GW - 0042012 - 2013**PILOT TEST** 03 / 11 / 2014



Kegan W. Boyer, P.G. Project Manager Upstream Business Unit Environmental Management Company 1400 Smith Street Room 07076 Houston, Texas 77002 Tel 713-372-7705 kegan.boyer@chevron.com

April 11, 2014

Mr. Glenn von Gonten Senior Hydrologist Environmental Bureau New Mexico Oil Conservation Division 1220 South Saint Francis Drive Santa Fe, New Mexico 87505

Re: Former Chevron North Eunice Gas Plant (Discharge Permit GW-004) Review of Pilot Test Data

Dear Mr. Von Gonten,

As Operator of the remediation program at the Former North Eunice Gas Plant, Chevron Environmental Management Company (CEMC) is submitting an electronic version (in .PDF format) of the following report dated March 2014:

• Review of Pilot Test Data; Former Eunice North Gas Plant; Eunice, New Mexico

This report was prepared by Conestoga-Rovers & Associates (CRA) on behalf of CEMC to document the results of two pilot tests conducted at the above referenced site in late 2012 through 2013. These pilot tests were designed to assess the potential for utilization of two different injectant compounds for remediation of the hexavalent chromium concentrations in groundwater that exceed NMWQCC standards.

This report is being provided in accordance with the most recent renewal of Discharge Permit GW-004 and is being provided to the NMOCD in electronic format via the FTP site. At this time, CEMC is evaluating the results of the pilot test and CRA recommendations to develop a path forward for remediation of the hexavalent chromium plume.

Should you have any questions or comments with respect to this report of the forward plan for remediation, please do not hesitate to contact me by phone at 713-372-7705 or via e-mail at kegan.boyer@chevron.com.

Sincerely,

hege- Hoze

Kegan W. Boyer, P.G. Environmental Project Manager

cc: Mike Wisniowiecki, CRA

April 11, 2014 Page 2



Review of Pilot Test Data

Former Eunice North Gas Plant Eunice, New Mexico

Prepared for: Chevron Environmental Management Company

> Prepared by: Conestoga-Rovers & Associates

2055 Niagara Falls Boulevard, Suite #3 Niagara Falls, New York U.S.A. 14304

Office: (716) 297-6150 Fax: (716) 297-2265

web: http://www.CRAworld.com

March 2014 Ref. no. 073018 (9)

Table of Contents

Page

Section 1.0	Introd	luction1
	1.1	Overview1
	1.2	Facility Location and History1
	1.3	Previous Results1
	1.4	Current Pilot Study2
Section 2.0	Techn	ology Descriptions 3
500000	2 1	Reduction of Chromium by Injection of a Reducing Agent 3
	2.1	Potential Ry-Products 4
	212	Potential Chromium Reduction 4
	2.1.2	Reduction of Chromium by Biodegradation 4
	2.2	Potential Ry-Products 5
	2.2.2	Potential Chromium Reduction
Continu 2.0		-
Section 3.0		bituay
	3.1	Injections
	3.2	Iracer
	3.3	Monitoring
Section 4.0	Monit	oring Data7
	4.1	Pilot Study #1 (Sodium Dithionite Study)7
	4.1 4.1.1	Pilot Study #1 (Sodium Dithionite Study)7 Chromium7
	4.1 4.1.1 4.1.2	Pilot Study #1 (Sodium Dithionite Study)7 Chromium7 Other Metals
	4.1 4.1.1 4.1.2 4.1.3	Pilot Study #1 (Sodium Dithionite Study)7Chromium7Other Metals8Sulfate/Sulfide/Bromide9
	4.1 4.1.1 4.1.2 4.1.3 4.1.4	Pilot Study #1 (Sodium Dithionite Study)
	4.1 4.1.1 4.1.2 4.1.3 4.1.4 4.2	Pilot Study #1 (Sodium Dithionite Study)
	4.1 4.1.1 4.1.2 4.1.3 4.1.4 4.2 4.2.1	Pilot Study #1 (Sodium Dithionite Study)
	4.1 4.1.1 4.1.2 4.1.3 4.1.4 4.2 4.2.1 4.2.2	Pilot Study #1 (Sodium Dithionite Study)
	4.1 4.1.1 4.1.2 4.1.3 4.1.4 4.2 4.2.1 4.2.2 4.2.3	Pilot Study #1 (Sodium Dithionite Study)
	4.1 4.1.1 4.1.2 4.1.3 4.1.4 4.2 4.2.1 4.2.2 4.2.3 4.2.3	Pilot Study #1 (Sodium Dithionite Study).7Chromium.7Other Metals.8Sulfate/Sulfide/Bromide.9Pilot Study #1 Observations.10Pilot Study #2 (Soy-Lactate Study).10Chromium.10Iron.12Sulfate/Sulfide/Bromide.12Nutrients.13
	4.1 4.1.1 4.1.2 4.1.3 4.1.4 4.2 4.2.1 4.2.2 4.2.1 4.2.2 4.2.3 4.2.4 4.2.5	Pilot Study #1 (Sodium Dithionite Study).7Chromium.7Other Metals.8Sulfate/Sulfide/Bromide.9Pilot Study #1 Observations.10Pilot Study #2 (Soy-Lactate Study).10Chromium.10Iron.12Sulfate/Sulfide/Bromide.12Nutrients.13Total Organic Compound (TOC).14
	4.1 4.1.1 4.1.2 4.1.3 4.1.4 4.2 4.2.1 4.2.2 4.2.3 4.2.4 4.2.5 4.2.6	Pilot Study #1 (Sodium Dithionite Study).7Chromium.7Other Metals.8Sulfate/Sulfide/Bromide.9Pilot Study #1 Observations.10Pilot Study #2 (Soy-Lactate Study).10Chromium.10Iron.12Sulfate/Sulfide/Bromide.12Nutrients.13Total Organic Compound (TOC).14Pilot Study #2 Observations.14
Section 5.0	4.1 4.1.1 4.1.2 4.1.3 4.1.4 4.2 4.2.1 4.2.2 4.2.3 4.2.4 4.2.5 4.2.6 Comp	Pilot Study #1 (Sodium Dithionite Study).7Chromium.7Other Metals.8Sulfate/Sulfide/Bromide.9Pilot Study #1 Observations.10Pilot Study #2 (Soy-Lactate Study).10Chromium.10Iron.12Sulfate/Sulfide/Bromide.12Nutrients.13Total Organic Compound (TOC).14Pilot Study #2 Observations.14



List of Figures (Following Text)

- Figure 1 Pilot Test Well Network
- Figure 2 Deep Well Chromium Plume
- Figure 3 Total Chromium Over Time in Pilot Study #1
- Figure 4 Total Chromium Over Time in Pilot Study #2

List of Tables (Following Text)

Table 1Field Pilot Study Monitoring Data

List of Appendices

- Appendix A Discharge Permit
- Appendix B Analytical Reports



Section 1.0 Introduction

1.1 Overview

This Report presents the data from pilot studies performed during 2012 and 2013 by environmental consultant Conestoga-Rovers & Associates (CRA) on behalf of Chevron Environmental Management Company (CEMC) at the Former Eunice North Gas Plant, hereafter referred to as the "Site."

1.2 Facility Location and History

The Site is located approximately 0.5 mile north of the Town of Eunice in the south half of the southeast quarter (SE/4) of the northeast quarter (NE/4) of Section 28, Township 21 South (T-21-S), Range 37 East (R-37-E). The approximate latitude/longitude coordinates for the Site are 32[°]27'01.46"N and 103[°]09'42.71"W. For the purpose of this report, the assessment Site included in the groundwater monitoring program is comprised of the original gas plant property and surrounding areas.

The Site was originally constructed by Skelly Oil Company during the 1940s, and subsequently acquired and modified by Texaco Exploration and Production, Inc. (Texaco) to operate as a turbo expander-type natural gas processing plant for extraction of natural gas liquids (NGL). Texaco operated the plant into the 1980s when the plant operations ceased and much of the equipment was dismantled and/or shut-in. Structures remaining on Site include two compressors, a compressor building, a cooling tower, former office buildings, aboveground storage tanks, sumps, and piping. Operations were transferred to Versado Gas Processors, LLC (Versado) on July 1, 1998. Versado is a limited liability partnership originally between CEMC and Dynegy Midstream Services (Dynegy). Dynegy continued to operate the two compressors in the northern portion of the Site. Dynegy subsequently was purchased by Targa Midstream Services, L.P. (Targa). Targa became a partner with Versado and currently operates the facility as a natural gas compressor station.

In the early 1990s, Texaco discovered benzene and chromium contamination in soils and groundwater at the Site. In 1996, the New Mexico Oil Conservation Division (NMOCD) required an initial investigation of sumps at the plant as a condition of Groundwater Discharge Permit GW-004. This investigation confirmed dissolved benzene and chromium in groundwater at concentrations exceeding New Mexico Water Quality Control Commission (NMWQCC) human health standards. It was thought that the source of the chromium contamination could be from cooling tower blow-down waters discharged around the surface of the plant. Sequential discharge permits have been submitted as needed. The current permit (Appendix A) was approved in January 2012 and is effective until March 2016.

1.3 Previous Results

Beginning in 2003, remedial efforts to treat chromium contamination in groundwater were initiated. A "study area" was established in areas of highest chromium concentrations (IW-001 and IW-002 located



in the west side of plant, IW-003 located approximately 2,500 feet east of the plant), and three injection wells were installed to allow pilot testing of remedial alternatives. An initial remedial alternative was tested in an "In Situ Reactive Zone" (IRZ). Groundwater treatment, consisting of injections of molasses, was attempted to provide a carbohydrate-based electron donor to lower the oxidation-reduction potential of groundwater to stimulate reduction of hexavalent chromium to trivalent chromium. Trivalent chromium is less toxic and readily precipitates as Cr(OH)₃ under alkaline or slightly acidic conditions. The initial pilot study was expanded by installation of a longitudinal array of 14 injection wells completed at the northeastern end of the chromium plume (distal array) approximately 2,500 feet eat northeast of the plant (see Figure 2). The IRZ treatment was applied to this array. IRZ treatments were discontinued in 2005 when bench testing (described below) demonstrated an alternative method could be a potentially more effective remedy.

A bench-scale study was performed by SECOR (a previous environmental consultant to EMC) to determine the optimum treatment chemical for chromium treatment, and findings are summarized in the *Reductive Treatment Bench-Scale Testing Evaluation* (SECOR, January 2006). This study, which was peer reviewed by Chevron's Remediation System Review Team (RSRT) group, found that molasses treatment should be discontinued since bench testing indicated it would reduce the pH of the groundwater and retain dissolved metals in solution. In 2008, the bench tested remedial alternative was implemented as an in situ pilot study. Injection wells IW018 through IW028 (medial array) were selected as injection wells since they bisected the dissolved chromium plume perpendicular to the groundwater flow direction. An inorganic reducing agent (calcium polysulfide) along with an electron donor (sodium acetate solution) was injected at each well continuously for 7 days. The pilot study demonstrated that chromium concentrations were reduced in the area of the injections, however, clogging of the wells occurred and this treatment method was not further pursued.

1.4 Current Pilot Study

In June 2012, four deep groundwater monitor wells were installed in the southeast corner of the Targa facility property, three in the vicinity of deep well MW-007A (MW-096, MW-097, IW-029) and one in the vicinity of deep well MW-009A (IW-030) (see Figure 1). These wells were installed as part of two chromium remediation pilot tests initiated in September 2012 to further evaluate two alternative methods for treatment of dissolved hexavalent chromium at the Site. The pilot study wells were installed just upgradient (west) of the large chromium plume located to the east of the gas plant property boundary. The pilot tests were approved by NMOCD and described in renewed Discharge Permit GW-004. Historic chromium concentrations at well MW-007A have ranged from 290 micrograms per liter (μ g/L) to 730 μ g/L. In 2011 and 2012 the chromium concentration remained below 300 μ g/L. Historic concentrations at well MW009A have been between 630 μ g/L and 940 μ g/L with the exception of an anomalously low concentration of 67 μ g/L reported for the May 2011 monitoring event. The chromium concentration was at 630 μ g/L in May 2012, which was the monitoring event prior to the initiation of the pilot study.



A pilot-scale study was performed in order to test the potential of in situ chemical reduction (ISCR) and in situ biochemical reduction (ISBR) to remove dissolved chromium from the groundwater. Two pilot study areas were set up at the Site. The area containing injection well IW029 was used to test ISCR by the injection of a sodium dithionite solution. The area containing injection well IW030 was used to test ISBR by the injection of an emulsified vegetable oil (EVO) solution. Pilot study injections were performed on October 23 and 24, 2012. Post-injection monitoring was performed. The baseline monitoring event was performed in September 2012, prior to the injections. For Pilot Study #1 (the EVO study), the wells were monitored in November and December 2012 and January 2013. These monitoring events were timed to be 1, 2, and 3 months after the injection event. Monitoring was performed for total and hexavalent chromium, bromide, sulfate, sulfide, sodium, and total and dissolved iron. For Pilot Study #2, (the sodium dithionite study), the wells were monitored in January 2013, April 2013, July 2013 and October/November 2013. These monitoring events were timed to be 3, 6, 9, and 12 months after the injection event. Monitoring was performed for total and hexavalent chromium, bromide, sulfate, sulfide, ammonia -nitrogen, orthophosphate-phosphorus total organic carbon, total, and dissolved iron. During well purging activities for both pilot studies, field parameters (pH, temperature, conductivity, dissolved oxygen (DO), oxygen reduction potential (ORP)) were monitored as required in the Discharge Permit. Stable field parameters were documented for each well sampled, assuring that the groundwater reached a stable condition during purging and that a representative sample was be collected. Analytical reports for these monitoring events are included as Appendix B.

Section 2.0 Technology Descriptions

2.1 Reduction of Chromium by Injection of a Reducing Agent

The oxidation states of chromium (Cr) range from minus 2 (CrII⁻) to plus six (CrVI⁺), but only the trivalent chromium (CrIII⁺) and hexavalent chromium (CrVI⁺) oxidation states are stable under most natural water conditions. CrVI⁺ is known to be toxic to humans, animals, and plants, and is more mobile in the environment than CrIII⁺. Conversely, CrIII⁺ is less toxic and readily precipitates as chromium trioxide (Cr(OH)₃) under alkaline or even slightly acidic conditions. Therefore, reduction of CrVI⁺ to CrIII⁺ is a potential option for treatment of sites containing CrVI⁺. Treatment can be accomplished by several methods.

In situ geofixation of chromium is the process of introducing a suitable reducing chemical reagent into the subsurface to reduce CrVI⁺ to CrIII⁺. The reduced chromium would be stable because it undergoes geochemical fixation onto the aquifer solids. Reagents such as calcium polysulfide, sodium dithionite, and sodium bisulfite can be used for the geofixation of chromium. It has been observed that short, alternating injections of reducing agent can result in effective distribution of the reducing agent in the subsurface. The reduction of the chromium can be monitored by collection of groundwater samples.



When the groundwater samples turn gray in color with a distinct black precipitate, chromium is being reduced. If the samples are yellow, CrVI⁺ is still present.

2.1.1 Potential By-Products

It has also been observed that when a reducing agent is added, the concentration of other dissolved metals such as iron may increase, however, these increases are expected to be transient. In this study, increases in the iron concentration were observed only at the injection wells. Iron concentrations did reach levels that exceeded the 1-milligram per liter (mg/L) NMWQCC Standard; however, these concentrations were expected to decrease rapidly after the study as conditions returned to their native, more oxidizing state. The dissolved iron would then reprecipitate from the groundwater. If sodium dithionite is used as the reducing agent, concentrations of sodium would also increase in the treatment area. At this Site, the pre-treatment sodium concentrations in the treatment area exceed the 250-mg/L NMWQCC standard for sodium. The additional sodium in the injected material was expected to disperse over time, therefore, sodium concentrations in the treatment area would return to baseline levels and the elevated sodium would be transient. Sulfide is the other by-product of a sodium dithionite injection; however, it is not soluble and settles out of the groundwater rapidly such that it is rarely detected in the groundwater.

2.1.2 Potential Chromium Reduction

For the reducing agent pilot study 2,800 gallons of a 5-percent sodium dithionite solution was injected into injection well IW029. This amount of sodium dithionite could theoretically reduce 87.3 pounds of $CrVI^{+}$ to $CrIII^{+}$. Chromium was present in IW029 at 184 µg/L during the September 2012 baseline monitoring event; therefore, the amount of sodium dithionite added was, in theory, sufficient to treat 57 million gallons of groundwater. The aquifer in the pilot study area is between 10 and 45 feet thick; therefore, the amount injected would, in theory, treat an area of over 500,000 square feet. However, these calculations represent idealized conditions that would not occur in the field, and the actual amount of treatment would be expected to be at least an order of magnitude lower, and would be limited more by the physical ability of the injected material to disperse from the point of injection than the stoichiometric demand of the chromium for the sodium dithionite.

2.2 Reduction of Chromium by Biodegradation

In this procedure, CrVI⁺ is reduced by anaerobic bacteria, which grow in the presence of an adequate nutrient medium and in the absence of oxygen. The soil containing CrVI⁺ is first treated with a nutrient medium, and the pH is adjusted to an optimum level for the growth of anaerobic bacteria. The nutrient medium is usually a combination of a carbon source and a source of energy for the growth of the anaerobic bacteria. The carbon source is typically a lactate, molasses, or a soy-lactate mixture. Under optimal conditions, bacteria grow and reduce CrVI⁺ to CrIII⁺. It is relatively low cost treatment and is very effective.



2.2.1 Potential By-Products

This treatment creates reducing conditions in the treatment area, therefore, the concentration of other dissolved metals such as iron may increase; however, these increases are expected to be transient since iron will reprecipitate as conditions return to their native, more oxidizing state. In this study, increases in iron concentrations were observed only in the injection wells. Iron concentrations did reach levels that exceeded the 1-mg/L NMWQCC standard; however, these concentrations were expected to decrease rapidly after the study as iron precipitates from the groundwater. Under reducing conditions, sulfate is converted to sulfide by sulfate reducing bacteria (SRB). The sulfide precipitates primarily as metal sulfides. Therefore, sulfate concentrations and the concentrations of some metals may decrease in the groundwater. Sulfide is not soluble and settles out of the groundwater rapidly such that it is rarely detected in the groundwater.

2.2.2 Potential Chromium Reduction

For the biological pilot study, 2,800 gallons of a 10-percent EVO solution was injected into injection well IW030. EVO sorbs to soil at a 0.001-pound EVO per pound of soil, and the aquifer in the pilot study area is between 10 and 45 feet thick; therefore, the amount injected would, in theory, treat an area of between 250 and 1,100 square feet depending on the aquifer thickness at the treated location. This measurement is expected to be accurate since the soil sorption demand for EVO is verifiable by measurement.

Section 3.0 Pilot Study

3.1 Injections

In Pilot Test Area #1 (sodium dithionite pilot test), approximately 2,800 gallons of a 5-percent sodium dithionite solution was injected into injection well IW029 on October 23 and 24, 2012. Sodium dithionite was added to water in 1,000-gallon tanks and mixed using a recirculating pump. The sodium dithionite solution was injected by gravity at approximately 10 gallons per minute (GPM).

In Pilot Test Area #2, approximately 2,800 gallons of a 10-percent EVO solution was injected into injection well IW030 on October 23 and 24, 2012. The EVO was diluted in batches and injected by gravity at rates between 3 and 10 GPM. Five hundred gallons of chase water was injected by gravity after the EVO solution was injected.

3.2 Tracer

Sodium bromide was added to both injection solutions as a tracer. Bromide acts as a conservative tracer since it is typically naturally present at only low background concentrations. It is highly water



soluble and is not degraded. Sodium bromide is mixed into the injection solution and migrates in the subsurface with the injected material. Monitoring for bromide ions is performed to determine where the injected material has dispersed. Sodium bromide was added at a concentration of 0.1 percent to both solutions.

3.3 Monitoring

In Pilot Test Area #1, injection well IW029 and monitoring wells MW007A, MW096, and MW097 are located within the pilot study area as shown on Figure 1. The baseline monitoring event was performed in September 2012 prior to the injections. The wells were monitored again in November and December 2012 and January 2013. These monitoring events were timed to be 1, 2, and 3 months after the injection event. Monitoring was performed for total and hexavalent chromium, bromide, sulfate, sulfide, sodium, and total and dissolved iron. Total and hexavalent chromium were monitored in order to determine whether hexavalent chromium was being converted to trivalent chromium and settling out of the groundwater, reducing the total amount of chromium in the groundwater. Bromide was monitored to assess the dispersion and migration of the injected material using the sodium bromide tracer. Sulfate and sulfide were monitored because sodium dithionite and the sodium bromide that were added. Total and dissolved iron was monitored to determine whether reducing conditions had been created in the treatment area. The ratio of total iron to dissolved iron indicates whether reducing conditions, which would favor the reduction of hexavalent chromium to trivalent chromium, are present.

In Pilot Test Area #2, injection well IW030 and monitoring wells MW009A, MW089SA, and IW028 are located within the pilot study area (Figure 1). The baseline monitoring event was performed in September 2012. The wells were monitored again in January 2013, April 2013, July 2013, and October/November 2013. These monitoring events were timed to be 3, 6, 9, and 12 months after the injection event. Monitoring was performed for total and hexavalent chromium, bromide, sulfate, sulfide, ammonia -nitrogen, orthophosphate-phosphorus, total organic carbon, total, and dissolved iron. Total and hexavalent chromium were monitored in order to determine whether hexavalent chromium was being converted to trivalent chromium and settling out of the groundwater, which would reduce the total amount of chromium in the groundwater. Bromide was monitored to assess the dispersion of the injected material using the sodium bromide tracer. Sulfate and sulfide were monitored to determine whether anaerobic processes such as the conversion of sulfate to sulfide by sulfate reducing bacteria (SRB) were occurring. SRB are active under conditions that would cause the reduction of hexavalent chromium to trivalent chromium therefore if sulfate reduction is taking place, conditions have likely been optimized for chromium reduction also. Ammonia –nitrogen and orthophosphatephosphorus are nutrients that are essential for microbial metabolism therefore the presence of these nutrients indicates the potential for a large amount of microbial growth and activity that would create conditions that would cause chromium to be reduced. Total organic carbon was monitoring to



determine where the injected carbon source (EVO) had reached and whether it was becoming consumed. Total and dissolved iron was monitored to determine whether reducing conditions had been created in the treatment area. The ratio of total iron to dissolved iron indicates whether reducing conditions are present. If iron is primarily in the dissolved form then reducing conditions which would favor the reduction of hexavalent chromium to trivalent chromium are present.

Section 4.0 Monitoring Data

4.1 Pilot Study #1 (Sodium Dithionite Study)

4.1.1 Chromium

At injection well IW029, the concentrations of total chromium and CrVI⁺ at the September 2012 baseline sampling event were 184 micrograms per liter (μ g/L) and 126 μ g/L, respectively which exceeded the NMWQCC standard of 50 μ g/L. One month after the sodium dithionite injection in November 2012, these concentrations had been reduced to non-detect levels. However, after 2 months in December 2012, total chromium was present at 21.4 μ g/L, which was below the NMWQCC standard of 50 μ g/L, but CrVI⁺ was measured at 161 μ g/L which exceeded the NMWQCC standard of 50 μ g/L. Similarly, 3 months after the sodium dithionite injection in January 2013, total chromium was measured at 12.5 μ g/L, which was below the NMWQCC standard of 50 μ g/L. One of these methods was clearly not accurate. Total chromium was measured using an ICP method, while CrVI⁺ was measured using a colorimetric method. The colorimetric method is subject to interferences by metals such as iron; therefore, the CrVI⁺ data were likely not accurate due to the high iron concentrations in the post-injection samples. The total chromium data showed that the sodium dithionite injection reduced total chromium in groundwater by 93 percent in the area of the injection well.

Monitoring well MW007A is located approximately 15 feet to the east (downgradient) of the injection well. No reductions in the concentrations of total chromium or $CrVI^+$ were observed at this location during the pilot study. Prior to the pilot study injection the concentrations of total chromium and $CrVI^+$ at this location were measured at 296 µg/L and 308 µg/L, respectively during the September 2012 baseline monitoring event. One month after the injections, in November 2012, these values were 327 µg/L and 319 µg/L indicating little change as a result of the injection. Two months after the pilot study injection, in December 2012 the concentrations of total chromium and $CrVI^+$ had increased to 633 µg/L and 603 µg/L, respectively, however, by three months after the injection, in January 2013, the values had returned to 258 µg/L and 254 µg/L, respectively which were close to the pre-treatment levels. Therefore a transient increase in chromium concentrations was observed at this location during the pilot study period, however, no sustained change in chromium concentrations was observed, suggesting that sufficient sodium dithionite did not reach this area. This suggestion is supported by other data collected from this well as discussed below.



Monitoring well MW096 is located approximately 40 feet to the east (downgradient) of the injection well. Concentrations of total chromium and $CrVI^+$ were low to non-detect both before and after the sodium dithionite injection. $CrVI^+$ was not detected at a concentration above 10 µg/L at this well during the pilot study period. Total chromium was not detected at a concentration above 10 µg/L during the September 2012 baseline monitoring event. During the November and December 2012 monitoring events, 1 and 2 months after the injection, total chromium concentrations were 18 µg/L and 15 µg/L respectively. By the January 2013 monitoring event, 4 months after the injection, the total chromium concentration had returned to less than 10 µg/L. Therefore no sustained effects of the injection were observed at this well.

Monitoring well MW097 is located approximately 15 feet to the north (side gradient) of the injection well. At the September 2012 baseline monitoring event, the initial concentrations of total chromium and $CrVI^+$ at this location were 323 µg/L and 322 µg/L, respectively. Concentrations of both total chromium and $CrVI^+$ increased to 562 µg/L and 436 µg/L 1 month after the injection (at the November 2012 monitoring event) but decreased to 207 µg/L and 183 µg/L, respectively 2 months after the injection, at the December 2012 monitoring event. By 3 months after the injection, at the January 2013 monitoring event, the concentrations of total chromium and $CrVI^+$ had rebounded to 307 µg/L and 272 µg/L, which were close to pretreatment levels. The data showed that a temporary 36-percent reduction in chromium concentration had occurred at this location. Monitoring wells MW-008A and MW-87A are located upgradient of well MW097 and show that chromium is present in groundwater upgradient of well MW097. Therefore, the rebound was likely caused by untreated groundwater moving downgradient into the treatment area. These concentrations are shown graphically in Figure 3.

4.1.2 Other Metals

At injection well IW029, the concentration of dissolved iron increased from non-detect levels prior to the injection to greater than 100 milligrams per liter (mg/L) after the injection. This increase showed that reducing conditions had been created in the area of the injection well. Sodium concentrations increased from 424 mg/L prior to the injection to greater than 4,000 mg/L after the injection reflecting the introduction of both sodium dithionite and sodium bromide. Sodium concentrations, at this location exceeded the 250 mg/L NMWQCC standard both before and after the injection. The high concentrations observed after the injection were expected to decrease rapidly as the injected sodium dispersed, therefore the increase is expected to be transient. At monitoring well MW007A, concentrations of total and dissolved iron remained at non-detect levels throughout the study period. A small increase in the sodium concentration, from 235 mg/L to greater than 300 mg/L was observed after the injection well MW007A and that very little of the injected material reached this location. Monitoring well MW007A is located approximately 15 feet downgradient of the injection well; therefore, these data



suggested that the injected material migrated less than 15 feet downgradient during the monitoring period.

Total and dissolved iron also remained at non-detect levels throughout the monitoring period at monitoring wells MW096 and MW097, suggesting that reducing conditions were not produced at these areas. Sodium concentrations did not increase at MW096, suggesting that the amendments did not reach this well; however, the sodium concentration at well MW097 increased from 375 mg/L to greater than 500 mg/L after the injection, suggesting that a small amount of the injected material had reached this well.

Based on the increase in sodium, it was calculated that sodium dithionite at this well had a concentration of 465 mg/L, which should have been sufficient to reduce the chromium that was present at this location. However, it appears that the sodium dithionite was consumed by other reduceable species such as iron and, therefore, the amount present was not sufficient to reduce the chromium to below the NMWQCC standard.

4.1.3 Sulfate/Sulfide/Bromide

At injection well IW029, the sulfate concentration increased immediately after the sodium dithionite injection. Sulfide was not detected prior to the injection and remained below the detection limit 1 month after the injection; however, by 2 months after the injection, the sulfide concentration had increased from less than 5 mg/L to 5,600 mg/L, indicating that sulfides were being formed. By 3 months after the injection, this concentration had decreased to 1,600 mg/L, indicating that solid sulfides were settling out of the groundwater. The bromide concentration at injection well IW029 was 12.6 mg/L prior to the injection and increased to 387 mg/L 1 month after the injection event. It then decreased to 250 mg/L and 183 mg/L, 2 and 3 months after the injection event, as the injected material moved out of the area of the injection well.

At monitoring well MW007A, the sulfate concentration showed an increase 1 and 2 months after the sodium dithionite injection; however, by 3 months after the injection, it had fallen to below the baseline level. No increase in sulfide or bromide concentration was observed at this location. These data suggest that minimal amounts of the injected material had reached well MW007A.

Increases in sulfate, sulfide, and bromide were not observed after the sodium dithionite injection at monitoring well MW096, which supported the conclusion drawn earlier that the injected material did not reach this well.

At monitoring well MW097, the sulfate concentration was 769 mg/L prior to the injection and increased to 1,360 mg/L 1 month after the injection and then to 1,610 mg/L 2 months after the injection. The sulfate concentration decreased slightly to 1,590 3 months after the injection. Sulfide was not detected



at this location throughout the pilot study period. The bromide concentration at this location was 6.98 mg/L prior to the injection and increased to 12.8 mg/L 1 month after the injection event. After 2 months, it had decreased to 7.8 mg/L and increased again to 18.4 mg/L 3 months after the injection event. These data support the conclusion drawn above that a small amount of the injected material had reached the area of well MW097.

4.1.4 Pilot Study #1 Observations

- Ninety-three percent removal of total chromium was observed in the injection well during the pilot study period.
- CrVI⁺ data did not show a reduction; however, these data are believed to be inaccurate due to the iron interference.
- Reducing conditions were established in the area of the injection well.
- Sodium, sulfate, sulfide, and bromide data all showed that the injected material reached the area of the injection well.
- A temporary 36-percent reductions in total chromium and a 43 percent reduction in CrVI⁺ were observed at monitoring well MW097.
- Reducing conditions did not appear to have been established in the area of monitoring well MW097; however, sodium, sulfate, and bromide data suggested that a small amount of the injected material had reached this area. Well. MW097 is located approximately 15 feet to the north (side gradient) of the injection well.
- The data suggested that minimal amounts of injected material reached monitoring wells MW007A and MW096. These wells are located downgradient of the injection well.
- Pilot study data showed that treatment of chromium to below the NMWQCC standard occurred in the area of the injection well; however, minimal downgradient dispersion of the amendment occurred. Temporary treatment of 36 percent of the total chromium and 43 percent of the CrVI⁺ occurred up to 15 feet to the north of the injection well; however, the majority of the sodium dithionite appeared to have been consumed closer to the injection well.

