QC limits are determined as follows: If the sample result is less than or equal to 5 times the reporting limit, the RPD limit is equal to the reporting limit. If the sample result is greater than 5 times the reporting limit, the RPD limit is the method defined RPD.
- For TRRP reports, the header on the column RL is equivalent to a MQL/PQL.
- Results for LCS and MS/MSD recoveries listed in the report are reported as ug/L on-column values which are not corrected for variables such as sample volumes or weights extracted, final volume of extracts and dilutions. To correct QC on-column recoveries to reflect actual spiking volumes for soils, mutltiply the values reported for Diesel Range Organics and Semivolatiles by 33.3 and Gasoline Range Organics by 20. The 8260 and 1006 results will not require correction. The only corection required for water analysis is for method 1006 where the reported concentration must be multiplied by 0.1.
- Due to limitiation of the reporting software, results for the Method blank in the Semivolatile fraction are reported as "O". Which indicates there was no compound detected at the reporting limit for the compound reveiwed.
- The dilution factor listed on the report represents only the analytical dilutions necessary for the target compounds to be within the calibration range of the instrument. It does not include any preparation factors, dry weight or any other adjustment.

#### Explanation of Qualifiers:

- U This qualifier indicates that the analyte was analyzed but not detected.
- J (Organics only) This qualifier indicates that the analyte is an estimated value between the RL and the MDT.
- B (Inorganics only) This Qualifier indicates that the analyte is an estimated value between the RL and the MDL.
- ${\tt N}$  (Organics only) This flag indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic charachterization of a TIC, such as "chlorinated hydrocarbon", the "N" flag is not used.

#### Explanation of General QC Outliers:

- A Matrix interference present in sample.
- a MS/MSD analyses yielded comparable poor recoveries, indicating a possible matrix interference. Method performance is demonstrated by acceptable LCS recoveries.
- b Target analyte was found in the method blank.
- M QC sample analysis yielded recoveries outside QC acceptance criteria. This sample was reanalyzed.
- L ICS analysis yielded high recoveries, indicating a potential high bias. No target analytes were

#### QUALITY ASSURANCE METHODS

#### REFERENCES AND NOTES

Report Date: 06/26/2008

observed above the RL in the associated samples.

- G Marginal outlier within 1% of acceptance criteria.
- r RPD value is outside method acceptance criteria.
- C Poor RPD values observed due to the non-homogenous nature of the sample.
- O Sample required dilution due to matrix interference.
- D Sample reported from a dilution.
- d Spike and/or surrogate diluted.
- E The reported concentration exceeds the instrument calibration.
- F The analyte is outside QC limits and was not detected in any associated samples in the analytical batch.
- H Continuing Calibration Verification (CCV) standard is not associated with the samples reported.
- q See the subcontract final report for qualifier explanation.
- W The MS/MSD recoveries are outside QC acceptance criteria because the amount spiked is much less than the amount found in the sample.
- K High recovery will not affect the quality of reported results.
- Z See case narrative.

#### Explanation of Organic QC Outliers:

- e Method blank analysis yielded phthalate concentrations above the RL. Phthlates are recognized potential laboratory contaminants. Its presence in the sample up to five times the amount reported in the blank may be attributed to laboratory contamination.
- S Sample reanalyzed/reextracted due to poor surrogate recovery. Reanalysis confirmed original analysis indicating a possible matrix interference.
- T Sample analysis yielded poor surrogate recovery.
- R The RPD between the two GC columns is greater than 40% and no anomalies are present. The higher result is reported as per EPA Method 8000B.
- I The RPD between the two GC columns is greater than 40% and anomalies are present. The lower of the two results has been reported.
- X Gaseous compound. In-house QC limits are advisory.
- Y Ketone compounds have poor purge efficiency. In-house QC limits are advisory.
- f Surrogate not associated with reported analytes.

#### Explanation of Inorganic QC Outliers:

- Q Method blank analysis yielded target analytes above the RL. Associated sample results are greater than 10 times the concentrations observed in the method blank.
- V The RPD control limit for sample results less than 5 times the RL is +/- the RL value. Sample and duplicate results are within method acceptance criteria.
- e Serial dilution failed due to matrix interference.
- g Sample result quantitated by Method of Standard Additions (MSA) due to the analytical spike recovery being below 85 percent. The correlation coefficent for the MSA is greater than or equal to 0.995.
- s BOD/CBOD seed value is not within method acceptance criteria. Due to the nature of the test method, the sample cannot be reanalyzed.
- 1 BOD/cBOD LCS value is not within method acceptance criteria. Due to the nature of the test method, sample cannot be reanalyzed.
- N Spiked sample recovery is not within control limits.
- n Sample result quantitated by Method of Standard Additions (MSA) due to the analytical spike recovery being below 85 percent. The correlation coefficient for the MSA is less than 0.995.
- \* Duplicate analysis is not within control limits.

#### Abbreviations:

- Batch Designation given to identify a specific extraction, digestion, preparation, or analysis set.
- CCV Continuing Calibration Verification
- CRA Low level standard check GFAA, Mercury
- CRI Low level standard check ICP
- Dil Fac Dilution Factor Secondary dilution analysis

#### QUALITY ASSURANCE METHODS

#### REFERENCES AND NOTES

Report Date: 06/26/2008

DLFac - Detection Limit Factor

DU - Duplicate

EB - Extraction Blank (TCLP, SPLP, etc.)

ICAL - Initial Calibration

ICB - Initial Calibration Blank

ICV - Initial Calibration Verification
ISA - Interference Check Sample A - ICP
ISB - Interference Check Sample B - ICP
ICD - Laboratory Control Duplicate
- Laboratory Control Sample

MB - Method Blank
MD - Method Duplicate

MDL - Method Detection Limit

MQL - Method Quantitation Limit (TRRP)

MS - Matrix Spike

MSD - Matrix Spike Duplicate

ND - Not Detected
PB - Preparation Blank
PREPF - Preparation Factor
RL - Reporting Limit

RPD - Relative Percent Difference RRF - Relative Response Factor

RT - Retention Time

SQL - Sample Quantitation Limit (TRRP) TIC - Tentatively Identified Compound

#### Method References:

- (1) EPA 600/4-79-020 Methods for the Analysis of Water and Wastes, March 1983.
- (2) EPA 600/R-94-111 Methods for the Determination of MEtals in Environmental Samples, Supplement I, May 1994.
- (3) EPA SW846 Test Methods for Evaluating Solid Waste, Third Edition, September 1986; Update I July 1992; Update II, September 1994, Update IIA August 1993; Update IIB, January 1995; Update III, December 1996, Update IVA January 1998, Update IVB November 2000.
- (4) Standard Methods for the Examination of Water and Wastewater, 16th Edition (1985), 17th Edition (1989), 18th Edition (1992), 19th Edition (1995), 20th Edition (1998).
- (5) HACH Water Analysis Handbook 3rd Edition (1997).
- (6) Federal Register, July 1, 1990 (40 CFR Part 136 Appendix A).
- (7) Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, 2nd Edition, January 1997.
- (9) Diagnosis and Improvement of Saline and Alkali Soils, Agriculture Handbook No. 60, United States Department of Agriculture, 1954.

## LABORATORY CHRONICLE

Job Number: 355329

Date: 06/26/2008

	Client ID: SB-4 5'	Date Re	cvd: 06/	/10/2008	Sample	Date: 06/02/2008	
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT	#(S)	DATE/TIME ANALYZED	DILUTIO
SW-846 9056	DESCRIPTION Ion Chromatography Analysis	1	400631			06/23/2008 1533	10
ab ID: 355329-2	Client ID: SB-4 10' DESCRIPTION Ion Chromatography Analysis	Date Re	cvd: 06/	10/2008	Sample	Date: 06/02/2008	
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT	#(S)	DATE/TIME ANALYZED	DILUTIO
SW-846 9056	Ion Chromatography Analysis	1	400631			06/23/2008 1620	10
ab ID: 355329-3	Client ID: SB-4 15'	Date Re	cvd: 06/	/10/2008	Sample	Date: 06/02/2008	
METHOD	DESCRIPTION					DATE/TIME ANALYZED	DILUTIO
SW-846 9056	DESCRIPTION Ion Chromatography Analysis	1	400631			06/23/2008 1636	10
	Client ID: SB-4 20'	Date Pe	ard: 06/	/10/2008	Sample	Date: 06/02/2008	
						DATE/TIME ANALYZED	DILUTIO
SW-846 9056	DESCRIPTION Ion Chromatography Analysis	1	400631		11 (0)	06/23/2008 1651	10
		Data Da		/10/2000	01-	Data - 06/02/2000	
WEALOU	DESCRIPTION SB-4 25	Date Re	EVA: U6/	T0/2008	#(g)	Date: 06/02/2008	DILUTIO
SW-846 9056	Client ID: SB-4 25' DESCRIPTION Ion Chromatography Analysis	1	400631	FREE DI	# (5)	DATE/TIME ANALYZED 06/23/2008 1707	10
		7	1,			20,20,200	
ab ID: 355329-6	Client ID: SB-4 30'	Date Re	cvd: 06/	10/2008	Sample	Date: 06/02/2008	
METHOD	DESCRIPTION Ion Chromatography Analysis	RUN#	BATCH#	PREP BT	#(S)	DATE/TIME ANALYZED	DILUTION 10
		1	400631			06/23/2008 1723	10
ab ID: 355329-7	Client ID: SB-4 35'	Date Re	cvd: 06/	10/2008	Sample	Date: 06/02/2008	
MHTH()()	DESCRIPTION	RUN#	BATCH#	BEEL RI.	#(S)	DATE/TIME ANALYZED	DILUTIO
SW-846 9056	Ion Chromatography Analysis	1	400631			06/23/2008 1809	10
ab ID: 355329-8	Client ID: SB-4 40' DESCRIPTION	Date Re	cvd: 06/	10/2008	Sample	Date: 06/02/2008	
		RUN#	BATCH#	PREP BT	#(S)	DATE/TIME ANALYZED 06/23/2008 1825	DILUTIO
SW-846 9056	Ion Chromatography Analysis	1	400631			06/23/2008 1825	10
ab ID: 355329-9	Client ID: SB-4 40-42'	Date Re	cvd: 06/	10/2008	Sample	Date: 06/02/2008	
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT	#(S)	DATE/TIME ANALYZED	DILUTIO
SW-846 9056	Ion Chromatography Analysis	1	400631			06/23/2008 1841	10
ab ID: 355329-10	Client ID: SB-4 42-44'	Date Re	cvd: 06/	10/2008	Sample	Date: 06/02/2008	
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT	#(S)	DATE/TIME ANALYZED	DILUTI
SW-846 9056	Ion Chromatography Analysis	1	400631			06/23/2008 1856	10
ab ID: 355329-11	Client ID: SB-4 44-46'	Date Re	cvd: 06/	10/2008	Sample	Date: 06/02/2008	
METHOD		RUN#	BATCH#	PREP BT	#(S)	DATE/TIME ANALYZED	DILUTI
SW-846 9056	Ion Chromatography Analysis	1	400714			06/24/2008 1923	10
h TD: 355320_12	Client ID: SB-4 46-48'	Date Po	mrd: 06/	/10/2009	Samole	Date: 06/02/2008	
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT	#(S)	DATE/TIME ANALYZED	DILUTIO
	Ion Chromatography Analysis	1	400714			06/24/2008 2010	10
n TD: 255220 12	Client ID: SB-4 48-50'	Data Pa	mrd. 064	110/2009	Camala	Date: 06/02/2008	
	DESCRIPTION	Date Ke	BATTOU#	T0\\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	#(S)	DATE/TIME ANALYZED	DILUTI
SW-846 9056	Ion Chromatography Analysis	LOIVI	DUTCUH	LLOT DI	11 (0)	PUTENTINE WANTINED	DITIOLI

## **Analytical Report 437672**

for

## **Conestoga Rovers & Associates**

**Project Manager: Desiree Crenshaw** 

State G

042079

08-MAR-12

Collected By: Client



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



### 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)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALII), West Virginia (362), Kentucky (85) Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

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

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

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

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

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





08-MAR-12

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

Reference: XENCO Report No: 437672

State G

Project Address: New Mexico

### **Desiree Crenshaw:**

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 437672. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 437672 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

**Brent Barron II** 

Odessa Laboratory Manager

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

Certified and approved by numerous States and Agencies.

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

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### **Sample Cross Reference 437672**



### Conestoga Rovers & Associates, Midland, TX

State G

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB-4 0-5'	S	02-24-12 09:52	0 - 5 ft	437672-001
SB-4 5-10'	S	02-24-12 09:53	5 - 10 ft	437672-002
SB-4 10-15'	S	02-24-12 09:55	10 - 15 ft	437672-003
SB-4 15-20'	S	02-24-12 09:56	15 - 20 ft	437672-004
SB-4 20-25'	S	02-24-12 09:57	20 - 25 ft	437672-005
SB-4 25-30'	S	02-24-12 09:58	25 - 30 ft	437672-006
SB-4 30-35'	S	02-24-12 10:00	30 - 35 ft	437672-007
SB-4 35-40'	S	02-24-12 10:01	35 - 40 ft	437672-008
SB-4 40-45'	S	02-24-12 10:02	40 - 45 ft	437672-009
SB-4 45-50'	S	02-24-12 10:03	45 - 50 ft	437672-010
SB-4 50-55'	S	02-24-12 10:05	50 - 55 ft	437672-011
SB-4 55-60'	S	02-24-12 10:06	55 - 60 ft	437672-012
SB-4 60-65'	S	02-24-12 10:07	60 - 65 ft	437672-013
SB-4 65-70'	S	02-24-12 10:08	65 - 70 ft	437672-014
SB-4 70-75'	S	02-24-12 10:09	70 - 75 ft	437672-015
SB-4 75-80'	S	02-24-12 10:10	75 - 80 ft	437672-016
SB-5 0-5'	S	02-24-12 10:15	0 - 5 ft	437672-017
SB-5 5-10'	S	02-24-12 10:17	5 - 10 ft	437672-018
SB-5 10-15'	S	02-24-12 10:19	10 - 15 ft	437672-019
SB-5 15-20'	S	02-24-12 10:22	15 - 20 ft	437672-020
SB-5 20-25'	S	02-24-12 10:23	20 - 25 ft	437672-021
SB-5 25-30'	S	02-24-12 10:24	25 - 30 ft	437672-022
SB-5 30-35'	S	02-24-12 10:25	30 - 35 ft	437672-023
SB-5 35-40'	S	02-24-12 10:27	35 - 40 ft	437672-024
SB-5 40-45'	S	02-24-12 10:29	40 - 45 ft	437672-025
SB-5 45-50'	S	02-24-12 10:30	45 - 50 ft	437672-026
SB-5 50-55'	S	02-24-12 10:31	50 - 55 ft	437672-027
SB-5 55-60'	S	02-24-12 10:33	55 - 60 ft	437672-028
SB-5 60-65'	S	02-24-12 10:34	60 - 65 ft	437672-029
SB-5 65-70'	S	02-24-12 10:35	65 - 70 ft	437672-030
SB-5 70-75'	S	02-24-12 10:36	70 - 75 ft	437672-031
SB-5 75-80'	S	02-24-12 10:38	75 - 80 ft	437672-032
SB-6 0-5'	S	02-24-12 10:46	0 - 5 ft	437672-033
SB-6 5-10'	S	02-24-12 10:47	5 - 10 ft	437672-034
SB-6 10-15'	S	02-24-12 10:48	10 - 15 ft	437672-035
SB-6 15-20'	S	02-24-12 10:49	15 - 20 ft	437672-036
SB-6 20-25'	S	02-24-12 10:51	20 - 25 ft	437672-037
SB-6 25-30'	S	02-24-12 10:52	25 - 30 ft	437672-038
SB-6 30-35'	S	02-24-12 10:53	30 - 35 ft	437672-039
SB-6 35-40'	S	02-24-12 10:54	35 - 40 ft	437672-040
SB-6 40-45'	S	02-24-12 10:55	40 - 45 ft	437672-041
SB-6 45-50'	S	02-24-12 10:57	45 - 50 ft	437672-042
SB-6 50-55'	S	02-24-12 10:58	50 - 55 ft	437672-043