4.2 Pilot Study #2 (Soy-Lactate Study)

4.2.1 Chromium

At the September 2012 baseline monitoring event, the initial concentrations of total chromium and $CrVI^{+}$ at injection well IW030 were 429 µg/L and 356 µg/L, respectively, which exceeded NMWQCC standard of 50 µg/L. Three months after the EVO injection at the January 2013 monitoring event, the total chromium concentration had been reduced to 68.4 µg/L, which was an 81-percent reduction although the total chromium concentration exceeded the 50-µg/L NMWQCC standard. The CrVI⁺ concentration had increased to 448 µg/L. This increase was likely due to iron interference with the



analysis as discussed above for Pilot Study #1. By 6 months after the EVO injection, at the April 2013 monitoring event, total chromium and $CrVI^+$ had been reduced to less than 10 µg/L, which is less than the 50-µg/L standard. The concentration remained below the 50-µg/L standard at the 9- and 12-month post-treatment monitoring events. The chromium data showed that the EVO injection reduced total chromium and $CrVI^+$ in groundwater in the area of the injection well by greater than 85 percent and reduced the concentrations of total chromium and $CrVI^+$ to below the 50-µg/L NMWQCC standard.

Monitoring well MW009A is located approximately 15 feet to the east (downgradient) of the injection well. No reductions in the concentrations of total chromium or $CrVI^+$ were observed at this location during the pilot study until the 12-month post-treatment monitoring event in October 2013 when a small, 13-percent reduction in chromium was observed. Initial concentrations of total chromium and $CrVI^+$ measured at the September 2012 baseline sampling event were 615 µg/L and 634 µg/L, respectively. During the 3-, 6-, and 9 month post-injection monitoring events in January, April, and July 2013, concentrations of total chromium ranged from 628 to 683 µg/L, and concentrations of $CrVI^+$ ranged from 652 to 681 µg/L; these concentrations all exceeded the 50-µg/L NMWQCC standard. At the October 2013 monitoring event, concentrations of total chromium and $CrVI^+$ had been reduced to 549 µg/L and 552 µg/L, respectively. These concentrations exceeded the NMWQCC standard.

Monitoring well IW028 is located approximately 50 feet downgradient of the injection well. Concentrations of total chromium and CrVI⁺ fluctuated during the pilot study period. The initial CrVI⁺ concentration was 15 μ g/L prior to the EVO injection, which was below the 50- μ g/L NMWQCC standard. Three months after the injection at the January 2013 monitoring event, it had increased to 56.3 μ g/L, which was above the 50- μ g/L NMWQCC standard; after 6 months at the April 2013 monitoring event, it had increased to 719 μ g/L, which was above the NMWQCC standard; after 9 months at the July 2013 monitoring event, it had decreased to 20.0 μ g/L, which was below the 50- μ g/L NMWQCC standard; and after 12 months at the October 2013 monitoring event, it had increased to 30.2 μ g/L, which was below the NMWQCC standard. The total chromium concentrations showed the same fluctuations as the CrVI⁺ concentrations. These fluctuations may not be associated with the EVO injection. Monitoring well IW028 is a new monitoring well; therefore, historical data were not available. The closest well for which historical data was available was well MW009A. At this well, CrVI⁺ concentration in 2011. However, this well was sampled annually in the spring; therefore, potential seasonal fluctuations were not captured. The observed fluctuations may be due to seasonal variations.

Monitoring well MW089SA is located approximately 15 feet to the southeast (side gradient) of the injection well. The initial concentrations of total chromium and $CrVI^+$ measured at the September 2012 baseline monitoring event at this location were 27.9 µg/L and 27.0 µg/L, respectively which were below the 50-µg/L NMWQCC standard. Concentrations of both total chromium and $CrVI^+$ increased after 6 months to 1,230 µg/L and 1,150 µg/L, respectively, which was above the NMWQCC standard, at the April 2013 monitoring event. The concentrations then decreased to 33.3 µg/L and 30.3 µg/L,



respectively 9 months after the injection at the July 2013 monitoring event, which were below the NMWQCC standard, and then increased to 1,170 μ g/L and 1,160 μ g/L, which were above the NMWQCC standard at the 12-month post-injection monitoring event in October 2013. The data showed that that chromium concentrations at this location fluctuated. The higher concentrations of greater than 1,000 μ g/L were similar to historic concentrations at this well, which were primarily measured in the spring and summer; however, lower concentrations of 23 μ g/L and 20 μ g/L, for total chromium and CrVI⁺, respectively were observed at the May 2012 monitoring event, which was 4 months before the September 2012 monitoring event, when similar concentrations were observed. These data suggested that the fluctuations observed may not be associated with the EVO injection. These concentrations are shown graphically on Figure 4.

4.2.2 Iron

At injection well IW030, the concentration of dissolved iron increased from less than 0.2 mg/L at the September 2012 baseline monitoring event performed prior to the injection to greater than 82.9 mg/L 3 months after the injection at the January 2013 monitoring event. This concentration exceeded the 1-mg/L NMWQCC standard for iron. The dissolved iron concentration had decreased to 38.3 mg/L by the 12 months post-treatment monitoring event at the October 2013 monitoring event. This concentration exceeded the NMWQCC standard but indicated a decreasing trend. The increase in dissolved iron concentrations showed that reducing conditions had been created in the area of the injection well. At monitoring well MW009A, the concentrations of total and dissolved iron remained at less than 0.2 mg/L throughout the study period. These data suggested that reducing conditions were not created in the area of monitoring well MW009A. Total and dissolved iron also remained at non-detect levels throughout the monitoring period at monitoring wells IW028 and MW089SA, suggested that reducing conditions were not established in these areas.

4.2.3 Sulfate/Sulfide/Bromide

At injection well IW030, the concentration of sulfate decreased from 1,320 mg/L at the September 2012 baseline monitoring event to less than 10 mg/L 3 months after the EVO injection at the January 2013 monitoring event. The baseline concentration of 1,320 mg/L exceeded the 600-mg/L NMWQCC standard. The sulfate concentration remained at less than 10 mg/L through the rest of the pilot study. These data showed that anaerobic conditions had been established causing sulfate to be converted to sulfide by SRB. Sulfide was not detected prior to the injection and remained below the detection limit throughout the pilot study period; however, sulfides are not soluble in water. Therefore, if solid sulfides were settling out of the groundwater at approximately the same rate they were formed, sulfide would not be detected in the groundwater. The bromide concentration at injection well IW030 was 14.9 mg/L prior to the injection at the January 2013 monitoring event and increased to 149 mg/L 3 months after the injection at the January 2013 monitoring event. The concentration then decreased to 112 mg/L 6 months after the injection at the April 2013 monitoring event, but increased again to



250 mg/L and 291 mg/L 9 months and 12 months after the injection at the July and October 2013 monitoring events. These data showed that the amendments remained in the pilot study area.

At monitoring well MW009A, sulfate remained high at greater than 600 mg/L, which exceeded the NMWQCC standard, and sulfide was not detected through the pilot study period. No increase in bromide concentrations was observed at this location. These data suggested that minimal amounts of the injected material had reached the area of well MW009A.

At monitoring well IW028, the sulfate concentration was 488 mg/L at the September 2012 baseline monitoring event, which is below the NMWQCC standard. The sulfate concentrations increased to 754 mg/L and 1,460 mg/L, at 3 and 6 months respectively after the EVO injection which were above the 600-mg/L NMWQCC standard. The sulfate concentration then decreased to 347 mg/L after 9 months at the July 2013 monitoring event and returned to the pretreatment level of 500 mg/L after 12 months at the October 2013 monitoring event. Sulfide was not detected throughout the pilot study period. No increase in bromide concentrations was observed at this location. These data suggested that minimal amounts of the injected material had reached the area of well IW028.

At monitoring well MW089SA, the sulfate concentration was 220 mg/L prior to the injection at the September 2012 monitoring event, which was below the 600-mg/L NMWQCC standard. The sulfate concentration increased to 1,560 mg/L, 6 months after the injection at the April 2013 monitoring event which was above the NMWQCC standard, decreased to 187 mg/L, 9 months after the injection at the July 2013 monitoring even which was below the NMWQCC standard and then increased to 1,360 mg/L, 12 months after the injection at the October 2013 monitoring event which was above the NMWQCC standard. Fluctuations in chromium concentrations were also observed at this location and may be associated with fluctuating groundwater levels. Sulfide was not detected at this location throughout the pilot study period except after 9 months at the July 2013 monitoring event when it was detected at 2.4 mg/L and after 12 months at the October 2013 monitoring event when it was detected at 5 mg/L. These levels were at or below the analytical detection limit and, therefore, it was not necessarily an increase. The bromide concentration at this location was 5.21 mg/L prior to the injection had increased slightly 8.7 mg/L by 6 months after the injection event at the April 2013 monitoring event. By 9 months after the injection at the July 2013 monitoring event it had decreased to a non-detect level but increased again to 8.2 mg/L by the October 2013 monitoring event. These data support the conclusion discussed above that a small amount of the injected material had reached the area of well MW089SA and that the changes in the concentrations were more influenced by fluctuations in groundwater levels than by the injected material.

4.2.4 Nutrients

At injection well, IW030, concentrations of both ammonia-nitrogen and orthophosphate-phosphorus were at non-detect levels prior to the EVO injection at the September 2012 baseline monitoring event.



Orthophosphate-phosphorus remained below the detection limit throughout the pilot study period; however, concentrations of ammonia-nitrogen increased to 3.01 mg/L 6 months after the injection at the April 2013 monitoring event, decreased to 0.04 mg/L 9 months after the injection at the July 2013 monitoring event and then increased slightly to 0.1 mg/L 12 months after the injection at the October 2013 monitoring event. Ammonia-nitrogen was added as part of the EVO injection, however the data showed that it was quickly consumed indicting that the area was nitrogen limited and that the addition of more nitrogen would stimulate increased microbial activity. At monitoring wells MW009A, IW028, and MW089SA, both ammonia-nitrogen and orthophosphate-phosphorus remained below their detection limits throughout the pilot study period indicating that the ammonia-nitrogen contained in the injected amendment did not reach this well. Based on these data, additional nitrogen and phosphorus nutrients should be added with any future EVO injection.

4.2.5 Total Organic Compound (TOC)

At injection well IW030, TOC was at 5.92 mg/L prior to the EVO injection at the September 2012 monitoring event but increased to 1,800 mg/L 3 months after the injection at the January 2013 monitoring event and then decreased to 816 mg/L 6 months after the injection at the April 2013 monitoring event and 761 mg/L by 12 months after the injection at the October 2013 monitoring event. These data showed that organic carbon was introduced into the area by the EVO injection. No increase in TOC was observed at wells MW009A or IW028. At MW089SA, the pre-treatment TOC was 2.75 mg/L, which increased to 6.75 mg/L 6 months after the injection at the April 2013 monitoring event, decreased to 3.05 mg/L 9 months after the injection at the July 2013 monitoring event, and then increased again to 6.91 mg/L 12 months after the injection at the October 2013 monitoring event. These fluctuations showed the same pattern that was observed for other parameters at this well and may be associated with fluctuations in the groundwater level.

4.2.6 Pilot Study #2 Observations

- Ninety-six percent removal of chromium was observed in the area of the injection well during the pilot study period.
- Iron and sulfate data showed that reducing conditions were established in the area of the injection well.
- The bromide data showed that the injected material remained in the area of the injection well.
- The amendment increased the ammonia-nitrogen and TOC concentrations in the area of the injection well since they were both injected.
- The ammonia-nitrogen was consumed quickly indicating a possible nutrient limitation in the area.
- Reductions in chromium concentrations were not observed outside the area of the injection well, and sulfate and iron data suggested that reducing conditions were not established outside the area of the injection well.



- The bromide and TOC data showed that the injected material did not reach wells MW009A or IW028, which are located to the east of the injection well. A small amount of the injected material did reach well MW089SA, which is located to the southeast of the injection well.
- Pilot study data showed that treatment of chromium to below the 50 µg/L NMWQCC standard occurred in the area of the injection well; however, minimal dispersion occurred to the east. Some dispersion occurred up to 15 feet to the southeast of the well; however, this area did not receive sufficient amendments to create reducing conditions and to treat the chromium present.
- Monitoring parameters in well MW089SA showed a seasonal fluctuation and may be associated with fluctuations in the groundwater level

Section 5.0 Comparison with Previous Pilot Study

A pilot study for in situ treatment of chromium-impacted groundwater was conducted by Stantec at the Site July 21 through July 28, 2008. The goal of the pilot study was to convert hexavalent chromium to trivalent chromium and reduce overall total dissolved chromium concentrations by an order of magnitude to levels that approached the maximum contaminant level (MCL) of 50 µg/L. The results of the pilot study showed that although chromium concentrations were reduced in the area of the injection, clogging of the well occurred.

The fouling observed in the pilot study did not appear to be a result of well construction, as the reagent (sodium acetate) was injected successfully. The fouling observed during calcium polysulfide injection could have been caused by a combination of sulfide reactions with iron and manganese as well as precipitation of elemental sulfur. Also, calcium polysulfide is a viscous material with a high pH, which may have led to the fouling observed. For this reason, sodium dithionite was recommended for the CRA pilot study. Sodium dithionite does not increase pH and was expected to produce the less fouling.

Fouling of the wells was not observed during the CRA pilot study; therefore, the substitution of sodium dithionite for calcium polysulfide did prevent fouling. Reductions in chromium concentrations of greater than 90 percent were observed in both pilot studies, indicating that sodium dithionite and EVO are equally effective for chromium treatment as compared to calcium polysulfide and sodium acetate. The additional benefits of the reagents used in the CRA study are that sodium dithionite did not cause the well to become clogged and that EVO is biodegraded much more slowly than sodium acetate; therefore, it lasts longer in the subsurface than sodium acetate and will sustain long-term chromium treatment.

Section 6.0 Conclusions

The results of the CRA pilot study showed that the substitution of sodium dithionite for calcium polysulfide eliminated the well clogging observed during the Stantec pilot study without compromising



chromium treatment. The CRA studies also showed that both sodium dithionite and EVO were effective treatments for the conversion of CrVI⁺ to CrIII⁺ and the subsequent precipitation of CrIII⁺ from groundwater. Both reagents treated chromium within the area of the injection wells to below the NMWQCC standard but did not treat groundwater more than 15 feet from the injection well. Based on CRA experience with in situ treatment, fifteen feet is a large radius of influence for an in situ injection, and treatment at this distance was not expected.

The doses of the reagents used in the pilot study were 5 percent sodium dithionite and 10 percent EVO. They were shown to provide effective treatment; however, based on the nutrient limitation observed in Pilot Study #2, the addition of nitrogen and phosphorus nutrients along with the EVO is recommended. Sodium dithionite is a less expensive reagent than EVO and reduced the dissolved chromium concentrations to below the NDWQCC standard for 1 month; however, EVO reduced the dissolved chromium concentrations for 3 months and sustained the treatment to concentrations below the NMWQCC standard for the remaining 9 months of the study period. Based on CRA experience with EVO, the injection is expected to sustain the reducing conditions that would favor chromium precipitation for up to 2 years. Precipitated chromium is expected to remain fixed long term. Therefore, for fast effective treatment of the source area, sodium dithionite would be the recommended reagent; however, for sustained treatment of an area where migration of additional chromium-containing groundwater is expected, EVO would be the recommended reagent. The migration of additional chromium-containing groundwater into the area was observed during the sodium dithionite study, indicating that the chosen remedy would need to accommodate the migration of untreated groundwater from upgradient into the treatment area. Therefore, EVO would be the recommended reagent for this Site.

All of Which is Respectfully Submitted,

CONESTOGA-ROVERS & ASSOCIATES

Mike Wisniowiecki Senior Project Manager

MW/al/9

Principal

FIGURES



	LEGEND
	Monitoring Well
0	Previous Injection Well
•	Pilot Test Monitor Well
Ø	Pilot Test Injection Well
	Approximate Groundwater Flow Direction, 2013
	 Gas Plant Property Boundary and Fence Line
	Pilot Test Boundary

073018-00(009)GN-DL001_ MAR 3/2014

(CRA

figure 1 PILOT TEST WELL NETWORK REVIEW OF PILOT TEST DATA FORMER EUNICE NORTH GAS PLANT LEA COUNTY, NEW MEXICO Chevron Environmental Management Company



073018-00(009)GN-DL002 MAR 3/2014





FIELD PILOT STUDY MONITORING DATA REVIEW OF PILOT TEST DATA FORMER EUNICE NORTH GAS PLANT NEW MEXICO

Lab Field Date Sample	ID: ID: ed:	NMW/OCC Standard*	448605-004 MW-007A-090612 9/6/2012	452802-003 MW-7A-111912 11/19/2012	452802-006 MW-7A-(Metal Strip) 11/19/2012	454667-004 MW-007A-122112 12/21/2012	456341-003 MW-007A-012413 1/24/2013	448605-006 MW-009A-090612 9/6/2012
Parameters	Units	nin qee standard						
	00							
Chromium, Hexavalent by SW 7196A								
Hexavalent Chromium	mg/L	0.05	0.308	0.319		0.693	0.254	0.634
Total Metals								
Chromium	mg/L	0.05	0.296	0.327	0.305	0.633	0.258	0.615
Iron	mg/L	1.0	ND (0.200)	ND (0.200)	ND (0.200)	ND (0.200)	ND (0.200)	ND (0.200)
Sodium	mg/L		235	333	337	344	208	306
Dissolved Metals								
Iron	mg/L	1.0	ND (0.200)	ND (0.200)		ND (0.200)	ND (0.200)	ND (0.200)
Inorganic Anions								
Bromide	mg/L		7.99	5.75		4.07	6.47	11
Chloride	mg/L					641 D		
Ortho-Phosphate	mg/L		ND (1.00)					ND (1.00)
Sulfate	mg/L	600	597	815		1080 D	518	691
Nitrogen Ammonia by SM4500-NH3C								
Nitrogen, Ammonia (as N)	mg/L		ND (0.100)					ND (1.00)
Sulfide by SM4500-S-F-00								
Sulfide, Total	mg/L		ND (5.00)	ND (5.00)		ND (5.00)	ND (5.00)	ND (5.00)
TOC by SM 5210C								
Total Organic Carbon	mg/L		4.57	2.88		4.41	2.95	2.8

Notes: * - New Mexico Water Quality Control Commission (NMWQCC) Standards 20.6.2.3103.A

Highlighting indicates values exceeds NMWQCC Standards

- D Samples were diluted due to targets detected over the highest point of the calibration curve, or due to the matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.

Page 2 of 7

FIELD PILOT STUDY MONITORING DATA REVIEW OF PILOT TEST DATA FORMER EUNICE NORTH GAS PLANT NEW MEXICO

Lab IE Field IE Date Sampled):): :	NMWQCC Standard*	456437-005 MW-009A-012513 1/25/2013	462048-003 MW-009A-042613 4/26/2013	467355-003 MW-009A-072513 7/25/2013	472775-003 MW-009A-102413 10/24/2013	448605-005 IW-028-090612 9/6/2012	456437-004 IW-28-012513 1/25/2013
Parameters	Units							
Chromium, Hexavalent by SW 7196A								
Hexavalent Chromium	mg/L	0.05	0.652	0.657	0.681	0.552	0.015	0.0563
Total Metals								
Chromium	mg/L	0.05	0.628	0.683	0.666	0.549	0.0185	0.0609
Iron	mg/L	1.0	ND (0.200)	ND (0.200)	ND (0.200)	ND (0.200)	ND (0.200)	ND (0.200)
Sodium	mg/L		289	282	307	287	308	389
Dissolved Metals								
Iron	mg/L	1.0	ND (0.200)	ND (0.200)	ND (0.200)	ND (0.200)	ND (0.200)	ND (0.200)
Inorganic Anions								
Bromide	mg/L		ND (1.0)	5.05	ND (8.00)	9.6	7.07	ND (1.0)
Chloride	mg/L							
Ortho-Phosphate	mg/L			ND (2.00)	ND (8.00)	ND (8.00)	ND (1.00)	
Sulfate	mg/L	600	687	808	643	611	488	754
Nitrogen Ammonia by SM4500-NH3C								
Nitrogen, Ammonia (as N)	mg/L			ND (0.100)	ND (0.100)	ND (0.100)	ND (1.00)	
Sulfide by SM4500-S-F-00								
Sulfide, Total	mg/L		ND (5.00)	ND (5.00)	ND (5.00)	ND (5.00)	ND (5.00)	ND (5.00)
TOC by SM 5310C								
Total Organic Carbon	mg/L		2.84	3.13	3.37	3.47	4.57	3.99

- Notes: * New Mexico Water Quality Control Commission (NMWQCC) Standards 20.6.2.3103.A
 - Highlighting indicates values exceeds NMWQCC Standards
 - D Samples were diluted due to targets detected over the highest point of the calibration curve, or due to the matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
 - B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
 - J The target analyte was positively identified below the quantitation limit and above the detection limit.

Page 3 of 7

FIELD PILOT STUDY MONITORING DATA REVIEW OF PILOT TEST DATA FORMER EUNICE NORTH GAS PLANT NEW MEXICO

Lab IL Field IL Date Sampled	D: D: d:		462048-001 IW-028-042613 4/26/2013	467355-001 IW-28-072513 7/25/2013	473427-001 IW-28-110413 11/4/2013	448605-003 IW-029-090612 9/6/2012	452802-003 IW-029-111912 11/19/2012	454667-003 IW-029-122179 12/21/2012	456341-002 IW-029-012413 1/24/2013
Parameters	Units	NiviwQCC Standard	<u> </u>						
i ununeters	onits								
Chromium, Hexavalent by SW 7196A									
Hexavalent Chromium	mg/L	0.05	0.719	0.0200	0.0302	0.126	ND (0.0100)	0.161	0.197
Total Metals									
Chromium	mg/L	0.05	0.848	0.0238	0.0394	0.184	ND (0.0500)	0.0214	0.0125
Iron	mg/L	1.0	ND (0.200)	ND (0.200)	ND (0.200)	ND (0.200)	58.1	164	155
Sodium	mg/L		569	270	296	424	4650	4610	3580
Dissolved Metals									
Iron	mg/L	1.0	ND (0.200)	ND (0.200)		ND (0.200)	119	99.3	108
Inorganic Anions									
Bromide	mg/L		7.82	ND (4.00)	ND (8.00)	12.6	387	250	183
Chloride	mg/L							702	
Ortho-Phosphate	mg/L		ND (4.00)	ND (4.00)		ND (1.00)			
Sulfate	mg/L	600	1460	347	500	1190	4630	2930	2930
Nitrogen Ammonia by SM4500-NH3C									
Nitrogen, Ammonia (as N)	mg/L		ND (0.100)	0.0137 BJ	ND (0.100)	ND (1.00)			
Sulfide by SM4500-S-F-00									
Sulfide, Total	mg/L		ND (5.00)	4.00 J	ND (5.00)	ND (5.00)	ND (5.00)	5600	1600
TOC by SM 5310C									
Total Organic Carbon	mg/L		5.32	4.87	4.24	4.99	27.2	52.2	28.7

Notes: * - New Mexico Water Quality Control Commission (NMWQCC) Standards 20.6.2.3103.A

Highlighting indicates values exceeds NMWQCC Standards

- D Samples were diluted due to targets detected over the highest point of the calibration curve, or due to the matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.

FIELD PILOT STUDY MONITORING DATA REVIEW OF PILOT TEST DATA FORMER EUNICE NORTH GAS PLANT NEW MEXICO

Lab ID: Field ID:			448605-007 IW-030-(p)090612	456437-002 IW-030-012513	462048-004 IW-030-042613	467355-004 IW-30-072513	472775-002 IW-30-102413	448605-008 MW-089SA-090612	456437-003 MW-89SA-012513	462048-002 MW-0089SA-042613
Date Sampled:			9/6/2012	1/25/2013	4/26/2013	7/25/2013	10/24/2013	9/6/2012	1/25/2013	4/26/2013
		NMWQCC Standard*								
Parameters	Units									
Chromium, Hexavalent by SW 7196A										
Hexavalent Chromium	mg/L	0.05	0.356	0.448	ND (0.0100)	ND (0.100)	ND (0.2)	0.027	0.0256	1.15
Total Matala										
	ma/l	0.05	0.420	0.0694	ND (0.0100)	0.0127	0.0169	0.0270	0.0209	1 22
Iron	mg/L	0.05	0.429	0.0084	ND (0.0100)	0.0137	0.0108	0.0279	0.0298	1.23
Sodium	mg/L	1.0	0.227	105	54.2 121	109	206	100 (0.200)	ND (0.200)	ND (0.200) 401
Sodium	iiig/L		470	100	151	100	200	255	205	491
Dissolved Metals										
Iron	mg/L	1.0	ND (0.200)	82.9	5.29	41.6	38.3	ND (0.200)	ND (0.200)	ND (0.200)
Inorganic Anions										
Bromide	mg/L		14.9	149	112	250	291	5.21	ND (0.200)	8.7
Chloride	mg/L									
Ortho-Phosphate	mg/L		ND (1.00)		ND (0.200)	ND (8.00)	ND (8.00)	ND (1.00)		ND (4.00)
Sulfate	mg/L	600	1320	ND (10)	ND (20.0)	ND (40.00)	ND (40.00)	220	206	1560
Nitrogon Ammonia by SN4E00 NH2C										
Nitrogen Ammonia (as N)	ma/l		ND (1.00)		3.01	0.0442 BI	0.1	ND (1.00)		ND (0 100)
Nitrogen, Annionia (as N)	iiig/ L		ND (1.00)		5.01	0.0442 BJ	0.1	ND (1.00)		ND (0.100)
Sulfide by SM4500-S-F-00										
Sulfide, Total	mg/L		ND (5.00)	ND (5.00)	ND (5.00)	ND (50.0)	ND (5.00)	ND (5.00)	ND (5.00)	ND (5.00)
TOC by SM 5310C										
Total Organic Carbon	mg/L		5.92	1800	816	661	761	2.75	3.00	6.75

Notes: * - New Mexico Water Quality Control Commission (NMWQCC) Standards 20.6.2.3103.A

Highlighting indicates values exceeds NMWQCC Standards

- D Samples were diluted due to targets detected over the highest point of the calibration curve, or due to the matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.

TABLE 1

FIELD PILOT STUDY MONITORING DATA REVIEW OF PILOT TEST DATA FORMER EUNICE NORTH GAS PLANT NEW MEXICO

Lab ID	:		467355-002	472775-001	448605-002	452802-001	454667-001	456437-001	448605-001	452802-002	454667-002
Field ID. Date Sampled			MW-89-5A-0/2513 7/25/2013	MW895A-102413 10/24/2013	MW-96-090612 9/6/2012	MW-96-111912 11/19/2012	MW-096-122112 12/21/2012	MW-96-012513 1/25/2013	MW-097-090512 9/5/2012	MW-9/-111912 11/19/2012	MW-097-122112 12/21/2012
Dute Sumpted		NMWQCC Standard*	772572015	10/24/2015	5/0/2012	11/15/2012	12/21/2012	1/25/2015	5/5/2012	11/15/2012	12/21/2012
Parameters	Units	-									
Chromium, Hexavalent by SW 7196A											
Hexavalent Chromium	mg/L	0.05	0.0303	1.16	ND (0.0100)	ND (0.0100)	ND (0.0100)	ND (0.0100)	0.322	0.436	0.183
Total Metals											
Chromium	mg/L	0.05	0.0333	1.17	ND (0.0100)	0.0177	0.0149	ND (0.0100)	0.323	0.562	0.207
Iron	mg/L	1.0	ND (0.200)	ND (0.200)	ND (0.200)	ND (0.200)	ND (0.200)	ND (0.200)	ND (0.200)	ND (0.200)	ND (0.200)
Sodium	mg/L		213	434	183	155	144	153	375	515	571
Dissolved Metals											
Iron	mg/L	1.0	ND (0.200)	ND (0.200)	ND (0.200)	ND (0.200)	ND (0.200)	ND (0.200)	ND (0.200)	ND (0.200)	ND (0.200)
Inorganic Anions											
Bromide	mg/L		ND (4.00)	8.2	7.07	5.20	3.32	ND (0.200)	6.98	12.8	7.8
Chloride	mg/L						205				930 D
Ortho-Phosphate	mg/L		ND (4.00)	ND (8.00)	ND (1.00)				ND (0.200)		
Sulfate	mg/L	600	187	1360	398	407	306	318	769	1360	1610 D
Nitrogen Ammonia by SM4500-NH3C											
Nitrogen, Ammonia (as N)	mg/L		ND (0.100)	ND (0.100)	0.101				0.164		
	0,		, í	. ,							
Sulfide by SM4500-S-F-00											
Sulfide, Total	mg/L		2.4	5.00	ND (5.00)	ND (5.00)	ND (5.00)	ND (50.0)	ND (5.00)	ND (5.00)	ND (5.00)
TOC by SM 5310C											
Total Organic Carbon	mg/L		3.05	6.91	2.75	1.66	1.84	1.47	1.12	4.90	6.71

Notes: * - New Mexico Water Quality Control Commission (NMWQCC) Standards 20.6.2.3103.A

Highlighting indicates values exceeds NMWQCC Standards

- D Samples were diluted due to targets detected over the highest point of the calibration curve, or due to the matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.

TABLE 1

Page 6 of 7

FIELD PILOT STUDY MONITORING DATA REVIEW OF PILOT TEST DATA FORMER EUNICE NORTH GAS PLANT NEW MEXICO

Lab ID Field ID Date Sampled	-	NMWQCC Standard*	456341-001 MW-097-012413 1/24/2013	448605-009 Dup-10-90612 9/6/2012	452802-005 Dup-1-111912 11/19/2012	454667-005 Dup-1-122112 12/21/2012	462048-005 DUP-1-042613 4/26/2013	467355-005 DUP-1-072513 7/25/2013	456341-004 Dup 1/24/2013
Parameters	Units								
Chromium, Hexavalent by SW 7196A									
Hexavalent Chromium	mg/L	0.05	0.272	0.125	ND (0.0100)	0.18	0.757	0.0191	0.164
Total Metals									
Chromium	mg/L	0.05	0.307	0.185	ND (0.0500)	0.213	0.786	0.0221	0.182
Iron	mg/L	1.0	ND (0.200)	ND (0.200)	167	ND (0.200)	ND (0.200)	ND (0.200)	ND (0.200)
Sodium	mg/L		635	427	5660	598	534	242	602
Dissolved Metals		4.0	ND (0.200)	NID (0.200)	247			NID (0.200)	
Iron	mg/L	1.0	ND (0.200)	ND (0.200)	21/	ND (0.200)	ND (0.200)	ND (0.200)	ND (0.200)
Inorganic Anions									
Bromide	mg/L		18.4	12.3	462	10.3	5.45	ND (4.00)	14.1
Chloride	mg/L					964 D			
Ortho-Phosphate	mg/L			ND (1.00)			ND (2.00)	ND (4.00)	
Sulfate	mg/L	600	1590	1200	4640	1570 D	1500	339	1570
Nitrogen Ammonia by SM4500-NH3C									
Nitrogen, Ammonia (as N)	mg/L			ND (1.00)			ND (0.100)	ND (0.100)	
Sulfide by SM4500-S-F-00									
Sulfide, Total	mg/L		ND (5.00)	ND (5.00)	ND (5.00)	ND (5.00)	ND (5.00)	3.2	ND (5.00)
	-						· ·		· ·
TOC by SM 5310C									
Total Organic Carbon	mg/L		6.33	5.05	17.4	6.86	5.92	5.39	6.36

Notes: * - New Mexico Water Quality Control Commission (NMWQCC) Standards 20.6.2.3103.A

Highlighting indicates values exceeds NMWQCC Standards

- D Samples were diluted due to targets detected over the highest point of the calibration curve, or due to the matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.

FIELD PILOT STUDY MONITORING DATA REVIEW OF PILOT TEST DATA FORMER EUNICE NORTH GAS PLANT NEW MEXICO

Lab I. Field I.	D: D:		456437-006 DUP2012513	456437-007 Metal QC1 (MW96)	456437-008 IW28 Metal QC2
Date Sample	d:		1/25/2013	1/25/2013	1/25/2013
		NMWQCC Standard*			
Parameters	Units				
Chromium, Hexavalent by SW 7196A	6				
Hexavalent Chromium	mg/L	0.05	0.0556		
Total Metals					
Chromium	mg/L	0.05	0.0598	ND (0.0100)	0.0608
Iron	mg/L	1.0	ND (0.200)	ND (0.200)	ND (0.200)
Sodium	mg/L		381	152	381
	0.				
Dissolved Metals					
Iron	mg/L	1.0	ND (0.200)		
Inorganic Anions					
Bromide	mg/L		ND (1.0)		
Chloride	mg/L				
Ortho-Phosphate	mg/L				
Sulfate	mg/L	600	738		
Nitrogen Ammonia by SM4500-NH3C					
Nitrogen, Ammonia (as N)	mg/l				
Sulfide by SM4500-S-F-00					
Sulfide, Total	mg/L		ND (5.00)		
TOC by SM 5310C					
Total Organic Carbon	mg/L		4.05		

Notes: * - New Mexico Water Quality Control Commission (NMWQCC) Standards 20.6.2.3103.A

Highlighting indicates values exceeds NMWQCC Standards

- D Samples were diluted due to targets detected over the highest point of the calibration curve, or due to the matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.

Appendix A

Discharge Permit


DISCHARGE PERMIT GW-004

1. GENERAL PROVISIONS:

A. PERMITTEE AND PERMITTED FACILITY: The Oil Conservation Division (OCD) of the Energy, Minerals and Natural Resources Department issues Discharge Permit GW-004 (Discharge Permit) to Chevron U.S.A., Inc. (Owner/Operator), located at 1400 Smith Street, Houston, Texas 77002 to abate ground water and vadose zone contamination at its Eunice North Gas Plant (Facility) located at State Highway 207 (Eunice-Hobbs Highway) Eunice, New Mexico 88231 in the NE/4 of the SE/4 of Section 28, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico.

As a result of historical operations at the site, Chevron is proposing to remediate chromium contaminated ground water by injecting 5 percent solution of sodium dithionite and/or a 10 percent soy lactate solution in injection wells to remediate contaminated ground water. Chevron will mix 2800 gallons fresh water with a five percent solution of sodium dithionite and/or mix 2800 gallons fresh water with ten percent soy lactate solution to generate a solution which will then be discharged into the Ogallala aquifer. The ground water will be sampled to determine the effectiveness of the discharged solution to remediate the chromium contamination. The depth to ground water in the Ogallala aquifer is 37 to 73 feet below the surface and the background total dissolved solids concentration is approximately 1,200 mg/L. The discharge plan specifies that Chevron will remediate contaminated ground at the site to meet the standards specified in the Water Quality Control Commission regulations (20.6.2.3103 NMAC).

B. SCOPE OF PERMIT: OCD has been granted authority to administer the Water Quality Act (Chapter 74, Article 6 NMSA 1978) as it applies to gas processing plants by statute and by delegation from the Water Quality Control Commission pursuant to Section 74-6-4(E) NMSA 1978.

The Water Quality Act and the rules issued under that Act protect ground water and surface water of the State of New Mexico by providing that, unless otherwise allowed by rule, no person shall cause or allow effluent or leachate to discharge so that it may move directly or indirectly into ground water unless such discharge is pursuant to an approved discharge plan. See 20.6.2.3104 NMAC and 20.6.2.3106 NMAC.

This Discharge Permit does not authorize any treatment of, or on-site disposal of, any materials, product, by-product, or oil field waste, including, but not limited to, the on-site disposal of lube oil, glycol, antifreeze, filters, elemental sulfur, washdown water, contaminated soil, and cooling tower blowdown water.

This Discharge Permit does not convey any property rights of any sort nor any exclusive privilege, and does not authorize any injury to persons or property, any invasion of other private rights, or any infringement of state, federal, or local laws, rules or regulations.

The Owner/Operator shall operate in accordance with the Discharge Permit conditions to comply with the Water Quality Act and the rules issued pursuant to that Act, so that neither a hazard to public health nor undue risk to property will result (see 20.6.2.3109C NMAC); so that no discharge will cause or may cause any stream standard to be violated (see 20.6.2.3109H(2) NMAC); so that no discharge of any water contaminant will result in a hazard to public health, (see 20.6.2.3109H(3) NMAC); and so that the numerical standards specified of 20.6.2.3103 NMAC are not exceeded.

The Owner/Operator shall not allow or cause water pollution, discharge, or release of any water contaminant that exceeds the Water Quality Control Commission (WQCC) standards specified at 20.6.2.3101 NMAC and 20.6.2.3103 NMAC or 20.6.4 NMAC (Water Quality Standards for Interstate and Intrastate Streams).

C. **DISCHARGE PERMIT CONDITIONS:** By signing this Discharge Permit, the Owner/Operator agrees to the specific provisions set out in this document, and the commitments made in the approved Discharge Plan Application and the attachments to that application, which are incorporated into the Discharge Permit by reference.

If this Discharge Permit is a permit renewal, it replaces the permit being renewed. Replacement of a prior permit does not relieve the Owner/Operator of its responsibility to comply with the terms of that prior permit while that permit was in effect.

D. DEFINITIONS: Terms not specifically defined in this Discharge Permit shall have the same meanings as those in the Water Quality Act or the rules adopted pursuant to that Act, as the context requires.

E. FILING FEES AND PERMIT FEES: Pursuant to 20.6.2.3114 NMAC, every facility that submits a discharge permit application for initial approval or renewal shall pay the permit fees specified in Table 1 and the filing fee specified in Table 2 of 20.6.2.3114 NMAC. OCD has already received the required \$100.00 filing fee for this application. The flat fee for "Abatement of Ground Water and Vadose Zone Contamination at Oil and Gas Sites" is \$2,600.00. The Owner/Operator shall submit this amount along with the signed Discharge Permit. Checks should be payable to the "New Mexico Water Quality Management Fund," not the Oil Conservation Division.

F. EFFECTIVE DATE, EXPIRATION, RENEWAL CONDITIONS, AND PENALTIES FOR OPERATING WITHOUT A DISCHARGE PERMIT: This Discharge Permit is effective when the Division's Environmental Bureau receives the signed Discharge Permit from the Owner/Operator and the \$2,600.00 fee. This Discharge Permit will expire on March 16, 2016. The Owner/Operator shall submit an application for renewal no later than 120 calendar days before that expiration date, pursuant to 20.6.2.3106F NMAC. If an Owner/Operator submits a renewal application at least 120 calendar days before the Discharge Permit expires and is in compliance with the approved Discharge Permit, then the existing Discharge Permit will not expire until OCD has approved or disapproved the renewal application. Operating with an expired Discharge Permit may subject the Owner/Operator to civil and/or criminal penalties. See Section 74-6-10.1 NMSA 1978 and Section 74-6-10.2 NMSA 1978.

G. MODIFICATIONS: The Owner/Operator shall notify the Division's Environmental Bureau of any facility expansion, production increase, or process modification that would result in any significant modification in the discharge of water contaminants. See 20.6.2.3107C NMAC. The Division's Environmental Bureau may require the Owner/Operator to submit a permit modification pursuant to 20.6.2.3109E NMAC and may modify or terminate a permit pursuant to Section 74-6-5(M) through (N) NMSA 1978.

H. TRANSFER OF DISCHARGE PERMIT: Prior to any transfer of ownership, control, or possession (whether by lease, conveyance or otherwise) of the Facility, the transferor shall notify the transferee in writing of the existence of the Discharge Permit, and shall deliver or send by certified mail to the Division's Environmental Bureau a copy of such written notification, together with a certification or other proof that such notification has been received by the transferee pursuant to 20.6.2.3111 NMAC. Upon receipt of such notification, the transferee shall inquire into all of the provisions and requirements contained in the Discharge Permit, and the transferee shall be charged with notice of all such provisions and requirements as they appear of record in the Division's file or files concerning the Discharge Permit. Upon assuming either ownership or possession of the Facility the transferee shall have the same rights and responsibilities under the Discharge Permit as were applicable to the transferor. See 20.6.2.3111 NMAC.

Transfer of the ownership, control, or possession of the Facility does not relieve the transferor of responsibility or liability for any act or omission which occurred while the transferor owned, controlled, or was in possession of the Facility. See 20.6.2.3111E NMAC.

I. CLOSURE PLAN AND FINANCIAL ASSURANCE: The Owner/Operator shall notify the Division's Environmental Bureau in writing when any operations of its Facility are to be discontinued for a period in excess of six months. Upon review of the Owner/Operator's notice, the Division's Environmental Bureau will determine whether to modify this permit pursuant to 20.6.2.3107 NMAC and 20.6.2.3109E NMAC or to require the Owner/Operator to submit a closure plan and/or post-closure plan, including financial assurance.

J. COMPLIANCE AND ENFORCEMENT: If the Owner/Operator violates or is violating a condition of this Discharge Permit, the Division's Environmental Bureau may issue a compliance order requiring compliance immediately or within a specified time period, suspending or terminating this Discharge Permit, and/or assessing a civil penalty. See Section 74-6-10 NMSA 1978. The Division's Environmental Bureau may also commence a civil action in district court for appropriate relief, including injunctive relief. See Section 74-6-10(A)(2) NMSA 1978 and Section 74-6-11 NMSA 1978. The Owner/Operator may be subject to criminal penalties for discharge permit; making any false material statement, representation, certification or omission of material fact in an application, record, report, plan or other document filed, submitted or required to be maintained under the Water Quality Act; falsifying, tampering with

or rendering inaccurate any monitoring device, method or record required to be maintained under the Water Quality Act; or failing to monitor, sample or report as required by a permit issued pursuant to a state or federal law or regulation. See Section 74-6-10.2 NMSA 1978.

2. GENERAL FACILITY OPERATIONS:

A. OPERATIONAL MONITORING: The Owner/Operator shall comply with its approved monitoring programs pursuant 20.6.2.3107 NMAC.

1. Ground Water Monitoring System: The Owner/Operator shall monitor and sample all ground water monitor wells in accordance with its approved ground water abatement program, including the monitor wells for the hydrocarbon plume, the chloride plume, and the chromium plume.

2. Installation of Monitor Wells Near Injection Wells IW023 and IW024:

a. The Owner/Operator shall install three monitor wells near Injection Well IW023 and three monitor wells near Injection Well IW024 in accordance with its renewal application of December 6, 2010.

b. The Owner/Operator shall monitor the near monitor wells to determine whether it has achieved its primary objectives as specified in its renewal application of December 6, 2010.

3. Dithionite Injection Pilot Study Monitoring

a. Field Monitoring: During the injection, the Owner/Operator shall monitor the three monitoring wells hourly for pH, DO, ORP, conductivity, and temperature.

b. Post-Injection Monitoring and Sampling: The Owner/Operator shall sample the three monitor wells and IW023 monthly for 3 months after the injection, using the injection and monitoring wells, to evaluate the effectiveness of the sodium dithionite treatment. Ground water samples will be collected and analyzed for total and hexavalent chromium, bromide, sulfate, sulfide, total organic carbon, sodium, total and dissolved iron, and field parameters (pH, temperature, conductivity, DO and ORP).

4. Biodegradation Pilot Study

a. Baseline Sampling: Prior to the injection of a soy-lactate solution, the Owner/Operator shall sample and analyze IW023 and the three monitoring wells for total and hexavalent chromium, sulfate, sulfide, ammonia-nitrogen, orthophosphate-phosphorus, total anaerobic microbial counts, total organic carbon, total and dissolved iron, and field parameters (pH, temperature, conductivity, DO, and ORP).

b. Field Monitoring: During the injection, the Owner/Operator shall monitor the three monitor wells hourly for pH, DO, ORP, conductivity, and temperature.

c. Post -Injection Monitoring and Sampling: The Owner/Operator shall sample the IW024 and the three monitoring wells to evaluate the treatment effectiveness. Ground water samples will be collected for successive quarters after the injection event and analyzed for total and hexavalent chromium, sulfate, sulfide, ammonia -nitrogen, orthophosphate phosphorus, total anaerobic microbial counts, total organic carbon, total and dissolved iron, and field parameters (pH, temperature, conductivity, DO, and ORP).

B. CONTINGENCY PLANS: The Owner/Operator shall implement its approved Contingency Plans to cope with failure of the discharge permit or system in accordance with Permit Condition 2.F.

C. CLOSURE PLAN: After completing abatement of all ground water and vadose contamination required under Permit Condition 2.G, the Owner/Operator shall perform the following closure measures:

1. Remove or plug all lines leading to and from ground water recovery or injection wells so that a discharge can no longer occur.

2. Remove all abatement system components from the site, if applicable.

3. After receiving notification from the Division's Environmental Bureau that postclosure monitoring may cease, the Owner/Operator shall plug and abandon its monitor well(s).

D. RECORD KEEPING: The Owner/Operator shall maintain records of all inspections required by this Discharge Permit at its local office located at 240 Avenue O, Eunice, NM 88231 for a minimum of five years and shall make those records available for inspection by the Division's Environmental Bureau.

E. RELEASE REPORTING: The Owner/Operator shall comply with the following permit conditions, pursuant to 20.6.2.1203 NMAC, if it determines that a release of oil or other water contaminant, in such quantity as may with reasonable probability injure or be detrimental to human health, animal or plant life, or property, or unreasonably interfere with the public welfare or the use of property, has occurred. The Owner/Operator shall report unauthorized releases of water contaminants in accordance with any additional commitments made in its approved Contingency Plan. If the Owner/Operator determines that any constituent exceeds the standards specified at 20.6.2.3103 NMAC, then it shall report a release to the Division's Environmental Bureau.

1. **Oral Notification:** As soon as possible after learning of such a discharge, but in no event more than twenty-four (24) hours thereafter, the Owner/Operator shall orally notify the Division's Environmental Bureau. The Owner/Operator shall provide the following:

- the name, address, and telephone number of the person or persons in charge of the facility, as well as of the Owner/Operator of the facility;
- the name and location of the facility;

- the date, time, location, and duration of the discharge;
- the source and cause of discharge;
- a description of the discharge, including its chemical composition;
- the estimated volume of the discharge; and,
- any actions taken to mitigate immediate damage from the discharge.

2. Written Notification: Within one week after the Owner/Operator has learned of the discharge, the Owner/Operator shall send written notification to the Division's Environmental Bureau verifying the prior oral notification as to each of the foregoing items and providing any appropriate additions or corrections to the information contained in the prior oral notification.

F. ABATEMENT PLAN: Pursuant to 20.6.2.4105A(6) NMAC, an Owner/Operator is exempt from the requirement to obtain and implement an Abatement Plan, as required in 20.6.2.4104 NMAC. However, an Owner/Operator's Discharge Permit must address abatement of contaminated ground water and be consistent with the requirements and provisions of Sections 20.6.2.4101, 20.6.2.4103, Subsections C and E of Section 20.6.2.4106, Sections 20.6.2.4107 and 20.6.2.4112 NMAC.

1. **Purpose of Abatement Plan:** The Owner/Operator shall abate polluted ground water so as to either remediate or protect the ground water for use as domestic and agricultural water supply.

2. Abatement Standards and Requirements: The Owner/Operator shall abate the vadose zone so that water contaminants in the vadose zone shall not contaminate ground water or surface water, through leaching, percolation or as the water table elevation fluctuates. The Owner/Operator, where the Total Dissolved Solids concentration is 10,000 mg/L or less, shall abate contaminated ground water so that toxic pollutant(s), as defined in 20.6.2.7WW NMAC, shall not be present and so that the standards of 20.6.2.3103 NMAC shall be met.

3. Ground Water Abatement: The Owner/Operator shall implement its approved ground water abatement program until it has remediated the contaminated ground water to meet the standards and requirements set forth in 20.6.2.4103 NMAC.

4. Completion and Termination: Pursuant to 20.6.2.4112 NMAC, abatement shall be considered complete when the standards and requirements specified in 20.6.2.4103 NMAC are met. At that time, the Owner/Operator shall submit an abatement completion report, documenting compliance with the standards and requirements set forth in 20.6.2.4103 NMAC and this Discharge Permit, to Division's Environmental Bureau for approval. The abatement completion report also shall propose any changes to long term monitoring and site maintenance activities, if needed, to be performed after termination of the abatement plan.

CHEVRON U.S.A., INC EUNICE NORTH GAS PLANT

G. OTHER REQUIREMENTS:

1. Inspection and Entry: Pursuant to 20.6.2.4107A NMAC, the Owner/Operator shall allow the Division's Environmental Bureau, upon the presentation of proper credentials, to:

- enter the facility at reasonable times;
- inspect and copy records required by this discharge permit;
- inspect any treatment works, monitoring, and analytical equipment;
- sample any wastes, ground water, surface water, stream sediment, plants, animals, or vadose-zone material including vadose-zone vapor;
- use the Owner/Operator's monitoring systems and wells in order to collect samples; and
- gain access to off-site property not owned or controlled by the Owner/Operator, but accessible to the Owner/Operator through a third-party access agreement, provided that it is allowed by the agreement.

2. Advance Notice: Pursuant to 20.6.2.4107B NMAC, The Owner/Operator shall provide the Division's Environmental Bureau with at least four (4) working days advance notice of any sampling to be performed pursuant to this Discharge Permit, or any well plugging, abandonment or destruction at the facility site.

3. Plugging and Abandonment: Pursuant to 20.6.2.4107C NMAC, the Owner/Operator shall request by certified mail, approval by the Division's Environmental Bureau to plug and abandon a monitor well, unless such approval is required from the State Engineer. The proposed action shall be designed to prevent water pollution that could result from water contaminants migrating through the well or borehole. The proposed action shall not take place without written approval from the Division's Environmental Bureau, unless written approval or disapproval is not received by the Owner/Operator within thirty (30) days of the date of receipt of the proposal.

H. ANNUAL REPORT: The Owner/Operator shall submit its annual report for each calendar year pursuant to 20.6.2.3107 NMAC to the Division's Environmental Bureau by March 15th of the following year. The annual report shall include the following:

- 1. Results of its ground water monitoring program; including:
- summary tables listing laboratory analytic results of all ground water and soil samples. Any WQCC constituent found to exceed the groundwater standard shall be highlighted and noted in the annual report. Copies of the most recent year's laboratory analytical data sheets shall also be submitted.
- annual water table potentiometric maps. A corrected water table elevation shall be determined for all wells containing non-aqueous phase liquids. These maps shall show well locations, pertinent site features, and the direction and magnitude of the hydraulic gradient.
- semi-annual isopleth maps for the following constituents: non-aqueous phase liquids; chlorides; chromium; and, BTEX.

CHEVRON U.S.A., INC EUNICE NORTH GAS PLANT

- semi-annual geologic cross-sections (both dip and strike), using the geologic/lithologic logs from the monitor, recovery, and injection wells, depicting the concentrations for the following constituents: non-aqueous phase liquids; chlorides; chromium; and, BTEX.
- estimate or measure of the volume of the solutions discharged during each quarter and the total volume discharged to date.

2. Summary of any releases and corrective actions taken in accordance with its approved Contingency Plan.

3. CLASS V WELLS: Pursuant to 20.6.2.5002B NMAC, leach fields and other wastewater disposal systems at Division-regulated facilities that inject non-hazardous fluid into or above an underground source of drinking water are UIC Class V injection wells, including ground water management wells. This Discharge Permit does not authorize the use of a Class V injection well for the disposal of industrial waste at the Facility. Pursuant to 20.6.2.5005 NMAC, the Owner/Operator shall close any Class V industrial waste injection wells at its Facility that inject non-hazardous industrial wastes or a mixture of industrial wastes and domestic wastes (*e.g.*, septic systems, leach fields, dry wells, *etc.*) other than the injection remediation wells within 90 calendar days of the issuance of this Discharge Permit. The Owner/Operator shall document the closure of any Class V wells used for the disposal of non-hazardous industrial wastes or a mixture of industrial wastes other than contaminated ground water in its Annual Report.

Other Class V wells, including wells used only for the injection of domestic wastes, must be permitted by the New Mexico Environment Department.

4. SCHEDULE OF COMPLIANCE:

A. PERMIT CERTIFICATION: The Owner/Operator shall sign and return this Permit to the Division's Environmental Bureau within 45 days of its receipt of this Permit.

B. SUBMISSION OF THE PERMIT FEES: As specified in Permit Condition 1.F, the Owner/Operator shall submit the fee of \$2,600.00 along with the signed Discharge Permit within 45 days of the receipt of the Discharge Permit. Checks should be payable to the **"New Mexico Water Quality Management Fund,"** not the Oil Conservation Division.

C. ANNUAL REPORT: As specified in Permit Condition 2.H, the Owner/Operator shall submit its annual report to the Division's Environmental Bureau by March 15th of the following year.

CERTIFICATION: (OWNER/OPERATOR) by the officer whose signature appears 5. below, acknowledges receipt of this Discharge Permit, and has reviewed its terms and conditions.

Cheston V.S.A. Inc Company Name - print name

Robert A. Guldner Company Representative - print name

Company Representative - Signature

Title: Manager OE/WBS

Date: 01/23/2012

Appendix B

Analytical Reports





B&A Laboratories, Inc. 10650 Culebra Rd., Suite 104-154 San Antonio, TX 78251-4949 Ph: (210) 509-3334 Fax (210) 509-3335 Houston - Dallas - San Antonio - Odessa Tampa - Atlanta - Phoenix

281680

Invoice No. 281680

	Client Information	Invoice Information
Invoice to:	Conestoga Rovers & Associates	Invoice Date: 09/17/2012
Contact:	Claudia Ramos	
Address:	2135 S Loop 250 W	Due Date: 10/17/2012
	Midland, TX 79703	Torme: 30 Dave
Project Name:	North Eunice	Terms. 50 Days
Project #:	073018	PO #: 4051255
		Lab PM: Nicholas Straccione

Comments:

Products / Services	WO Number	Matrix	ТАТ	Qty	Price	Ext. Price
Chromium, Hexavalent by SW 7196A	448605	Water	5 Day TAT	9	25.00	\$225.00
Total Metals by EPA 6010B	448605	Water	5 Day TAT	9	30.00	\$270.00
Dissolved Metals per ICP by SW846 6010B	448605	Water	5 Day TAT	9	8.00	\$72.00
Inorganic Anions by EPA 300/300.1	448605	Water	5 Day TAT	9	40.00	\$360.00
TOC by SM 5310C	448605	Water	5 Day TAT	9	35.00	\$315.00
Sub-Total anerobic bacteria	448605	Water	5 Day TAT	9	35.00	\$315.00
Sulfide by SM4500-S-F-00	448605	Water	5 Day TAT	9	40.00	\$360.00
Nitrogen Ammonia by SM4500-NH3C	448605	Water	5 Day TAT	9	35.00	\$315.00

Total:

\$2,232.00

Please detach this portion and return with your payment

	Client Information
Client:	Conestoga Rovers & Associates
Contact:	Claudia Ramos
Terms:	30 Days
PO #:	4051255

Invoice Inform	ation: 281680
Work Order Number:	448605
Due Date:	10/17/2012
Invoice Amount:	\$2,232.00
Amount Remitted:	

Past Due Invoices are subject to a 1.5% per Month service charge, plus collection fees.

Please send your payments to: Xenco Laboratories, Inc. 10650 Culebra Rd., Suite 104-154, San Antonio, Texas 78251-4949 Houston - Dallas - San Antonio - Odessa Tampa - Atlanta

Make checks payable or Credit Card payments to B&A Laboratories, Inc.

visit our webpage at www.xenco.com

Xenco Laboratories

140

CH	IAIN OF CUSTODY RI	ECORD AND ANALYSIS	REQUEST
----	--------------------	--------------------	---------

The Environmental Lab of Texas						12600 West I-20 East Odessa, Texas 79765							Phone: 432-563-1800 Fax: 432-563-1713													•		
Project Manager: Mike W	K.												. ·	Pro	ject	Nan	10:	l	JC	<u>) (</u>	#	1	Ž	0	ni	CE)	
Company Name CRA													-	-	Pro	oject	#:	\mathcal{L}]7	3	0	18	8	· · ·				
Company Address: 2135 W	10	D	2501	V										P	'roje	ct Lo)c:	Ľ	י טו	<u>)</u>	CE	2	Λ	<u>)/</u>	M	<u> </u>		
city/State/Zip: Midland		TX	797	03												PO	#:					, 						
Telephone No: 432-128/4-	$\mathcal{O}($	18	12	Fax No:	4	4	38)-1	105	37	2-E	XE	To	eport	For	mat:	E] st	anda	urd			TRF	۲P		□ и	PDE	S
Sampler Signature: JUStin	Vì	XØ	Ă	e-mail:														11 كشندي			-		,	الأعصرين				-1
	-																	TCLF		naiyi		or:			Т	T		
ORDER#: 448605						[Pre	serva	uion &	#of (Contair	918	Ma	atrix	Ê	T		OTAL	8			8					4	
(ALEX III / III / III / III / IIII / IIIII / IIII / IIIII / IIII / IIIII / IIII / IIIII / IIII / IIIII / IIII / IIII / IIIII / IIIIII	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Fittered	Total #. of Containers	kee HNQ,	ŦĊ	H ₂ SO4	NaOH	Na ₂ S ₂ O ₅	other (Specify)	DW-Drinking Water SL-Studge	GW = Groundwater S=SollSolid NP=Non-Potable Specify Other	TPH: 418.1 8015M 80	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K) Animum (C. SOV Alminian)	SAR/ESP/CEC	Metals: As Ag Ba Cd Cr Pb Hg	Votatiles	Serrivolatiles	BIEX 80218/5030 or BIEX 82	RCI	N.O.R.M.			RUSH TAT (Pre-Schedule) 24	Standard TAT
MW097 0905/2			9.5.12	1535			<u>Х</u>	-								_		_						·			╇	+
		╂			$\left \right $			╋			-+-	+				+			+						+		-	+
· · · · · · · · · · · · · · · · · · ·	<u> </u>	1	1					1.	\square							+	\top	╈	╞━						1		T	
		<u> </u>																			·				_		╇	
		 						-								-	-		<u> </u>						+		┢	┿
								╋	+			+-				+		┼	╋	\vdash		\neg	-	-+	╉	╋	╋	+
								\top				+				╈	1	+	1			·			1		T	
									·								Ţ											
Special instructions: read attached ssow	<u> </u>	Îme	Received by:		÷							Da	ite	- T	Time	<u>r < 6 r</u>	aboi amp /OCs abel	le Co Free 5 on	y Co ontai a of H conte	ners lead ainer	en te Inta spac (s)	ct? ce?	~~		0.0		≤(≍)≍(2
Relirquisted by:	21	L] Ime	Received by:									De	ite		Time		usto Lusto lamp by by	dy se dy se le Ha Sam Cou	eals (eals (and (pler/ rier?	on ca on ca Dellv Clien	ontai boler bred t Rej UPS	ner((s) p. ?	(8) DHL	.				5 Star
Relinquished by: Date	T	lme	Received by EL	ot: MQ	X	N	Já	ł	h		k	Σ-0	ite ?-[6	2][Time [*]	4 1	emp	eratu	ire U	pon	Reco	eipt:			1.	5	<u>۰</u> ۰	;

CRA Simplified Scope of Work (SSOW)/Laboratory Services Purchase Order

SSOW Ref. Code 073018_20120823

Project Name: Chevron-North Eunice

Phase/Study Title: Baseline Sampling Event Description: Pilot Test - GW Sampling

CRA Project No./Phase/Task: 073018

		- Toject Ebbation.				······	-			Fi	eld	QC :	Sam	ples				
ltem	Sample Matrix	Analytical Parameters	Analytical Methods	Holding Time	Unit Prices	Applicable Surcharge Multiplier ⁽¹⁾	Ext P	ended rices	Estimated Sample Qty/Event	MS	Lab Dup	Trip Blk	RBIK	Fid Dup	Tota Samj Qty	al pie B v. Sa	illable Imples	Estimated Cost/Event
	water	Total, Chromium, Iron, Sodium	SW-846 6010B	180 days	\$ 30.00	1.00	\$	30.00	8			2		2	12		12	\$360.00
2	water	Hexavalent Chromium	SW-846 7196A	24 hours	\$ 25.00	1.00	\$	25.00	8					2	10		10	\$250.00
3	water	Anions (SO4, Br)	E 300	28 days	\$ 40.00	1.00	\$	40.00	8					2	10		10	\$400.00
ł	water	Sulfide	SM4500	7 days	\$ 40.00	1.00	\$	40.00	8					2	10		10	\$400.00
i .	water	Ammonia-Nitrogen	SM4500	28 days	\$ 35.00	1.00	\$	35.00	8					2	10		10	\$350.00
	water	Total Organic Carbon TOC	SM5310	28 days	\$ 35.00	1.00	\$	35.00	8					2	10		10	\$350.00
,	water	Orthophosphate-phosphorus	E300	48 hrs	\$ 14.00	1.00	\$	14.00	8					2	10		10	\$140.00
1.	water	Total Anaerobic Microbial Count		24 hrs	\$ 35.00	1.00	\$	35.00	8					2	10		10	\$350.00
)	water	Dissolved Iron	SW-846 6010B	180 days	\$ 10.00	1.00	\$	10.00	· 8 ·					2	10		10	\$100.00
													:					
				,				_ ·										

(1) Explanation of Surcharges: (1) Explanation of Surcharges: Laboratory Surcharge(s): Estimated Event Total Costs: Lab Contracting Summary:

	Governi	ng Terms and Conditions	CRA Purchase Order Number:	4051255	Claudia Ramos 8/23/2012	:
		Master Agreement Number:	Name of Client:		(authorized CRA signature) (date signature)	gned)
-	1	Exhibit "A" Terms and Conditions	Other Additional Insureds:			
		Client Contract	Governing Law:	Texas	Nick Straccione 8/23/2012	:
			Currency:	US	(authorized Vendor signature) (date si	gned)
			Address Invoice to:	CRA c/o Claudia Ramos	Typed name constitutes authorized signature.	
			-	6320 Rothway, Suite 100		
				Houston, TX 77040	· · · · · · · · · · · · · · · ·	

Vendor to provide and deliver all items or services set out or otherwise described below subject to the governing terms and conditions checked above. This Purchase Order expressly limits acceptance to such terms and conditions. Any additional or different terms proposed by Vendor are rejected unless expressly agreed to in writing by CRA. To accept this Purchase Order, Vendor must sign, date, and return one copy of this page to issuer before starting any work. CRA's receipt of Signature of this Purchase Order may be sent by facsimile (with confirmation by transmitting machine) and/or transmitted by portable document file (PDF) which shall be treated as an original signature, and any such signature, facsimile, PDF file, or copy of this signed Purchase Order shall be valid as an original and shall be binding as if it were the original. Show Purchase Order No. on all correspondence, insurance certificates, invoices, and delivery papers.