### **Sample Cross Reference 437672**



### Conestoga Rovers & Associates, Midland, TX

### State G

SB-6 55-60'	S	02-24-12 10:59	55 - 60 ft	437672-044
SB-6 60-65'	S	02-24-12 11:00	60 - 65 ft	437672-045
SB-6 65-70'	S	02-24-12 11:01	65 - 70 ft	437672-046
SB-6 70-75'	S	02-24-12 11:02	70 - 75 ft	437672-047
SB-6 75-80'	S	02-24-12 11:04	75 - 80 ft	437672-048
SB-7 0-5'	S	02-24-12 09:17	0 - 5 ft	437672-049
SB-7 5-10'	S	02-24-12 09:18	5 - 10 ft	437672-050
SB-7 10-15'	S	02-24-12 09:22	10 - 15 ft	437672-051
SB-7 15-20'	S	02-24-12 09:26	15 - 20 ft	437672-052
SB-7 20-25'	S	02-24-12 09:27	20 - 25 ft	437672-053
SB-7 25-30'	S	02-24-12 09:29	25 - 30 ft	437672-054
SB-7 30-35'	S	02-24-12 09:30	30 - 35 ft	437672-055
SB-7 35-40'	S	02-24-12 09:31	35 - 40 ft	437672-056
SB-7 40-45'	S	02-24-12 09:32	40 - 45 ft	437672-057
SB-7 45-50'	S	02-24-12 09:33	45 - 50 ft	437672-058
SB-7 50-55'	S	02-24-12 09:33	50 - 55 ft	437672-059
SB-7 55-60'	S	02-24-12 09:34	55 - 60 ft	437672-060
SB-7 60-65'	S	02-24-12 09:19	60 - 65 ft	437672-061
SB-7 65-70'	S	02-24-12 09:20	65 - 70 ft	437672-062
SB-7 70-75'	S	02-24-12 09:21	70 - 75 ft	437672-063
SB-7 75-80'	S	02-24-12 09:22	75 - 80 ft	437672-064





Client Name: Conestoga Rovers & Associates

Project Name: State G



Project ID: 042079 Report Date: 08-MAR-12 Work Order Number: 437672 Date Received: 02/27/2012

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None



**Project Id: 042079** 

Project Location: New Mexico

# Certificate of Analysis Summary 437672

Conestoga Rovers & Associates, Midland, TX

Project Name: State G

Date Received in Lab: Mon Feb-27-12 10:59 am

Project Manager: Brent Barron II 08-MAR-12 Report Date:

					right manager. Didni Danon in	DIGHT DAILOH II	
	Lab Id:	437672-001	437672-002	437672-003	437672-004	437672-005	437672-006
Analysis Dogwootod	Field Id:	SB-4 0-5'	SB-4 5-10'	SB-4 10-15'	SB-4 15-20'	SB-4 20-25'	SB-4 25-30'
naisan wednesien	Depth:	0-5 ft	5-10 ft	10-15 ft	15-20 ft	20-25 ft	25-30 ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Feb-24-12 09:52	Feb-24-12 09:53	Feb-24-12 09:55	Feb-24-12 09:56	Feb-24-12 09:57	Feb-24-12 09:58
Anions by E300	Extracted:						
	Analyzed:	Mar-05-12 10:01	Mar-05-12 10:01	Mar-05-12 10:01	Mar-05-12 10:01	Mar-05-12 10:01	Mar-05-12 10:01
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		18.9 4.67	24.3 4.63	70.6 4.59	96.2 4.48	158 4.49	204 4.46
Percent Moisture	Extracted:						
	Analyzed:	Feb-27-12 14:55	Feb-27-12 14:55	Feb-27-12 14:55	Feb-27-12 14:55	Feb-27-12 14:55	Feb-27-12 14:55
	Units/RL:	% RL	% RL	% RL	% RL	% RL	% RL
Percent Moisture		10.1 1.00	9.33 1.00	8.56 1.00	6.27 1.00	6.50 1.00	5.74 1.00

Odessa Laboratory Manager Brent Barron II

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Project Id: 042079

Project Location: New Mexico

# Certificate of Analysis Summary 437672

Conestoga Rovers & Associates, Midland, TX

Project Name: State G

Date Received in Lab: Mon Feb-27-12 10:59 am

Report Date: 08-MAR-12

						Project Manager: Brent Barron II	Brent Barron II	
	Lab Id:	437672-007		437672-008	437672-009	437672-010	437672-011	437672-012
Amalucie Dogwood	Field Id:	SB-430-35'		SB-435-40'	SB-4 40-45'	SB-4 45-50'	SB-4 50-55'	SB-455-60'
Anutysis nequesieu	Depth:	30-35 ft		35-40 ft	40-45 ft	45-50 ft	50-55 ft	55-60 ft
	Matrix:	SOIL		SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Feb-24-12 10:00	00	Feb-24-12 10:01	Feb-24-12 10:02	Feb-24-12 10:03	Feb-24-12 10:05	Feb-24-12 10:06
Anions by E300	Extracted:							
	Analyzed:	Mar-05-12 10:01	01	Mar-05-12 10:01	Mar-05-12 10:01	Mar-05-12 10:01	Mar-05-12 10:01	Mar-05-12 10:01
	Units/RL:	mg/kg	RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		314	86.8	333 8.88	357 8.86	326 8.82	370 8.99	279 4.46
Percent Moisture	Extracted:							
	Analyzed:	Feb-27-12 14:55	55	Feb-27-12 14:55	Feb-27-12 14:55	Feb-27-12 14:55	Feb-27-12 14:55	Feb-27-12 15:05
	Units/RL:	%	RL	% RL	% RL	% RL	% RL	% RL
Percent Moisture		6.43	1.00	5.45 1.00	5.18 1.00	4.77 1.00	6.60 1.00	5.91 1.00

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Project Id: 042079

Project Location: New Mexico

# Certificate of Analysis Summary 437672

Conestoga Rovers & Associates, Midland, TX

Project Name: State G

Date Received in Lab: Mon Feb-27-12 10:59 am

Project Manager: Brent Barron II Report Date: 08-MAR-12

	Lab Id:	437672-013	437672-014	437672-015	437672-016	437672-017	437672-018
Analysis Ponnostod	Field Id:	SB-4 60-65'	SB-4 65-70'	SB-4 70-75'	SB-4 75-80'	SB-5 0-5'	SB-5 5-10'
Armiton wednesden	Depth:	£ 59-09	65-70 ft	70-75 ft	75-80 ft	0-5 ft	5-10 ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Feb-24-12 10:07	Feb-24-12 10:08	Feb-24-12 10:09	Feb-24-12 10:10	Feb-24-12 10:15	Feb-24-12 10:17
Anions by E300	Extracted:						
	Analyzed:	Mar-05-12 10:01	Mar-05-12 10:01	Mar-05-12 10:01	Mar-05-12 10:01	Mar-06-12 09:36	Mar-06-12 09:36
	Units/RL:	mg/kg RL					
Chloride		291 4.46	371 8.87	414 8.83	395 8.74	365 9.00	189 9.16
Percent Moisture	Extracted:						
	Analyzed:	Feb-27-12 15:05	Feb-27-12 15:05	Feb-27-12 15:05	Feb-27-12 15:05	Feb-27-12 15:11	Feb-27-12 15:11
	Units/RL:	% RL					
Percent Moisture		5.77 1.00	5.32 1.00	4.86 1.00	3.91 1.00	6.71 1.00	8.33 1.00

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**Project Id:** 042079

Project Location: New Mexico

# Certificate of Analysis Summary 437672

Conestoga Rovers & Associates, Midland, TX

Project Name: State G



Date Received in Lab: Mon Feb-27-12 10:59 am

Report Date: 08-MAR-12

					Project Manager: Brent Barron II	Brent Barron II	
	Lab Id:	437672-019	437672-020	437672-021	437672-022	437672-023	437672-024
Analysis Ponnoctod	Field Id:	SB-5 10-15'	SB-5 15-20'	SB-5 20-25'	SB-5 25-30'	SB-5 30-35'	SB-5 35-40'
naisan hay sishmit	Depth:	10-15 ft	15-20 ft	20-25 ft	25-30 ft	30-35 ft	35-40 ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Feb-24-12 10:19	Feb-24-12 10:22	Feb-24-12 10:23	Feb-24-12 10:24	Feb-24-12 10:25	Feb-24-12 10:27
Anions by E300	Extracted:						
	Analyzed:	Mar-06-12 09:36	Mar-06-12 09:36	Mar-06-12 09:36	Mar-06-12 09:36	Mar-06-12 09:36	Mar-06-12 09:36
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		437 9.25	868 18.1	990 18.0	627 8.89	414 8.91	411 8.91
Percent Moisture	Extracted:						
	Analyzed:	Feb-27-12 15:11	Feb-27-12 15:11	Feb-27-12 15:11	Feb-27-12 15:11	Feb-27-12 15:11	Feb-27-12 15:11
	Units/RL:	% RL	% RL	% RL	% RL	% RL	% RL
Percent Moisture		9.20 1.00	7.07 1.00	6.42 1.00	5.52 1.00	5.77 1.00	5.68 1.00

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**Project Id: 042079** 

Project Location: New Mexico

# Certificate of Analysis Summary 437672

Conestoga Rovers & Associates, Midland, TX

Project Name: State G

Date Received in Lab: Mon Feb-27-12 10:59 am

Project Manager: Brent Barron II Report Date: 08-MAR-12

					The state of the s	***************************************	
	Lab Id:	437672-025	437672-026	437672-027	437672-028	437672-029	437672-030
Amalucis Ponnoctod	Field Id:	SB-5 40-45'	SB-5 45-50'	SB-5 50-55'	SB-5 55-60'	SB-5 60-65'	SB-5 65-70'
micanhara reducien	Depth:	40-45 ft	45-50 ft	50-55 ft	55-60 ft	60-65 ft	65-70 ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Feb-24-12 10:29	Feb-24-12 10:30	Feb-24-12 10:31	Feb-24-12 10:33	Feb-24-12 10:34	Feb-24-12 10:35
Anions by E300	Extracted:						
	Analyzed:	Mar-06-12 09:36	Mar-06-12 09:36	Mar-06-12 09:36	Mar-06-12 09:36	Mar-06-12 09:36	Mar-06-12 09:36
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		373 4.42	380 4.43	641 9.01	500 8.88	463 8.90	398 8.84
Percent Moisture	Extracted:						
	Analyzed:	Feb-28-12 11:05	Feb-28-12 11:05	Feb-28-12 11:05	Feb-28-12 11:05	Feb-28-12 11:05	Feb-28-12 11:05
	Units/RL:	% RL	% RL	% RL	% RL	% RL	% RL
Percent Moisture		4.97 1.00	5.21 1.00	6.74 1.00	5.45 1.00	5.67 1.00	5.01 1.00

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**Project Id:** 042079

Project Location: New Mexico

# Certificate of Analysis Summary 437672

Conestoga Rovers & Associates, Midland, TX

Project Name: State G

Date Received in Lab: Mon Feb-27-12 10:59 am

Project Manager: Brent Barron II Report Date: 08-MAR-12

					Tologo in manufact in the control in	DIAME DELL'ALL	
	Lab Id:	437672-031	437672-032	437672-033	437672-034	437672-035	437672-036
Andlucis Ronnoctod	Field Id:	SB-5 70-75'	SB-5 75-80'	SB-6 0-5'	SB-6 5-10'	SB-6 10-15'	SB-6 15-20'
riemitoro rechmerem	Depth:	70-75 ft	75-80 ft	0-5 ft	5-10 ft	10-15 ft	15-20 ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Feb-24-12 10:36	Feb-24-12 10:38	Feb-24-12 10:46	Feb-24-12 10:47	Feb-24-12 10:48	Feb-24-12 10:49
Anions by E300	Extracted:						
	Analyzed:	Mar-06-12 09:36	Mar-06-12 09:36	Mar-07-12 15:50	Mar-07-12 15:50	Mar-07-12 15:50	Mar-07-12 15:50
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		428 8.82	365 8.73	1110 17.6	1530 18.1	1170 18.1	965 8.93
Percent Moisture	Extracted:						
	Analyzed:	Feb-28-12 11:05	Feb-28-12 11:05	Feb-28-12 11:05	Feb-28-12 11:05	Feb-28-12 11:05	Feb-28-12 11:05
	Units/RL:	% RL	% RL	% RL	% RL	% RL	% RL
Percent Moisture		4.77 1.00	3.77 1.00	4.77 1.00	7.20 1.00	7.00 1.00	5.97 1.00

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**Project Id: 042079** 

Project Location: New Mexico

# Certificate of Analysis Summary 437672

Conestoga Rovers & Associates, Midland, TX

Project Name: State G

Date Received in Lab: Mon Feb-27-12 10:59 am

Report Date: 08-MAR-12

Project Manager: Brent Barron II

					The state of the s	THE PART OF THE	
	Lab Id:	437672-037	437672-038	437672-039	437672-040	437672-041	437672-042
Analysis Dogwood	Field Id:	SB-6 20-25'	SB-6 25-30'	SB-6 30-35'	SB-6 35-40'	SB-6 40-45'	SB-6 45-50'
markets wednesten	Depth:	20-25 ft	25-30 ft	30-35 ft	35-40 ft	40-45 ft	45-50 ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Feb-24-12 10:51	Feb-24-12 10:52	Feb-24-12 10:53	Feb-24-12 10:54	Feb-24-12 10:55	Feb-24-12 10:57
Anions by E300	Extracted:						
	Analyzed:	Mar-07-12 15:50	Mar-07-12 15:50	Mar-07-12 15:50	Mar-07-12 15:50	Mar-07-12 15:50	Mar-08-12 00:15
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1040 18.0	857 8.81	886 8.82	934 8.90	716 8.83	297 4.37
Percent Moisture	Extracted:						
	Analyzed:	Fcb-28-12 11:05	Feb-28-12 11:05	Feb-28-12 11:05	Feb-28-12 11:05	Feb-28-12 11:05	Feb-28-12 11:05
	Units/RL:	% RL	% RL	% RL	% RL	% RL	% RL
Percent Moisture		6.46 1.00	4.64 1.00	4.76 1.00	5.65 1.00	4.83 1.00	3.91 1.00