200016-PO(QSF-024-Lab)-Rev.10 1/18/2011

Anvino

Xenc	o Laboratories	5				· · ·					C	HAIN	OF	CUS	STO	DYF	REC	OR) AN	D A	NA	LÝS	is i	REG)UE	:ST					1. J. A. S.
The Enviror	mental Lab of Texas	•					• .	1 C	260)des	0 We sa, 1	st Texa	-20 Ea as 797	ast 765				X				Ph F	ione ax:	: 43 43	2-5 2-5	63-1 63-1	1800 1713	 J			` .	
Pr	niect Manager: Mike	W	isr		weck											Pr	ojec	t Na	me: _	Λ	Uc	2	4	<u>h</u>	E		<u>1ic</u>	·e	لمستحم		•
Cr	ompany Name CRA							-									Pi	rojec	t #:	Ć	37	13	0	12	3						
0.	Address 2135	SIM	02	50	N												Proli	act i.	oc: .	5	Jr	ì	e		X)	N	1				
C	ompany Address. <u>Arck)</u>	and	<u>-</u> 7V	1	GINZ																			1		A rrent	<u> </u>				
CI	ity/State/Zip: ////			$\frac{1}{2}$	1700	• • • • • • • • • • • • • • • • • • •	·	1.2.	~	1	2	1.	7	5	-			٢)#:						 1			·····			•
Te	elephone No: <u>432-</u>	686	· CC	180		Fax No:		100	2	·U	57	52	Y	0(0	Repo	rt Fo	rmat	: /	AX S	itand	ard So In	ìn.		TR	(RP	Le		PDE	s C-	k mo
s. St	ampler Signature:	hoy	<u></u>		····	e-mail:	M	Wi	iS	nia	Ju	vie	20	K	ð		ц Ц		20	9.	<u>.</u>	2	£	2	3	n'	Ŧ	E.	щù	ĕ,	Also.
(ab use only	V) 01.5	······					۲C	,RA	i	NO	10	1.0	OI.	n						TCL	P:			Ť.	T	Г	Π	Т	Ĩ		
000EP#	" 448648D							Г	Pre	servat	ion 8	# of C	ontain	018		Aatrix	ß			TOTA	L: g	+	╀╴	╞		ľ			1		_
URDEN #										ŀ	Γ	TT			\$	Ng g	B	1006		s	1			62 62 62 62 62 62 62 62 62 62 62 62 62 6	1-	•			AL IN		
(Å		İ	f			_		8							SL-Stu	Pisoido Mecify O	015M	Ă	4 2		8			or BT					Ş.		
IS O		•	Dep 1	E E	npled	прied		ontaine						S.	Water	Mather S	∞ 	8	Ng.					2602					E.	TAT	
i qej			ning	a S	LIES O	e Sar	diterec	of C				T	s.	J Š	rinking	Sround sn-Potal	418	¥	202	Ŋ,	AS AS	8		8021		N.			AT H	dard	
AB#	FIELD CODE		Begi	Endi	D D	0430	Field	Total t	N I	P	УS°H	logn NaO		e de	C-MD	CW=	Hdi	Ä	C S S	Anon	Meta	Volat	間の	Q	õ	TON			<u>R</u>		
64	MW96090612				9-6-12	60000		6)	1					L									 	_	L	Ŀ	\square		Ļ	X	
03	IWU29090612			ļ	9-6-12	0830		6	4	4	ļ		1		<u> </u>	_'		\square						 	L	<u> </u>	\vdash	<u>_</u>	+	ΙΫ́	
BO	MW W7A 090612	· .		ļ	1. 9-6-12	1130		6/	<u>}</u>	4	ļ	\square	\downarrow	_	1.				-	_	-		 		L	\downarrow	╞╧┽	┉╇┉			
05	Fw 028090612		ļ	ļ	9-6-12	1240		<u> </u>												_	1		 		L		H	<u> </u>		1X	
Of of	~~ W9,4 090612		ļ		9-6-12	1330	ļ	6/	1	_ _				_	_							_	1	L	L		\vdash			1 <u>X</u>	
00	IW 030(P) 090612				9-0-12	1410		6)	1						_	···					<u> </u>		 				\square			ļĄ	
0A	MW 0893.4 0906	12	<u> </u>		9-6-12	1505		67	1				_	1									 		L		\vdash		╇	1	
OR	Dup1090612		<u> </u>						1				_	<u> </u>	1									ļ	┢		\vdash		╇		
				ļ																			L	·			\square		4-		
			<u> </u>	<u> </u>						Ļ					L							L			L						
Special in	structions: Attacked SSOW	for 0	ina	ly	Ses. a	ppy of co Hached.	3C. Cau	tur n w	ne B	d pui	in 66	on ofh	9. In	6•1 Ю	2) an	2150) 101	et	L abo Samp	rato ole C	ry Ci onta	omn inera	ient inta	s: act?			```	Y .	N		
Relinguishe	ad by:	Date	T	me	Received by:				,				T	D	ate		Time	-	abel	s rife S ON wity a	coni	nea laine	uspa ir(s)	ace / ainer	r(9)		1	Y Y	N N		
t l l l mot	- Vbou	9- MJ	80	50	Deserved by:		;						1	Ē	-		Tim		Custo	idy s	eals	ono	oole	нг(8) н	~/			ŗ.	N		
Relinquishe	ed by:	Date		UT1 0	INCECEIVED DY:									U	ue		11176		Samp by by	NG H / Sar / Coi	and npler urier?	Velli /Clie	rere nt Re UP	u əp.? S	DH	Ł	FedE	Y Ex Lo	N one S	Star	
Relinquishe	ed by:	Date	Ť	me	Received by EL	or:	p	e	r	r			C	1/1	ate /12	8	Time 3	2	Temp	erat	ure l	lpon	Red	ceipt	t: 🤉	55	-	21	Ì		

Analytical Report 448605

for

Conestoga Rovers & Associates

Project Manager: Mike Wisniowiecki

North Eunice

073018

17-SEP-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)



17-SEP-12



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

Reference: XENCO Report No: 448605 North Eunice Project Address: Eunice, NM

Mike Wisniowiecki:

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 448605. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 448605 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 448605



Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW047 090512	W	09-05-12 15:35		448605-001
MW96090612	W	09-06-12 09:30		448605-002
IW029090612	W	09-06-12 10:30		448605-003
MW007A090612	W	09-06-12 11:30		448605-004
IW028090612	W	09-06-12 12:40		448605-005
MW009A090612	W	09-06-12 13:30		448605-006
IW030(p)090612	W	09-06-12 14:10		448605-007
MW0895A090612	W	09-06-12 15:05		448605-008
Dup1090612	W	09-06-12 00:00		448605-009



CASE NARRATIVE

Client Name: Conestoga Rovers & Associates Project Name: North Eunice



Project ID:073018Work Order Number:448605

Report Date: 17-SEP-12 Date Received: 09/06/2012

Sample receipt non conformances and comments:

Samples #2-9 (received 09-07) were taken to the lab by the client one day after sample#1 (received 09-06)

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-896116 Inorganic Anions by EPA 300/300.1 E300

Batch 896116, Ortho-Phosphate recovered below QC limits Samples affected are: 448605-001. The Laboratory Control Sample for Ortho-Phosphate is within laboratory Control Limits

Batch: LBA-896119 Inorganic Anions by EPA 300/300.1 E300

Batch 896119, Ortho-Phosphate recovered below QC limits Samples affected are: 448605-004, -002, -003. The Laboratory Control Sample for Ortho-Phosphate is within laboratory Control Limits

Batch: LBA-896120 Inorganic Anions by EPA 300/300.1 E300

Batch 896120, Ortho-Phosphate recovered below QC limits in the Matrix Spike. Samples affected are: 448605-007, -006, -009, -005, -008. The Laboratory Control Sample for Ortho-Phosphate is within laboratory Control Limits



Certificate of Analysis Summary 448605

Conestoga Rovers & Associates, Midland, TX

Project Name: North Eunice



Date Received in Lab: Thu Sep-06-12 04:14 pm

Project Location: Eunice, NM

Project Id: 073018

Contact: Mike Wisniowiecki

Report I	Date: 17	SEP-12	
Kenori i	Jale: 1/-	NEP-17	

								Project Ma	nager:	Nicholas Stra	ccione			
	Lab Id:	448605-0	001	448605-0	002	448605-0	003	448605-0	004	448605-0	005	448605-0	006	
An aluais Do an onto d	Field Id:	MW047 09	0512	MW96090	0612	IW029090	0612	MW007A09	90612	IW028090	0612	MW009A0	90612	
Analysis Kequestea	Depth:													
	Matrix:	WATE	R	WATE	R	WATE	R	WATE	R	WATE	R	WATE	R	
	Sampled:	Sep-05-12	15:35	Sep-06-12 (09:30	Sep-06-12	10:30	Sep-06-12	11:30	Sep-06-12	12:40	Sep-06-12	13:30	
Chromium, Hexavalent by SW 7196A	Extracted:													
	Analyzed:	Sep-06-12	16:45	Sep-07-12	09:15	Sep-07-12	09:15	Sep-07-12	09:15	Sep-07-12	09:15	Sep-07-12	09:15	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	
Hexavalent Chromium		0.322	0.0100	ND	0.0100	0.126	0.0100	0.308	0.0100	0.0150	0.0100	0.634	0.0100	
Dissolved Metals per ICP by SW846	Extracted:	Sep-10-12	11:30	Sep-10-12	11:30	Sep-10-12	11:30	Sep-10-12	11:30	Sep-10-12	11:30	Sep-10-12	-12 11:30	
6010B	Analyzed:	Sep-12-12	03:09	Sep-12-12	03:15	Sep-12-12	03:20	Sep-12-12	03:26	Sep-12-12	03:32	Sep-12-12	03:48	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	
Iron		ND	0.200	ND	0.200	ND	0.200	ND	0.200	ND	0.200	ND	0.200	
Inorganic Anions by EPA 300/300.1	Extracted:	Sep-08-12	05:49	Sep-08-12	20:22	Sep-08-12	20:38	Sep-08-12	20:54	Sep-08-12	22:31	Sep-08-12	22:47	
SUB: E871002	Analyzed:	Sep-08-12	05:49	Sep-08-12	20:22	Sep-08-12	20:38	Sep-08-12	20:54	Sep-08-12	22:31	Sep-08-12	22:47	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	
Bromide		6.98	0.200	7.07	1.00	12.6	1.00	7.99	1.00	7.07	1.00	11.0	1.00	
Ortho-Phosphate		ND	0.200	ND	1.00	ND	1.00	ND	1.00	ND	1.00	ND	1.00	
Sulfate		769	5.00	398	2.50	1190	2.50	597	2.50	488	2.50	691	2.50	
Nitrogen Ammonia by SM4500-NH3C	Extracted:													
SUB: E871002	Analyzed:	Sep-11-12	11:59	Sep-11-12	12:00	Sep-11-12	12:01	Sep-11-12	12:03	Sep-11-12	12:04	Sep-11-12	12:05	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	
Nitrogen, Ammonia (as N)		0.164	0.100	0.101	0.100	ND	0.100	ND	0.100	ND	0.100	ND	0.100	
Sulfide by SM4500-S-F-00	Extracted:													
SUB: E871002	Analyzed:	Sep-10-12	11:30	Sep-10-12	11:31	Sep-10-12	11:32	Sep-10-12	11:33	Sep-10-12	11:34	Sep-10-12	11:35	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	
Sulfide, total		ND	5.00	ND	5.00	ND	5.00	ND	5.00	ND	5.00	ND	5.00	
TOC by SM 5310C	Extracted:													
SUB: E871002	Analyzed:	Sep-10-12	12:19	Sep-10-12	12:35	Sep-10-12	12:52	Sep-10-12	13:09	Sep-10-12	13:49	Sep-10-12	14:05	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	
Total Organic Carbon		1.12	1.00	2.75	1.00	4.99	1.00	2.30	1.00	4.57	1.00	2.80	1.00	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.

The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.

Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Nicholas Straccione Project Manager



Project Id: 073018

Contact: Mike Wisniowiecki

Certificate of Analysis Summary 448605

Conestoga Rovers & Associates, Midland, TX

Project Name: North Eunice



Date Received in Lab: Thu Sep-06-12 04:14 pm

Report Date: 17-SEP-12

roject Location: Eunice, NM								Keport	Date:	1/-SEP-12			
								Project Ma	nager:	Nicholas Stra	ccione		
	Lab Id:	448605-	001	448605-	002	448605-0	003	448605-0	004	448605-0	005	448605-0	006
Anglusia Doguostad	Field Id:	MW047 09	MW047 090512		MW96090612		IW029090612		MW007A090612		IW028090612		90612
Analysis Kequesiea	Depth:												
	Matrix:	WATE	R	WATE	R	WATE	R	WATE	R	WATE	R	WATE	R
	Sampled:	Sep-05-12	15:35	Sep-06-12	09:30	Sep-06-12	10:30	Sep-06-12	11:30	Sep-06-12	12:40	Sep-06-12	13:30
Total Metals by EPA 6010B	Extracted:	Sep-10-12	11:30	Sep-10-12 11:30		Sep-10-12	11:30	Sep-10-12	11:30	Sep-10-12	11:30	Sep-10-12	11:30
SUB: E871002	Analyzed:	Sep-12-12	01:51	Sep-12-12	02:13	Sep-12-12	02:19	Sep-12-12	02:24	Sep-12-12	02:41	Sep-12-12	02:47
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Chromium		0.323	0.0100	ND	0.0100	0.184	0.0100	0.296	0.0100	0.0185	0.0100	0.615	0.0100
Iron		ND	0.200	ND	0.200	ND	0.200	ND	0.200	ND	0.200	ND	0.200
Sodium		375	0.500	183	0.500	424	0.500	235	0.500	308	0.500	306	0.500

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.

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

Nul Ct

Nicholas Straccione Project Manager

Page 6 of 28



Project Id: 073018

Project Location: Eunice, NM

Contact: Mike Wisniowiecki

Certificate of Analysis Summary 448605

Conestoga Rovers & Associates, Midland, TX

Project Name: North Eunice



Date Received in Lab: Thu Sep-06-12 04:14 pm

Report Date: 17-SEP-12

Project Manager: Nicholas Straccione

	Lab Id:	448605-0	007	448605-0	008	448605-0)09		
Anglucia Degregated	Field Id:	IW030(p)09	90612	MW0895A0	90612	Dup10906	612		
Analysis Kequestea	Depth:								
	Matrix:	WATE	R	WATE	R	WATE	R		
	Sampled:	Sep-06-12	14:10	Sep-06-12	15:05	Sep-06-12 (00:00		
Chromium, Hexavalent by SW 7196A	Extracted:								
	Analyzed:	Sep-07-12	09:15	Sep-07-12 (09:15	Sep-07-12 (09:15		
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL		
Hexavalent Chromium		0.356	0.0100	0.0270	0.0100	0.125	0.0100		
Dissolved Metals per ICP by SW846	Extracted:	Sep-10-12	11:30	Sep-10-12	11:30	Sep-10-12	11:30		
6010B	Analyzed:	Sep-12-12	03:54	Sep-12-12 (04:00	Sep-12-12 (04:05		
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL		
Iron		ND	0.200	ND	0.200	ND	0.200		
Inorganic Anions by EPA 300/300.1	Extracted:	Sep-08-12	23:03	Sep-08-12 2	23:19	Sep-08-12 2	23:35		
SUB: E871002	Analyzed:	Sep-08-12	23:03	Sep-08-12 2	23:19	Sep-08-12 2	23:35		
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL		
Bromide		14.9	1.00	5.21	1.00	12.3	1.00		
Ortho-Phosphate		ND	1.00	ND	1.00	ND	1.00		
Sulfate		1320	2.50	220	2.50	1200	2.50		
Nitrogen Ammonia by SM4500-NH3C	Extracted:								
SUB: E871002	Analyzed:	Sep-11-12	12:07	Sep-11-12	12:09	Sep-11-12	12:10		
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL		
Nitrogen, Ammonia (as N)		ND	0.100	ND	0.100	ND	0.100		
Sulfide by SM4500-S-F-00	Extracted:								
SUB: E871002	Analyzed:	Sep-10-12	11:36	Sep-10-12	11:38	Sep-10-12	11:39		
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL		
Sulfide, total		ND	5.00	ND	5.00	ND	5.00		
TOC by SM 5310C	Extracted:								
SUB: E871002	Analyzed:	Sep-10-12	14:22	Sep-10-12	14:38	Sep-10-12	14:54		
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL		
Total Organic Carbon		5.92	1.00	2.75	1.00	5.05	1.00		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.

XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.

Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Nicholas Straccione Project Manager



Project Id: 073018

Project Location: Eunice, NM

Contact: Mike Wisniowiecki

Certificate of Analysis Summary 448605

Conestoga Rovers & Associates, Midland, TX

Project Name: North Eunice



Date Received in Lab: Thu Sep-06-12 04:14 pm

Report Date: 17-SEP-12

Project Manager: Nicholas Straccione

								I I ojece Miunugeri	1 (leffolds birdeeloffe	
	Lab Id:	448605-	007	448605-0	008	448605-0)09			
Analysis Paguested	Field Id:	IW030(p)0	90612	MW0895A0	90612	Dup1090	612			
Analysis Kequesiea	Depth:									
	Matrix:	WATE	R	WATE	R	WATE	R			
	Sampled:	Sep-06-12	14:10	Sep-06-12	15:05	Sep-06-12	00:00			
Total Metals by EPA 6010B	Extracted:	Sep-10-12	11:30	Sep-10-12	11:30	Sep-10-12	11:30			
SUB: E871002	Analyzed:	Sep-12-12	02:52	Sep-12-12	02:58	Sep-12-12	03:04			
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL			
Chromium		0.429	0.0100	0.0279	0.0100	0.185	0.0100			
Iron		0.227	0.200	ND	0.200	ND	0.200			
Sodium		470	0.500	235	0.500	427	0.500			

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.

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

ch Nul

Nicholas Straccione Project Manager

Page 8 of 28



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
- **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

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

Certified and approved by numerous States and Agencies.

LOQ Limit of Quantitation

Phor

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

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

4143 Greenbriar Dr. Stafford, TX 77477 9701 Harry Hines Blvd , Dallas, TX 75220 5332 Blackberry Drive, San Antonio TX 78238 2505 North Falkenburg Rd, Tampa, FL 33619 12600 West I-20 East, Odessa, TX 79765 6017 Financial Drive, Norcross, GA 30071 3725 E. Atlanta Ave, Phoenix, AZ 85040

Phone	Fax
(281) 240-4200	(281) 240-4280
(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(432) 563-1800	(432) 563-1713
(770) 449-8800	(770) 449-5477
(602) 437-0330	

Final 1.000





Work Order #: 448605				073018			
Lab Batch #: 896454	Si Into Pre	ample: 896454-	1-BKS	Matrix:	Water		
Reporting Units: mg/L	B	atch #: 1	BLANK /F	SLANK SPI	OVERY S	STUDY	
Chromium, Hexavalent by SW 7196A Analytes		Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Hexavalent Chromium		< 0.0100	0.0250	0.0235	94	80-120	
Lab Batch #: 896456 Date Analyzed: 09/06/2012 D:	Sate Pre	ample: 896456- pared: 09/06/20	1-BKS 012	Matrix: Analyst:			
Reporting Units: mg/L	Ba	atch #: 1	BLANK /F	JLANK SPI	KE REC	OVERY S	JUDY
Chromium, Hexavalent by SW 7196A Analytes		Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Hexavalent Chromium		<0.0100	0.0250	0.0232	93	80-120	

Blank Spike Recovery [D] = 100*[C]/[B] All results are based on MDL and validated for QC purposes. BRL - Below Reporting Limit





WOLK OLUCE #: 448003	Project ID: 073018										
Analyst: TTE	Da	ate Prepar	red: 09/08/201	12			Date A	nalyzed: (9/08/2012		
Lab Batch ID: 896116 Sample: 626946-1-	BKS	Batc	h #: 1			Matrix: Water					
Units: mg/L		BLAN	K /BLANK S	SPIKE / E	BLANK S	SPIKE DUPI	LICATE	RECOVI	ERY STUD	Y	
Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	0.000	10.0	0.15		10.0				00.120	20	
Bromide	<0.200	10.0	9.47	95	10.0	9.56	96	1	80-120	20	
Ortho-Phosphate	< 0.200	10.0	10.2	102	10.0	10.8	108	6	80-120	20	
Sulfate	<0.500	50.0	53.5	107	50.0	54.2	108	1	80-120	20	
	Date Prenared: 09/08/2012 Date Analyzed: 09/08/2012										
Analyst: TTE	Da	ate Prepar	ed: 09/08/201	12	:		Date A	nalyzed: (9/08/2012		
Analyst: TTE Lab Batch ID: 896119 Sample: 626948-1-	Da BKS	ate Prepar Batcl	red: 09/08/201 h #: 1	12			Date A	nalyzed: (Matrix: \	09/08/2012 Water		
Analyst: TTE Lab Batch ID: 896119 Sample: 626948-1- Units: mg/L	Da BKS	ate Prepar Batcl BLAN	red: 09/08/201 h #: 1 K /BLANK \$	12 SPIKE / F	BLANK S	SPIKE DUPI	Date A	nalyzed: (Matrix: \ RECOVI	09/08/2012 Water ERY STUD	Y	-
Analyst: TTE Lab Batch ID: 896119 Sample: 626948-1- Units: mg/L Inorganic Anions by EPA 300/300.1	Da BKS Blank Sample Result [A]	ate Prepar Batcl BLAN Spike Added	red: 09/08/201 h #: 1 K /BLANK S Blank Spike Result	SPIKE / F Blank Spike %R	BLANK S Spike Added	Blank Spike Duplicate	Date A	nalyzed: (Matrix: RECOVI RPD %	09/08/2012 Water ERY STUD Control Limits %R	Y Control Limits %RPD	Flag
Analyst: TTE Lab Batch ID: 896119 Sample: 626948-1- Units: mg/L Inorganic Anions by EPA 300/300.1 Analytes	Da BKS Blank Sample Result [A]	ate Prepar Batcl BLAN Spike Added [B]	red: 09/08/201 h #: 1 K /BLANK S Blank Spike Result [C]	SPIKE / E Blank Spike %R [D]	BLANK S Spike Added [E]	Blank Spike Duplicate Result [F]	Date A	nalyzed: (Matrix: \ RECOVI RPD %	09/08/2012 Water ERY STUD Control Limits %R	Y Control Limits %RPD	Flag
Analyst: TTE Lab Batch ID: 896119 Sample: 626948-1- Units: mg/L Inorganic Anions by EPA 300/300.1 Analytes Bromide	Da BKS Blank Sample Result [A] <0.200	ate Prepar Batcl BLAN Spike Added [B] 10.0	red: 09/08/201 h #: 1 K /BLANK S Blank Spike Result [C] 9.18	SPIKE / F Blank Spike %R [D] 92	BLANK S Spike Added [E] 10.0	Blank Spike Duplicate Result [F] 9.28	Date A	nalyzed: (Matrix: \ RECOVI RPD %	09/08/2012 Water CRY STUD Control Limits %R 80-120	Control Limits %RPD 20	Flag
Analyst: TTE Lab Batch ID: 896119 Sample: 626948-1- Units: mg/L Inorganic Anions by EPA 300/300.1 Analytes Bromide Ortho-Phosphate	Da BKS Blank Sample Result [A] <0.200 <0.200	ate Prepar Batcl BLAN Spike Added [B] 10.0 10.0	red: 09/08/201 h #: 1 K /BLANK \$ Blank Spike Result [C] 9.18 9.81	12 SPIKE / F Blank Spike %R [D] 92 98	Spike Added [E] 10.0 10.0	Blank Spike Duplicate Result [F] 9.28 10.0	Date A	nalyzed: (Matrix: N RECOVE %	09/08/2012 Water CRY STUD Control Limits %R 80-120 80-120	Y Control Limits %RPD 20 20	Flag

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





Work Order #: 448605		Project ID: 073018										
Analyst: TTE	Da	ate Prepar	ed: 09/08/201	12			Date A	nalyzed: (09/08/2012			
Lab Batch ID: 896120 Sample: 626950-1-1	BKS	Batch	n#: 1					Matrix: \	Water			
Units: mg/L		BLAN	K/BLANK S	SPIKE / H	BLANK S	SPIKE DUPI	LICATE	RECOVI	ERY STUD	PΥ		
Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
Bromide	<0.200	10.0	9.66	97	10.0	9.68	97	0	80-120	20		
Ortho-Phosphate	<0.200	10.0	9.19	92	10.0	9.30	93	1	80-120	20		
Sulfate	<0.500	50.0	53.8	108	50.0	53.2	106	1	80-120	20		
Analyst: DEP Lab Batch ID: 896226 Sample: 896226-1-1	D: 3KS	ate Prepar Batcl	ed: 09/11/201 n#: 1	12			Date A	nalyzed: (Matrix: \)9/11/2012 Water			
Units: mg/L		BLAN	K /BLANK S	SPIKE / I	BLANK S	SPIKE DUPI	LICATE]	RECOVI	ERY STUD	θY		
Nitrogen Ammonia by SM4500-NH3C Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
Nitrogen, Ammonia (as N)	<0.100	2.50	2.68	107	2.50	2.70	108	1	80-120	20		
Analyst: TTE Lab Batch ID: 896149 Sample: 896149-1-1	D: BKS	ate Prepar Batcl	ed: 09/10/201 n #: 1	12			Date A	nalyzed: (Matrix: \	09/10/2012 Water			
Units: mg/L		BLAN	K/BLANK S	SPIKE / I	BLANK S	SPIKE DUPI	LICATE 1	RECOVI	ERY STUD	θY		
Sulfide by SM4500-S-F-00 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
Sulfide, total	<5.00	1000	1000	100	1000	1000	100	0	75-120	20		

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





Work Order #: 448605		Project ID: 073018											
Analyst: TTE		Da	ate Prepar	ed: 09/10/201	2			Date A	nalyzed: (09/10/2012			
Lab Batch ID: 896183	Sample: 896183-1-B	SKS	Batcl	h#: 1			Matrix: Water						
Units: mg/L			BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
TOC by SM 53	310C	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag	
Analytes			[B]	[C]	[D]	[E]	Result [F]	[G]					
Total Organic Carbon		<1.00	15.0	14.3	95	15.0	14.4	96	1	90-110	20		
Analyst: MKO		Da	ite Prepar	ed: 09/10/201	2			Date A	nalyzed: (09/12/2012			
Analyst: MKO Lab Batch ID: 896366	Sample: 626973-1-B	Da BKS	ate Prepar Batcl	ed: 09/10/201 h #: 1	12			Date A	nalyzed: (Matrix: \	9/12/2012 Water			
Analyst: MKO Lab Batch ID: 896366 Units: ^{mg/L}	Sample: 626973-1-B	Da BKS	ate Prepar Batcl BLAN	ed: 09/10/201 h #: 1 K /BLANK S	2 SPIKE / F	BLANK S	PIKE DUPI	Date A	nalyzed: (Matrix: \ RECOVI	09/12/2012 Water E RY STUD	Ŷ		
Analyst: MKO Lab Batch ID: 896366 Units: ^{mg/L} Total Metals by EP	Sample: 626973-1-B PA 6010B	Da BKS Blank Sample Result [A]	ate Prepar Batcl BLAN Spike Added	ed: 09/10/201 h #: 1 K /BLANK S Blank Spike Result	SPIKE / F Blank Spike %R	BLANK S Spike Added	Blank Spike Duplicate	Date A	nalyzed: (Matrix: \ RECOVI RPD %	99/12/2012 Water ERY STUD Control Limits %R	Control Limits %RPD	Flag	
Analyst: MKO Lab Batch ID: 896366 Units: ^{mg/L} Total Metals by EP Analytes	Sample: 626973-1-B PA 6010B	Da BKS Blank Sample Result [A]	ate Prepar Batcl BLAN Spike Added [B]	ed: 09/10/201 h #: 1 K /BLANK S Blank Spike Result [C]	2 SPIKE / F Blank Spike %R [D]	Spike Added [E]	Blank Blank Spike Duplicate Result [F]	JICATE	nalyzed: (Matrix: RECOVI RPD %	09/12/2012 Water ERY STUD Control Limits %R	Y Control Limits %RPD	Flag	
Analyst: MKO Lab Batch ID: 896366 Units: ^{mg/L} Total Metals by EP Analytes Chromium	Sample: 626973-1-B PA 6010B	Da BKS Blank Sample Result [A] <0.0100	Interprepar Batcl BLAN Spike Added [B] 1.00	ed: 09/10/201 h #: 1 K /BLANK S Blank Spike Result [C] 0.942	2 SPIKE / F Blank Spike %R [D] 94	Spike Added [E]	Blank Spike Duplicate Result [F]	Date A	nalyzed: (Matrix: \ RECOVH RPD % 3	99/12/2012 Water ERY STUD Control Limits %R 80-120	Y Control Limits %RPD 20	Flag	
Analyst: MKO Lab Batch ID: 896366 Units: ^{mg/L} Total Metals by EP Analytes Chromium Iron	Sample: 626973-1-B PA 6010B	Da BKS Blank Sample Result [A] <0.0100 <0.200	Added [B]	ed: 09/10/201 h #: 1 K /BLANK S Blank Spike Result [C] 0.942 4.84	2 SPIKE / F Blank Spike %R [D] 94 97	BLANK S Spike Added [E] 1.00 5.00	Blank Spike Duplicate Result [F] 0.914 4.70	Jate A	Alyzed: (Matrix:) RECOVI % 3 3	99/12/2012 Water ERY STUD Control Limits %R 80-120 80-120	Control Limits %RPD 20 20	Flag	

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: North Eunice



Work Order #: 448605								
Lab Batch #: 896116				Pro	oject ID:	073018		
Date Analyzed: 09/08/2012	Date P	repared: 09/0	8/2012	Α	nalyst: T	ТЕ		
QC- Sample ID: 448576-001 S		Batch #: 1		r	Matrix: D	rinking Wate	r	
Reporting Units: mg/L		MATI	RIX / MA	ATRIX SPIKE RECOVERY STUDY				
Inorganic Anions by EPA 300 Analytes		Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag	
Bromide		<0.200	10.0	11.2	112	80-120		
Sulfate		45.3	50.0	89.1	88	80-120	<u> </u>	
		10.0	0.0	0,11	00	00 120	<u> </u>	
Lab Batch #: 896116 Date Analyzed: 09/08/2012	Date P	repared: 09/0	8/2012	А	nalyst: T	ΓE		
QC- Sample ID: 448578-002 S		Batch #: 1		r	Matrix: D	rinking Wate	r	
Reporting Units: mg/L		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	
Bromide		0.534	10.0	9.51	90	80-120		
Sulfate		1.68	50.0	54.7	106	80-120	<u> </u>	
Lab Batch #• 806110		I		1 1		I	<u>.</u>	
Date Analyzed: 09/08/2012	Date P	repared: 09/0	8/2012	А	nalvst: T	ГЕ		
OC- Sample ID: 448674-001 S		Ratch #• 1			Motniv, W	ator		
Reporting Units: mg/L		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]					
Bromide		7.05	100	92.2	85	80-120		
Ortho-Phosphate		<2.00	100	74.4	74	80-120	X	
Sulfate		10.3	500	526	103	80-120		
Lab Batch #: 896119								
Date Analyzed: 09/08/2012	Date P	repared: 09/0	8/2012	А	nalyst: T	ГЕ		
QC- Sample ID: 448709-001 S		Batch #: 1		I	Matrix: W	ater		
Reporting Units: mg/L		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	
Anarytes		6 DF	100	02.0	07	80.120	<u> </u>	
Ortho Phoenhate		<2.00	100	71.0	0/	80.120		
		<2.00	500	502	102	80.120		
Sunate		/ 8.9	500	393	105	00-120	1	

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



Form 3 - MS Recoveries

Project Name: North Eunice



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



Sodium

Form 3 - MS Recoveries

Laboratories							TNI	
Project Na	ame: N	orth Eunio	e				14BORATORI	
Work Order #: 448605								
Lab Batch #: 896183				Pro	oject ID:	073018		
Date Analyzed: 09/10/2012	Date P	repared: 09/1	0/2012	Analyst: TTE				
QC- Sample ID: 448581-002 S		Batch #: 1		I	Matrix: W	/ater		
Reporting Units: mg/L]	MATE	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY	
TOC by SM 5310C Analytes		Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag	
Total Organic Carbon		1.17	15.0	15.9	98	90-110		
Lab Batch #: 896366								
Date Analyzed: 09/12/2012	Date P	repared: 09/1	0/2012	А	nalyst: M	КО		
QC- Sample ID: 448605-001 S		Batch #: 1		1	Matrix: W	/ater		
Reporting Units: mg/L]	MATE	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY	
Total Metals by EPA 6010B		Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag	
Chromium		0.323	1.00	1.22	90	80-120		
Iron		<0.200	5.00	4.82	96	80-120		

375

25.0

396

84

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



Form 3 - MS / MSD Recoveries

Project Name: North Eunice



Work Order #: 448605						Project II	D: 073018				
Lab Batch ID: 896454 (C- Sample ID:	448605	-002 S	Ba	tch #:	1 Matrix	k: Water				
Date Analyzed: 09/07/2012	Date Prepared:	09/07/2	012	An	alyst:	WRU					
Reporting Units: mg/L		Μ	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY S	STUDY		
Chromium, Hexavalent by SW 7196A	Parent Sample	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	[A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	% K	%RPD	
Hexavalent Chromium	<0.0100	0.200	0.233	117	0.200	0.233	117	0	80-120	20	
Lab Batch ID: 896456	C- Sample ID:	448547	-001 S	Ba	tch #:	1 Matrix	k: Water				
Date Analyzed: 09/06/2012	Date Prepared:	09/06/2	012	An	alyst:	WRU					
Reporting Units: mg/L		Μ	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERYS	STUDY		
Chromium, Hexavalent by SW 7196A	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	[A]	[B]		[D]	[E]		[G]				
Hexavalent Chromium	<0.0100	0.200	0.238	119	0.200	0.238	119	0	80-120	20	

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



Sample Duplicate Recovery



Project Name: North Eunice

Work Order #: 448605					
Lab Batch #: 896454			Project I	D: 073018	
Date Analyzed: 09/07/2012 09:15 Date Prepare	red: 09/07/2012	2 Ana	lyst:WRU		
QC- Sample ID: 448605-002 D Batc	h #: 1	Ma	t rix: Water		
Reporting Units: mg/L	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Chromium, Hexavalent by SW 7196A Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Hexavalent Chromium	<0.0100	< 0.0100	0	20	U
Lab Batch #: 896456					
Date Analyzed: 09/06/2012 11:30 Date Prepar	red: 09/06/2012	2 Ana	lyst:WRU		
QC- Sample ID: 448547-001 D Batc	h #: 1	Ma	t rix: Water		
Reporting Units: mg/L	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Chromium, Hexavalent by SW 7196A Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Hexavalent Chromium	< 0.0100	< 0.0100	0	20	U
Lab Botch # 896149			1	I	
Date Analyzed: 09/10/2012 11:41 Date Prepar	red: 09/10/2012	2 Ana	lyst:TTE		
OC- Sample ID: 448605-009 D Batc	h #: 1	Ma	trix: Water		
Reporting Units: mg/L	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Sulfide by SM4500-S-F-00 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Sulfide, total	<5.00	< 5.00	0	20	U
Lab Batch #: 896149					· · · · · · · · · · · · · · · · · · ·
Date Analyzed: 09/10/2012 11:22 Date Prepare	red: 09/10/2012	2 Ana	lyst:TTE		
QC- Sample ID: 448699-011 D Batc	h #: 1	Ma	t rix: Water		
Reporting Units: mg/L	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Sulfide by SM4500-S-F-00 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Sulfide, total	<5.00	<5.00	0	20	U

Spike Relative Difference RPD 200 * $|\,(B\text{-}A)/(B\text{+}A)\,|$ All Results are based on MDL and validated for QC purposes.

Heterotrophic Plate Count

(Hygeia SOP-09)



Client No.: 30311 Nick Straccione Xenco Laboratories 4141 Greenbriar Stafford, TX 77477 Hygeia Sample ID Client Sample ID Location Sample Type Sample Amount Medium / Method Dilution Factor(s)	Project No.: CRA Project Name: Collected: 09/05/2012 Justin Nixon Received: 09/07/2012 Analyzed: 09/07/2012 96108 QC X 448605-001 Water 0.1 mL R2A
Bacteria Isolated:	Raw Count Dilution CFU / 100 mL %
Anaerobic heterotrophic bacteria	
Comments	13,000 / 100 mL

Heterotrophic Plate Count

(Hygeia SOP-09)



Client No.: 30311	Project No.:	CRA		
Nick Straccione	Project Name:			
Xenco Laboratories	Collected:	09/05/2012	Justin Nixon	
4141 Greenbriar	Received:	09/07/2012		
Stafford, TX 77477	Analyzed:	09/07/2012		
	1			

Analyst

Anita Schauer

Lab Director

Crystal Enloe

Thank you for using Hygeia Laboratories Inc. We strive to provide superior quality and service.

This report may not be reproduced except in full, and only with the written approval of this laboratory. Please contact Hygeia regarding any questions about these results, this report, or the analytical methods employed.

Data in this report are reliable within two significant figures. Sample results are not corrected based on results of blanks. The minimum reporting limit (MRL) is calculated as the lowest dilution tested/volume. Estimates of uncertainty are available upon request. CFU = colony forming units. CFU/unit is calculated as raw count*dilution/sample amount. Total CFU/unit is the sum of individual CFUs/unit and is considered <MRL if no colonies are present.

Confidentiality Notice:

The information contained herein is confidential and privileged, intended for the exclusive use of the individual or entity named above. If the reader of this document is not the intended recipient, or the employee or agent responsible for delivering it to the intended recipient, you are hereby notified that any dissemination, distribution or copying of the document(s) is strictly prohibited. If you have received this document in error, please immediately notify us by telephone to arrange for its return.

Guidelines for Interpretation:

Interpretation of the data and information within this document is left to the company, consultant, and/or persons who conducted the fieldwork. Bacteria have been associated with a variety of health effects and sensitivity varies from person to person. Contact the CDC (www.cdc.gov) for information regarding potential health risks related to exposure in air or on surfaces and the USEPA (www.epa.gov) for existing established standards including regulated water quality standards.

Liability Notice:

Hygeia Laboratories Inc. and its personnel shall not be held liable for any misinformation provided to us by the client regarding these samples or for any misuse or interpretation of information supplied by us. Liability shall extend to providing replicate analyses only. This report relates only to samples submitted and analyzed.

Revision 0 09/14/2012 as

Heterotrophic Plate Count

(Hygeia SOP-09)



Client No.: 30311			Р	roject No.	CRA									
Nick Straccione	Project I													
Xenco Laboratories				Collected	: 09/06	09/06/2012 client								
4141 Greenbriar				Received	: 09/08	09/08/2012								
Stafford, TX 77477				Analyzed	: 09/08	/2012								
Hygeia Sample ID		96	133		96134			96135						
Client Sample ID		44860	5 - 002			448605 - 003				448605 - 004				
Location														
Sample Type		Wa	ater			Water				Water				
Sample Amount	0.1 mL					0.	.1 mL			1 mL				
Medium / Method		R	2A		R2A				R2A					
Dilution Factor(s)	1:1			1:1					1:1					
Bacteria Isolated	Raw	Dilution	CFU / 100 m	L %	Raw	Dilution	CFU / 100 ml	%	Raw	Dilution	CFU / 100 ml	L %		
Anaerobic beterotrophic bacteria	543	1	543,000	100	411	1	411,000	100	2416	1	241,600	100		
												\square		
												+		
							-							
												+		
												+		
												+		
Total CFU		543,000	/ 100 mL		411,000 / 100 mL				241,600 / 100 mL					
Comments														

Heterotrophic Plate Count

(Hygeia SOP-09)



1

Client No.: 30311 Nick Straccione			P Proje	roject No ect Nam	o.: CF e:	RA								
Xenco Laboratories	Coll			Collecte	d: 09	09/06/2012 client								
4141 Greenbriar	R			Receive	d: 09	09/08/2012								
Stafford, TX 77477				Analyze	d: 09	/08/2012								
Hygeia Sample ID		96	136			96137				96138				
Client Sample ID		44860)5 - 005			448605 - 006				448605 - 007				
Location														
Sample Type	Water					Water				Water				
Sample Amount	1 mL					1 mL				0	.1 mL			
Medium / Method	R2A					R2A				R2A				
Dilution Factor(s)	1:1					1:1			1:1					
Bacteria Isolated:	Raw Count	Dilution	CFU / 100 m	L %	Ra Co	w unt Dilution	CFU / 100 ml	L %	Raw Coun	t Dilution	CFU / 100 mL	L %		
Anaerobic heterotrophic bacteria	120	1	12,000	100	2	1 1	2,100	100	57	1	57,000	100		
												1		
											-	+		
												1		
								\uparrow			1	1		
							1	+		1	1	1		
				+				+		1	1	1		
								+		1				
				+				+		1		+		
				+	┢			+		1		+		
Total CFU		12.000 / 100 mL				2,100 / 100 mL				57,000 / 100 mL				
Comments														
Heterotrophic Plate Count

(Hygeia SOP-09)

ſ



Client No.: 30311			Pro	oject No.:	CRA				
Nick Straccione	ck Straccione Project Name:								
Xenco Laboratories			C	Collected:	09/06	/2012	clie	ent	
4141 Greenbriar			F	Received:	09/08	/2012			
Stafford, TX 77477			Ļ	Analyzed:	09/08	/2012			
Hygeia Sample ID		9	6139			9	6140		
Client Sample ID		4486	05 - 008			4486	05 - 009		
Location									
Sample Type		v	Vater			V	/ater		
Sample Amount		1	mL			1	mL		
Medium / Method			R2A			I	R2A		
Dilution Factor(s)		1:1				1:1			
	Daw				Daw				
Bacteria Isolated:	Count	Dilution	CFU / 100 mL	%	Count	Dilution	CFU / 100 mL	%	
Anaerobic heterotrophic bacteria	66	1	6,600	100	155	1	15,500	100	
	┝──╊			├──┤					
Total CFU		6,600) / 100 mL			15,50	0 / 100 mL		
Comments				1					
					1				

Heterotrophic Plate Count

(Hygeia SOP-09)



Client No.: 30311	Project No.: CRA	
Nick Straccione	Project Name:	
Xenco Laboratories	Collected: 09/06/2012	client
4141 Greenbriar	Received: 09/08/2012	
Stafford, TX 77477	Analyzed: 09/08/2012	

Analyst

Anita Schauer

Lab Director

Crystal Enloe

Thank you for using Hygeia Laboratories Inc. We strive to provide superior quality and service.

This report may not be reproduced except in full, and only with the written approval of this laboratory. Please contact Hygeia regarding any questions about these results, this report, or the analytical methods employed.

Data in this report are reliable within two significant figures. Sample results are not corrected based on results of blanks. The minimum reporting limit (MRL) is calculated as the lowest dilution tested/volume. Estimates of uncertainty are available upon request. CFU = colony forming units. CFU/unit is calculated as raw count*dilution/sample amount. Total CFU/unit is the sum of individual CFUs/unit and is considered <MRL if no colonies are present.

Confidentiality Notice:

The information contained herein is confidential and privileged, intended for the exclusive use of the individual or entity named above. If the reader of this document is not the intended recipient, or the employee or agent responsible for delivering it to the intended recipient, you are hereby notified that any dissemination, distribution or copying of the document(s) is strictly prohibited. If you have received this document in error, please immediately notify us by telephone to arrange for its return.

Guidelines for Interpretation:

Interpretation of the data and information within this document is left to the company, consultant, and/or persons who conducted the fieldwork. Bacteria have been associated with a variety of health effects and sensitivity varies from person to person. Contact the CDC (www.cdc.gov) for information regarding potential health risks related to exposure in air or on surfaces and the USEPA (www.epa.gov) for existing established standards including regulated water quality standards.

Liability Notice:

Hygeia Laboratories Inc. and its personnel shall not be held liable for any misinformation provided to us by the client regarding these samples or for any misuse or interpretation of information supplied by us. Liability shall extend to providing replicate analyses only. This report relates only to samples submitted and analyzed.

Revision 0 09/14/2012 as

Xenco Laboratories

140

CI	YAIN OF	CUSTODY	RECORD	AND	ANALYSIS REQUEST

The Environmental Lab of Texas		·		• •		•	1260 Ode)0 V 95a	Vest , Tex	1-20 (as 1) Eas 7976	it 15	Phone: 432-563 Fax: 432-563						163-1 163-1	800 713) - }			•.					
Project Manager: Mike W	B.													•	Proje	ct Na	me:		L	0	2	h	2	<u><u></u></u>	n'	101	<u>e</u> ,		
Company Name CRA		*****									******			-	F	Proje	ct #:	(0	7	Ľ	<u>)</u>]	8						
Company Address: 2135 W	10	$\mathcal{O}\mathcal{O}$	2501												Pro	ject	Loc:	8	$\frac{2}{2}$	חנ	ìC	e	<u></u>	V	N	1			
attuistation And And		ΓX	79.7	03												P	0 #:		_										
$\frac{1}{2} \frac{1}{2} \frac{1}$	\int	18	10	Fax No:	4	4	3	7-	10	2	10-	∂	8	Ren	ort F	orma	t:	П	Star	ndaro	d	Γ	<u>] т</u> ғ	RP			NPDI	ES	
Telephone No. <u>100 CEUCE</u>		X 10	$\overline{\Lambda}$	e-mail:		<u> </u>								6								-	-						
Sampler Signature:	<u> </u>	$\underline{\mathcal{N}}$	<u> </u>	U main											F				51 D.	An	alyzo	For:		3			T	7	
(lab use only) 4/18/205									uniform	0 44 4	6 () and			Mate	-	<u>.</u>		TO	TAL:		1	1	1	ŀ			Î	121	
ORDER #: 770000	<u> </u>	[-			PI	eser	VELICOT		ST Com		╋	Watti		8				х Я		8260							
B # (fab use only)	eginning Depth	nding Depth	Date Sampled	Time Sampled	ield Filtered	otal #. of Containers	8	HNO3	HCI H.SO.	NaOH	Mars205	None	Other (Specify)	W-LANKING WIRK SL-SUIGE W = Groundwater S-SoilSoil	P-Non-Potable Specify Othe TPH- 442 4 2014514	PH: TX 1005 TX 10	lations (Ca, Mg, Na, K)	vitions (Ct, SO4, Alkalinity)	AR / ESP / CEC	fetals: As Ag Ba Cd Cr Pb	(olatiles	STEX 80218/5030 or BTEX	Ş	LORM.			**************************************	KUSH TAI (Preschedus	Standard TAT
AALAROT O965/2	↓@	<u> </u>	9.5.12	1535	<u> </u>	-	X			+	+		-	<u>, , , , , , , , , , , , , , , , , , , </u>			Ĕ	Ì	Ű	-	1	1	f	Ē					
										1-												_	L		L		_	4	ا بشخہ
			1					+	+	╀	┢	$\left \cdot \right $	-		_	+-	\square			-			╞		┢	┝╍┤	-+	╧╋	
	+						\vdash	╉	÷	╋	+	$\left \right $	+		╋	╋				+	╉	╋	╋	┼─	┢	\vdash	╉	÷	_
						·		-		1	1					\uparrow	\square					1	\uparrow				丄		
							\square					П										L	L			\square	_	_	
	<u> </u>	<u> </u>						+	_	+								-		-	_	+-	+	<u> </u>	┢╌	┝┥	╉	+	
					—		┝─┾	┦	+	╋	-	┝╌┠	+		╋	╀─			-+	-	-+-	+	+	┢╴	+	┢┥	╉	╉	
Special Instructions: read attached soow	<u> </u>		1		ل ـــِـا	L	L					i	.		I		Lab San VOC	orat nple Cs F	tory Con ree (Con tain of He	nmen ers In eadsp	tacti ace	- - ? ?	L	بر ۲	E E E E E E E E E E E E E E E E E E E	6		
Relinquished by: Relinquished by: Relinquished by: Relinquished by: Date Time Received by:													Date		Tir Tir	ne	Lab Cus Cus San	els c tody tody nple by S by C	on co sea sea Han iampi	ontal Is or Is or d De ler/C	ner(s 1 con 1 coo ellven lient f) laine ler(s) ed Rep. PS	и(S)) ? DH	L	く C Fet		Lone	Sta	۱
Relinquished by: Date	T	lme	Received by EL	ot: MQ	z	N	Д,	H	h			8-	Date	-12	ті 14	ne *14	Tem	nperi	ature	Up	on Re	sceit)t:		/	.5	-	C	

CRA Simplified Scope of Work (SSOW)/Laboratory Services Purchase Order

SSOW Ref. Code 073018_20120823

Project Name: Chevron-North Eunice

Phase/Study Title: Baseline Sampling Event Description: Pilot Test - GW Sampling

CRA Project No./Phase/Task: 073018

			Project Location:	Eunice, New Mexico				_									
•	Item	Sample Matrix	Analytical Parameters	Analytical Methods	Holding Time	Unit Prices	Applicable Surcharge Multiplier ⁽¹⁾	Ex	tended rices	Estimated Sample Qty/Event	Fi SW	Trip BIK	Samp Xe Xe	Fid Dup said	Total Sampie Qty.	Billable Samples	Estimated Cost/Event
1	1	water	Total, Chromium, Iron, Sodium	SW-846 6010B	180 days	\$ 30.00	1.00	\$	30.00	. 8		 2		2	12	12	\$360.00
1	2	water	Hexavalent Chromium	SW-846 7196A	24 hours	\$ 25.00	1.00	\$	25.00	8				2	10	10	\$250.00
	3	water	Anions (SO4, Br)	E 300	28 days	\$ 40.00	1.00	\$	40.00	8				2	10	10	\$400.00
	4	water	Sulfide	SM4500	7 days	\$ 40.00	1.00	\$	40.00	8				2	10	10	\$400.00
	5	water	Ammonia-Nitrogen	SM4500	28 days	\$ 35.00	1.00	\$	35.00	8				2	10	10	\$350.00
	6	water	Total Organic Carbon TOC	SM5310	28 days	\$ 35.00	1.00	\$	35.00	8				2	10	10	\$350.00
	7	water	Orthophosphate-phosphorus	E300	48 hrs	\$ 14.00	1.00	\$	14.00	8				2	10	10	\$140.00
	8	water	Total Anaerobic Microbial Count		24 hrs	\$ 35.00	1.00	\$	35.00	8				2	10	10	\$350.00
1	9	water	Dissolved Iron	SW-846 6010B	180 days	\$ 10.00	1.00	\$	10.00	8				2	10	10	\$100.00
																	1. A. A.
				· · · ·						. •							
							~			4							

⁽¹⁾ Explanation of Surcharges:

Estimated Event Subtotal: Laboratory Surcharge(s): Estimated Event Total Costs:

\$2,700.00 \$0.00 \$2,700.00

Lab Contracting Summary: 4051255 **Governing Terms and Conditions** CRA Purchase Order Number: Claudia Ramos 8/23/2012 (authorized CRA signature) (date signed) Master Agreement Number: Name of Client: -Exhibit "A" Terms and Conditions Other Additional Insureds: Texas **Client Contract** Governing Law: Nick Straccione 8/23/2012 (authorized Vendor signature) (date signed) Currency US Typed name constitutes authorized signature. Address Invoice to: CRA c/o Claudia Ramos 6320 Rothway, Suite 100 Houston, TX 77040

Vendor to provide and deliver all items or services set out or otherwise described below subject to the governing terms and conditions checked above. This Purchase Order expressly limits acceptance to such terms and conditions. Any additional or different terms proposed by Vendor are rejected unless expressly agreed to in writing by CRA. To accept this Purchase Order, Vendor must sign, date, and return one copy of this page to issuer before starting any work. CRA's receipt of Signature of this Purchase Order may be sent by facsimile (with confirmation by transmitting machine) and/or transmitted by portable document file (PDF) which shall be treated as an original signature, and any such signature, facsimile, PDF file, or copy of this signed Purchase Order shall be valid as an original and shall be binding as if it were the original. Show Purchase Order No. on all correspondence, insurance certificates, invoices, and delivery papers.

200016-PO(QSF-024-Lab)-Rev.10 1/18/2011

enco Laboratori	es									C i	ΗΑΙΛ	I OF	CUS	STOD	YR	ECC)RD	ANL) AN	IAL	YSI	3 RE	:QU	IES7	r			
Environmental Lab of Texas	•					• •	1	126(Dde	00 W 95a.	əst l Təx	l-20 E as 79	ast 765				×.				Pho Fa	ne: x:	432 432	-563 -563	⊦-180 }-171	0 3	1		·.
Mik	0 1.1			. ork	1				,		• -								Â	ła		H		۶.	mì	rØ)	
Project Manager: ///	<u>e</u> w		10	upen				······				· · · ·	·	-	Pro	oject	Nam	le:	Δ	<u>-</u> 7	0	$\frac{1}{2}$	2	,			L auine	
Company Name <u>CK</u>	<u>A</u>	•			·									-		Pre	oject :	#:	$\underline{0}$	1	5	Л.	ð		<u> </u>			
Company Address: 2134	Sla	02	<u>50</u>	<u>N</u>										-	P	roje	ct Lo	c:	2	<u>N</u>	<u>iC</u>	<u>e</u> ,	Δ	11	<u>n</u> _			
	Mand!	TX	.7	9703													P0 ;	#:				. 1	~					
	1.01	N	18/	· / · · · · · · · · · · · · · · · · · ·	Fau blau		112	$\overline{\mathbf{x}}$	_10	21	10-1	γ	2	- -				'n	Var				Π.))	П		9
Telephone No: 199	- 600	<u>. a</u>	<u>/// (</u>	<u>y</u>	. Pax NO:		100	2	<u>U</u>	<u>o</u> c		Y			por		mar: A di	ير 1010	a sa	anoa OM	na N bì l	ne	<u>, 1</u>	-RRP 	145	יים /שו	100	5
Sampler Signature:	of not	5			e-mail:	M	Ŵ	15	ni	<u>0u</u>	Vie	20	KG	2	- 1	متر	0	ñ	<u>i l</u>	-/-			لىپ سېچ	ĩã	<u>ڪ</u>	<u>1</u> E	uq i	ē,
	- 1					۰C	,KA	łu	JOI	rlo	J.C	01	n						TCLP:			Ī	Ì	T	Т	Π	٦ı	
448648)						Г	Pr	eserva	tion 8	8 # of C	Contain	018	Ма	lrix	8			TAL	; .8	$\left \cdot \right $	+	_				1	
			T	T			Γ	Τ	ŀ	Τ	Π			g 2	1 X	õ	8			S H G			88	. •			2	
							<i>w</i>								city Ot	Ň	Ř s			5			2 Z Z				-the	
	•	Dept	Ę	. pjed	ped		tainer						S		Sp.	8	8 5	2 Z 2 Z	. N	Bao			2030				ě	¥.
		Buit	a	E S	Sam	para	S S					~	Spec	N Suit	Potable	418.1	P K	5 D	SP /	As Ag	。	at is		3			TAT	
		egint	nding	Date	MAE25	ed Fa	#	8	ẩ ₽	S.	E		Other	N-Orig	P=Non	Ï	Ha	nions -	ARIE	tetas:	olatile	S	ž.				LSUS	Stand
FIELD CODE			<u> </u>	9-6-12	60000	E.	6	X		1	╀═╂	-			2			1	0	É	H	Ť	Ť	<u> </u>	+	$\uparrow \uparrow$	Ē	X
Tw 029090612		<u>†</u>		9-6-12	0830		6	Ż		\uparrow		-†-					-	╈	\uparrow		\square	+	Ŧ	+	\uparrow	\square	1	X
A NW 1277A 090612	L		1	. 9-6-12	1130		6	8										Τ				T	Τ					X
FW 028090612				9-6-12	1240		6	K						· .														X
6 no 009, 090612			<u> </u>	9-6-12	1330		6	4	_														\bot		\perp	╞╌┼		X
1 IW U30(P) 090612	, 		_	9-6-12	1410		6)	1		<u> </u>								1				4	\bot		┶	┢╍┟		Ą
B MW 08954 091	2612	 	 	1-6-12	1505		6	4			┟╌┠							+	 		\square		4	+-	+-	┢╌╄	╋	\mathbb{H}
8 Dupl090612		ļ	<u> </u>			$\left - \right $	┝─┠╴	-		-	┨┤	_	-				_	╇	-			+	╇	╋	┢	┝┼	╋	
			╂			$\left - \right $	┝─╋╴	╋		-	┼┼		╉━┥			-+	+-	+-				+	4	+	╋	┟╍┾	+	
		<u> </u>								3		9	4.1				L	abori	atory	/ Col	mme	nts:				i		
or Attocked SSOV	u for o	na	ly:	Se5. a	Hached.	<u>Ca</u>	n w	æ	ρυ	4 b	with	n.	60	ne	R	00	¥ S	ampl	e Co	ntair	iers	ntac	?			Y Y	N	
naulahed by:	Date	Ī	lme	Received by:								T	Da	ite		Time		uus abels	on c	conte	iner	pace s)	11			Ý	N	
Just Marin	9-7-12	08	30	<u> </u>														ustoc	iy se ly se	als o	n co n co	oler(91(8) 3)	/		Ý	• N	
rouished by:	Date	T	ime	Received by:									Da	itê		lime	Sa	ample by	e Ha Samj	nd D pler/(elive Client	red Rep	?		-	Y Y	N	
leavished by	Date	+	ime	Received by EL	OT: 10							-	Da	ite	+	Time	-	by	Cour	ier?	1	JPS	Ð	HL	Fed	JEX L	.one S	Star
Induistico nà:				1 Altan 1	mith	70-	es.	λ	1	_		10	1/1/	12	8	:3)) Te	empe	ratu	re Uj	oon F	lece	pt:	33	5	2.	Ì	



XENCO Laboratories



Prelogin/Nonconformance Report- Sample Log-In

Client: Conestoga Rovers & AssociatesAcceptable Temperature Range: 0 - 6 degCDate/ Time Received: 09/06/2012 04:14:00 PMAir and Metal samples Acceptable Range: AmbientWork Order #: 448605Temperature Measuring device used :

Sample Receipt Checklist	Comment	S
#1 *Temperature of cooler(s)?	2	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	
#4 *Custody Seals intact on shipping container/ cooler?	Yes	
#5 Custody Seals intact on sample bottles/ container?	Yes	
#6 *Custody Seals Signed and dated for Containers/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 relinquished/ received?	Yes	
#11 Chain of Custody agrees with sample label(s)?	Yes	
#12 Container label(s) legible and intact?	Yes	
#13 Sample matrix/ properties agree with Chain of Custody?	Yes	
#14 Samples in proper container/ bottle?	Yes	
#15 Samples properly preserved?	Yes	
#16 Sample container(s) intact?	Yes	
#17 Sufficient sample amount for indicated test(s)?	Yes	
#18 All samples received within hold time?	Yes	
#19 Subcontract of sample(s)?	Yes	
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes	
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes	
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	Yes	

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Date:

Checklist reviewed by:

Date: _____

Analytical Report 448605

for

Conestoga Rovers & Associates

Project Manager: Mike Wisniowiecki

North Eunice

073018

20-SEP-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-SEP-12



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

Reference: XENCO Report No: 448605 North Eunice Project Address: Eunice, NM

Mike Wisniowiecki:

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 448605. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 448605 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 448605



Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW097 090512	W	09-05-12 15:35		448605-001
MW96090612	W	09-06-12 09:30		448605-002
IW029090612	W	09-06-12 10:30		448605-003
MW007A090612	W	09-06-12 11:30		448605-004
IW028090612	W	09-06-12 12:40		448605-005
MW009A090612	W	09-06-12 13:30		448605-006
IW030(p)090612	W	09-06-12 14:10		448605-007
MW089SA 090612	W	09-06-12 15:05		448605-008
Dup1090612	W	09-06-12 00:00		448605-009



CASE NARRATIVE

Client Name: Conestoga Rovers & Associates Project Name: North Eunice



Project ID:073018Work Order Number:448605

Report Date: 20-SEP-12 Date Received: 09/06/2012

Sample receipt non conformances and comments:

Samples #2-9 (received 09-07) were taken to the lab by the client one day after sample#1 (received 09-06)

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-896116 Inorganic Anions by EPA 300/300.1 E300

Batch 896116, Ortho-Phosphate recovered below QC limits Samples affected are: 448605-001. The Laboratory Control Sample for Ortho-Phosphate is within laboratory Control Limits