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Project Id: 042079

Project Location: New Mexico

# Certificate of Analysis Summary 437672

Conestoga Rovers & Associates, Midland, TX

Project Name: State G

Date Received in Lab: Mon Feb-27-12 10:59 am

Report Date: 08-MAR-12
Project Manager: Brent Barron II

					rioject Manager: Dient Danon II	DICHE DAILOH II	
	Lab Id:	437672-043	437672-044	437672-045	437672-046	437672-047	437672-048
Analysis Pomostod	Field Id:	SB-6 50-55'	SB-6 55-60'	SB-6 60-65'	SB-6 65-70'	SB-6 70-75'	SB-6 75-80'
maison wednesden	Depth:	50-55 ft	55-60 ft	60-65 ft	65-70 ft	70-75 ft	75-80 ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Feb-24-12 10:58	Feb-24-12 10:59	Feb-24-12 11:00	Feb-24-12 11:01	Feb-24-12 11:02	Feb-24-12 11:04
Anions by E300	Extracted:						
	Analyzed:	Mar-08-12 00:15	Mar-08-12 00:15	Mar-08-12 00:15	Mar-08-12 00:15	Mar-08-12 00:15	Mar-08-12 00:15
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		209 4.47	10.2 4.44	97.0 4.45	31.0 4.41	18.2 4.42	18.1 4.37
Percent Moisture	Extracted:						
	Analyzed:	Feb-28-12 11:05	Feb-28-12 11:05	Feb-28-12 11:30	Feb-28-12 11:30	Feb-28-12 11:30	Feb-28-12 11:30
	Units/RL:	% RL	% RL	% RL	% RL	% RL	% RL
Percent Moisture		6.07 1.00	5.49 1.00	5.63 1.00	4.77 1.00	4.99 1.00	3.86 1.00

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Project Id: 042079

Project Location: New Mexico

### Certificate of Analysis Summary 437672 Conestoga Rovers & Associates, Midland, TX

Project Name: State G

Date Received in Lab: Mon Feb-27-12 10:59 am

Project Manager: Brent Barron II Report Date: 08-MAR-12

					1 loject Mallagel. Dient Dallon II	DICHT DAILOH II	
	Lab Id:	437672-049	437672-050	437672-051	437672-052	437672-053	437672-054
Amalunia Donnachod	Field Id:	SB-7 0-5'	SB-75-10'	SB-7 10-15'	SB-7 15-20'	SB-7 20-25'	SB-7 25-30'
Analysis nequesieu	Depth:	0-5 ft	5-10 ft	10-15 ft	15-20 ft	20-25 ft	25-30 ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Feb-24-12 09:17	Feb-24-12 09:18	Feb-24-12 09:22	Feb-24-12 09:26	Feb-24-12 09:27	Feb-24-12 09:29
Anions by E300	Extracted:						
	Analyzed:	Mar-08-12 00:15	Mar-08-12 00:15	Mar-08-12 00:15	Mar-08-12 00:15	Mar-08-12 00:15	Mar-08-12 00:15
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		432 8.80	832 8.84	1650 18.2	1500 17.9	1460 17.9	1080 17.7
Percent Moisture	Extracted:						
	Analyzed:	Feb-28-12 12:30	Feb-28-12 12:30	Feb-28-12 12:30	Feb-28-12 12:30	Feb-28-12 12:30	Feb-28-12 12:30
	Units/RL:	% RL	% RL	% RL	% RL	% RL	% RL
Percent Moisture		4.53 1.00	4.95 1.00	7.60 1.00	5.99 1.00	6.08 1.00	4.93 1.00

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**Project Id:** 042079

Project Location: New Mexico

# Certificate of Analysis Summary 437672

Conestoga Rovers & Associates, Midland, TX

Project Name: State G

Date Received in Lab: Mon Feb-27-12 10:59 am

Report Date: 08-MAR-12 Project Manager: Brent Barron II

	Lab Id:	437672-055	437672-056	437672-057	437672-058	437672-059	437672-060
Analysis Ponnostod	Field Id:	SB-730-35'	SB-7 35-40'	SB-7 40-45'	SB-7 45-50'	SB-7 50-55'	SB-7 55-60'
Time Para Archaeaca	Depth:	30-35 ft	35-40 ft	40-45 ft	45-50 ft	50-55 ft	55-60 ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Feb-24-12 09:30	Feb-24-12 09:31	Feb-24-12 09:32	Feb-24-12 09:33	Feb-24-12 09:33	Feb-24-12 09:34
Anions by E300	Extracted:						
	Analyzed:	Mar-08-12 00:15					
	Units/RL:	mg/kg RL					
Chloride		980 8.83	972 8.86	1000 17.7	975 8.82	1310 17.9	1190 17.9
Percent Moisture	Extracted:						
	Analyzed:	Feb-28-12 12:30	Feb-28-12 12:42				
	Units/RL:	% RL					
Percent Moisture		4.83 1.00	5.17 1.00	5.12 1.00	4.71 1.00	6.08 1.00	6.30 1.00

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Project Id: 042079

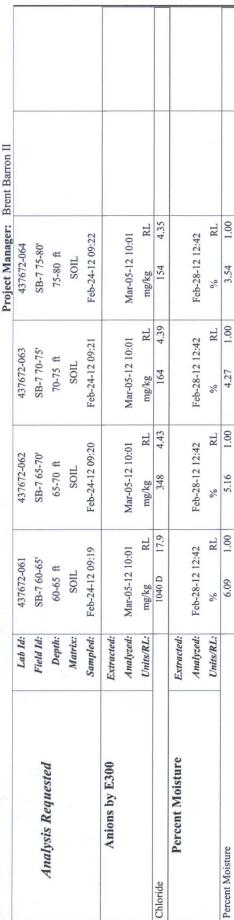
Project Location: New Mexico

### Certificate of Analysis Summary 437672 Conestoga Rovers & Associates, Midland, TX

Project Name: State G

Date Received in Lab: Mon Feb-27-12 10:59 am

08-MAR-12 Report Date:



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### **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

LOD Limit of Detection

PQL Practical Quantitation Limit

MQL Method Quantitation Limit

LOQ Limit of Quantitation

**DL** Method Detection Limit

NC Non-Calculable

- + NELAC certification not offered for this compound.
- \* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
6017 Financial Drive, Norcross, GA 30071	(770) 449-8800	(770) 449-5477
3725 E. Atlanta Ave. Phoenix, AZ 85040	(602) 437-0330	



### **Blank Spike Recovery**



Project Name: State G

Work Order #: 437672

**Project ID:** 

042079

Lab Batch #: 882942

Sample: 882942-1-BKS

Matrix: Solid

Date Analyzed: 03/06/2012

Date Prepared: 03/06/2012

Analyst: BRB

Reporting Units: mg/kg

Batch #: 1 BLANK /BLANK SPIKE RECOVERY STUDY

and me	Daten #.	DLIMIT	DLAM SI	ILL ILL	COVERT	JIUDI
Anions by E300	Blank Result	Spike Added	Blank Spike	Blank Spike	Control Limits	Flags
Analytes	[A]	[B]	Result [C]	%R [D]	%R	
Chloride	<0.840	20.0	18.6	93	75-125	

Lab Batch #: 882943 Date Analyzed: 03/05/2012 Sample: 882943-1-BKS

Matrix: Solid

**Date Prepared:** 03/05/2012

Analyst: BRB

Reporting	Units:	mg/kg
-----------	--------	-------

Batch #:
----------

ANK	SPIKE	RECOVERY	<b>STUDY</b>

Reporting Units: mg/kg	Batch #: 1	BLANK /	BLANK SP	IKE REC	COVERYS	STUDY
Anions by E300	Blank Result	Spike Added	Blank Spike Result	Blank Spike	Control Limits	Flags
Analytes	[A]	[B]	[C]	%R [D]	%R	
Chloride	<0.840	20.0	18.7	94	75-125	



### BS / BSD Recoveries



Project Name: State G

Work Order #: 437672

Analyst: BRB

Lab Batch ID: 883085

Date Prepared: 03/07/2012

Batch #: 1

Date Analyzed: 03/07/2012 **Project ID: 042079** 

Sample: 883085-1-BKS

Matrix: Solid

Units: mg/kg		BLAN	LANK /BLANK SPIKE / BLANK SPIKE DUPLICATE	PIKE / B	LANKS	PIKE DUPL	I	RECOVERY	RY STUD	Y	
Anions by E300	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike	Blank Spike Duplicate	BIK. Spk Dup. %R	RPD	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[0]	[0]	[3]	Result [F]	[6]				
Chloride	<0.840	20.0	19.8	66	20.0	19.8	66	0	75-125	20	

Analyst: BRB

Date Prepared: 03/08/2012

Matrix: Solid

Batch #: 1 Sample: 883089-1-BKS Lab Batch ID: 883089

Date Analyzed: 03/08/2012

Units: mg/kg		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE	PIKE / B	LANKS	PIKE DUPI	I	RECOVE	RECOVERY STUD	Y	
Anions by E300	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	BIk. Spk Dup. %R	RPD	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[0]	[D]	[3]	Result [F]	[6]				
Chloride	<0.840	20.0	19.7	66	20.0	9.61	86	1	75-125	20	

Blank Spike Recovery [D] = 100\*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100\*(F)/[E]
All results are based on MDL and Validated for QC Purposes Relative Percent Difference RPD = 200\*[(C-F)/(C+F)]



### Form 3 - MS Recoveries

Project Name: State G



Work Order #: 437672

Lab Batch #: 882942

QC- Sample ID: 437672-023 S

**Date Analyzed:** 03/06/2012

Project ID: 042079

**Date Prepared:** 03/06/2012

Analyst: BRB

Batch #:

Matrix: Soil

Reporting Units: mg/kg	MATI	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	414	212	649	111	75-125	

Lab Batch #: 882942

**Date Analyzed:** 03/06/2012

Date Prepared: 03/06/2012

Analyst: BRB

QC-Sample ID: 438142-001 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg	MATI	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	12.5	121	136	102	75-125	- 44

Lab Batch #: 882943

Date Analyzed: 03/05/2012

**Date Prepared:** 03/05/2012

Analyst: BRB

QC- Sample ID: 437672-001 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg	MATI	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes		[2]				
Chloride	18.9	111	134	104	75-125	

Lab Batch #: 882943

Date Analyzed: 03/05/2012

Date Prepared: 03/05/2012

Analyst: BRB

QC- Sample ID: 437672-011 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg	MAT	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	370	214	616	115	75-125	177

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

BRL - Below Reporting Limit



### Form 3 - MS Recoveries

Project Name: State G



Work Order #: 437672

Lab Batch #: 883085

Date Analyzed: 03/07/2012

QC- Sample ID: 438034-001 S

Date Prepared: 03/07/2012

Project ID: 042079

Analyst: BRB

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg	MATRIX / MATRIX SPIKE RECOVERY STUDY					MATRIX / MATRIX SPIKE RECOVERY STU					DY
Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag					
Chloride	9.88	102	111	99	75-125						

Lab Batch #: 883089

**Date Analyzed: 03/08/2012** 

**Date Prepared:** 03/08/2012

Analyst: BRB

QC- Sample ID: 437672-042 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg	MATRIX / MATRIX SPIKE RECOVERY STUD				DY	
Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	297	104	426	124	75-125	

Lab Batch #: 883089

Date Analyzed: 03/08/2012

**Date Prepared:** 03/08/2012

Analyst: BRB

QC- Sample ID: 437672-052 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg	rting Units: mg/kg MATRIX SPIKE RECOVE					DY
Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	1500	425	2000	118	75-125	

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

BRL - Below Reporting Limit



### **Sample Duplicate Recovery**



Project Name: State G

Work Order #: 437672

Lab Batch #: 882942

Project ID: 042079

Analyst: BRB

QC- Sample ID: 438142-001 D

Batch #: 1 Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY

Reporting Onts. mg/kg	SAMI LE	SAMILE SAMILE DOI LICATE RECOVERT							
Anions by E300	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag				
Analyte		[B]							
Chloride	12.5	12.2	2	20					

Lab Batch #: 882943

**Date Analyzed:** 03/05/2012 10:01

**Date Prepared:** 03/05/2012

Analyst: BRB

QC- Sample ID: 437672-001 D

Batch #: 1 Matrix: Soil

Reporting Units: mg/kg	SAMPLE / SAMPLE DUPLICATE RECOVERY							
Anions by E300	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag			
Analyte		[B]						
Chloride	18.9	23.2	20	20				

Lab Batch #: 883085

Date Analyzed: 03/07/2012 15:50

Date Prepared: 03/07/2012

Analyst: BRB

QC- Sample ID: 438034-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg	SAMPLE/SAMPLE DUPLICATE RECOVERY						
Anions by E300  Analyte	Re	t Sample esult [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag	
Allalyte							
Chloride	9	.88	9.22	7	20		

Lab Batch #: 883085

**Date Analyzed:** 03/07/2012 15:50 **QC-Sample ID:** 438034-011 D

Date Prepared: 03/07/2012

Analyst: BRB

Departing Units: mg/kg

Batch #: 1 Matrix: Soil

Reporting Units: mg/kg	SAMPLE / SAMPLE DUPLICATE RECOVERY						
Anions by E300  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag		
Chloride	310	293	6	20	100		



### **Sample Duplicate Recovery**



Project Name: State G

Work Order #: 437672

Lab Batch #: 883089

Project ID: 042079

**Date Prepared:** 03/08/2012

Analyst: BRB

Date Analyzed: 03/08/2012 00:15 QC- Sample ID: 437672-042 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg	SAMPLE / SAMPLE DUPLICATE RECOVE				
Anions by E300  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	297	297	0	20	

Lab Batch #: 882343

Date Analyzed: 02/27/2012 13:00

**Date Prepared:** 02/27/2012

Analyst: BRB

QC-Sample ID: 437671-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %	SAMPLE / SAMPLE DUPLICATE RECOVERY							
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag			
Analyte		[B]						
Percent Moisture	8.99	8.74	3	20				

Lab Batch #: 882344

Date Analyzed: 02/27/2012 15:11

**Date Prepared:** 02/27/2012

Analyst: BRB

QC- Sample ID: 437672-017 D

Batch #: 1

Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY						
Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag		
6.71	6.95	4	20			
	Parent Sample Result	Parent Sample Result [A] Sample Duplicate Result [B]	Parent Sample Result [A] Sample Duplicate Result [B]	Parent Sample Result [A] Sample Duplicate Result [B] Control Limits %RPD		

Lab Batch #: 882450

Date Analyzed: 02/28/2012 11:05

Date Prepared: 02/28/2012

Analyst: BRB

**QC-Sample ID:** 437672-025 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY

and a man		0111111		THE REAL	0 , 222
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		[B]		A	
Percent Moisture	4.97	5.23	5	20	



### **Sample Duplicate Recovery**



Project Name: State G

Work Order #: 437672

Lab Batch #: 882452

Project ID: 042079

Date Prepared: 02/28/2012

Date Analyzed: 02/28/2012 11:30

Analyst: BRB

QC- Sample ID: 437672-045 D Batch #: 1 Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY

Reporting Units: 70	SAMPLE / SAMPLE DUPLICATE RECOVERY							
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag			
Analyte		[B]						
Percent Moisture	5.63	5.43	4	20				

The Environmental Lab of Texas

Fax: 432-563-1713 Phone: 432-563-1800 CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Odessa, Texas 79765 12600 West I-20 East