Batch: LBA-896119 Inorganic Anions by EPA 300/300.1 E300

Batch 896119, Ortho-Phosphate recovered below QC limits Samples affected are: 448605-004, -002, -003. The Laboratory Control Sample for Ortho-Phosphate is within laboratory Control Limits

Batch: LBA-896120 Inorganic Anions by EPA 300/300.1 E300

Batch 896120, Ortho-Phosphate recovered below QC limits in the Matrix Spike. Samples affected are: 448605-007, -006, -009, -005, -008. The Laboratory Control Sample for Ortho-Phosphate is within laboratory Control Limits



Certificate of Analysis Summary 448605

Conestoga Rovers & Associates, Midland, TX

Project Name: North Eunice



Date Received in Lab: Thu Sep-06-12 04:14 pm

Project Location: Eunice, NM

Project Id: 073018

Contact: Mike Wisniowiecki

Report Date:	20-SEP-12
Project Manager	Nicholas Straccione

								I Toject Ma	mager	Incholas Stra	Jerone		
	Lab Id:	448605-0	001	448605-0	002	448605-0)03	448605-0	004	448605-0)05	448605-0)06
Arabusis Dogwostad	Field Id:	MW097 09	0512	MW96090)612	IW029090)612	MW007A0	90612	IW028090)612	MW009A09	90612
Anaiysis Kequestea	Depth:		ļ	1									
	Matrix:	WATE	R	WATE	R	WATE	R	WATE	R	WATE	R	WATE	R
	Sampled:	Sep-05-12	15:35	Sep-06-12	09:30	Sep-06-12	10:30	Sep-06-12	11:30	Sep-06-12	12:40	Sep-06-12	13:30
Chromium Hevevelent by SW 71964	Entracted			····									
Cill Onnum, Hexavalent by 577717021	Extractea.	S 0C 12	16.45	S-= 07 12	00.15	Sec. 07.12.	00.15	Sec. 07.12	00.15	S 07 12	00.15	S 07 12	00.15
	Anaiyzea:	Sep-06-12	16:45	Sep-07-12 (J9:15	Sep-07-12 (09:15	Sep-07-12	09:15	Sep-0/-120	J9:15	Sep-07-120	09:15
	Units/RL:	mg/L	RL	mg/L	RL		RL	mg/L	RL	mg/L	RL	mg/L	RL
Hexavalent Chromium		0.322	0.0100	ND	0.0100	0.120	0.0100	0.308	0.0100	0.0150	0.0100	0.634	0.0100
Dissolved Metals per ICP by SW846	Extracted:	Sep-10-12	11:30	Sep-10-12 !	11:30	Sep-10-12 1	11:30	Sep-10-12	11:30	Sep-10-12	11:30	Sep-10-12	11:30
6010B	Analyzed:	Sep-12-12	03:09	Sep-12-12 (J3:15	Sep-12-12 (03:20	Sep-12-12	03:26	Sep-12-12 (03:32	Sep-12-12	03:48
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Iron		ND	0.200	ND	0.200	ND	0.200	ND	0.200	ND	0.200	ND	0.200
Inorganic Anions by EPA 300/300.1	Extracted:	Sep-08-12	05:49	Sep-08-12 2	20:22	Sep-08-12 2	20:38	Sep-08-12	20:54	Sep-08-12	22:31	Sep-08-12	22:47
SUB: E871002	Analyzed:	Sep-08-12	05:49	Sep-08-12 2	20:22	Sep-08-12 2	20:38	Sep-08-12	20:54	Sep-08-12	22:31	Sep-08-12	22:47
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Bromide		6.98	0.200	7.07	1.00	12.6	1.00	7.99	1.00	7.07	1.00	11.0	1.00
Ortho-Phosphate		ND	0.200	ND	1.00	ND	1.00	ND	1.00	ND	1.00	ND	1.00
Sulfate		769	5.00	398	2.50	1190	2.50	597	2.50	488	2.50	691	2.50
Nitrogen Ammonia by SM4500-NH3C	Extracted:		ļ	1									
SUB: E871002	Analyzed:	Sep-11-12	11:59	Sep-11-12	12:00	Sep-11-12 1	12:01	Sep-11-12	12:03	Sep-11-12	12:04	Sep-11-12	12:05
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Nitrogen, Ammonia (as N)		0.164	0.100	0.101	0.100	ND	0.100	ND	0.100	ND	0.100	ND	0.100
Sulfide by SM4500-S-F-00	Extracted:												
SUB: E871002	Analyzed:	Sep-10-12	11:30	Sep-10-12	11:31	Sep-10-12 1	11:32	Sep-10-12	11:33	Sep-10-12	11:34	Sep-10-12	11:35
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Sulfide, total	-	ND	5.00	ND	5.00	ND	5.00	ND	5.00	ND	5.00	ND	5.00
TOC by SM 5310C	Extracted:												
SUB: E871002	Analyzed:	Sep-10-12	12:19	Sep-10-12	12:35	Sep-10-12	12:52	Sep-10-12	13:09	Sep-10-12	13:49	Sep-10-12	14:05
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Total Organic Carbon		1.12	1.00	2.75	1.00	4.99	1.00	2.30	1.00	4.57	1.00	2.80	1.00
				i de la companya de l				1		1	,	i	

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.

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

Nicholas Straccione Project Manager



Project Id: 073018

Contact: Mike Wisniowiecki

Certificate of Analysis Summary 448605

Conestoga Rovers & Associates, Midland, TX

Project Name: North Eunice



Date Received in Lab: Thu Sep-06-12 04:14 pm Report Date: 20-SEP-12

Project Location: Eunice, NM

Toject Docation. Lunice, NW								Project Ma	nager:	Nicholas Stra	ccione		
	Lab Id:	448605-0	001	448605-0	002	448605-0	003	448605-0	004	448605-0	005	448605-0	006
Anglusis Paguastad	Field Id:	MW097 09	0512	MW96090	0612	IW029090	0612	MW007A09	90612	IW028090	0612	MW009A0	90612
Analysis Kequesieu	Depth:												
	Matrix:	WATE	R	WATE	R	WATE	R	WATE	R	WATE	R	WATE	R
	Sampled:	Sep-05-12	15:35	Sep-06-12	09:30	Sep-06-12	10:30	Sep-06-12	11:30	Sep-06-12	12:40	Sep-06-12	13:30
Total Metals by EPA 6010B	Extracted:	Sep-10-12	11:30	Sep-10-12	11:30	Sep-10-12	11:30	Sep-10-12	11:30	Sep-10-12	11:30	Sep-10-12	11:30
SUB: E871002	Analyzed:	Sep-12-12	01:51	Sep-12-12	02:13	Sep-12-12	02:19	Sep-12-12	02:24	Sep-12-12	02:41	Sep-12-12	02:47
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Chromium		0.323	0.0100	ND	0.0100	0.184	0.0100	0.296	0.0100	0.0185	0.0100	0.615	0.0100
Iron		ND	0.200	ND	0.200	ND	0.200	ND	0.200	ND	0.200	ND	0.200
Sodium		375	0.500	183	0.500	424	0.500	235	0.500	308	0.500	306	0.500

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.

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

the Nul

Nicholas Straccione Project Manager



Project Id: 073018

Project Location: Eunice, NM

Contact: Mike Wisniowiecki

Certificate of Analysis Summary 448605

Conestoga Rovers & Associates, Midland, TX

Project Name: North Eunice



Date Received in Lab: Thu Sep-06-12 04:14 pm

Report Date: 20-SEP-12

Project Manager: Nicholas Straccione

Lab Id: 448605-007 448605-008 448605-009 Field Id: IW030(p)090612 MW089SA 090612 Dup1090612 Analysis Requested Depth: Matrix: WATER WATER WATER Sampled: Sep-06-12 14:10 Sep-06-12 15:05 Sep-06-12 00:00 Chromium, Hexavalent by SW 7196A Extracted: Sep-07-12 09:15 Sep-07-12 09:15 Sep-07-12 09:15 Analyzed: Units/RL: mg/L RL mg/L RL mg/L RL 0.356 0.0100 0.0270 0.0100 0.125 0.0100 Hexavalent Chromium **Dissolved Metals per ICP by SW846** Extracted: Sep-10-12 11:30 Sep-10-12 11:30 Sep-10-12 11:30 6010B Sep-12-12 03:54 Sep-12-12 04:00 Sep-12-12 04:05 Analyzed: Units/RL: mg/L RL mg/L RL mg/L RL 0.200 0.200 ND 0.200 Iron ND ND Inorganic Anions by EPA 300/300.1 Extracted: Sep-08-12 23:03 Sep-08-12 23:19 Sep-08-12 23:35 SUB: E871002 Sep-08-12 23:03 Sep-08-12 23:19 Sep-08-12 23:35 Analyzed: Units/RL: mg/L RL mg/L RL mg/L RL Bromide 14.9 1.00 5.21 1.00 12.3 1.00 Ortho-Phosphate ND 1.00 ND 1.00 ND 1.00 2.50 Sulfate 1320 2.50 220 2.50 1200 Nitrogen Ammonia by SM4500-NH3C Extracted: SUB: E871002 Sep-11-12 12:07 Sep-11-12 12:09 Sep-11-12 12:10 Analyzed: Units/RL: mg/L RL mg/L RL mg/L RL 0.100 Nitrogen, Ammonia (as N) ND 0.100 ND 0.100 ND Sulfide by SM4500-S-F-00 Extracted: SUB: E871002 Sep-10-12 11:36 Sep-10-12 11:38 Sep-10-12 11:39 Analyzed: Units/RL: mg/L RL mg/L RL mg/L RL ND ND 5.00 Sulfide, total ND 5.00 5.00 TOC by SM 5310C Extracted: SUB: E871002 Sep-10-12 14:22 Analyzed: Sep-10-12 14:38 Sep-10-12 14:54 RL RL Units/RL: mg/L mg/L mg/L RL Total Organic Carbon 5.92 1.00 2.75 1.00 5.05 1.00

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.

XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.

Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Nicholas Straccione Project Manager

Page 7 of 28



Project Id: 073018

Project Location: Eunice, NM

Contact: Mike Wisniowiecki

Certificate of Analysis Summary 448605

Conestoga Rovers & Associates, Midland, TX

Project Name: North Eunice



Date Received in Lab: Thu Sep-06-12 04:14 pm

Report Date: 20-SEP-12

Project Manager: Nicholas Straccione

								110jeet Munuger.	Thenolus bulueelone	
	Lab Id:	448605-	007	448605-0	008	448605-0	009			
Analysis Paguested	Field Id:	IW030(p)0	90612	MW089SA 0	90612	Dup1090	612			
Analysis Kequesiea	Depth:									
	Matrix:	WATE	R	WATE	R	WATE	R			
	Sampled:	Sep-06-12	14:10	Sep-06-12	15:05	Sep-06-12	00:00			
Total Metals by EPA 6010B	Extracted:	Sep-10-12	11:30	Sep-10-12	11:30	Sep-10-12	11:30			
SUB: E871002	Analyzed:	Sep-12-12	02:52	Sep-12-12	02:58	Sep-12-12	03:04			
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL			
Chromium		0.429	0.0100	0.0279	0.0100	0.185	0.0100			
Iron		0.227	0.200	ND	0.200	ND	0.200			
Sodium		470	0.500	235	0.500	427	0.500			

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.

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

Ch Nul

Nicholas Straccione Project Manager

Page 8 of 28



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
- **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

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

Certified and approved by numerous States and Agencies.

LOQ Limit of Quantitation

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

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

4143 Greenbriar Dr. Stafford, TX 77477 9701 Harry Hines Blvd , Dallas, TX 75220 5332 Blackberry Drive, San Antonio TX 78238 2505 North Falkenburg Rd, Tampa, FL 33619 12600 West I-20 East, Odessa, TX 79765 6017 Financial Drive, Norcross, GA 30071 3725 E. Atlanta Ave, Phoenix, AZ 85040

Phone	Fax
(281) 240-4200	(281) 240-4280
(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(432) 563-1800	(432) 563-1713
(770) 449-8800	(770) 449-5477
(602) 437-0330	





Work Order #: 448605		Project ID:					
Lab Batch #: 896454	Sa	ample: 896454-	1-BKS	Matrix:	Water		
Date Analyzed: 09/07/2012 D	ate Pre	pared: 09/07/20		Analyst:	WRU		
Reporting Units: mg/L	Ba	atch #: 1	BLANK /B	SLANK SPI	KE REC	OVERYS	STUDY
Chromium, Hexavalent by SW 7196A	7196A Blank Result			Blank Spike Result	Blank Spike %R	Control Limits %R	Flags
Analytes	[A]			[C]	[D]	,	
Hexavalent Chromium		<0.0100	0.0250	0.0235	94	80-120	
Lab Batch #: 896456	S	ample: 896456-	1-BKS				
Date Analyzed: 09/06/2012 D	ate Pre	pared: 09/06/20	012	Analyst:			
Reporting Units: mg/L	Ba	atch #: 1	KE REC	COVERY S	STUDY		
Chromium, Hexavalent by SW 7196A Analytes		Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Hexavalent Chromium	<0.0100			0.0232	93	80-120	

Blank Spike Recovery [D] = 100*[C]/[B] All results are based on MDL and validated for QC purposes. BRL - Below Reporting Limit





WOLK OLUCE #: 448003							Pro	ject ID: (073018		
Analyst: TTE	Da	Date Prepared: 09/08/2012 Date Analyzed: 09/08/2012									
Lab Batch ID: 896116 Sample: 626946-1-	BKS	Batc	h #: 1					Matrix: V	Water		
Units: mg/L		BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY									
Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	0.000	10.0	0.15		10.0				00.120	20	
Bromide	<0.200	10.0	9.47	95	10.0	9.56	96	1	80-120	20	
Ortho-Phosphate	< 0.200	10.0	10.2	102	10.0	10.8	108	6	80-120	20	
Sulfate	<0.500	50.0	53.5	107	50.0	54.2	108	1	80-120	20	
Analyst: TTE	Da	ate Prepar	ed: 09/08/201	12	:		Date A	nalyzed: (9/08/2012		
Analyst: TTE Lab Batch ID: 896119 Sample: 626948-1-	Da BKS	ate Prepar Batcl	red: 09/08/201 h #: 1	12			Date A	nalyzed: (Matrix: \	09/08/2012 Water		
Analyst: TTE Lab Batch ID: 896119 Sample: 626948-1- Units: mg/L	Da BKS	ate Prepar Batcl BLAN	red: 09/08/201 h #: 1 K /BLANK \$	12 SPIKE / F	BLANK S	SPIKE DUPI	Date A	nalyzed: (Matrix: \ RECOVI	09/08/2012 Water ERY STUD	Y	-
Analyst: TTE Lab Batch ID: 896119 Sample: 626948-1- Units: mg/L Inorganic Anions by EPA 300/300.1	Da BKS Blank Sample Result [A]	ate Prepar Batcl BLAN Spike Added	red: 09/08/201 h #: 1 K /BLANK S Blank Spike Result	SPIKE / F Blank Spike %R	BLANK S Spike Added	Blank Spike Duplicate	Date A	nalyzed: (Matrix: RECOVI RPD %	09/08/2012 Water ERY STUD Control Limits %R	Y Control Limits %RPD	Flag
Analyst: TTE Lab Batch ID: 896119 Sample: 626948-1- Units: mg/L Inorganic Anions by EPA 300/300.1 Analytes	Da BKS Blank Sample Result [A]	ate Prepar Batcl BLAN Spike Added [B]	red: 09/08/201 h #: 1 K /BLANK S Blank Spike Result [C]	SPIKE / E Blank Spike %R [D]	BLANK S Spike Added [E]	Blank Spike Duplicate Result [F]	Date A	nalyzed: (Matrix: \ RECOVI RPD %	09/08/2012 Water ERY STUD Control Limits %R	Y Control Limits %RPD	Flag
Analyst: TTE Lab Batch ID: 896119 Sample: 626948-1- Units: mg/L Inorganic Anions by EPA 300/300.1 Analytes Bromide	Da BKS Blank Sample Result [A] <0.200	ate Prepar Batcl BLAN Spike Added [B] 10.0	red: 09/08/201 h #: 1 K /BLANK S Blank Spike Result [C] 9.18	SPIKE / F Blank Spike %R [D] 92	BLANK S Spike Added [E] 10.0	Blank Spike Duplicate Result [F] 9.28	Date A	nalyzed: (Matrix: \ RECOVI RPD %	09/08/2012 Water CRY STUD Control Limits %R 80-120	Control Limits %RPD 20	Flag
Analyst: TTE Lab Batch ID: 896119 Sample: 626948-1- Units: mg/L Inorganic Anions by EPA 300/300.1 Analytes Bromide Ortho-Phosphate	Da BKS Blank Sample Result [A] <0.200 <0.200	ate Prepar Batcl BLAN Spike Added [B] 10.0 10.0	red: 09/08/201 h #: 1 K /BLANK \$ Blank Spike Result [C] 9.18 9.81	12 SPIKE / F Blank Spike %R [D] 92 98	Spike Added [E] 10.0 10.0	Blank Spike Duplicate Result [F] 9.28 10.0	Date A	nalyzed: (Matrix: N RECOVE %	09/08/2012 Water CRY STUD Control Limits %R 80-120 80-120	Y Control Limits %RPD 20 20	Flag

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





Work Order #: 448605							Pro	ject ID:(073018		
Analyst: TTE	Da	Date Prepared: 09/08/2012 Date Analyzed: 09/08/2012									
Lab Batch ID: 896120 Sample: 626950-1-1	BKS	Batch	n#: 1					Matrix: \	Water		
Units: mg/L		BLAN	K/BLANK S	SPIKE / H	BLANK S	SPIKE DUPI	LICATE	RECOVI	ERY STUD	PΥ	
Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Bromide	<0.200	10.0	9.66	97	10.0	9.68	97	0	80-120	20	
Ortho-Phosphate	<0.200	10.0	9.19	92	10.0	9.30	93	1	80-120	20	
Sulfate	<0.500	50.0	53.8	108	50.0	53.2	106	1	80-120	20	
Analyst: DEP Lab Batch ID: 896226 Sample: 896226-1-1	Date Prepared: 09/11/2012 Date Analyzed: 09/11/2012 KS Batch #: 1 Matrix: Water										
Units: mg/L		BLAN	K /BLANK S	SPIKE / I	BLANK S	SPIKE DUPI	LICATE]	RECOVI	ERY STUD	θY	
Nitrogen Ammonia by SM4500-NH3C Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Nitrogen, Ammonia (as N)	<0.100	2.50	2.68	107	2.50	2.70	108	1	80-120	20	
Analyst: TTE Lab Batch ID: 896149 Sample: 896149-1-1	Date Prepared: 09/10/2012 Date Analyzed: 09/10/2012 BKS Batch #: 1 Matrix: Water										
Units: mg/L		BLAN	K/BLANK S	SPIKE / I	BLANK S	SPIKE DUPI	LICATE 1	RECOVI	ERY STUD	θY	
Sulfide by SM4500-S-F-00 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Sulfide, total	<5.00	1000	1000	100	1000	1000	100	0	75-120	20	

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





Work Order #: 448605								Pro	ject ID: (073018		
Analyst: TTE		Da	Date Prepared: 09/10/2012 Date Analyzed: 09/10/2012									
Lab Batch ID: 896183	Sample: 896183-1-B	SKS	S Batch #: 1 Matrix: Water									
Units: mg/L			BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY									
TOC by SM 53	310C	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes			[B]	[C]	[D]	[E]	Result [F]	[G]				
Total Organic Carbon		<1.00	15.0	14.3	95	15.0	14.4	96	1	90-110	20	
Analyst: MKO		Da	ite Prepar	ed: 09/10/201	2			Date A	nalyzed: (09/12/2012		
Analyst: MKO Lab Batch ID: 896366	Sample: 626973-1-B	Da BKS	ate Prepar Batcl	ed: 09/10/201 h #: 1	12			Date A	nalyzed: (Matrix: \	9/12/2012 Water		
Analyst: MKO Lab Batch ID: 896366 Units: ^{mg/L}	Sample: 626973-1-B	Da BKS	ate Prepar Batcl BLAN	ed: 09/10/201 h #: 1 K /BLANK S	2 SPIKE / F	BLANK S	PIKE DUPI	Date A	nalyzed: (Matrix: \ RECOVI	09/12/2012 Water ERY STUD	Ŷ	
Analyst: MKO Lab Batch ID: 896366 Units: ^{mg/L} Total Metals by EP	Sample: 626973-1-B PA 6010B	Da BKS Blank Sample Result [A]	ate Prepar Batcl BLAN Spike Added	ed: 09/10/201 h #: 1 K /BLANK S Blank Spike Result	SPIKE / F Blank Spike %R	BLANK S Spike Added	Blank Spike Duplicate	Date A	nalyzed: (Matrix: \ RECOVI RPD %	99/12/2012 Water ERY STUD Control Limits %R	Control Limits %RPD	Flag
Analyst: MKO Lab Batch ID: 896366 Units: ^{mg/L} Total Metals by EP Analytes	Sample: 626973-1-B PA 6010B	Da BKS Blank Sample Result [A]	ate Prepar Batcl BLAN Spike Added [B]	ed: 09/10/201 h #: 1 K /BLANK S Blank Spike Result [C]	2 SPIKE / F Blank Spike %R [D]	Spike Added [E]	Blank Blank Spike Duplicate Result [F]	JICATE	nalyzed: (Matrix: RECOVI RPD %	09/12/2012 Water ERY STUD Control Limits %R	Y Control Limits %RPD	Flag
Analyst: MKO Lab Batch ID: 896366 Units: ^{mg/L} Total Metals by EP Analytes Chromium	Sample: 626973-1-B PA 6010B	Da BKS Blank Sample Result [A] <0.0100	Interprepar Batcl BLAN Spike Added [B] 1.00	ed: 09/10/201 h #: 1 K /BLANK S Blank Spike Result [C] 0.942	2 SPIKE / F Blank Spike %R [D] 94	Spike Added [E]	Blank Spike Duplicate Result [F]	Date A	nalyzed: (Matrix: \ RECOVH RPD % 3	99/12/2012 Water ERY STUD Control Limits %R 80-120	Y Control Limits %RPD 20	Flag
Analyst: MKO Lab Batch ID: 896366 Units: ^{mg/L} Total Metals by EP Analytes Chromium Iron	Sample: 626973-1-B PA 6010B	Da BKS Blank Sample Result [A] <0.0100 <0.200	Added [B]	ed: 09/10/201 h #: 1 K /BLANK S Blank Spike Result [C] 0.942 4.84	2 SPIKE / F Blank Spike %R [D] 94 97	BLANK S Spike Added [E] 1.00 5.00	Blank Spike Duplicate Result [F] 0.914 4.70	Jate A	Alyzed: (Matrix:) RECOVI % 3 3	99/12/2012 Water ERY STUD Control Limits %R 80-120 80-120	Control Limits %RPD 20 20	Flag

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: North Eunice



Work Order #: 448605							
Lab Batch #: 896116				Pro	oject ID:	073018	
Date Analyzed: 09/08/2012	Date P	repared: 09/0	8/2012	Α	nalyst: T	ТЕ	
QC- Sample ID: 448576-001 S		Batch #: 1		r	Matrix: D	rinking Wate	r
Reporting Units: mg/L		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
Bromide		<0.200	10.0	11.2	112	80-120	
Sulfate		45.3	50.0	89.1	88	80-120	<u> </u>
		10.0	0.0	0,11	00	00 120	<u> </u>
Lab Batch #: 896116 Date Analyzed: 09/08/2012	Date P	repared: 09/0	8/2012	А	nalyst: T	ΓE	
QC- Sample ID: 448578-002 S		Batch #: 1		r	Matrix: D	rinking Wate	r
Reporting Units: mg/L		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
Bromide		0.534	10.0	9.51	90	80-120	
Sulfate		1.68	50.0	54.7	106	80-120	<u> </u>
Lab Batch #• 806110		I		1 1		I	<u>.</u>
Date Analyzed: 09/08/2012	Date P	repared: 09/0	8/2012	А	nalvst: T	ГЕ	
OC- Sample ID: 448674-001 S		Batch #• 1			Motniv, W	ator	
Reporting Units: mg/L		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]				
Bromide		7.05	100	92.2	85	80-120	
Ortho-Phosphate		<2.00	100	74.4	74	80-120	X
Sulfate		10.3	500	526	103	80-120	
Lab Batch #: 896119							
Date Analyzed: 09/08/2012	Date P	repared: 09/0	8/2012	А	nalyst: T	ГЕ	
QC- Sample ID: 448709-001 S		Batch #: 1		I	Matrix: W	ater	
Reporting Units: mg/L		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
Anarytes		6 DF	100	02.0	07	80.120	<u> </u>
Ortho Phoenhate		<2.00	100	71.0	0/	80.120	
		<2.00	500	502	102	80.120	
Sunate		/ 8.9	500	393	105	00-120	1

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



Form 3 - MS Recoveries

Project Name: North Eunice

Work Order #: 448605							
Lab Batch #: 896120				Pr	oject ID:	073018	
Date Analyzed: 09/08/2012	Date F	repared: 09/0	8/2012	A	analyst: T	TE	
QC- Sample ID: 448605-009 S		Batch #: 1		I	Matrix: W	Vater	
Reporting Units: mg/L		MATE	RIX / MA	TRIX SPIKE	RECO	VERY STU	JDY
Inorganic Anions by EPA 300		Parent Sample Result	Spike Added	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes		[A]	[B]				
Bromide		12.3	50.0	64.3	104	80-120	
Ortho-Phosphate		<1.00	50.0	38.0	76	80-120	X
Sulfate		1200	250	1410	84	80-120	
Lab Batch #: 896120							
Date Analyzed: 09/09/2012	Date F	repared: 09/0	9/2012	A	analyst: T	TE	
QC- Sample ID: 448680-001 S		Batch #: 1		I	Matrix: W	Vater	
Reporting Units: mg/L		MATE	RIX / MA	TRIX SPIKE	RECO	VERY STU	JDY
Inorganic Anions by EPA 300		Parent Sample Result	Spike Added	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes		[A]	[B]				
Bromide		4.55	100	98.3	94	80-120	-
Ortho-Phosphate		<2.00	100	83.6	84	80-120	
Sulfate		93.9	500	637	109	80-120	
Lab Batch #: 896226		·					
Date Analyzed: 09/11/2012	Date F	repared: 09/1	1/2012	A	analyst: D)EP	
QC- Sample ID: 448605-006 S		Batch #: 1		1	Matrix: W	Vater	
Reporting Units: mg/L		MATE	RIX / MA	TRIX SPIKE	RECO	VERY STU	JDY
Nitrogen Ammonia by SM4500-NH3C		Parent Sample Result	Spike Added	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes		[A]	[B]				
Nitrogen, Ammonia (as N)		< 0.100	2.50	2.60	104	80-120	
Lab Batch #: 896183							
Date Analyzed: 09/10/2012	Date F	repared: 09/1	0/2012	A	analyst: T	TE	
QC- Sample ID: 448581-001 S		Batch #: 1		I	Matrix: W	Vater	
Reporting Units: mg/L		MATE	RIX / MA	TRIX SPIKE	RECO	VERY STU	JDY
TOC by SM 5310C Analytes		Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Total Organic Carbon		1.07	15.0	15.8	98	90-110	+
roun organic curbon		1.07	15.0	10.0	20	1 20 110	1

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



Sodium

Form 3 - MS Recoveries

Laboratories						TNI
Project Name: N	North Eunio	ce				498ORATORY
Work Order #: 448605						
Lab Batch #: 896183			Pro	oject ID:	073018	
Date Analyzed: 09/10/2012 Date I	Prepared: 09/1	0/2012	А	nalyst: T	TE	
QC- Sample ID: 448581-002 S	Batch #: 1		r	Matrix: V	Vater	
Reporting Units: mg/L	MATI	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
TOC by SM 5310C Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Total Organic Carbon	1.17	15.0	15.9	98	90-110	
Lab Batch #: 896366						
Date Analyzed: 09/12/2012 Date I	Prepared: 09/1	0/2012	А	nalyst: N	1KO	
QC- Sample ID: 448605-001 S	Batch #: 1		Γ	Matrix: V	Vater	
Reporting Units: mg/L	MATI	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Total Metals by EPA 6010B	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chromium	0.323	1.00	1.22	90	80-120	
Iron	<0.200	5.00	4.82	96	80-120	
TOC by SM 5310C Analytes Total Organic Carbon Lab Batch #: 896366 Date Analyzed: 09/12/2012 Date I QC- Sample ID: 448605-001 S Reporting Units: mg/L Total Metals by EPA 6010B Analytes Chromium Iron	Parent Sample Result [A] 1.17 Prepared: 09/1 Batch #: 1 MATI Parent Sample Result [A] 0.323 <0.200	Spike Added [B] 15.0 0/2012 RIX / MA Spike Added [B] 1.00 5.00	Spiked Sample Result [C] 15.9 A TRIX SPIKE Spiked Sample Result [C] 1.22 4.82	%R [D] 98 malyst: M Matrix: V RECO %R [D] 90 96	Control Limits %R 90-110 IKO Vater VERY STU Control Limits %R 80-120 80-120	Flag

375

25.0

396

84

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



Form 3 - MS / MSD Recoveries

Project Name: North Eunice



Work Order #: 448605						Project II	D: 073018				
Lab Batch ID: 896454 (C- Sample ID:	448605	-002 S	Ba	tch #:	1 Matrix	k: Water				
Date Analyzed: 09/07/2012	Date Prepared:	09/07/2	012	An	alyst:	WRU					
Reporting Units: mg/L	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
Chromium, Hexavalent by SW 7196A	Parent Sample	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	[A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	% R	%RPD	
Hexavalent Chromium	<0.0100	0.200	0.233	117	0.200	0.233	117	0	80-120	20	
Lab Batch ID: 896456	C- Sample ID:	448547	-001 S	Ba	tch #:	1 Matrix	k: Water				
Date Analyzed: 09/06/2012	Date Prepared:	09/06/2	012	An	alyst:	WRU					
Reporting Units: mg/L		Μ	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERYS	STUDY		
Chromium, Hexavalent by SW 7196A	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	[A]	[B]		[D]	[E]		[G]				
Hexavalent Chromium	<0.0100	0.200	0.238	119	0.200	0.238	119	0	80-120	20	

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



Sample Duplicate Recovery



Project Name: North Eunice

Work Order #: 448605					
Lab Batch #: 896454			Project I	D: 073018	
Date Analyzed: 09/07/2012 09:15 Date Prepa	red: 09/07/2012	2 Ana	lyst: WRU		
QC- Sample ID: 448605-002 D Bate	h #: 1	Ma	trix: Water		
Reporting Units: mg/L	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Chromium, Hexavalent by SW 7196A Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Hexavalent Chromium	< 0.0100	< 0.0100	0	20	U
Lab Batch #: 896456					
Date Analyzed: 09/06/2012 11:30 Date Prepa	red: 09/06/2012	2 Ana	lyst: WRU		
QC- Sample ID: 448547-001 D Bate	h #: 1	Ma	trix: Water		
Reporting Units: mg/L	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Chromium, Hexavalent by SW 7196A Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Hexavalent Chromium	< 0.0100	<0.0100	0	20	U
Lab Baseh #. 896149			-	-	-
Date Analyzed: 09/10/2012 11:41 Date Prepa	red: 09/10/2012	2 Ana	lvst: TTE		
OC- Sample ID: 448605-009 D Bate	h #: 1	Ma	trix: Water		
Reporting Units: mg/L	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Sulfide by SM4500-S-F-00 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Sulfide, total	<5.00	<5.00	0	20	U
Lab Batch #: 896149	·				
Date Analyzed: 09/10/2012 11:22 Date Prepa	red: 09/10/2012	2 Ana	lyst:TTE		
QC- Sample ID: 448699-011 D Bate	h #: 1	Ma	trix: Water		
Reporting Units: mg/L	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Sulfide by SM4500-S-F-00 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Sulfide, total	<5.00	<5.00	0	20	U

Spike Relative Difference RPD 200 * $|\,(B\text{-}A)/(B\text{+}A)\,|$ All Results are based on MDL and validated for QC purposes.

Heterotrophic Plate Count

(Hygeia SOP-09)



Client No.: 30311 Nick Straccione Xenco Laboratories 4141 Greenbriar Stafford, TX 77477 Hygeia Sample ID Client Sample ID Location Sample Type Sample Amount Medium / Method Dilution Factor(s)	9610 448605- Wate 0.1 m R2A 1:1	Project N Project Nar Collect Receiv Analyz 8 QC X 001	No.: CRA me: red: 09/05/2012 red: 09/07/2012 red: 09/07/2012	Justin Nixon	
	Raw				
Bacteria Isolated:	Count Dilution CF	U / 100 mL %			
	12 000 / 1	00 ml			
Comments					

Heterotrophic Plate Count

(Hygeia SOP-09)



Client No.: 30311	Project No.:	CRA		
Nick Straccione	Project Name:			
Xenco Laboratories	Collected:	09/05/2012	Justin Nixon	
4141 Greenbriar	Received:	09/07/2012		
Stafford, TX 77477	Analyzed:	09/07/2012		

Analyst

Anita Schauer

Lab Director

Crystal Enloe

Thank you for using Hygeia Laboratories Inc. We strive to provide superior quality and service.

This report may not be reproduced except in full, and only with the written approval of this laboratory. Please contact Hygeia regarding any questions about these results, this report, or the analytical methods employed.

Data in this report are reliable within two significant figures. Sample results are not corrected based on results of blanks. The minimum reporting limit (MRL) is calculated as the lowest dilution tested/volume. Estimates of uncertainty are available upon request. CFU = colony forming units. CFU/unit is calculated as raw count*dilution/sample amount. Total CFU/unit is the sum of individual CFUs/unit and is considered <MRL if no colonies are present.

Confidentiality Notice:

The information contained herein is confidential and privileged, intended for the exclusive use of the individual or entity named above. If the reader of this document is not the intended recipient, or the employee or agent responsible for delivering it to the intended recipient, you are hereby notified that any dissemination, distribution or copying of the document(s) is strictly prohibited. If you have received this document in error, please immediately notify us by telephone to arrange for its return.

Guidelines for Interpretation:

Interpretation of the data and information within this document is left to the company, consultant, and/or persons who conducted the fieldwork. Bacteria have been associated with a variety of health effects and sensitivity varies from person to person. Contact the CDC (www.cdc.gov) for information regarding potential health risks related to exposure in air or on surfaces and the USEPA (www.epa.gov) for existing established standards including regulated water quality standards.

Liability Notice:

Hygeia Laboratories Inc. and its personnel shall not be held liable for any misinformation provided to us by the client regarding these samples or for any misuse or interpretation of information supplied by us. Liability shall extend to providing replicate analyses only. This report relates only to samples submitted and analyzed.

Revision 0 09/14/2012 as

Heterotrophic Plate Count

(Hygeia SOP-09)



Client No.: 30311			P	Project No.	: CRA														
Nick Straccione			Proj	ect Name	ne:														
Xenco Laboratories				Collected	: 09/06	/2012	cl	ient											
4141 Greenbriar				Received	: 09/08	/2012													
Stafford, TX 77477				Analyzed	: 09/08	/2012													
Hygeia Sample ID		96	133			9	6134			g	6135								
Client Sample ID		44860	5 - 002			4486	05 - 003			4486	605 - 004								
Location																			
Sample Type		W	ater			V	Vater			V	Vater								
Sample Amount		0.1	mL			0.	.1 mL				1 mL								
Medium / Method		R	2A				R2A		R2A										
Dilution Factor(s)		1:1				1:1		1:1											
Bacteria Isolated	Raw Count	Dilution	CFU / 100 m	L %	Raw	Dilution	CFU / 100 ml	%	Raw	Dilution	CFU / 100 ml	L %							
Anaerobic beterotrophic bacteria	543	1	543,000	100	411	1	411,000	100	2416	1	241,600	100							
												<u> </u>							
												+							
												+							
												+							
				+-1								+							
				+				$\left \right $				+							
				+							1	+							
				+			1												
												L							
Total CFU		543,000) / 100 mL			411,00	00 / 100 mL			241,6	00 / 100 mL								
Comments																			

Heterotrophic Plate Count

(Hygeia SOP-09)



1

Client No.: 30311 Nick Straccione			P Proj	roject No ect Nam	o.: CF e:	RA													
Xenco Laboratories				Collecte	d: 09	/06/2012													
4141 Greenbriar				Receive	d: 09	/08/2012													
Stafford, TX 77477				Analyze	d: 09	/08/2012													
Hygeia Sample ID		96	136				96137			9	6138								
Client Sample ID		44860)5 - 005			448	605 - 006			4486	305 - 007								
Location																			
Sample Type		W	ater				Water			V	Vater								
Sample Amount		1	mL				1 mL			0	.1 mL								
Medium / Method		F	2A				R2A				R2A								
Dilution Factor(s)		1:1				1:	1			1:1									
Bacteria Isolated:	Raw Count	Dilution	CFU / 100 m	L %	Ra Co	w unt Dilution	CFU / 100 ml	L %	Raw Coun	t Dilution	CFU / 100 mL	L %							
Anaerobic heterotrophic bacteria	120	1	12,000	100	2	1 1	2,100	100	57	1	57,000	100							
												1							
												1							
												1							
												1							
												+							
								+		1									
				+				+		1		+							
											-	+							
Total CFU		12,000	/ 100 mL	<u> </u>		2,10	00 / 100 mL			57,00	0 / 100 mL								
Comments																			

Heterotrophic Plate Count

(Hygeia SOP-09)

ſ



Client No.: 30311			Pro	oject No.:	CRA				
Nick Straccione			Proje	ct Name:					
Xenco Laboratories			C	Collected:	09/06	/2012	clie	ent	
4141 Greenbriar			F	Received:	09/08	/2012			
Stafford, TX 77477			A	Analyzed:	09/08	/2012			
Hygeia Sample ID		9	6139			9	6140		
Client Sample ID		4486	05 - 008			4486	05 - 009		
Location									
Sample Type		v	Vater			W	/ater		
Sample Amount		1	l mL			1	mL		
Medium / Method			R2A			F	R2A		
Dilution Factor(s)		1:1				1:1			
Bacteria Isolated:	Raw Count	Dilution	CFU / 100 mL	%	Raw Count	Dilution	CFU / 100 mL	%	
Anaerobic heterotrophic bacteria	66	1	6,600	100	155	1	15,500	100	
			<u> </u>					\vdash	
				┝─┤	$\left - \right $				
				┣──┨	$\left -\right $				
	- -								
Total CFU		6,600) / 100 mL			15,500	0 / 100 mL		
Comments									
					1				

Heterotrophic Plate Count

(Hygeia SOP-09)



Client No.: 30311	Project No.: CRA	
Nick Straccione	Project Name:	
Xenco Laboratories	Collected: 09/06/2012	client
4141 Greenbriar	Received: 09/08/2012	
Stafford, TX 77477	Analyzed: 09/08/2012	

Analyst

Anita Schauer

Lab Director

Crystal Enloe

Thank you for using Hygeia Laboratories Inc. We strive to provide superior quality and service.

This report may not be reproduced except in full, and only with the written approval of this laboratory. Please contact Hygeia regarding any questions about these results, this report, or the analytical methods employed.

Data in this report are reliable within two significant figures. Sample results are not corrected based on results of blanks. The minimum reporting limit (MRL) is calculated as the lowest dilution tested/volume. Estimates of uncertainty are available upon request. CFU = colony forming units. CFU/unit is calculated as raw count*dilution/sample amount. Total CFU/unit is the sum of individual CFUs/unit and is considered <MRL if no colonies are present.

Confidentiality Notice:

The information contained herein is confidential and privileged, intended for the exclusive use of the individual or entity named above. If the reader of this document is not the intended recipient, or the employee or agent responsible for delivering it to the intended recipient, you are hereby notified that any dissemination, distribution or copying of the document(s) is strictly prohibited. If you have received this document in error, please immediately notify us by telephone to arrange for its return.

Guidelines for Interpretation:

Interpretation of the data and information within this document is left to the company, consultant, and/or persons who conducted the fieldwork. Bacteria have been associated with a variety of health effects and sensitivity varies from person to person. Contact the CDC (www.cdc.gov) for information regarding potential health risks related to exposure in air or on surfaces and the USEPA (www.epa.gov) for existing established standards including regulated water quality standards.

Liability Notice:

Hygeia Laboratories Inc. and its personnel shall not be held liable for any misinformation provided to us by the client regarding these samples or for any misuse or interpretation of information supplied by us. Liability shall extend to providing replicate analyses only. This report relates only to samples submitted and analyzed.

Revision 0 09/14/2012 as

Xenco Laboratories

140

 CHAIN OF CUSTODY RECORD	AND ANALYSIS REQUEST

The Environmental Lab of Texas		·	12600 West I-20 East Odessa, Texas 79765												I	hor Fax	10:4 :4	32-5 32-5	i63-' i63-'	1800 1713) - 3			•.					
Project Manager: Mike W	1 <u>3</u> .													·	Proje	ect N	me:		L	0	2	h	2	20	<u>n</u>	10	e,		
Company Name CRA		****			-									-	Project #: 073018														
Company Address: 2135 W	J1000250N															Project Loc: EUNICE, NM													
attuistation And And		TX	79.7	03												P	0#:					-	·						
$\frac{1}{2} \frac{1}{2} \frac{1}$	$\int \int $	18	10	Fax No:	4	4	3	7-	10	2	10-	\widehat{O}	8	Rec	ort F	orm	ıt:	П	Sta	ndaro	d	Γ] тғ	RP			NPDI	ES	
Telephone No. <u>100 CEUCE</u>		10	$\overline{\Lambda}$	e-mail:		<u> </u>								£								-							
Sampler Signature:	<u> </u>	$\frac{1}{2}$	<u> </u>	U main											F				20.0.1	An	alyzo	For:	-			T	T	7	
(lab use only) 4/18/205									uniform	0 44 4	6 () and		<u>.</u>	Male	-	<u></u>		TO	TAL:		1	1		ŀ			Î	2	
ORDER #: 770000		[-			PI	eser	VELICOT		ST Com		╺╌╂	Weith		8				х Я		8260							
B # (fab use only)	eginning Depth	nding Depth	Date Sampled	Time Sampled	ield Filtered	otal #. of Containers	8	HNO3	HCI H.SO.	NaOH	Mars205	None	Other (Specify)	NV=Chinking Vlater SL=Studge XV = Groundwatter S=ScillScill	P-Non-Potable Specify Othe	PH: TX 1005 TX 10	lations (Ca, Mg, Na, K)	viions (Ct, SO4, Alkalinity)	AR / ESP / CEC	fetals: As Ag Ba Cd Cr Pb	(olatiles	STEX 80218/5030 or BTEX	Ş	LORM.			**************************************		Standard TAI
AALAROT O965/2	<u> </u>	<u> </u>	9.5.12	1535	<u> </u>	-	X			+	+		Ť	<u>, </u>	-		ľ	Ť	Ű	-	1	1	T	Ē	T				
										1-								_						<u> </u>			_	4	ا بشين
			1					+	+	╀	┢	$\left \right $			_					-	_		+		╇	┝╍┥		╧╋╴	-
							\vdash	╉	÷	╋	+	$\left \right $	╉							+	╉	-	╋	┼─	+	┢─┤	╉	÷	-
						·				1	1		1	·· 1.	╈						+	\top	1						
							\square					Π													L			_	
	ļ	 						+		+		┝╌┠	_		╋					+			+		┢╌	┝┥	+	╇	_
					$\left \cdot \right $		-+	+	╋	╋		┝╌┠	╉		╋	╋				-			+	┢	╋	┝─┤	╉	╉	
Special Instructions: read attached soow	<u>L</u>		1		ا ـــــا		l.	L.	I			i			I		Lab San VO	nple	tory Con	Con tain of He	nmen ers in eadsp	tact tact	 ? ?	<u> </u>	ب ۲	<u>ک</u>	Ć.		
Relinguighed by: Relinguished by: Relinguished by: Date	21	ime L Ime	Received by:										Date		Ti Ti	me me	Lab Cus Cus San	els (tody tody nple by S	on co / sea / sea Han Hanp iamp	ontal Is or Is or d De ler/C	ner(s 1 con 1 coo 2007 2007 2007 2007 2007 2007 2007 20) taine ler(s) ed Røp. PS	97(8)) ? DH	IL.	C Fei		Lone	Sta	r
Relinquished by: Date	T	lme	Received by EL	ot: MQ	z	N	Д,	H	h			8-	Date	-12	т 14	те * Ц	Ten	nper	ature	Up	on Re	ecelp	ot:		/	.5	<u>م</u>	с 	

CRA Simplified Scope of Work (SSOW)/Laboratory Services Purchase Order

SSOW Ref. Code 073018_20120823

Project Name: Chevron-North Eunice

Phase/Study Title: Baseline Sampling Event Description: Pilot Test - GW Sampling

CRA Project No./Phase/Task: 073018

			Project Location:	Eunice, New Mexico				_							_			
											Fi	eld		Sam	ples			
	ltem	Sample Matrix	Analytical Parameters	Analytical Methods	Holding Time	Unit Prices	Applicable Surcharge Multiplier ⁽¹⁾	Ext P	ended rices	Estimated Sample Qty/Event	MSD	Lab Du	Trip Blk	RBIK	Fld Dup Other	Total Sample Qty.	Billable Samples	Estimated Cost/Event
	1	water	Total, Chromium, Iron, Sodium	SW-846 6010B	180 days	\$ 30.00	1.00	\$	30.00	8			2		2	12	12	\$360.00
	2	water	Hexavalent Chromium	SW-846 7196A	24 hours	\$ 25.00	1.00	\$	25.00	8					2	10	10	\$250.00
	3	water	Anions (SO4, Br)	E 300	28 days	\$ 40.00	1.00	\$	40.00	8					2	10	10	\$400.00
	4	water	Sulfide	SM4500	7 days	\$ 40.00	1.00	\$	40.00	8					2	10	10	\$400.00
	5	water	Ammonia-Nitrogen	SM4500	28 days	\$ 35.00	1.00	\$	35.00	8					2	10	10	\$350.00
	6	water	Total Organic Carbon TOC	SM5310	28 days	\$ 35.00	1.00	\$	35.00	8					2	10	10	\$350.00
	7	water	Orthophosphate-phosphorus	E300	48 hrs	\$ 14.00	1.00	\$	14.00	8					2	10	10	\$140.00
÷	8	water	Total Anaerobic Microbial Count		24 hrs	\$ 35.00	1.00	\$	35.00	8					2	10	10	\$350.00
	9	water	Dissolved Iron	SW-846 6010B	180 days	\$ 10.00	1.00	\$	10.00	8					2	10	10	\$100.00
														ı				1 - A. A.
				• •					- 1									· .
							5											

(1) Explanation of Surcharges:

Estimated Event Subtotal: Laboratory Surcharge(s): Estimated Event Total Costs:

\$2,700.00 \$0.00 \$2,700.00

Lab Contracting Summary:

Governi	ng Terms and Conditions	CRA Purchase Order Number:	4051255	Claudia Ramos 8/23/2012
	Master Agreement Number:	 Name of Client:		(authorized CRA signature) (date signed)
V	Exhibit "A" Terms and Conditions	Other Additional Insureds:		· · · · ·
	Client Contract	Governing Law:	Texas	Nick Straccione 8/23/2012
		Currency:	US	(authorized Vendor signature) (date signed)
		Address Invoice to:	CRA c/o Claudia Ramos	Typed name constitutes authorized signature.
		—	6320 Rothway, Suite 100	
		· · · · · · · · · · · · · · · · · · ·	Houston, TX 77040	- · · · · · · · · · · · · · · · · · · ·

Vendor to provide and deliver all items or services set out or otherwise described below subject to the governing terms and conditions checked above. This Purchase Order expressly limits acceptance to such terms and conditions. Any additional or different terms proposed by Vendor are rejected unless expressly agreed to in writing by CRA. To accept this Purchase Order, Vendor must sign, date, and return one copy of this page to issuer before starting any work. CRA's receipt of Signature of this Purchase Order may be sent by facsimile (with confirmation by transmitting machine) and/or transmitted by portable document file (PDF) which shall be treated as an original signature, and any such signature, facsimile, PDF file, or copy of this signed Purchase Order shall be valid as an original and shall be binding as if it were the original. Show Purchase Order No. on all correspondence, insurance certificates, invoices, and delivery papers.

200016-PO(QSF-024-Lab)-Rev.10 1/18/2011

			1995 - S. 1997 -					C	HAIN	OF	cus	TOD	(RE	COR	D AI	VD A	NAL	.YSI	S RI	ΞQl	JES	Γ			
				• •	1	260) des	i0 We	əst I Texi	-20 E as 79	ast 765				١			Ph Fr	one: ax:	432 432	-563 -56:)-180 }-17')0 13	1		
رے ال	<u>.</u>	. prk	•				oou;		40 , 0			•				Λ			th		۶.	mì	rD		
NISI	10	upen	1										Proj	ect N	eme:			1		5		711	ىت	l as	·······
												•		Proje	et #:))1	3	Ľ	Ď					
DO D	50	<u>N</u>											Pr	oject	Loc:	Ľ	J	ìC	e,		11	<u>n</u>			
TX	17	9703													0#:				. 1	~		•			
$\frac{1}{2}$	19/	΄ <u>Λ</u>)	12	5	1.	0	10-	71	21			_		άν .				Π.			п.		
	200	<u>y</u>	Fax NO:		100	2	Ű	<u>Q</u> L		M	0.0	/ R0		forma Coc	at: L g m	ع بعر م	itandi Coll	ard Nbi	ne	<u>с</u>	1888 25 /1	145	יים /שו		с 1
¥		<u></u>	e-mail:	M	M	iS	nic	<u>)u</u>	UIE	201	56	<u>)</u>	- r	ň	m	9.	<u>.</u>		fe	يني	ĩõ	ίćθ	s E	iqu	ζŻΆ
				Ċ	KĄ	ju	S	rlc	1.0	on	n		t			TCL	P:		Ť	Ï	T	T	TT	Ĩ	
					Г	Pre	serva	lion 8	##ofC	ontaine	978	Mal	rix	8		TOTA	L; ,9	+	\vdash	┥				8	
	1	1		Π	Γ	Τ	T	Τ	TT		T	g 32	N.	80			S Fr			928 X 820	. •			2	
					"I							Control of the second	5	¥ K	Q	catinity	5							4	
)ept	l 🗧	- pe	beid		tainer			ŀ			s	いた	ŝ	8	S. S	Ž (2 2 8 3			5030				ž	F
ing l	a a	dings	Sam	F ered	S S					_	Spect	áng We	Potable		S.	5	AS AG			021B/	.			TAT	E B
ginn	ding	Date (쏊	# 3		្ទី ថ្ន	s,	Ð		other (N=Crint	-Cool	ž ž	stions) suoji		okatiles	Ö	₩ A	5			HSA	tand
	<u> </u>	9-6-12	Cransison	Ű.	L S	╎		+			H	55	2		8	20		2	<u></u>	<u>m</u>	≝ <u>†</u> ⁼		┼╌┼╴	Ē	X
	+	9-6-12	10930		61	7	+-	┢	╞╴╋	+-	+					+	+	\square	$\neg \uparrow$	╋	-	+-	$\uparrow \uparrow$	1	X
		. 9-6-12	1130	-	īΪ	竹	+	┢	\dagger	+	\top			+	[]	-				十		1	\Box		X
		9-6-12	1240		51	1	1.	\uparrow	\square		\top	·	Ť	1				\square		T		Τ		Ι	X
		9-6-12	1330		63	1									Π				Τ		Ι				X
		9-6-12	1410		63	1									Π										ЦД.
		9-6-12	1505		67	×															\bot	\bot	$\downarrow \downarrow$	4	ĽЦ
				\square		1				_				_			<u> </u>	\square	\downarrow	\downarrow	╇		$\downarrow \downarrow$		
									_	_	┟╻╏		_		\square		1	 	\downarrow	4	+	_	┢╍┝		
					ᆠ		-	Ļ			ГÏ														Ц
and	lu	505 4	by of co	יבי מאויי	101 1 101	YN€ ∞	20 . 0 - 1-	ルレ	10 4	7.1 mi	u•/;	r Oli Do	50 10-	-	Sam	ple C	ontal	ners	intac	1?			Y	N	
	- O -	Received by:						· D		111	Da	te.		me	VOC Labé	is Fre	e of l	Head ainer	spac (s)	e?			Y Y	N N	
12 09	830										- 7				Cust	ody a	eals eals	on co on co	intair oler/	101(9 (5))		Y Y	N N	
, 1	rime -	Received by:									Da	le .	T	me	Sam	ple H	and I	Deliv	red	. ?			Y Y	N N	
	Cimo:	Decalued by El	07.		<u>.</u>					-	Del	lo				by Col	irier?		UPS	0	HL.	Fea	JEX L	one S	ter
'		I TA A A	h	-0-1	ر م	r	1			C	ì'n	ไว	8	2)	Tem	perat	ure U	pon	Rece	ipt:	34	5	2.	Ò	
	Segiming Depth	NISMO 200250 17X7 2008 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 100	Nisnioujeck 20250N 7X79703 4080 4080 4080 1000000000000000000000000000000000000	NISTIOUSECKI 29250N 7X79703 1-0080 1-0080 1-0080 1-0080 1-0080 1-0080 1-0080 1-0080 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80 1-0-80	Nisnioujecki 2p 250N 7X 79703 2-008(2) Fax No: 2 2-008(2) Fax No: 2 3-008(2) Fax No: 2 3-096(2) Fax No: 2 3-096	Nisniowecki $\frac{1}{2}$ $\frac{1}{2}$ \frac	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	12600 We Octossa, NISNIOUŻCKI p 250N r 7X 79703 r 0080 r 7X 79703 r 0080 r 0080 r 0080 r 0080 r 0080 r 0080 r 0000 r 00000 r 00000 r 00000 r 000000 r 000000 r 0000000 r 000000000000000000000000000000000000	$\frac{12600 West 1}{0 clessa, Tex}$ $\frac{12600 West 1}{0 clessa, Tex}$ $\frac{13500 West 1}{0 clessa, Tex}$ $\frac{11500 West 1}{0 clessa, Tex}$ $\frac{11500 West 1}{0 clessa, Tex}$ $\frac{1100 West 1}{0 clessa}$	$\begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} $	CHAIN OF 12800 West 1-20 East Odessa, Toxas 79765 NISTIOUECKI Description & How	CHAIN OF CUS 12600 West I-20 East Odessa, Texas 79765 NISDIOUECKI POSOLUCKI TX 79703 POSOLUCKI Posorvalion & # of Containers $Posorvalion & # of ContainersPosorvalion & Posorvalion$	$\begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} $	$\begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} $	CHAIN OF CUSTODY RECOR 12800 West 1-20 East Odessa, Toxas 79765 Project M Project M	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	CHAIN OF CUSTODY RECORD AND A 12800 West 1-20 East Odessa, Texas 79765 NISDIOURCKI Project Name: Internet inte	$\begin{array}{c c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{$	CHAIN OF CUSTOPY RECORD AND ANALYS 128000 West 1-20 East Odessa, Taxas 75765 Project Mane: Project Mane: NISSNIQUECKI Project Mane: Project Mane:	CHAIN OF CUSTODY RECORD AND ANALYSIS RI 12800 West L20 East Odessa, Texas 79765 NISDIOUSECKI Project Name: AIO/M Project Name: AIO/M AIO/M Project Name: AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M AIO/M A	CHAIN OF CUSTORY RECORD AND ANDLYSIS RECUID 12000 West L 20 East Odessa, Toxas 79765 Project Meno:	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	CHAIN OF CUSTODY RECORD AND ANLLYSIS REGUEST 12000 Version 200 End to 20 East Odessa, Taxas 79765 Project Neme: Morth Euclid Project Neme:	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	CHAIN OF CUSTODY RECORD AND AND LYSIS REGUEST 12000 West Los East Dodessa, Toxas 79765 Project Nome:

7



XENCO Laboratories



Prelogin/Nonconformance Report- Sample Log-In

Client: Conestoga Rovers & AssociatesAcceptable Temperature Range: 0 - 6 degCDate/ Time Received: 09/06/2012 04:14:00 PMAir and Metal samples Acceptable Range: AmbientWork Order #: 448605Temperature Measuring device used :

Sample Receipt Checklist	Comment	S
#1 *Temperature of cooler(s)?	2	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	
#4 *Custody Seals intact on shipping container/ cooler?	Yes	
#5 Custody Seals intact on sample bottles/ container?	Yes	
#6 *Custody Seals Signed and dated for Containers/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 relinquished/ received?	Yes	
#11 Chain of Custody agrees with sample label(s)?	Yes	
#12 Container label(s) legible and intact?	Yes	
#13 Sample matrix/ properties agree with Chain of Custody?	Yes	
#14 Samples in proper container/ bottle?	Yes	
#15 Samples properly preserved?	Yes	
#16 Sample container(s) intact?	Yes	
#17 Sufficient sample amount for indicated test(s)?	Yes	
#18 All samples received within hold time?	Yes	
#19 Subcontract of sample(s)?	Yes	
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes	
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes	
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	Yes	

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Date:

Checklist reviewed by:

Date: _____

Analytical Report 452802

for

Conestoga Rovers & Associates

Project Manager: Mike Wisniowiecki

N. Eunice

073018-2012-01

06-DEC-12

Collected By: Client





12600 West I-20 East Odessa, Texas 79765

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

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

> Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900) Xenco-Lakeland: Florida (E84098) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX) Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757) Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



06-DEC-12



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

Reference: XENCO Report No: **452802 N. Eunice** Project Address: TX

Mike Wisniowiecki:

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 452802. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 452802 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 452802



Conestoga Rovers & Associates, Midland, TX

N. Eunice

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW96111912	W	11-19-12 15:00		452802-001
MW97111912	W	11-19-12 16:40		452802-002
IW029111912	W	11-19-12 17:20		452802-003
MW7A111912	W	11-19-12 18:55		452802-004
Dup1111912	W	11-19-12 00:00		452802-005
MW7A(Metal Strip)	W	11-19-12 00:00		452802-006



Client Name: Conestoga Rovers & Associates Project Name: N. Eunice



 Project ID:
 073018-2012-01

 Work Order Number:
 452802

Report Date: 06-DEC-12 Date Received: 11/20/2012

Sample receipt non conformances and comments:

Sample 003, client IDIW029111912, and sample 005, client ID Dup1111912 appear to be duplicate samples but their physical characteristics were different. Sample 005 had a dark yellow color and sediment whereas sample 003 was lighter and contained little sediment. This would account for the varied results between the two samples. Results were confirmed by reanalysis.

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-901453 Inorganic Anions by EPA 300/300.1 E300

Batch 901453, Sulfate recovered above QC limits in the Matrix Spike. Samples affected are: 452802-001, -004, -002, -003, -005. The Laboratory Control Sample for Sulfate is within laboratory Control Limits

Batch: LBA-901583 Total Metals by EPA 6010B SW6010B

Batch 901583, Sodium recovered above QC limits in the Matrix Spike. Samples affected are: 452802-001, -004, -002, -003, -005. The Laboratory Control Sample for Sodium is within laboratory Control Limits



Certificate of Analysis Summary 452802

Conestoga Rovers & Associates, Midland, TX

Project Name: N. Eunice

Project Id: 073018-2012-01 Contact: Mike Wisniowiecki

Project Location: TX



Date Received in Lab: Tue Nov-20-12 09:12 am

Report Date: 06-DEC-12

								Project Ma	nager:	Nicholas Strad	ccione	
	Lab Id:	452802-0	001	452802-0	002	452802-0	03	452802-0	004	452802-0	005	452802-006
Anglusia Deguasted	Field Id:	MW96111	.912	MW97111	912	IW029111	912	MW7A11	1912	Dup11119	912	MW7A(Metal Strip)
Analysis Kequesiea	Depth:											
	Matrix:	WATE	R	WATEI	R	WATE	ર	WATE	R	WATE	R	WATER
	Sampled:	Nov-19-12	15:00	Nov-19-12	16:40	Nov-19-12	17:20	Nov-19-12	18:55	Nov-19-12	00:00	Nov-19-12 00:00
Chromium, Hexavalent by SW 7196A	Extracted:											
	Analyzed:	Nov-20-12	13:35	Nov-20-12	13:35	Nov-20-12	13:35	Nov-20-12	13:35	Nov-20-12	13:35	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	
Hexavalent Chromium		ND	0.0100	0.436	0.200	ND	0.0100	0.319	0.0100	ND	0.0100	
Dissolved Metals per ICP by SW846	Extracted:	Nov-30-12	12:10	Nov-30-12	12:10	Nov-30-12	12:10	Nov-30-12	12:10	Nov-30-12	12:10	
6010B	Analyzed:	Nov-30-12	18:32	Nov-30-12	19:00	Nov-30-12	19:05	Nov-30-12	19:23	Nov-30-12	19:28	
SUB: 1X104/04215	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	
Iron		ND	0.200	ND	0.200	119	0.200	ND	0.200	217	0.200	
Inorganic Anions by EPA 300/300.1	Extracted:	Nov-21-12	12:57	Nov-21-12	13:14	Nov-21-12	14:05	Nov-21-12	14:22	Nov-21-12	14:40	
SUB: TX104704215	Analyzed:	Nov-21-12	12:57	Nov-21-12	13:14	Nov-21-12	14:05	Nov-21-12	14:22	Nov-21-12	14:40	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	
Bromide		5.20	0.400	12.8	1.00	387	4.00	5.75	1.00	462	4.00	
Sulfate		407	1.00	1360	2.50	4630	10.0	815	2.50	4640	10.0	
Sulfide by SM4500-S-F-00	Extracted:											
SUB: TX104704215	Analyzed:	Nov-21-12	14:03	Nov-21-12	14:05	Nov-21-12	14:06	Nov-21-12	14:07	Nov-21-12	14:08	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	
Sulfide, total		ND	5.00	ND	5.00	ND	5.00	ND	5.00	ND	5.00	
TOC by SM 5310C	Extracted:											
SUB: TX104704215	Analyzed:	Nov-28-12	16:34	Nov-28-12	16:50	Nov-28-12	17:18	Nov-28-12	17:33	Nov-28-12	18:20	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	
Total Organic Carbon		1.66	1.00	4.90	1.00	27.2	1.00	2.88	1.00	17.4	1.00	

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

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

Version: 1.%

Ch Nul

Nicholas Straccione Project Manager



Certificate of Analysis Summary 452802

Conestoga Rovers & Associates, Midland, TX

Project Name: N. Eunice



Project Location: TX



Date Received in Lab: Tue Nov-20-12 09:12 am

Report Date: 06-DEC-12

								Project Ma	nager:	Nicholas Stra	ccione		
	Lab Id:	452802-0	001	452802-0	002	452802-0	003	452802-0	004	452802-0	005	452802-0	006
Amaluaia Dogwostod	Field Id:	MW9611	1912	MW97111	912	IW029111	1912	MW7A11	1912	Dup1111	912	MW7A(Meta	ıl Strip)
Analysis Kequesiea	Depth:												
	Matrix:	WATE	R	WATE	R	WATE	R	WATE	R	WATE	R	WATE	R
	Sampled:	Nov-19-12	15:00	Nov-19-12	16:40	Nov-19-12	17:20	Nov-19-12	18:55	Nov-19-12	00:00	Nov-19-12	00:00
Total Metals by EPA 6010B	Extracted:	Nov-26-12	10:30	Nov-26-12	10:30	Nov-26-12	10:30	Nov-26-12	10:30	Nov-26-12	10:30	Nov-29-12	11:45
SUB: TX104704215	Analyzed:	Nov-26-12	19:25	Nov-26-12	19:42	Nov-26-12	19:48	Nov-26-12	19:54	Nov-26-12	19:59	Nov-29-12	17:01
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Chromium		0.0177	0.0100	0.562	0.0100	ND	0.0500	0.327	0.0100	ND	0.0500	0.305	0.0100
Iron		ND	0.200	ND	0.200	58.1	1.00	ND	0.200	167	1.00	ND	0.200
Sodium		155	0.500	515	0.500	4650	2.50	333	0.500	5660	25.0	337	0.500

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.