TAT brebnete FedEx Lone Star □ NPDES RUSH TAT (Pre-Schedule) 24, 48, 72 hrs ç ZZZZZZZ Project Los: May Marcie on State B TRRP MORW H SCI Labele on container(s)
Custody seets on container(s)
Custody seets on cooler(s) by Sampler/Client Rep. ? by Courier? UPS emperature Upon Receipt: Sample Containers Intact? **/OCs Free of Headspace?** BLEX 8051B/2030 of BLEX 8560 Analyze For: 042039 Laboratory Comments: Sample Hand Delivered Report Format: Standard Metals: As Ag Ba Cd Cr Pb Hg Se TCLP: TOTAL: SAR / ESP / CEC Project #: # Od Project Name: Mg, Na, K) Cations (Ca, 1059 8 9001 XT TX 1005 Hal lme. Time 80128 M2108 1.814 drenshave cowerld 27.12 Date Date 432-686-0186 Oguet (Specify) Preservation & # of Containers euoN a EOZSZEN HOPN \*OS\*H нс FONH 901 Buy : Cotal #. of Containers benefiri blaie-mail: =ax No: 2001 956 80 955 100 600 95b 452 453 38 Time Sampled 79703 Received by ELOT mil 8-4-12 Received by: Received by: Date Sampled 2125 S 1000 BED W Desiree Crenshaw S 30 3 25 38 35 5 Ending Depth 2 35 5 2105 Time 433-686-0086 8 3 9 Beginning Depth 0 1-27-1 Midland Date Date 30,-35 C. P. A. 45,-50 35,-40 401-451 30,-35 25-30 15, 20, 5-10, 101-15 FIELD CODE 437672 L Company Address: Sampler Signature: Project Manager: Company Name Telephone No: Clty/State/Zip: 4-88 500-4 3B-4 534 5B.4 5.B-4 いのよ 30-4 50-4 58-4 Special Instructions: Relinquished by: Relinquished by: Relinquished by (lab use only) ORDER #: 63 8 O 8 40 0 (Isb use only) 0

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East

The Environmental Lab of Texas

TAT bisbrist Lone Star ☐ NPDES TAT HRUS Schedule) 24, 48, 72 hrs ပ္စ 222222 FedEx 0 2 Phone: 432-563-1800 Fax: 432-563-1713 Project Loc: Mew Mare ic TRRP MORM Z BCI Labels on container(s) Custody seals on container(s) Sample Hand Delivered by Sampler/Client Rep. ? by Courier? UPS Temperature Upon Receipt: /OCs Free of Headspace? RIEX 80218/2030 of BIEX 8260 Sample Containers Intact? Custody seals on cooler(s) Analyze For 2 \_aboratory Comments 842078 Semivolaties Shite N Standard Metals: As Ag Ba Cd Cr Pb Hg Se TCLP: TOTAL: SAR TESP / CEC Project Name: Project #: PO #: Report Format: 2001 XT Hal 9001 XT 10.59 Time Ime 80158 M2108 1.814 Hall dranshaw a crawocld. 2.27.13 Date Date Other (Specify) Preservation & # of Containers Mone 432-686-0186 Odessa, Texas 79765 SOZSZEN HOPN °OSZH HC FONH 90 Containers of Containers benetifi blaif Fax No: e-mall: 900 1022 600) 4101 1007 1000 GIAI 1015 1019 2001 Time Sampled tudios Received by ELOT: 2-24-13 Received by: Received by: 79703 Date Sampled 2135 5 LOOD 250 W Desiree Orenshaw 3 55 3 60 X 80 Ending Depth 50 432-1086-0006 Time Time 20 Time 3 00 2 65 20 Beginning Depth Z 11-18 Date Michand 580 35 - 80, -20 36-105 551-601 59-,09 102-15A 51-10 101-15 437672 FIELD CODE 0,5 50,43 5 Company Address: Sampler Signature: Project Manager: Company Name Telephone No: City/State/Zip: 58-5 20-1 2007 58-5 505 50-4 50-4 Special instructions SB dqiered by: Relinquished by: inquished by (lab use only) ORDER #: 30 9 D J (Vino seu del) # EA

The Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST 12600 West I-20 East Phone: 432-563-1800 Odessa, Texas 79765 Fax: 432-563-1713

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Fax: 432-563-1713	lame: Que Mate of	Project #: BHZU79	Los: Med merica	PO 禁:	at: Standard TRRP	CON			28 X3T8 to 0808\812X 83	Cations Anions (SAR/E) Wetals: Volables										7	Sample Containers Intact?	Labels on container(s)	Custody seals on container(s) Custody seals on cooler(s)	Sample Hand Delivered	by Courier? UPS DHL F	Temparature Upon Receipt:
	Project Name:	Proj	Project Loc:	-	Report Format:	crawor 10.0		Matrix	08 M&108 1,814	TPH: A	(V)							+	+	>		Date Time		Date Time	1	3.37 Date Time
Odessa, Texas 79765					432-686-0180	derenshawe on		Preservation & # of Containers		Mone MacScot MacH HCI HCI HMO <sup>2</sup>									4							in
			2		Fax No:	e-mail:				에그 아크	a 1023	1074	1025	1027	1028	10.30	(03)		1034	1035						wa Cla
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The Environmental Lab of Texas	Project Manager:	Company Name	Company Address:	City/State/Zip:	Telephone No:	Sampler Signature:	n(v)				20.05	5	58.5	58-5	588	58-5	38-5	SB-5	58-5	5-85	Special instructions:		J. Company	ed by:		ed by:
The Envi	. –	,					(lab use only)	ORDER #:	ip nee outh)	si)	ä	7	23	な	25	24	12	28	وتو	8	Special		Relinguished by:	Refinanished by:		Relinquished by:

Marica Phone: 432-563-1800 Fax: 432-563-1713 TRRP CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST BCI 042079 VOCs Free of Headspace? Sample Containers Intact? Matuk BTEX 80218/5030 or BTEX 8260 Analyze For: Laboratory Comments Project Los: May 4 Standard Metals: As Ag Ba Cd Cr Pb Hg Se TCLP: TOTAL: SARIESPICEC Anions (CL.) enoing Project Name: Project #: # Od Cations (Ca, Mg, Na, K) Report Format: 2001 XT Hel 9001 XT Hai M2108 1.814 derenshaw Ocrawor Oguet (Specify) Preservation & # of Containers Snow 422-686-0186 Odessa, Texas 79765 12600 West I-20 East OZSZEN HOEN \*OSZH HCI HINO 90 Cotain #. of Containers benediri blei e-mail: Fax No: 100% 9601 5501 150 840, 1036 1038 80 059 150 Time Sampled 29703 250 W 3-24-12 Date Sampled Dogwer Crershaw 2 25 30 33 2000 62 X 2000 3 5 Ending Depth E 6 432-686-0056 R 2 Beginning Depth 0 Midland 151-820 201-25 130 30-35 18-183 北京 151-101 35, 40 COR 5-10 2133 5-9 35, 437072 FIELD CODE The Environmental Lab of Texas Company Address: Sampler Signature: 58-10 58-10 Project Manager: Company Name 5B-b 5.6-6 0-6 Telephone No: 9-5 Sp-10 58-6 5B-6 City/State/Zip: Special Instructions (lab use only) ORDER #: 36 力 AB # (Sab use only)

TAT bisbrist

FAT HEUS

MORM

Schedule) 24, 48, 72 hrs

□ NPDES

FedEx Lone Star

머니

Sample Hand Delivered by Sampler/Client Rep. ? by Courier? UPS

I'me

Date

222222

Labels on container(s) Custody seals on container(s)

Date

Received by:

600

32-1

Date

Relinquished by:

Received by:

Custody seals on cooler(s)

ပ္

M

Temperature Upon Receipt:

10.57

23119

Time

Date

Received by ELOT

TIMB

Date

Relinquished by:

The Environmental Lab of Texas

Desice Cronsha

Project Manager:

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Odessa, Texas 79765 12600 West I-20 East

Phone: 432-563-1800 432-563-1713 Shee 4 Fax:

Project Name:

TAT bisbrist Lone Star □ NPDES RUSH TAT (Pre-Schedule) 24, 48, 72 hrs ပ္ ZZZZZZZ 3.0 FedEx you merica NORW TRRP 굼 Labels on container(s) Custody seals on container(s) Sample Hand Delivered by Sampler/Client Rep. 7 by Courler? UPS Temperature Upon Receipt: Sample Containers Intact? VOCs Free of Headspace? 042079 SLEX 8021B/2030 of BTEX 8260 Custody seals on cooler(s) Analyze For Laboratory Comments Standard Ex As Ag Ba Cd Cr Pb Hg Se TCLP: DED / ESE / BYS TOTAL: Project Loc: ₩ Od Project#: Cations (Ca, Mg, Na, K) Report Format: 10:01 2001 XT Hall 9001 XT Time lme derenshaw Geraworld com M2108 1.814 Hdl 2,27.13 Date Date 433-686-0180 Other (Specify) Preservation & # of Containers Snow OZSZEN HOEN OSTH HCI HMO soi Cotal #, of Containers : benefit blai Fax No: e-mail: 107 550 10.51 1050 100 416 058 100 10 Delqms2 emiT Received by ELOT 2970 2-84-12 Received by: Received by: 400 JSD W Date Sampled Mudling TX 29 00 8 13 40 55 75 80 3 Ending Depth 3 55 60 S 432-486-0086 TIMB 3 40 75/2 Beginning Depth 90 81-EC Date 24- Jan 75-80 55'-,60 62 10 05-70 2135 50:-55 45,50 5-0 40-45 00 in 437672 FIELD CODE Sampler Signature: Company Address: 5B-6 Company Name 58-b SB-10 53- 10 58-7 Telephone No: 58-6 58-7 City/State/Zip: 38-6 3B-6 S.B.-b Special Instructions Refinquished by: Relinquished by: yd beheir (lab use only) ORDER #: 500 3 170 (Vino seu dal) # EA T.

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

The Environmental Lab of Texas

TAT brebnet2 FedEx Lone Star ☐ NPDES ZZZZZZ ç dule) 24, 48, 72 hrs TAT HOUS Men mercin **>>>>>>>** Phone: 432-563-1800 Fax: 432-563-1713 TRRP MALON DH RCI Labels on container(s) Custody seals on container(s) Mate of Femperature Upon Receipt: VOCs Free of Headspace? Sample Hand Delivered by Sampler/Client Rep. ? by Courler? UPS BIEX 80218/2030 of BIEX 8260 Sample Containers Intact? Custody seals on cooler(s) Analyze For: oya079 Laboratory Comments Standard Netzis: As Ag Ba Cd Cr Pb Hg Se TOLP: TOTAL: SAR / ESP / CEC PO #: Project Loc: Project #: Project Name: Cations (Ca, Mg, Na, K) Report Format: acrenshawacrawsorld.com 9001 XT 2001 XI He 227171059 Sme. Hall 1.814 Meros Date Date Oguet (Specify) 432-626-3186 Preservation & # of Containers SHOW Odessa, Texas 79765 12600 West I-20 East OZSZEN \*OS\*H HCI FONH 80 Total #. of Containers beratiri bisi e-mail: Fax No: 35 833 ies 422 926 833 933 930 Time Sampled when 3 39703 vee by ELOT A-8-112 use goal Received by: Received by: Date Sampled Desicer Constan 500 432-666-008b 25 3 35 35 35 35 SS 05 35 38 20 45 50 B 5 Ending Depth Y रे भेर TIME B V Beginning Depth 9 R U Madland 1-16 252 Date Date CAR 58-60 35-35 40: 45° 45-50 50' 55' 6 30-35 25-301 5-90 19-151 Though FIELD CODE Company Address: Sampler Signature: Project Manager: Company Name 58-7 58-7 Telephone No: 58-7 City/State/Zip: 48-7 50-7 56.4 58-7 200 pecial instructions Relinquished by: Relinquished by: (lab use only) ORDER #: 53 AB # (lab use only) is

12600 West I-20 East

TAT brishnet2 Lone Star □ NPDES TAT HRUS Schedule) 24, 48, 72 hrs ô ZZZZZZZ FedEx 0 3 Fax: 432-563-1713 Project Loc: Agus Mex Les Phone: 432-563-1800 TRRP MORM CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST 머니 Labels on container(s) Custody seals on container(s) Temperature Upon Receipt: Sample Hand Delivered by Sampler/Client Rep. ? by Courier? UPS SIEX 8021B/2030 of BIEX 8260 Sample Containers Intact? VOCs Free of Headspace? Custody seals on cooler(s) Analyze For Laboratory Comments 042079 Shits Standard Tales As Ag Ba Cd Cr Pb Hg Se TCLP: TOTAL: SARIESPICEC Project Name: Project #: PO #: Cations (Ca, Mg, Na, K) Report Format: 10:57 9001 XI 2001 XT Hall Fime lme M2108 1.814 Hall 3.27.12 Date Date Date Other (Specify) Preservation & # of Containers SuoN Odessa, Texas 79765 EOZSZEN HOEN OS H HCI EONH 901 Total #. of Containers : benetin blei e-mail: Fax No: 322 20 Time Sampled Rej 79703 1000 JS0 M Received, by ELOT Received by: Received by: Date Sampled Desiced Coepshur K B 2 Ending Depth के वर 432-686-0086 1050 LIMB TIMB Š 7 00 Beginning Depth Mr we Dand 3 Date Date 38 180 78-35 437672 129-00 10t -150 8 FIELD CODE The Environmental Lab of Texas Sampler Signature: Company Address: Project Manager: Company Name Telephone No: City/State/Zlp: 5.05 8-7 Special Instructions: Relinquished by: raulehed by: Relinquished by: (lab use only) ORDER #: AB # (lab use only) C



### XENCO Laboratories

Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa Document Title: Sample Receipt Checklist

Document No.: SYS-SRC Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

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

Client CR	H		10 mm 10 mm					
Date/Time: 2	27.12	10:5	39					
Lab ID#:	437672	2						
Initials:	AZ						,	
		S	ample Receip	t Check	ist			
1. Samples on ice?					Blue	(Water)	No	
2. Shipping container	in good condition?	4		- Maria	Yes	No	None	in a
3. Custody seals intac	t on shipping conta	iner (co	oler) and bottles	?	Yes	No	(NA)	
4. Chain of Custody p	resent?				(Yes)	No		
5. Sample instructions	complete on chain	of cust	tody?		Yes	No		
6. Any missing / extra	samples?		The boy Ma	J. Sani	Yes	(No)		
7. Chain of custody si	gned when relinquis	shed / n	eceived?	80, 91 L	(Yes)	No		4
8. Chain of custody ag	rees with sample la	bel(s)?			Yes	No		
9. Container labels leg	jible and intact?				Yes	No		
10. Sample matrix / pr	operties agree with	chain o	f custody?	132.0	Yes	No ·		
11. Samples in proper	container / bottle?		The Alexander		Yes	No		
12. Samples properly	preserved?			4	Yes	No	N/A	
13. Sample container	intact?				Yes	No		
14. Sufficient sample a	amount for indicate	d test(s	)?	A Day	Yes	No		
15. All samples receiv	ed within sufficient	hold tin	ne?	The Late	Yes	No	W	
16. Subcontract of sar	mple(s)?		11.	Inches.	Yes	No	(NA)	
17. VOC sample have	zero head space?		males of the		Yes	No	(N/A)	1
18. Cooler 1 No.	Cooler 2 No.		Cooler 3 No.		Cooler 4 No	).	Cooler 5 No.	
lbs 3.0	°C lbs .	°C	lbs	°C	lbs	°C	lbs	°c
Contact:	Conta	Nonc	onformance l	Docume	ntation	Date/Time:_		
Regarding:				*				
Corrective Action Tak	en:							
Check all that apply:	☐ Cooling process condition ☐ Initial and Back	accepta up Temp	ble by NELAC 5. perature confirm	5.8.3.1.a.1. out of tem	perature co		rature	

### **Analytical Report 445445**

for

### Conestoga Rovers & Associates

Project Manager: Desiree Crenshaw
State G
042079-2012-02

16-JUL-12

Collected By: Client



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



### 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)

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Xenco-Lakeland: Florida (E84098)

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

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

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

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

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





16-JUL-12

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

Reference: XENCO Report No: 445445

State G

Project Address: New Mexico

### **Desiree Crenshaw:**

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 445445. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 445445 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,

**Nicholas Straccione** 

Project Manager

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### **Sample Cross Reference 445445**



### Conestoga Rovers & Associates, Midland, TX

State G

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
Site A NW Wall	S	07-10-12 17:00	0 - 2.5 ft	445445-001
Site A NE Wall	S	07-10-12 17:00	0 - 2.5 ft	445445-002
Site A SW Wall	S	07-11-12 10:00	0 - 2.5 ft	445445-003
Site A SE Wall	S	07-11-12 10:05	0 - 2.5 ft	445445-004
Site A N Floor	S	07-11-12 10:10	0 - 2.5 ft	445445-005
Site A S Floor	S	07-11-12 10:15	0 - 2.5 ft	445445-006
Site B NW Wall	S	07-11-12 10:20	0 - 2.5 ft	445445-007
Site B NE Wall	S	07-11-12 10:25	0 - 2.5 ft	445445-008
Site B SW Wall	S	07-11-12 10:30	0 - 2.5 ft	445445-009
Site B SE Wall	S	07-11-12 10:35	0 - 2.5 ft	445445-010
Site B Floor	S	07-11-12 10:40	0 - 2.5 ft	445445-011

### CASE NARRATIVE



Client Name: Conestoga Rovers & Associates

Project Name: State G



Report Date: 16-JUL-12

Project ID: 042079-2012-02

Work Order Number: 445445 Date Received: 07/11/2012

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-892030 TPH By SW8015 Mod

SW8015MOD\_NM

Batch 892030, 1-Chlorooctane, o-Terphenyl recovered above QC limits Data confirmed by reanalysis. Samples affected are: 624446-1-BKS.

SW8015MOD\_NM

Batch 892030, C12-C28 DRO recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 445445-010, -004, -005, -001, -002, -007, -008, -006, -003, -009, -011. The Laboratory Control Sample for C12-C28 DRO is within laboratory Control Limits



Project Id: 042079-2012-02 Contact: Desiree Crenshaw

Project Location: New Mexico

# Certificate of Analysis Summary 445445

Conestoga Rovers & Associates, Midland, TX

Project Name: State G



Date Received in Lab: Wed Jul-11-12 03:05 pm

Report Date: 16-JUL-12
Project Manager: Nicholas Straccione

•					A TOJCCE IMMINISTED THEORY OF THE PROPERTY OF	tionolas Saucciono	
	Lab Id:	445445-001	445445-002	445445-003	445445-004	445445-005	445445-006
Analysis Donnostod	Field Id:	Site A NW Wall	Site A NE Wall	Site A SW Wall	Site A SE Wall	Site A N Floor	Site A S Floor
Thursday Mey design	Depth:	0-2.5 ft	0-2.5 ft	0-2.5 ft	0-2.5 ft	0-2.5 ft	0-2.5 ft
	Matrix:	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
	Sampled:	Jul-10-12 17:00	Jul-10-12 17:00	Jul-11-12 10:00	Jul-11-12 10:05	Jul-11-12 10:10	Jul-11-12 10:15
Inorganic Anions by EPA 300/300.1	Extracted:	Jul-13-12 02:53	Jul-13-12 03:09	Jul-13-12 03:25	Jul-13-12 03:41	Jul-13-12 03:57	Jul-13-12 04:46
SUB: E871002	Analyzed:	Jul-13-12 02:53	Jul-13-12 03:09	Jul-13-12 03:25	Jul-13-12 03:41	Jul-13-12 03:57	Jul-13-12 04:46
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1210 11.3	377 10.9	685 11.1	1190 12.4	1470 13.0	794 11.6
Percent Moisture	Extracted:						
	Analyzed:	Jul-11-12 16:30	Jul-11-12 16:30	Jul-11-12 16:30	Jul-11-12 16:30	Jul-11-12 16:30	Jul-11-12 16:30
	Units/RL:	% RL	% RL	% RL	% RL	% RL	% RL
Percent Moisture		11.9 1.00	8.15 1.00	10.3 1.00	19.2 1.00	23.3 1.00	14.0 1.00
TPH By SW8015 Mod	Extracted:	Jul-11-12 16:00	Jul-11-12 16:00	Jul-11-12 16:00	Jul-11-12 16:00	Jul-11-12 16:00	Jul-11-12 16:00
	Analyzed:	Jul-12-12 01:29	Jul-12-12 01:58	Jul-12-12 02:27	Jul-12-12 02:55	Jul-12-12 03:25	Jul-12-12 03:57
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C12 GRO		ND 17.0	ND 16.3	ND 83.3	ND 18.5	ND 97.5	ND 17.4
C12-C28 DRO		941 17.0	925 16.3	1410 83.3	272 18.5	6980 97.5	598 17.4

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

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Bul ch

Project Manager

Nicholas Straccione



Contact: Desiree Crenshaw Project Id: 042079-2012-02

Project Location: New Mexico

## Certificate of Analysis Summary 445445 Conestoga Rovers & Associates, Midland, TX

Project Name: State G

Date Received in Lab: Wed Jul-11-12 03:05 pm

Project Manager: Nicholas Straccione 16-JUL-12 Report Date:

La Analysis Requested Fie							
F	Lab Id:	445445-007	445445-008	445445-009	445445-010	445445-011	
	Field Id:	Site B NW Wall	Site B NE Wall	Site B SW Wall	Site B SE Wall	Site B Floor	
	Depth:	0-2.5 ft					
W	Matrix:	SOLID	SOLID	SOLID	SOLID	SOLID	
Sam	Sampled:	Jul-11-12 10:20	Jul-11-12 10:25	Jul-11-12 10:30	Jul-11-12 10:35	Jul-11-12 10:40	
300/300.1	Extracted:	Jul-13-12 05:02	Jul-13-12 05:18	Jul-13-12 05:34	Jul-13-12 05:50	Jul-13-12 06:06	100
SUB: E871002 Ana	Analyzed:	Jul-13-12 05:02	Jul-13-12 05:18	Jul-13-12 05:34	Jul-13-12 05:50	Jul-13-12 06:06	
Unii	Units/RL:	mg/kg RL					
Chloride		78.1 1.11	53.2 1.11	293 1.08	106 1.14	111 1.14	
Percent Moisture Extr	Extracted:						
Ana	Analyzed:	Jul-11-12 16:30					
Unii	Units/RL:	% RL					
Percent Moisture		10.1 1.00	9.77 1.00	7.83 1.00	12.5 1.00	12.3 1.00	
TPH By SW8015 Mod Extra	Extracted:	Jul-11-12 16:00					
Ana	Analyzed:	Jul-12-12 04:27	Jul-12-12 04:56	Jul-12-12 05:25	Jul-12-12 05:53	Jul-12-12 07:26	
Uni	Units/RL:	mg/kg RL					
C6-C12 GRO		ND 16.7	ND 82.7	18.5 16.2	ND 17.1	25.4 17.0	
C12-C28 DRO		809 16.7	1710 82.7	2940 16.2	820 17.1	580 17.0	

Nicholas Straccione Project Manager

Page 6 of 18

Final 1.000

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



### **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

LOD Limit of Detection

PQL Practical Quantitation Limit

MQL Method Quantitation Limit

LOQ Limit of Quantitation

**DL** Method Detection Limit

NC Non-Calculable

- + NELAC certification not offered for this compound.
- \* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
6017 Financial Drive, Norcross, GA 30071	(770) 449-8800	(770) 449-5477
3725 E. Atlanta Ave, Phoenix, AZ 85040	(602) 437-0330	. ,



Project Name: State G

Work Orders: 445445,

Project ID: 042079-2012-02

Lab Batch #: 892030

Sample: 445445-001 / SMP

Batch: 1 Matrix: Solid

SU	RROGATE R	ECOVERY	STUDY	
Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		[D]		
82.1	99.8	82	70-135	
45.3	49.9	91	70-135	
	Amount Found [A]	Amount True Found Amount [A] [B]  82.1 99.8	Amount   True   Recovery   %R   [D]	Found   Amount   Recovery   Limits   %R   [D]     %R   82.1   99.8   82   70-135

Lab Batch #: 892030

Sample: 445445-002 / SMP

Batch: 1

Matrix: Solid

Units: mg/kg Date Analyzed: 07/12/12 01:58	SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooctane	86.1	100	86	70-135		
o-Terphenyl	46.6	50.0	93	70-135	100	

Lab Batch #: 892030

Sample: 445445-003 / SMP

Batch: 1

1 Matrix: Solid

Units: mg/kg Date Analyzed: 07/12/12 02:27	SURROGATE RECOVERY STUDY						
TPH By SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooctane	87.9	99.6	88	70-135	3		
o-Terphenyl	47.7	49.8	96	70-135			

Lab Batch #: 892030

Sample: 445445-004 / SMP

Batch: 1

Matrix: Solid

Units: mg/kg Date Analyzed: 07/12/12 02:55	SURROGATE RECOVERY STUDY						
TPH By SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooctane	89.3	99.7	90	70-135	- 5 V 7		
o-Terphenyl	49.2	49.9	99	70-135	1 del		

Lab Batch #: 892030

Sample: 445445-005 / SMP

Batch: 1

Matrix: Solid

Units: mg/kg Date Analyzed: 07/12/12 03:25	SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooctane	93.6	99.8	94	70-135	1	
o-Terphenyl	65.2	49.9	131	70-135		

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: State G

Work Orders: 445445,

Sample: 445445-006 / SMP

Project ID: 042079-2012-02

Lab Batch #: 892030

Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 07/12/12 03:57	SU	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	85.1	99.8	85	70-135	
o-Terphenyl	45.8	49.9	92	70-135	

Lab Batch #: 892030

Sample: 445445-007 / SMP

Batch: 1

Matrix: Solid

Units: mg/kg Date Analyzed: 07/12/12 04:27	SU	RROGATE RI	ECOVERY	STUDY	
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	91.1	100	91	70-135	
o-Terphenyl	50.0	50.1	100	70-135	

Lab Batch #: 892030

Sample: 445445-008 / SMP

Batch: 1

Matrix: Solid

Units: mg/kg Date Analyzed: 07/12/12 04:56	SU	RROGATE RI	ECOVERY	STUDY	
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	92.0	99.5	92	70-135	
o-Terphenyl	50.0	49.8	100	70-135	

Lab Batch #: 892030

Sample: 445445-009 / SMP

Batch: 1

Matrix: Solid

<b>Units:</b> mg/kg <b>Date Analyzed:</b> 07/12/12 05:25	SU	RROGATE RI	ECOVERY	STUDY	
TPH By SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.7	99.8	88	70-135	
o-Terphenyl	47.5	49.9	95	70-135	

Lab Batch #: 892030

Sample: 445445-010 / SMP

Batch: 1

Matrix: Solid

Units: mg/kg Date Analyzed: 07/12/12 05:53	SU	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.6	99.7	91	70-135	
o-Terphenyl	48.8	49.9	98	70-135	

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: State G

Work Orders: 445445,

Project ID: 042079-2012-02

Lab Batch #: 892030

Sample: 445445-011 / SMP

Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 07/12/12 07:26	SURROGATE RECOVERY STUDY											
TPH By SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags							
1-Chlorooctane	88.2	99.5	89	70-135								
o-Terphenyl	47.9	49.8	96	70-135								

Lab Batch #: 892030

Sample: 624446-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 07/12/12 01:01	SURROGATE RECOVERY STUDY										
TPH By SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
1-Chlorooctane	88.9	100	89	70-135	100						
o-Terphenyl	49.8	50.0	100	70-135	184						

Lab Batch #: 892030

Sample: 624446-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg Date Analyzed: 07/12/12 00:03	SU	SURROGATE RECOVERY STUDY												
TPH By SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags									
1-Chlorooctane	155	100	155	70-135	**									
o-Terphenyl	93.5	50.0	187	70-135	**									

Lab Batch #: 892030

Sample: 624446-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg Date Analyzed: 07/12/12 00:32	SURROGATE RECOVERY STUDY											
TPH By SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags							
1-Chlorooctane	97.9	100	98	70-135								
o-Terphenyl	49.9	50.0	100	70-135	DA OR							

Lab Batch #: 892030

Sample: 445445-002 S / MS

Batch: 1

Matrix: Solid

Units: mg/kg Date Analyzed: 07/12/12 07:56	SU	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-135	Setsis
o-Terphenyl	51.3	50.0	103	70-135	

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: State G

Work Orders: 445445,

**Project ID:** 042079-2012-02

Batch: 1

Lab Batch #: 892030

Sample: 445445-002 SD / MSD

Matrix: Solid

Units: mg/kg Date Analyzed: 07/12/12 08:26	SU	RROGATE RI	ECOVERY	STUDY	
TPH By SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	51.2	50.0	102	70-135	

Surrogate Recovery [D] = 100 \* A / B

<sup>\*</sup> Surrogate outside of Laboratory QC limits

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



## BS / BSD Recoveries



Project Name: State G

Work Order #: 445445

**Project ID:** 042079-2012-02

Date Analyzed: 07/13/2012

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Matrix: Solid Date Prepared: 07/13/2012 Batch #: 1 Sample: 624506-1-BKS Lab Batch ID: 892136 Units: mg/kg Analyst: TTE

Flag Limits %RPD Control 20 Control Limits %R 80-120 RPD % Blk. Spk Dup. %R [G] 16 Duplicate Result [F] Blank Spike 8.96 Spike Added 100 Blank Spike %R [D] 102 Blank Spike Result [C] 102 Spike Added [B] 100 Sample Result <1.00 [A] Inorganic Anions by EPA 300/300.1 Analytes

Date Analyzed: 07/12/2012 Matrix: Solid Date Prepared: 07/11/2012 Batch #: 1 Sample: 624446-1-BKS Lab Batch ID: 892030 Analyst: KEB

Chloride

Flag Limits %RPD Control 35 35 BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 70-135 70-135 RPD % 0 Blk. Spk Dup. %R [G] 71 85 Spike Duplicate Result [F] Blank 604 849 Spike 1000 1000 3 Blank Spike %R [D] 71 84 Blank Spike Result [C] 904 839 Spike Added 1000 1000 B Sample Result <15.0 <15.0 [A] TPH By SW8015 Mod Units: mg/kg Analytes C12-C28 DRO C6-C12 GRO

Blank Spike Duplicate Recovery [G] = 100\*(F)/(E)All results are based on MDL and Validated for QC Purposes Relative Percent Difference RPD = 200\*|(C-F)/(C+F)| Blank Spike Recovery [D] = 100\*(C)/[B]



### Form 3 - MS Recoveries

Project Name: State G



Work Order #: 445445

Lab Batch #: 892136

**Date Prepared:** 07/13/2012

**Project ID:** 042079-2012-02

Date Analyzed: 07/13/2012

Analyst: TTE

QC- Sample ID: 445441-001 S

Batch #: 1

Matrix: Solid

Reporting Units: mg/kg	MATI	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA 300	Parent Sample Result	Spike Added	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes	[A]	[B]				
Chloride	15.8	100	117	101	80-120	

Lab Batch #: 892136

**Date Analyzed:** 07/13/2012

**Date Prepared:** 07/13/2012

Analyst: TTE

QC- Sample ID: 445445-011 S

Batch #:

Matrix: Solid

Reporting Units: mg/kg	MATE	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	111	114	204	82	80-120	

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

BRL - Below Reporting Limit



# Form 3 - MS / MSD Recoveries

Project Name: State G

Work Order #: 445445

Lab Batch ID: 892030

Date Analyzed: 07/12/2012

QC-Sample ID: 445445-002 S Date Prepared: 07/11/2012

Matrix: Solid KEB Analyst: Batch #:

Project ID: 042079-2012-02

ceporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	/MAT	RIX SPIF	CE DUPLICA	TE RECO	OVERY S	TUDY		
TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits	Control Limits %RPD	Flag
C6-C12 GRO	<16.3	1090	622	71	1090	784	72	1	70-135	35	
C12-C28 DRO	925	1090	1640	99	1090	1630	65	1	70-135	35	×

Matrix Spike Percent Recovery [D] = 100\*(C-A)/BRelative Percent Difference RPD = 200\*(C-F)/(C+F)

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

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





### **Sample Duplicate Recovery**



Project Name: State G

Work Order #: 445445

Lab Batch #: 892038

Project ID: 042079-2012-02

Date Analyzed: 07/11/2012 16:30

**Date Prepared:** 07/11/2012

Analyst: WRU

QC- Sample ID: 445445-001 D

Batch #: 1

Matrix: Solid

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY

reporting cintor	DIRITE BE	DIRITE DE	DULLIN	THE REE	O I EIL
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		[B]			
Percent Moisture	11.9	10.8	10	20	

## **Xenco Laboratories**

The Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST
12600 West I-20 East
Phone: 432-563-1800
Odessa Texas 79765

Relinquished by:	Relinquished by:	Relinquished by:	Special											LAB # (lab use only)	ORDER #:	(lab use only)								
ned by:	ned by:	ned by:	Special Instructions:	1	Site B	-	Site B	SITE A	Site A	Site A of		P	SiteA	п	0	(vine)		Sampler Signature:	Telephone No:	City/State/Zip:	Company Address:	Company Name	Project Manager:	
		7.		SE wail	Was .	NE walk	3	S Floor	N Floor	SE wall	SW Wall	,	NW Wall	FIELD CODE		イント			432 230	Midland	SE 2135	2	Desil	
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As As Temperature Upon Receipt: 2	Sample Hand Delivered by Sampler/Client Rep. ? by Courier? UPS	Labels on container(s) ON Custody seals on container(s) Custody seals on cooler(s)	Laboratory Comments: Sample Containers Intact? VOCs Free of Headspace?					1						Metals: As Ag Ba Cd Cr Pb Hg	Se Se		3		Standard		6	042079	23	Pax:
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## Xenco Laboratories

The Environmental Lab of Texas

12600 West I-20 East Odessa, Texas 79765 CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Phone: 432-563-1800 Fax: 432-563-1713

Relinquished by:	Relinquished by:	Relinquished by:	Special I	***********			:					LAB # (lab use only)	ORDER #:	(lab use only)			_		•	_	
ed by:	ed by:	ed by:	Special Instructions:	The second secon		7					Site B Floor	FIELD CODE		1447 HA WIN	Sampler Signature:	Telephone No: 432		SS:	Company Name	Project Manager:	
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pera 0	ple l	ody ody	ple o			-	-	-			1	Anions (C) SO4, Alkalinity)		TCLP:	1				0	6.	
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	=											Standard TAT									



### **XENCO Laboratories**



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

Client: Conestoga Rovers & Associates

Date/ Time Received: 07/11/2012 03:05:00 PM

Work Order #: 445445

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)?		3	
#2 *Shipping container in good condition?		Yes	
#3 *Samples received on ice?		Yes	
#4 *Custody Seals intact on shipping conta	iner/ cooler?	Yes	
#5 Custody Seals intact on sample bottles/	container?	Yes	
#6 *Custody Seals Signed and dated for Co	ontainers/coolers	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 relinqui	shed/ received?	Yes	
#11 Chain of Custody agrees with sample I	abel(s)?	Yes	
#12 Container label(s) legible and intact?	100	Yes	
#13 Sample matrix/ properties agree with C	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 (le	ess than 1/4 inch bubble)?	Yes	
#21 <2 for all samples preserved with HNO		Yes	
#22 >10 for all samples preserved with NaA		Yes	

Analyst:	PH Device/Lot#:	
Checklist	completed by:	Date: 07/11/2012
Checklis	et reviewed by:	Date: <u>07/11/2012</u>

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

### **Analytical Report 445661**

for

### Conestoga Rovers & Associates

**Project Manager: Desiree Crenshaw** 

State G

042079

20-JUL-12

Collected By: Client



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



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

Xenco-Houston (EPA Lab code: TX00122):

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

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

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

Xenco-Lakeland: Florida (E84098)

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

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

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

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

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





20-JUL-12

Project Manager: Desiree Crenshaw Conestoga Rovers & Associates 2135 S Loop 250 W Midland, TX 79703

Reference: XENCO Report No: 445661

State G

Project Address: New Mexico

### **Desiree Crenshaw:**

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 445661. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 445661 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.

**Nicholas Straccione** 

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 445661**



### Conestoga Rovers & Associates, Midland, TX

State G

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
Site A SW	S	07-13-12 13:00	0 - 2.5	445661-001
Site B SW Wall	S	07-13-12 13:05	0 - 2.5	445661-002
Site B NE Wall	S	07-13-12 13:10	0 - 2.5	445661-003

### CASE NARRATIVE



Client Name: Conestoga Rovers & Associates

Project Name: State G



Project ID: 042079 Work Order Number: 445661 Report Date: 20-JUL-12 Date Received: 07/13/2012

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None



445661



### Conestoga Rovers & Associates, Midland, TX

State G

Sample Id: Site A SW Matrix: Soil % Moisture: 5.95

Lab Sample Id: 445661-001 Date Collected: Jul-13-12 13:00 Basis: Dry Weight

Sample Depth: 0 - 2.5 Date Received: Jul-13-12 17:32

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Seq Number: 892429 Date Prep: Jul-17-12 11:07

ParameterCas NumberResultUnitsAnalysis DateFlagDilChloride16887-00-62820mg/kg07/17/12 11:0710

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P

Seq Number: 892326 Date Prep: Jul-16-12 08:30

 Parameter
 Cas Number
 Result
 Units
 Analysis Date
 Flag
 Dil

 TPH\_DRO
 PHCG1028
 548
 mg/kg
 07/16/12 12:42
 1



445661



### Conestoga Rovers & Associates, Midland, TX

State G

Sample Id: Site A SW

Matrix: Soil

% Moisture:

Lab Sample Id: 445661-001

Date Collected: Jul-13-12 13:00

Basis: Wet Weight

Sample Depth: 0 - 2.5

Date Received: Jul-13-12 17:32

2000 11000110011 0 11 10 12 1

Analytical Method: Percent Moisture

Seq Number: 892320

ParameterCas NumberResultUnitsAnalysis DateFlagDilPercent MoistureTMOIST5.95%07/16/12 12:001



445661



### Conestoga Rovers & Associates, Midland, TX

State G

Sample Id: Site B SW Wall Matrix: Soil % Moisture: 6.14

Lab Sample Id: 445661-002 Date Collected: Jul-13-12 13:05 Basis: Dry Weight

Sample Depth: 0 - 2.5 Date Received: Jul-13-12 17:32

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Seq Number: 892429 Date Prep: Jul-17-12 11:39

 Parameter
 Cas Number
 Result
 Units
 Analysis Date
 Flag
 Dil

 Chloride
 16887-00-6
 430
 mg/kg
 07/17/12 11:39
 10

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P

Seq Number: 892326 Date Prep: Jul-16-12 08:30

**Parameter Analysis Date** Flag Units Cas Number Result Dil TPH GRO PHC612 19.5 07/16/12 13:14 mg/kg 1 TPH DRO PHCG1028 1060 mg/kg 07/16/12 13:14



445661



### Conestoga Rovers & Associates, Midland, TX

State G

Sample Id: Site B SW Wall

Matrix: Soil

% Moisture:

Lab Sample Id: 445661-002

Date Collected: Jul-13-12 13:05

Sample Depth: 0 - 2.5

Date Received: Jul-13-12 17:32

Basis: Wet Weight

Analytical Method: Percent Moisture

Seq Number: 892320

**Parameter** Flag **Analysis Date** Dil Cas Number Result Units Percent Moisture **TMOIST** 6.14 % 07/16/12 12:00 1



445661



### Conestoga Rovers & Associates, Midland, TX

State G

Sample Id: Site B NE Wall Matrix: Soil % Moisture: 6.22

Lab Sample Id: 445661-003 Date Collected: Jul-13-12 13:10 Basis: Dry Weight

Sample Depth: 0 - 2.5 Date Received: Jul-13-12 17:32

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Seq Number: 892429 Date Prep: Jul-17-12 11:55

ParameterCas NumberResultUnitsAnalysis DateFlagDilChloride16887-00-640.0mg/kg07/17/12 11:551

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P

Seq Number: 892326 Date Prep: Jul-16-12 08:30

 Parameter
 Cas Number
 Result
 Units
 Analysis Date
 Flag
 Dil

 TPH\_DRO
 PHCG1028
 1020
 mg/kg
 07/16/12 13:47
 1



445661



### Conestoga Rovers & Associates, Midland, TX

State G

Sample Id: Site B NE Wall

Matrix: Soil

% Moisture:

Lab Sample Id: 445661-003

Date Collected: Jul-13-12 13:10

Basis: Wet Weight

Sample Depth: 0 - 2.5

Date Received: Jul-13-12 17:32

Dusis. Wet W

Analytical Method: Percent Moisture

Seq Number: 892320

ParameterCas NumberResultUnitsAnalysis DateFlagDilPercent MoistureTMOIST6.22%07/16/12 12:001



Contact: Desiree Crenshaw

Project Id: 042079

Project Location: New Mexico

## Certificate of Analysis Summary 445661 Conestoga Rovers & Associates, Midland, TX

Project Name: State G



Date Received in Lab: Fri Jul-13-12 05:32 pm Report Date: 20-JUL-12

Project Manager: Nicholas Straccione

				inafar.	arrange manager and a second	
	Lab Id:	445661-001	445661-002	445661-003		
Laborato Danial	Field Id:	Site A SW	Site B SW Wall	Site B NE Wall		
Amarysis Nequesieu	Depth:	0-2.5	0-2.5	0-2.5		
	Matrix:	SOIL	SOIL	SOIL		
	Sampled:	Jul-13-12 13:00	Jul-13-12 13:05	Jul-13-12 13:10		
Inorganic Anions by EPA 300/300.1	Extracted:	Jul-17-12 11:07	Jul-17-12 11:39	Jul-17-12 11:55		
SUB: TX104704215	Analyzed:	Jul-17-12 11:07	Jul-17-12 11:39	Jul-17-12 11:55		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		2820 10.6	430 10.7	40.0 1.07		
Percent Moisture	Extracted:					
	Analyzed:	Jul-16-12 12:00	Jul-16-12 12:00	Jul-16-12 12:00		
	Units/RL:	% RL	% RL	% RL		
Percent Moisture		5.95 1.00	6.14 1.00	6.22 1.00		
TPH By SW8015 Mod	Extracted:	Jul-16-12 08:30	Jul-16-12 08:30	Jul-16-12 08:30		
	Analyzed:	Jul-16-12 12:42	Jul-16-12 13:14	Jul-16-12 13:47		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL		
TPH_GRO		ND 15.9	19.5 15.9	ND 16.0		
TPH_DRO		548 15.9	1060 15.9	1020 16.0		

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

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Bul Ch

Nicholas Straccione Project Manager

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Final 1.000



### **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

LOD Limit of Detection

**PQL** Practical Quantitation Limit

MQL Method Quantitation Limit

LOQ Limit of Quantitation

**DL** Method Detection Limit

NC Non-Calculable

- + NELAC certification not offered for this compound.
- \* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
6017 Financial Drive, Norcross, GA 30071	(770) 449-8800	(770) 449-5477
3725 E. Atlanta Ave, Phoenix, AZ 85040	(602) 437-0330	



Project Name: State G

Work Orders: 445661,

Sample: 445661-001 / SMP

Project ID: 042079

Lab Batch #: 892326

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 07/16/12 12:42	SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.6	99.9	88	70-135	
o-Terphenyl	46.4	50.0	93	70-135	

Lab Batch #: 892326

Sample: 445661-002 / SMP

Batch:

Matrix: Soil

Units: mg/kg Date Analyzed: 07/16/12 13:14	Units: mg/kg Date Analyzed: 07/16/12 13:14 SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	88.8	99.6	89	70-135	
o-Terphenyl	48.3	49.8	97	70-135	

Lab Batch #: 892326

Sample: 445661-003 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg Date Analyzed: 07/16/12 13:47	SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooctane	88.5	99.8	89	70-135	-	
o-Terphenyl	47.2	49.9	95	70-135		

Lab Batch #: 892326

Sample: 624650-1-BLK / BLK

Batch: 1

Matrix: Solid

<b>Units:</b> mg/kg <b>Date Analyzed:</b> 07/16/12 12:09	SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooctane	89.4	100	89	70-135		
o-Terphenyl	47.5	50.0	95	70-135		

Lab Batch #: 892326

Sample: 624650-1-BKS / BKS

Batch: 1

Matrix: Solid

<b>Units:</b> mg/kg <b>Date Analyzed:</b> 07/17/12 00:28	SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	114	100	114	70-135	
o-Terphenyl	57.3	50.0	115	70-135	

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



Project Name: State G

**Work Orders:** 445661, **Lab Batch #:** 892326

Project ID: 042079

Sample: 624650-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 07/17/12 00:58	SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	55.9	50.0	112	70-135	

Lab Batch #: 892326

Sample: 445607-003 S / MS

Batch:

Matrix: Solid

Units: mg/kg Date Analyzed: 07/16/12 23:28 SURROGATE RECOVERY STUDY				STUDY	
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes 1-Chlorooctane	113	100	113	70-135	
o-Terphenyl	56.5	50.0	113	70-135	

Lab Batch #: 892326

Sample: 445607-003 SD / MSD

Batch: 1

Matrix: Solid

Units: mg/kg Date Anal	lyzed: 07/16/12 23:58	SU	RROGATE R	ECOVERY S	STUDY	
TPH By SW8015  Analytes	Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		104	100	104	70-135	
o-Terphenyl		51.1	50.0	102	70-135	

Surrogate Recovery [D] = 100 \* A / B

<sup>\*</sup> Surrogate outside of Laboratory QC limits

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



## BS / BSD Recoveries



Project Name: State G

Work Order #: 445661

Analyst: TTE

Lab Batch ID: 892429

Date Prepared: 07/17/2012

Batch #: 1

**Project ID:** 042079 **Date Analyzed:** 07/17/2012

Matrix: Solid

Sample: 624711-1-BKS

Date Analyzed: 07/

Flag Limits %RPD Control 20 BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 80-120 RPD % Blk. Spk Dup. %R [G] 105 Blank Spike Duplicate Result [F] 105 Spike Added 100  $\Xi$ Blank Spike %R [D] 104 Blank Spike Result 104 Spike Added 100 [B] Blank Sample Result [A] <1.00 Inorganic Anions by EPA 300/300.1 Units: mg/kg Analytes Chloride

Analyst: KEB

Lab Batch ID: 892326

Sample: 624650-1-BKS

Batch #: 1

**Date Prepared:** 07/16/2012

Matrix: Solid

Date Analyzed: 07/17/2012

Units: mg/kg		BLAN	K /BLANK S	PIKE / E	SLANK S	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE F	RECOVE	RY STUD	Y	
TPH By SW8015 Mod	Blank Sample Result	Spike Added	Blank Spike Result	Blank Spike	Spike Added	Blank Spike Dunlicate	BIK. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	<u> </u>	[B]	[C]	[a]	[E]	Result [F]	[5]				
TPH_GRO	<15.0	1000	176	78	1000	782	78	1	70-135	35	
TPH_DRO	<15.0	1000	937	94	1000	928	93	1	70-135	35	

Relative Percent Difference RPD = 200\*[(C-F)/(C+F)] Blank Spike Recovery [D] = 100\*(C)/[B] Blank Spike Duplicate Recovery [G] = 100\*(F)/[E] All results are based on MDL and Validated for QC Purposes



### Form 3 - MS Recoveries

Project Name: State G



Work Order #: 445661

Lab Batch #: 892429

Project ID: 042079

Date Analyzed: 07/17/2012 Date Prepared: 07/17/2012 **Analyst: TTE** 

QC-Sample ID: 445661-001 S Batch #: Matrix: Soil

Reporting Units: mg/kg	MATI	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	2820	1060	4000	111	80-120	

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

BRL - Below Reporting Limit



# Form 3 - MS / MSD Recoveries

Project Name: State G

Work Order #: 445661

Lab Batch ID: 892326

QC- Sample ID: 445607-003 S

Matrix: Solid

Project ID: 042079

Batch #:

Date Analyzed: 07/16/2012	Date Prepared: 07/16/2012	07/16/20	012	An	Analyst:	KEB					
		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	[/MAT	RIX SPI	KE DUPLICA	TE RECO	OVERY S	TUDY		
TPH By SW8015 Mod	Parent	Caille	Spiked Sample Spiked	Spiked	Cailto		Spiked	uad	Control	Control	Floa
	Result	Added		%R	Added	Spined Sample Result [F]	%R	%	%R	%RPD	riag
Analytes	[A]	[B]		[D]	[E]		[6]				
TPH_GRO	<16.5	1100	772	70	1100	781	71	1	70-135	35	
TPH_DRO	<16.5	1100	939	85	1100	942	98	0	70-135	35	

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

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

Matrix Spike Percent Recovery [D] = 100\*(C-A)/BRelative Percent Difference RPD = 200\*(C-F)/(C+F)



### **Sample Duplicate Recovery**



Project Name: State G

Work Order #: 445661

Lab Batch #: 892320

Project ID: 042079

**Date Prepared:** 07/16/2012 Date Analyzed: 07/16/2012 12:00 QC-Sample ID: 445661-001 D Batch #: 1

Analyst: WRU

Penarting Unite: %

Matrix: Soil SAMPLE / SAMPLE DUPLICATE DECOVEDY

SAMPLE	SAMPLE	DUPLIC	AIE REC	OVERY
Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
	[B]			
5.95	5.85	2	20	
	Parent Sample Result [A]	Parent Sample Result [A] Sample Duplicate Result [B]	Parent Sample Result [A] Sample Duplicate Result [B]	Result Duplicate RPD Limits [A] Result %RPD [B]

### The Environmental Lab of Texas ORDER #: (lab use only) Relinquished by: Special Instructions: Relinquished by: Relinquished by: Xenco Laboratories LAB # (lab use only) Sampler Signature: Telephone No: City/State/Zip: Company Address: Company Name Project Manager: Size P P FIELD CODE North Floor Wall 2135 151cec CBS Date 6 230 4/310 0 Creasian **Beginning Depth** 737 Time Time Time 2.5 2.5 **Ending Depth** 100 Received by ELOT Received by: Received by: i 0 20tot **Date Sampled** 250 W 1300 310 1307 Fax No: Time Sampled e-mail: Field Filtered yeranshau (Obraworld: com Total #. of Containers Odessa, Texas 79765 12600 West I-20 East Ice HNO<sub>3</sub> HCI H<sub>2</sub>SO<sub>4</sub> CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST NaOH Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> None 22,217/5/2 Other (Specify) Date Date Report Format: Project Name: Project Loc: Time TPH: 418.1 28015MDR 8015E Time Project #: TX 1005 TX 1006 PO #: Temperature Upon Receipt: 2.0 Sample Hand Delivered by Sampler/Client Rep. ? by Courier? UPS Labels on container(s) Custody seals on container(s) Custody seals on cooler(s) Sample Containers Intact? VOCs Free of Headspace? Laboratory Comments: Cations (Ca, Mg, Na, K) Anions (21, SO4, Alkalinity) TOTAL: TCLP: Standard SAR / ESP / CEC Phone: 432-563-1800 Fax: Metals: As Ag Ba Cd Cr Pb Hg Se new mexico 192079 Xuta G Volatiles /Ze 432-563-1713 Semivolatiles ☐ TRRP BTEX 8021B/5030 or BTEX 8260 As Read RCI N.O.R.M. FedEx Lone Star d |Corrected **イイ米 イイイ イ** ☐ NPDES RUSH TAT (Pre-Schedule) 24) zzzzzz 48. 72 hrs Standard TAT

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Final 1.000



### **XENCO Laboratories**



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

Client: Conestoga Rovers & Associates

Date/ Time Received: 07/13/2012 05:32:00 PM

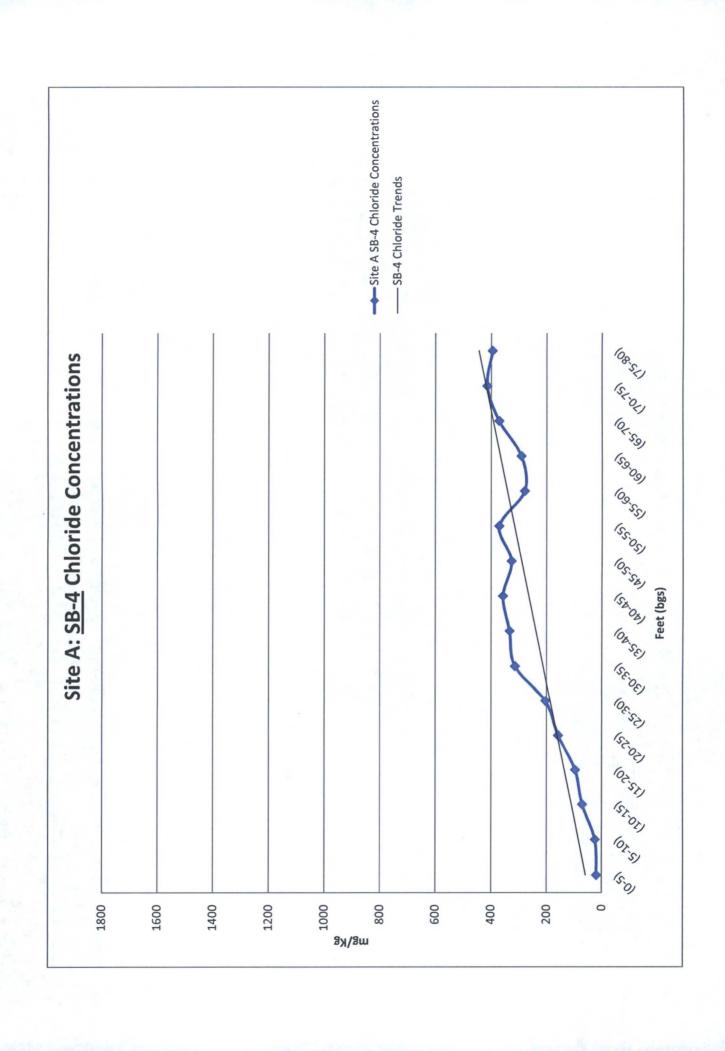
Work Order #: 445661

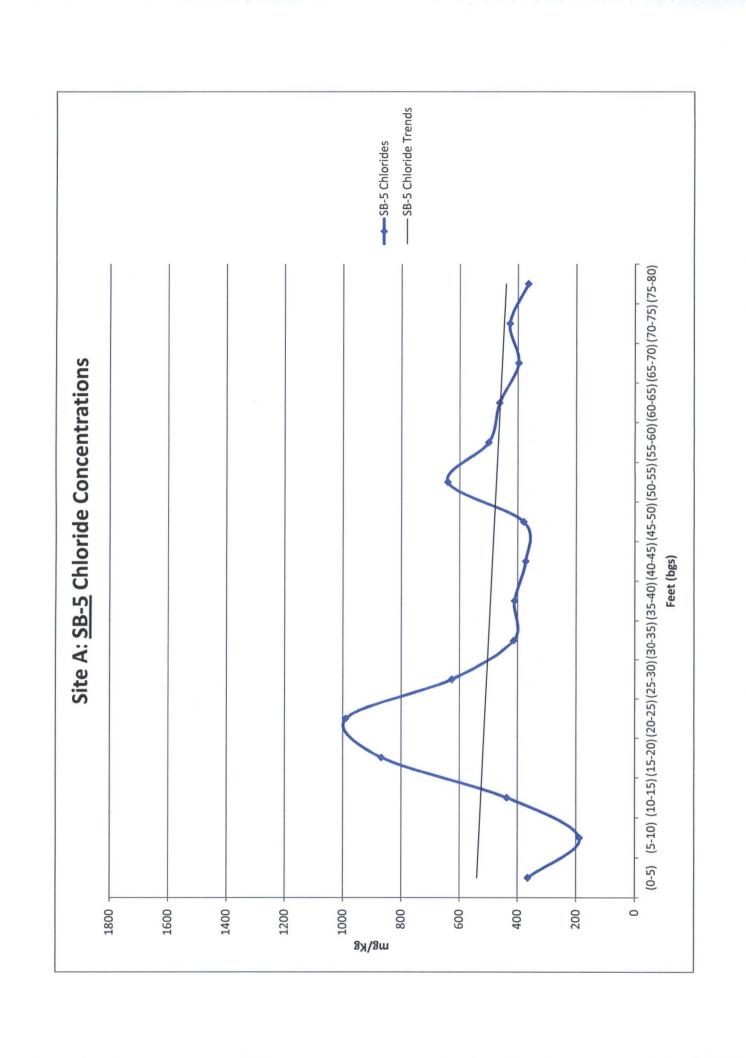
Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient

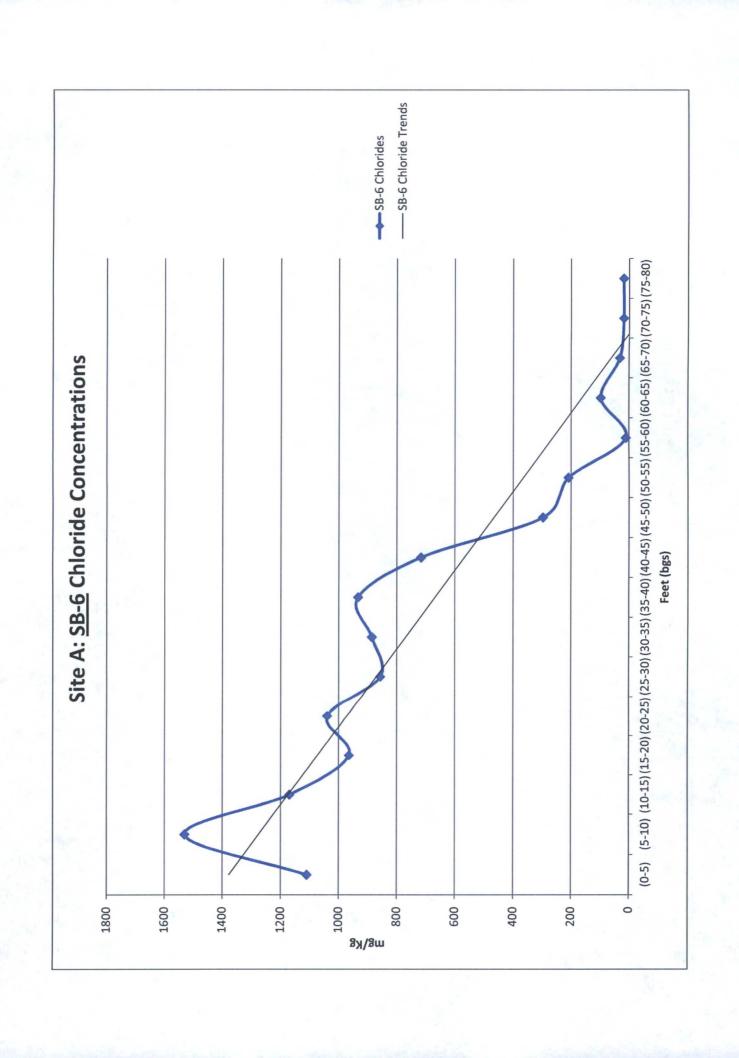
Temperature Measuring device used :

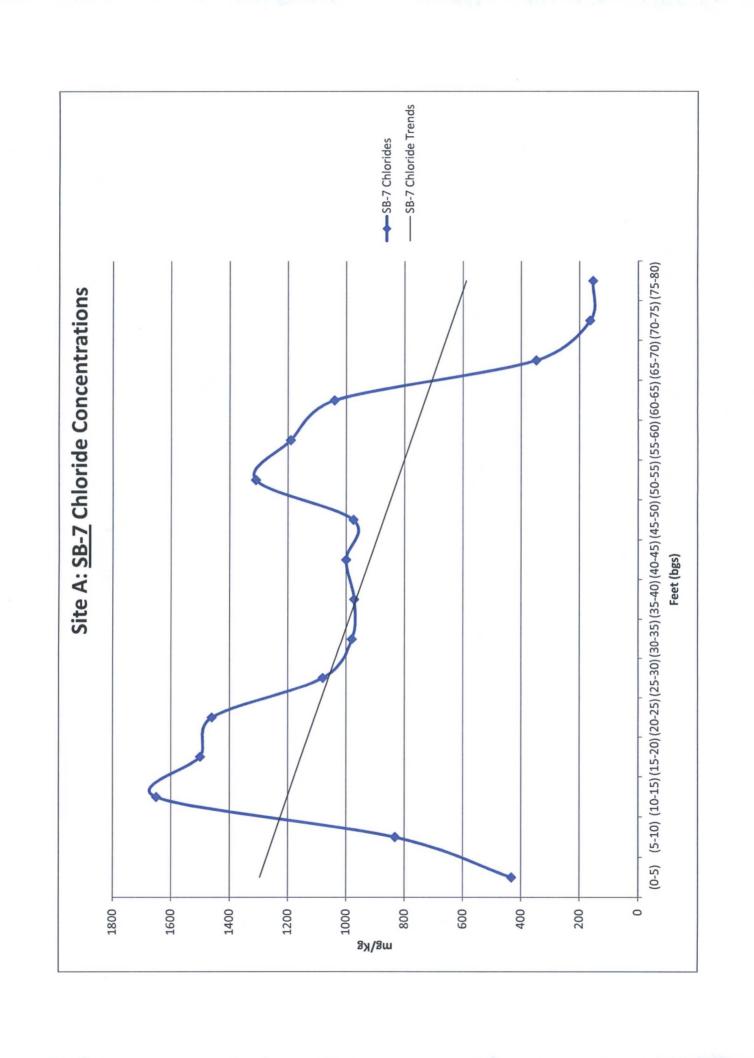
Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	.5	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	
#4 *Custody Seals intact on shipping container/ cooler?	N/A	
#5 Custody Seals intact on sample bottles/ container?	N/A	
#6 *Custody Seals Signed and dated for Containers/coolers	N/A	
#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	

Analyst:	PH Device/Lot#:	
3.8	empleted by:	D-1 07/40/9040
Checklist co	inplotod by:	Date: 07/16/2012









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Page	or		(Name of d		(SCAC)			
TO:		000° imust appear before consignee's name or a		FROM: Charles	J. & Gase	reg Mere	· 5 · · · ·	- Tarapan
Street 1001				Street Section	n 9 Townshi	0 145 Rm	ret st	x Unite
				City Contant	Ur. 112.6	State 19111	Zip Code	00,760
City CITTLE		State, MA	Zip Code 56 3 31	24 hr. Emergency C	ontact Tel. No. 432	130 431	<i>)</i>	
Route						Vehicle Number	9	
No. of Units & Container Type	HM	Proper Shipping Name, Hazard UN or NA Number, Packing Gr	ASIC DESCRIPTION Class or UN or NA Number, Pro hazard Class, P	per Shipping Name, acking Group	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
TCM		1100 McM	) more	110.5	Iday			
								1
			•					-
4								
						\$100 y		
PLAC	ARDS TEN	IDERED: YES - NO -	1	REMIT	<u> </u>			
specifically in writing the agreed or declared value	agreed or declar of the property is	nt on value, shippers are required to state ared value of the property, as follows: "The hereby specifically stated by the shipper to er ecily a limitation of the carrier's liability absent	I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classifled, packaged,	COD	Amt: \$	C.O.D. F PREPAI	EE:	
a release or a value de the carrier's liability or de provided by such provision (3) Commodilies requiring must be so marked and p	claration by the clare a value, the ns. See NMFC Ite g special or addit ackaged as to en Freight Bills and	shipper and the shipper does not release carrier's liability shall be limited to the extent in 172. onal care or attention in handling or stowing sure sale transportation. See Section 2(e) of Statements of Charges and Section 1(a) of	marked and lebelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.  Signature	Subject to Section 7 of the consignee without recovere following statement:  The carrier shall not mak freight and all other lawful chair	conditions, if this shipment is to be deli- on the consigner, the consigner at- te delivery of this shipment without rges.  Signature of Consigner)	payment of FREIGHT Percept who ight is chec	ES \$	k box if charges
the ter (th po na	property describ- its of packages u- e word carrier be- ssession of the pro- tion, if on its route	t to the classifications and tariffs in effect on the distance in apparent good order, except as not known), marked, consigned, and destined as it nig understood throughout this contract as meaperly under the contract) agrees to carry to its underwise to deliver to another carrier on the rethick contract and the contract of all or any of, said property over all of the carrier of all or any of, said property over all of	tile of the issue of this Bill of Lading, ed (contents and condition of con- ndicated above which said carrier ning any person or corporation in sual place of delivery at eald desti- tute to said destination. It is multu-	fination and as to eac performed hereunder sification on the date of Shipper hereby	th party at any time interested in all o shall be subject to all the bit of lading shipment, or certifies that he is familiar with a ion and the said terms and condition	or any said property, that end terms and conditions in the	very service to ne governing cla conditions in the	be is-
SHIPPER (	RAS	for Okocron	entropy of the second	CARRIER SU	AN DAWCO	e Soul	vice	( 0
PER	Cher	nov		PER (10	of Culd	· · ·		_ 4
	) > <			DATE 7-1	7-12			18.80

### is an acknowledgment that a Bill of Lading has been issued and is not Original This Memorandum Shipper No. 145 800 Bill of Lading, nor a copy or duplicate, covering the property named herein, and is intended solely for filing or record. 736002 Carrier No. white RIVIERS Page (SCAC) On Collect on Delivery shipments, the letters COD' must appear before consignee's name or as otherwise provided in Item 430. Sec. 1. Envil Apportal G-Lew Shipper TO: Je IVIL CR ( Paral Consignee section 9 Township Street State MM Zip Code City MIN 4310 State. Zip Code oo. 432 230 24 hr. Emergency Contact Tel. No. Vehicle Route Number TOTAL QUANTITY WEIGHT CHARGES **BASIC DESCRIPTION** HM No. of Units (For Carrier Use Only) Proper Shipping Name, Hazard Class UN or NA Number, Proper Shipping Name, or Hazard Class, Packing Group (Weight, Volum Gallons, etc.) (Subject to Correction) RATE & Container Type Lan toll to too Da ICM PLACARDS TENDERED: YES - NO -Note — (1) Where the rate is dependent on value, shippors are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding." (2) Where the applicable tariif provisions specify a limitation of the carrier's liability absent a release or a value declaration by the chipper and the shipper and close not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See NMFC Item 172. (3) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation. See Section 2(e) of item 360, Bits of Lading, Freight Bits and Statements of Charges and Section 1(a) of the Contract Terms and Conditions for a list of such articles. C.O.D. TO: I horeby declare that the contents of this consignment are fully and accurately described above by the proper shipping arms and are classified, packaged, marked and labellod/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental recutations. ADDRESS C.O.D. FEE: PREPAID | COLLECT | COD Amt: \$ TOTAL Subject to Section 7 of the conditions, if this shipment is to be delivered to the naignee without recourse on the consigner, the consigner shall sign the ng saterram. or carrier shall not make delivery of this shipment without payment of and all other lawful charges. FREIGHT CHARGES Signature RECEIVED, subject to the classifications and tailfs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, it is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment. Shipper hereby certifies that he is familiar with all the lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns. CARRIER SHIPPER

PER

DATE

Permanent post-office address of shipper.

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Shipper No. 645800

Carrier No. 786003

Page	of	2000	(Name of c		(SCAC)	Dat	te	19.10
TO:		OD*must appear before consignee's name or	March September 1 April 1 March 1		t Environme lad			
Consigned			ALOUE J	Street School	9 Township 195	Renge ?	13€ Um	Lell I
		Street		City Commete	10-	State (VIII)	Zip Code	C9888.
city Eurine		State, VM	Zip Code 88 23 1	24 hr. Emergency (	Contact Tel. No. 432	230	4310	
Route						V	ehicle umber	
No. of Units & Container Type	HM	Proper Shipping Name, Hazard UN or NA Number, Packing G	BASIC DESCRIPTION Class ON ON NA Number, Pro roup Hazard Class, P	per Shipping Name, acking Group	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGH* (Subject t Correction	RATE	CHARGES (For Carrier Use Only)
Lew			egulated Mul	onas.	12 cy			
		(501)	)					
	10							
9 8						nd		
		DERED: YES NO		REMIT C.O.D. TO: ADDRESS				
agreed or declared value be not exceeding (2) Where the applicable	of the property is paritt provisions so	at on value, shippers are required to state red value of the property, as follows: "The hereby specifically stated by the shipper to or	described above by the proper shipping name and are classified, packaged,		Amt: \$	Pf	O.D. FEE: REPAID   S	
a release or a value de the carrier's liability or de provided by such provisio (3) Commodities requiring must be so marked and a	claration by the clare a value, the ns. See NMFC Ite g special or additi ackaged as to en Freight Bills and	shipper and the shipper does not release carrier's liability shall be limited to the extent m 172. onal care or attention in handling or stowing sure safe transportation. See Section 2(e) of Statements of Charges and Section 1(a) of	in all respects in proper condition for transport according to applicable international and national governmental regulations.  Signature	for			TAL SARGES \$	eck box if charges are to be
Ehringen Erreit	RECEIVED, subject or property describe this of packages un- ne word carrier bel ssession of the pro- tion, if on its route,	to such antices. It is the classifications and tariffs in effect on the of above in apparent good order, except as ne known), marked, consigned, and destined as neg understood throughout this contract as me porty under the contract) agrees to carry to its otherwise to deliver to another carrier on the nearlier of all or any of, said property over all he carrier of all or any of, said property over all to the contract of the contract of the carrier of the nearlier of all oranged property over all the carrier of all carriers of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of contract of contract con	late of the issue of this Bill of Lading, ted (contents and condition of con- indicated above which said carrior aning any person or corporation in usual place of delivery at eald desti- route to said destination. It is mutu-	tination and as to experiormed hereunde silication on the date Shipper herel	by certifies that he is tamiliar with a stion and the said terms and condition	or any said properly terms and conditi till the lading term	y, that every service to ons in the governing cl as and conditions in	tho
SHIPPER ()	2A V	or Chevron		CARRIER	d	641	n	
PER	Cher	no		PER				_ 4
	1)	11-		DATE 7 - 1	2-13			

### **This Memorandum**

is an acknowledgment that a Bill of Lading has been issued and is not Original Bill of Lading, nor a copy or duplicate, covering the property named herein, and is intended solely for filling or record.

Shipper No	645800

Carrier	No	

7802

						Carrier No	- ' '	C 17 21323
Page	of	Sundana Siviles		carrier) ('SCAC')		Date _	7-12-12	
ro:		COD* must appear before consignee's name or	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	FROM: OF OR Shipper	es forms mother	Murry		mosey.
		e Dervices (Hu	(4U0)	Street July 100	gulance P ,	145 Koo	Je. 336	that wil
Street 1001				City Company	· 3× · 8	State J(Y)	Zip Code	54360
sity Eurice		State, NIN	Zip Code % 6 J 3 (	24 hr. Emergency (	Contact Tel. No. 43	7 779 6	1310	
Route						Vehicle Number	9	
No. of Units & Container Type	НМ	BASIC DESCRIPTION  Proper Shipping Name, Hazard Class UN or NA Number, Proper Shipping Name, UN or NA Number, Packing Group  Hazard Class, Packing Group			TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
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Note — (1) Where the r	ate is depender	IDERED: YES NO INTO NO INTO NO	I hereby declare that the contents of this					
or not exceeding.  (2) Where the applicable tarilf provisions specify a limitation of the carrier's flability absent in release or a value declaration by the shipper and the shipper does not release in all respects in proper condition to carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by auch provisions. See NMFC item 172.  (3) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation. See Section 2(e) of the most of the carrier's liability shall be limited to the extent provided by auch provisions. See NMFC item 172.			described above by the proper shipping name and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for	COD Subject to Section 7 of the	C.O.D. FEE: PREPAID   COLLECT   \$ delivered to the   TOTAL			
			International and national governmental regulations.	nd national governmental following statement:	on the consignor, the consignor shi ike delivery of this shipment without arges. (Signature of Consignor)	payment of FREIGHT F	FREIGHT CHARGES FREIGHT PREPAID Except when box all right is checked  Collect	
the tent (the pos	property describe s of packages un word carrier bel session of the pro on, if on its route,	It to the classifications and taril's in effect on the d ad above in apparent good order, except as not inknown), marked, consigned, and destined as: any understood throughout this contract as mes perly under the contract) agrees to carry to its u otherwise to deliver to another carrier on the a th carrier of all or any of, said property over all	ed (contents and condition of con- ndicated above which said carrier ning any person or corporation in sual place of delivery at said desti- pute to said destination. It is mutu-	performed hereunde silication on the date Shipper herel	by certifies that he is familiar with all allion and the said terms and conditions	terms and conditions in the tading terms and	ne governing cla conditions in the	is- he
SHIPPER (	RA	<u> </u>		CARRIER	71/2			— a
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	1			DATE ) '	6 11/			

### is an acknowledgment that a Bill of Lading has been issued and is not Original This Memorandum Shipper No. Bill of Lading, nor a copy or duplicate, covering the property named herein, and is intended solely for filing or record. Carrier No. Date Page (Name of carrier) (SCAC) On Collect on Delivery shipments, the letters COD" must appear before consignee's name or as otherwise provided in Item 430, Sec. 1. TO: Shipper ML MOONEE Street Street State City Zip Code 24 hr. Emergency Contact Tel. No. Vehicle Number Route **BASIC DESCRIPTION TOTAL QUANTITY** WEIGHT CHARGES No. of Units HM Proper Shipping Name, Hazard Class UN or NA Number, Proper Shipping Name, Or Hazard Class, Packing Group RATE (Weight, Volume, Gallons, etc.) (Subject to (For Carrier & Container Type Use Only) Correction) 1200 XEMPT PLACARDS TENDERED: YES | NO | REMIT C.O.D. TO: ADDRESS Note — (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is follows: The agreed or declared value of the property is hereby specifically stated by the shipper to per (2) Where the applicable larify provisions specify a fimilation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See NMFC Item 172. (3) Commodities requiring special or additional care or attention in handling or stoving must be so marked and packaged as to ensure safe transportation. See Section 2(e) of item 360, Bits of Lading, Freight Bits and Statements of Charges and Socion 1(a) of the Contract Torms and Conditions for a list of such articles. I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classifled, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental C.O.D. FEE: PREPAID [] COLLECT [] COD Amt: \$ TOTAL Subject to Section 7 of the conditions, if this shipment is to be delivered to the onsignee without recourse on the consignor, the consignor shall sign the flowing statement: The carrier shall not make delivery of this shipment without payment of sight and all other lawful charges. FREIGHT CHARGES FREIGHT PREPAID except when box at right is checked Signature fination and as to each party at any time interested in all or any sald property, that every service to be performed hiercunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of stipment. Shipper hereby certifies that he is familiar with all the lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shippor and accepted for himself and his assigns.

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier the word carrier being understood throughout this contact as meaning any person or corporation in possession of the property under the contact) agrees to carry to its usual place of delivery at said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to des-

SHIPPER CRA	CARRIER Ly (Max
PER Chovion	PER GARAGE
D2-C-	DATE - 11-17

This Memorandum is an acknowledgment that a Bill of Lading has been Bill of Lading, nor a copy or duplicate, covering the preintended solely for filing or record.					Shipper No.	786005 -		
Page of (Name of			carrier) (SCAC)		Date	그 그 그래 하고 없이 하는 사람이 하고 있는 것이다.		
On Collect on Delivery shipments, the letters COD* must appear before consignee's name or as otherwise provided in Item 430, Sec. 1.  TO:  Consignee Support S				Street 717	2504			
City Lun	ice	State, MM	Zip Code 8873/	24 hr. Emergency C	onlact Tel. No	State TX		79782
Route					17	Veh	icle	
No. of Units & Container Type				per Shipping Name,	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
	M	EXEMPT 11		acking Group	1207	Correction		Ose Omy)
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PLACARDS TENDERED: YES NO  Note — (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding — per — per — (2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability of the carrier's liability and the immediate of the extent he carrier's liability of the carrier's liability and the immediate of the extent provisions. See MHFC them 172.  (3) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation. See Section 2(e) of elem 360, Bills of Lading, Freight Bills and Statements of Charges and Section 1(e) of			COD EEE:					
			Subject to Section 7 of the consignee willhout recourse following statement: The carrier shall not mal recipit and all other taviful cha	delivered to the shall sign the ut payment of	PAID   SECT   SE	S \$		
the Contract Terms and Contract	RECEIVED, subject property described this of packages unle e word carrier bein ssession of the prop- tion, if on its route,	of such articles and section right of of such articles. The control of such articles and a blove in apparent good order, except as not mown), marked, consigned, and destined as ig gradestood throughout this contract as mee entry under the contract) agrees to carry to its u other order or any of, said property over all or carrier of all or any of, said property over all or carrier of all or any of, said property over all or carrier of all or any of, said property over all or carrier or all or any of, said property over all or carrier or all or any of, said property over all or carrier or all or any of, said property over all or carrier or all or any of, said property over all or carrier or all or any of, said property over all or carrier or all or any of, said property over all or carrier or all or any of, said property over all or carrier or all or any of, said property over all or carrier or all or any of, said property over all or carrier or all or any of, said property over all or carrier or all or any of, said property over all or carrier or all or any of, said property over all or carrier or all or said property over all or said property over all or carrier or all or said property over all or carrier or all or said property over all or said proper	ed (contents and condition of con- indicated above which said carrier ming any person or corporation in sual place of defivery at said desti- bute to said destination. It is mutu-	tination and as to ea performed hereunder sification on the date o Shipper hereby	certifies that he is familiar with ion and the said terms and conditi	if or any said property, thing terms and conditions	at every service to in the governing of and conditions in	las- the
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Permanent post-off	ice address of	shipper.	HICKELDINGS PERMENTALISMENT SOVINK	STYLE CF365-4 ©:	2003 LABELIMASTER® (I	800) 621-5808 ww	w.labelmaster.	com