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

Version: 1.%

Ch Nul

Nicholas Straccione Project Manager



Flagging Criteria

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

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

Certified and approved by numerous States and Agencies.

LOQ Limit of Quantitation

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

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

4143 Greenbriar Dr, Stafford, TX 77477 9701 Harry Hines Blvd, Dallas, TX 75220 5332 Blackberry Drive, San Antonio TX 78238 2505 North Falkenburg Rd, Tampa, FL 33619 12600 West I-20 East, Odessa, TX 79765 6017 Financial Drive, Norcross, GA 30071 3725 E. Atlanta Ave, Phoenix, AZ 85040
 Phone
 Fax

 (281) 240-4200
 (281) 240-4280

 (214) 902 0300
 (214) 351-9139

 (210) 509-3334
 (210) 509-3335

 (813) 620-2000
 (813) 620-2033

 (432) 563-1800
 (432) 563-1713

 (770) 449-8800
 (770) 449-5477

 (602) 437-0330
 (432) 563-1713

Final 1.000





Work Order #: 452802		Pro	oject ID:		073018-	2012-01
Lab Batch #: 901801	Sample: 901801-	1-BKS	Matrix:	Water		
Date Analyzed: 11/20/2012 Date	Prepared: 11/20/2	012	Analyst:	WRU		
Reporting Units: mg/L	Batch #: 1	BLANK /B	BLANK SPI	KE REC	OVERY S	STUDY
Chromium, Hexavalent by SW 7196A	Blank Result	Spike Added	Blank Spike	Blank Spike	Control Limits	Flags
Analytes	[A]	[B]	Result [C]	%R [D]	%R	
Hexavalent Chromium	<0.0100	0.0250	0.0216	86	80-120	

Blank Spike Recovery [D] = 100*[C]/[B] All results are based on MDL and validated for QC purposes. BRL - Below Reporting Limit





Work Order #: 452802		р	4. D	. 1. 11/20/201	2			Pro Data A	ject ID: (73018-201	2-01	
Analyst: MKU	Samala, 620572 1 F	Da	ate Prepar	ed: 11/30/201	Z			Date A	Motrive V	. 1/30/2012 Nater		
Lab Batch ID: 901937	Sample: 630572-1-B	3KS	Batch	n #:]				TOATE				
Units: mg/L			BLAN	K/BLANK S	SPIKE / F	BLANK S	SPIKE DUPI	LICATE .	RECOVE	ERY STUD	Ŷ	
Dissolved Metals per ICP b Analytes	эу SW846 6010В	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Iron		<0.0300	5.00	4.77	95	5.00	4.67	93	2	75-125	25	
Analyst: JOL		 D;	ate Prepar	ed: 11/21/201	2			Date A	nalyzed: 1	1/21/2012		
Lab Batch ID: 901453	Sample: 630313-1-E	3KS	Batcl	h#: 1					Matrix: \	Water		
Units: mg/L			BLAN	K /BLANK S	SPIKE / F	BLANK S	PIKE DUPI	LICATE	RECOVI	ERY STUD	Y	
Inorganic Anions by E Analytes	PA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Inorganic Anions by E Analytes Bromide	PA 300/300.1	Blank Sample Result [A] <0.200	Spike Added [B] 10.0	Blank Spike Result [C] 9.72	Blank Spike %R [D] 97	Spike Added [E] 10.0	Blank Spike Duplicate Result [F] 10.5	Blk. Spk Dup. %R [G] 105	RPD %	Control Limits %R 90-110	Control Limits %RPD	Flag
Inorganic Anions by El Analytes Bromide Sulfate	PA 300/300.1	Blank Sample Result [A] <0.200 <0.500	Spike Added [B] 10.0 50.0	Blank Spike Result [C] 9.72 52.8	Blank Spike %R [D] 97 106	Spike Added [E] 10.0 50.0	Blank Spike Duplicate Result [F] 10.5 54.3	Blk. Spk Dup. %R [G] 105 109	RPD %	Control Limits %R 90-110 90-110	Control Limits %RPD 10 20	Flag
Inorganic Anions by El Analytes Bromide Sulfate Analyst: TTE	PA 300/300.1	Blank Sample Result [A] <0.200 <0.500 Da	Spike Added [B] 10.0 50.0 ate Prepar	Blank Spike Result [C] 9.72 52.8 ed: 11/21/201	Blank Spike %R [D] 97 106 2	Spike Added [E] 10.0 50.0	Blank Spike Duplicate Result [F] 10.5 54.3	Blk. Spk Dup. %R [G] 105 109 Date A	RPD %	Control Limits %R 90-110 90-110 1/21/2012	Control Limits %RPD 10 20	Flag
Inorganic Anions by El Analytes Bromide Sulfate Analyst: TTE Lab Batch ID: 901374	PA 300/300.1	Blank Sample Result [A] <0.200 <0.500 Da BKS	Spike Added [B] 10.0 50.0 ate Prepar Bate	Blank Spike Result [C] 9.72 52.8 ed: 11/21/201 h #: 1	Blank Spike %R [D] 97 106 2	Spike Added [E] 10.0 50.0	Blank Spike Duplicate Result [F] 10.5 54.3	Blk. Spk Dup. %R [G] 105 109 Date A	RPD % 8 3 nalyzed: 1 Matrix: V	Control Limits %R 90-110 90-110 1/21/2012 Water	Control Limits %RPD	Flag
Inorganic Anions by El Analytes Bromide Sulfate Analyst: TTE Lab Batch ID: 901374 Units: mg/L	PA 300/300.1	Blank Sample Result [A] <0.200 <0.500 Da KS	Spike Added [B] 10.0 50.0 ate Prepar Batcl BLAN	Blank Spike Result [C] 9.72 52.8 ed: 11/21/201 h #: 1 K /BLANK S	Blank Spike %R [D] 97 106 2	Spike Added [E] 10.0 50.0 BLANK S	Blank Spike Duplicate Result [F] 10.5 54.3 SPIKE DUPI	Blk. Spk Dup. %R [G] 105 109 Date A	RPD % 8 3 nalyzed: 1 Matrix: V RECOVI	Control Limits %R 90-110 90-110 1/21/2012 Water CRY STUD	Control Limits %RPD 10 20	Flag
Inorganic Anions by El Analytes Bromide Sulfate Analyst: TTE Lab Batch ID: 901374 Units: mg/L Sulfide by SM4500 Analytes	PA 300/300.1 Sample: 901374-1-E D-S-F-00	Blank Sample Result [A] <0.200 <0.500 Blank Sample Result [A]	Spike Added [B] 10.0 50.0 ate Prepar Batcl BLAN Spike Added [B]	Blank Spike Result [C] 9.72 52.8 ed: 11/21/201 h #: 1 K /BLANK S Blank Spike Result [C]	Blank Spike %R [D] 97 106 2 SPIKE / H Blank Spike %R [D]	Spike Added [E] 10.0 50.0 BLANK S Spike Added [E]	Blank Spike Duplicate Result [F] 10.5 54.3 PIKE DUPI Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G] 105 109 Date A LICATE Blk. Spk Dup. %R [G]	RPD % 8 3 malyzed: 1 Matrix: V RECOVE %	Control Limits %R 90-110 90-110 1/21/2012 Water ERY STUD Control Limits %R	Control Limits %RPD 10 20 YY Control Limits %RPD	Flag





Work Order #: 452802								Pro	ject ID: (073018-201	2-01	
Analyst: JOL		Da	ate Prepar	red: 11/28/201	2			Date A	nalyzed: 1	1/28/2012		
Lab Batch ID: 901786	Sample: 901786-1-B	SKS	Bate	h #: 1					Matrix: \	Water		
Units: mg/L			BLAN	K/BLANK S	SPIKE / E	BLANK S	PIKE DUPI	LICATE	RECOVE	ERY STUD	Y	
TOC by SM 5	5310C	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes			[B]	[C]	נטן		Kesuit [F]	[G]				
Total Organic Carbon		<1.00	15.0	14.4	96	15.0	14.5	97	1	90-110	20	
Analyst: MKO		Da	ate Prepar	red: 11/26/201	2			Date A	nalyzed: 1	1/26/2012		
Analyst: MKO Lab Batch ID: 901583	Sample: 630364-1-B	Da SKS	ate Prepar Batel	red: 11/26/201 h #: 1	12			Date A	nalyzed: 1 Matrix: \	1/26/2012 Water		
Analyst: MKO Lab Batch ID: 901583 Units: ^{mg/L}	Sample: 630364-1-B	Da SKS	ate Prepar Bate BLAN	red: 11/26/201 h #: 1 K /BLANK S	2 SPIKE / F	BLANK S	PIKE DUPI	Date A	nalyzed: 1 Matrix: \ RECOVH	1/26/2012 Water E RY STUD	Y	
Analyst: MKO Lab Batch ID: 901583 Units: mg/L Total Metals by E	Sample: 630364-1-B PA 6010B	Da SKS Blank Sample Result [A]	ate Prepar Batc BLAN Spike Added	red: 11/26/201 h #: 1 K /BLANK S Blank Spike Result	2 SPIKE / F Blank Spike %R	Spike Added	PIKE DUPI Blank Spike Duplicate Besult [F]	Date A	nalyzed: 1 Matrix: \ RECOVH RPD %	1/26/2012 Water ERY STUD Control Limits %R	Y Control Limits %RPD	Flag
Analyst: MKO Lab Batch ID: 901583 Units: ^{mg/L} Total Metals by E Analytes	Sample: 630364-1-B PA 6010B	Da BKS Blank Sample Result [A]	ate Prepar Batc BLAN Spike Added [B]	red: 11/26/201 h #: 1 K /BLANK S Blank Spike Result [C]	2 SPIKE / F Blank Spike %R [D]	Spike Added [E]	PIKE DUPI Blank Spike Duplicate Result [F]	Date A	nalyzed: 1 Matrix: \ RECOVE RPD %	1/26/2012 Water ERY STUD Control Limits %R	Y Control Limits %RPD	Flag
Analyst: MKO Lab Batch ID: 901583 Units: ^{mg/L} Total Metals by E Analytes Chromium	Sample: 630364-1-B	Da SKS Blank Sample Result [A] <0.0100	ate Prepar Batci BLAN Spike Added [B] 1.00	red: 11/26/201 h #: 1 K /BLANK S Blank Spike Result [C] 0.973	2 SPIKE / F Blank Spike %R [D] 97	Spike Added [E]	Blank Spike Duplicate Result [F] 0.943	Date A	nalyzed: 1 Matrix: N RECOVE RPD % 3	1/26/2012 Water CRY STUD Control Limits %R 80-120	Y Control Limits %RPD 20	Flag
Analyst: MKO Lab Batch ID: 901583 Units: mg/L Total Metals by E Analytes Chromium Iron	Sample: 630364-1-B PA 6010B	Da SKS Blank Sample Result [A] <0.0100 <0.200	Atter Prepar Batel BLAN Spike Added [B] 1.00 5.00	red: 11/26/201 h #: 1 K /BLANK \$ Blank Spike Result [C] 0.973 4.82	2 SPIKE / F Blank Spike %R [D] 97 96	Spike Added [E] 1.00 5.00	SPIKE DUPI Blank Spike Duplicate Result [F] 0.943 4.74	Date A LICATE Blk. Spk Dup. %R [G] 94 95	nalyzed: 1 Matrix: N RECOVE % 3 2	1/26/2012 Water ERY STUD Limits %R 80-120 80-120	Y Control Limits %RPD 20 20	Flag





Work Order #: 452802 Analyst: MKO	Project ID: 073018-2012-01 Date Prepared: 11/29/2012 Date Analyzed: 11/29/2012											
Lab Batch ID: 901811	Sample: 630521-1-B	Batch #: 1 Matrix: Water BI ANK /BI ANK SDIKE / BI ANK SDIKE DUDI ICATE DECOVEDY STUDY										
Units: mg/L		BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Total Metals by E	PA 6010B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes			[B]	[C]	[D]	[E]	Result [F]	[G]				
Chromium		< 0.0100	1.00	0.912	91	1.00	0.887	89	3	80-120	20	
Iron		<0.200	5.00	4.90	98	5.00	4.70	94	4	80-120	20	
Sodium		< 0.500	25.0	24.1	96	25.0	23.5	94	3	80-120	25	



Work Order #: 452802

Reporting Units: mg/L

Bromide

Sulfate

Bromide

Sulfate

Lab Batch #: 901453

Lab Batch #: 901453

Lab Batch #: 901786

Reporting Units: mg/L

Total Organic Carbon

Lah Batch # 901786

Reporting Units: mg/L



Date Analyzed: 11/28/2012 Date I	Pate Prepared:11/28/2012Analyst:JOL							
QC- Sample ID: 452928-001 S	Batch #: 1 Matrix: Water							
Reporting Units: mg/L	MATRIX / MATRIX SPIKE RECOVERY STUDY							
TOC by SM 5310C	Parent Sample Result	Spike Added	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag		
Analytes	[A] [B]							
Total Organic Carbon	23.0 15.0 36.6 91 90-110							

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

Date Prepared: 11/29/2012

Project Name: N. Eunice



Work Order #: 452802 Lab Batch #: 901811 Date Analyzed: 11/29/2012 QC- Sample ID: 452802-006 S

Project ID: 073018-2012-01

Analyst: MKO

QC- Sample ID: 452802-006 S	Batch #: 1		I	Matrix: W	ater	
Reporting Units: mg/L	MATE	RIX / MA	TRIX SPIKE	RECOV	VERY STU	DY
Total Metals by EPA 6010B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chromium	0.305	1.00	1.15	85	75-125	
Iron	< 0.200	5.00	4.36	87	75-125	
Sodium	337	25.0	356	76	75-125	

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: N. Eunice



Work Order #: 452802 Project ID: 073018-2012-01 Lab Batch ID: 901801 QC- Sample ID: 452802-001 S Matrix: Water Batch #: 1 Date Prepared: 11/20/2012 Analyst: WRU Date Analyzed: 11/20/2012 **Reporting Units:** mg/L MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY Parent Spiked Sample Duplicate Control Spiked Spiked Control Chromium, Hexavalent by SW 7196A Sample Spiked Sample Spike Result Sample Spike Dup. RPD Limits Limits Flag Result Added [C] %R Added Result [F] %R %R %RPD % Analytes [A] [**B**] [D] [E] [G] Hexavalent Chromium < 0.0100 0.200 0.236 118 0.200 0.237 119 0 80-120 20 Lab Batch ID: 901937 QC- Sample ID: 452802-001 S Batch #: 1 Matrix: Water Analyst: MKO Date Prepared: 11/30/2012 Date Analyzed: 11/30/2012 Reporting Units: mg/L MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY Parent Spiked Sample Duplicate Spiked Control Control Spiked **Dissolved Metals per ICP by SW846 6010B** Sample Spike Result Spiked Sample RPD Limits Limits Sample Spike Dup. Flag Result Added [C] %R Added Result [F] %R %R %RPD % Analytes [A] [**B**] [D] [E] [G] < 0.0300 5.00 4.50 90 94 4 75-125 Iron 5.00 4.68 25 Lab Batch ID: 901583 **OC- Sample ID:** 452853-003 S Batch #: 1 Matrix: Soil Date Prepared: 11/26/2012 Analyst: MKO Date Analyzed: 11/26/2012 Reporting Units: mg/L MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY Parent Spiked Sample Duplicate Spiked Control Spiked Control **Total Metals by EPA 6010B** Sample Spike Result Sample Spike Spiked Sample Dup. RPD Limits Limits Flag Result Added [C] %R Added Result [F] %R % %R %RPD Analytes [A] **[B]** [D] [E] [G] Chromium < 0.0500 5.00 4.83 97 5.00 4.82 96 0 75-125 20 93 75-125 Iron < 1.0025.0 23.2 25.0 23.1 92 0 20 1490 75-125 Sodium 1340 125 1510 136 125 120 1 25 Х

Matrix Spike Percent Recovery $[D] = 100^{\circ}(C-A)/B$ Relative Percent Difference RPD = $200^{\circ}|(C-F)/(C+F)|$ 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: N. Eunice

Work Order #: 452802

Lab Batch #: 901801			Project I	D: 073018-2	2012-01
Date Analyzed: 11/20/2012 13:35 Date Pre	pared: 11/20/2012	2 Ana	lyst:WRU		
QC- Sample ID: 452802-001 D Ba	atch #: 1	Mat	rix: Water		
Reporting Units: mg/L	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Chromium, Hexavalent by SW 7196A	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		[B]			
Hexavalent Chromium	< 0.0100	< 0.0100	0	20	U
Lab Batch #: 901374					
Date Analyzed: 11/21/2012 14:04 Date Pre	pared: 11/21/2012	2 Ana	lyst:TTE		
QC- Sample ID: 452802-001 D B :	atch #: 1	Mat	rix: Water		
Reporting Units: mg/L	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Sulfide by SM4500-S-F-00 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Sulfide, total	<5.00	< 5.00	0	20	U

Spike Relative Difference RPD 200 * | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes. BRL - Below Reporting Limit

Company-City			, Ph	one,	0/ 0				Lab C	nly:			L	12	no	07			5 ⁽ - 7									
CRA-M	idland		(43	<u>2)6</u>	86-1	1080			TAT.	<u> </u>	DE	- 101		12	α_0		-	<u>, , , , , , , , , , , , , , , , , , , </u>	44 6		and T	ATIO	nrolo		oifio	<u></u>		<u>.</u>
Project Name-Location		/ done at XE	NCO.	Ċ	3730	2/8-20	2-4	1	It is ty	Dicall	v⊢ 51 y 5-7	7 Wor	rking	Days	s for le	vel II ar	d 10+	H Wo	rking	days	s for l	evel III	and	IV da	a.			
Proj. State TX AL, FL, C	GA, LA, MS, NC,	Proj. Mana	ger (PM)			. ìo						Ξ		21	ĺ <u>s</u>		T						7			Ren	narks	3
NJ, PA, SC, TN, UT Othe	r • • • • • • • • • • • • • • • • • • •		<u>-ne-i</u>	<u></u>	<u>- 10 Fa</u>	x No:	ск,		OAs ler:			5		pdd/	5		1 () 1						2	Ξ	ved)		ТТ	i -
MWIShiow	ieck; Ocn	orworld. Co	m (43)6X	>-012	<i>Ъ</i>		≥ ₽			dX-2	ŝ	5	Ċ.					• .			10d	lest	oudo			
Invoice to Accounting	🗖 Inc. Invoice w	th Final Rep	ort 🔲 In	voice	e must	have a	P.O.		¶L ôH			App	icide	(pdd	Ĕ	3							R	∱₽	re-a	-		Lon
Bill to:					<u>.</u>				ି ପ ହ		H	6	Pest		lest.	5		ŀ					le.	ſø	are p	ede		
Quote/Pricing:		P.O. No:			C] Call f	or P.C)	δ γ			م	B	23TA	ю. 	NA							β	g/Kg	pu	IS NG		
Reg Program: UST D	RY-CLEAN Land-	Fill Waste-	Disp NF	PDES	5 DW	TRRP			Apc		Ž	Π	s	E E	Š,	V)							ا د	ů,	<u> d</u>	/ed a		ې د
QAPP Per-Contract CL	P AGCEE NAV	Y DOE DO	DD USA	CE (OTHEF	2:			ž -		Hd	AE	icide	b 13	ν N	A							48	N,	ill ap	bro		ĨÄ
Special DLs (GW DW	QAPP MDLs RLs	s See Lab P	M Inclu	ded	Call	PM)			TBE	270	MA	BN8	lerb	4 2	, ,	2							4h	J/Gu	es W	e e		
			A						M-X N		l oo	₹		Å.	als	12							L.		harg	ld el		a a
Sampler Name Tus	tin Nix	Rignatu	e !)	the	≥ 1	Wy				8310	D D		Ö.	Ϋ́	Met	甘		1				1 - J	13	é	Surc	bs a		Date
-			<i>V</i>		2	Size	[Vpe	es (List TCL		RO	ы Ц	les	8-¥-	ר, ר ע	\triangleleft		1 1 1 1 1 					5h	abo	les (an-L		
Sample ID	Sampling	Time		site	aine	ner (ner	vativ	H L L L L L	SIN	2	L.	sticic			Ø		· ·					AP	AH	amp	Se		
Sample in	Date		ti "E	0 E	but B	ntaiı	ntai	Ser	A F	۲ ^s	100	lő Ö	Ъ.	stals:	L L L L	N/							TAS	dn: H	양	bid		- up
			Ma ± De	ပိ	<u>5</u> 0 #	ပိ	ပိ	å	<u> </u>	đ	Ě	Ś	ö	ž	<u>7</u>	<u> 1</u>	_						<u> </u> ₽	Ā	当	S		R
mw96111912	11-19-12	1500	W		<u>X 5</u>						_				_	<u>X</u>									\square			\vdash
man111912		1640			11											X												
Iw 029111912		1720														X					39 1					<u></u>		L
mw74111912		1855														<u>N</u>				а а 1								
PUD/11/1912		-			1								1			X												
MW74 (metalstrip	$\overline{)}$				11							· · · · ·														·		
								- 4							45 1			1			1							
· · · · · · · · · · · · · · · · · · ·													• *															
Relinquished by (Init	ials and Sign)	Date &	Time	R	elinqui	shed to) (Iniți	als an	d Sign)		Date	э&	Time	To	tal Conta	ainers	per C	:0C:	1	26	C	Cooler	Temp	<u>, 4</u>	€°C		
1) Just Mia	、	11-20-1	2 8:45	2)	N	p	<u>- </u>	1			11-	-20-	. 12	69:1	2_Ot	herwise	agree	d on v	writing	g. Re	ports	are the	Intell	ectual	Prop	erty of X	ENCO); ; ;
3)			nar i den <u>Vi</u>	4)						-		· · · ·				ui paiu. rebv regi	uested	es wi I. Rus	h Cha	ardes	and (ollecti	on Fee	epon es are	pre-a	ipproved	if need	ded.
1 5)		<u> </u>		10)				- 14 - 14			1			<u> </u>														

CRA Simplified Scope of Work (SSOW)/Laboratory Services Purchase Order

SSOW Ref. Code

073018 20120823

Project I	Name:	Chevron-North	n Eunice

CRA Project No./Phase/Task: 073018

Phase/Study Title: Post Injection Monitoring

Event Description: Pilot Study - GW Sampling

Project Location: Eunice, New Mexico **Field QC Samples** Applicable dng pl= Estimated ₩ Total ā Other Holding Unit Surcharge Extended Sample Sample Sample ¥ Billable Estimated S đ å Multiplier⁽¹⁾ Qty/Event Matrix **Analytical Parameters Analytical Methods** Time Prices Prices Qty. Samples Cost/Event Item Total, Chromium, Iron, Sodium SW-846 6010B 180 days \$ 30.00 1.00 \$ 30.00 6 \$180.00 water 4 1 6 SW-846 7196A \$ 25.00 1.00 24 hours \$ 5 Hexavalent Chromium 25.00 1 5 \$125.00 water 4 Anions (SO4, Br) E 300 28 davs \$ 40.00 1.00 \$ 40.00 water 4 1 5 5 \$200.00 SM4500 \$ 40.00 1.00 \$ Sulfide 7 days 5 water 40.00 4 1 5 \$200.00 **Total Organic Carbon TOC** SM5310 28 days \$ 35.00 1.00 \$ 35.00 water 4 1 5 5 \$175.00 SW-846 6010B 180 days \$ 10.00 1.00 \$ 10.00 5 water **Dissolved Iron** 4 1 5 \$50.00 SSOW COVERS 3 MONTLY SAMPLING EVENTS 1) Explanation of Surcharges: **Estimated Event Subtotal:** \$930.00 Laboratory Surcharge(s): \$0.00 **Estimated Event Total Costs:** \$2,790.00 Lab Contracting Summary: **Governing Terms and Conditions CRA Purchase Order Number:** Claudia Ramos 11/13/2012 Master Agreement Number: Name of Client: (authorized CRA signature) (date signed) $\mathbf{\nabla}$ Exhibit "A" Terms and Conditions Other Additional Insureds: Π **Client Contract** Governing Law: Texas Nicholas Straccione 11/13/2012 Currency: US (authorized Vendor signature) (date signed) Address invoice to: Typed name constitutes authorized signature. CRA c/o Claudia Ramos 6320 Rothway, Suite 100 Houston, TX 77040

Vendor to provide and deliver all items or services set out or otherwise described below subject to the governing terms and conditions checked above. This Purchase Order expressly limits acceptance to such terms and conditions. Any additional or different terms proposed by Vendor are rejected unless expressly agreed to in writing by CRA. To accept this Purchase Order, Vendor must sign, date, and return one copy of this page to issuer before starting any work. CRA's receipt of Signature of this Purchase Order must sign, date, and return one copy of this page to issuer before starting any work. CRA's receipt of Signature of this Purchase Order, Vendor must sign, date, and return one copy of this page to issuer before starting any work. CRA's receipt of Signature of this Purchase Order may be sent by facsimile (with confirmation by transmitting machine) and/or transmitted by portable document file (PDF) which shall be treated as an original signature, and any such signature, facsimile, PDF file, or copy of this signed Purchase Order shall be valid as an original and shall be binding as if it were the original. Show Purchase Order No. on all correspondence, insurance certificates, involces, and delivery papers.

200016-PO(QSF-024-Lab)-Rev.10 1/18/2011

Page 17 of 18

Final 1.000



XENCO Laboratories



Prelogin/Nonconformance Report- Sample Log-In

Client: Conestoga Rovers & AssociatesAcceptable Temperature Range: 0 - 6 degCDate/ Time Received: 11/20/2012 09:12:00 AMAir and Metal samples Acceptable Range: AmbientWork Order #: 452802Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.5
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	Νο
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	Yes
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	Yes

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Date: 11/20/2012

Checklist reviewed by:

Date: 11/20/2012

Analytical Report 454667

for

Conestoga Rovers & Associates

Project Manager: Mike Wisniowiecki

N. Eunice

073018

08-JAN-13

Collected By: Client





12600 West I-20 East Odessa, Texas 79765

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

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

> Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900) Xenco-Lakeland: Florida (E84098) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX) Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757) Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



08-JAN-13



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

Reference: XENCO Report No(s): **454667 N. Eunice** Project Address: TX

Mike Wisniowiecki:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 454667. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 454667 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 454667



Conestoga Rovers & Associates, Midland, TX

N. Eunice

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-096-122112	W	12-21-12 13:40		454667-001
MW-097-122112	W	12-21-12 12:20		454667-002
IW-029-122179	W	12-21-12 12:40		454667-003
MW-007A-122112	W	12-21-12 13:40		454667-004
Dup-1-122112	W	12-21-12 00:00		454667-005



CASE NARRATIVE

Client Name: Conestoga Rovers & Associates Project Name: N. Eunice



 Project ID:
 073018

 Work Order Number(s):
 454667

Report Date: 08-JAN-13 Date Received: 12/21/2012

Sample receipt non conformances and comments: None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-903782 Inorganic Anions by EPA 300/300.1 E300

Batch 903782, Sulfate recovered below QC limits in the Matrix Spike. Samples affected are: 454667-004, -002, -001, -005, -003. The Laboratory Control Sample for Sulfate is within laboratory Control Limits

Batch: LBA-903797 TOC by SM 5310C SM5310C

Batch 903797, Total Organic Carbon recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Samples affected are: 454667-004, -002, -001, -005, -003. The Laboratory Control Sample for Total Organic Carbon is within laboratory Control Limits



Certificate of Analysis Summary 454667

Conestoga Rovers & Associates, Midland, TX

Project Name: N. Eunice



Date Received in Lab: Fri Dec-21-12 03:30 pm Report Date: 08-JAN-13

Project Location: TX

Project Id: 073018

Contact: Mike Wisniowiecki

								Project Mai	nager:	Nicholas Strac	ccione	
	Lab Id:	454667-0	001	454667-0	02	454667-0	03	454667-0	04	454667-0	05	
Analysis Paguastad	Field Id:	MW-096-12	22112	MW-097-12	2112	IW-029-122	2179	MW-007A-1	22112	Dup-1-122	.112	
Analysis Requested	Depth:											
	Matrix:	WATE	R	WATEI	ર	WATE	ર	WATE	R	WATEI	R	
	Sampled:	Dec-21-12	13:40	Dec-21-12	12:20	Dec-21-12	12:40	Dec-21-12	13:40	Dec-21-12 (00:00	
Chromium, Hexavalent by SW 7196A	Extracted:											
	Analyzed:	Dec-21-12	16:40	Dec-21-12	16:40	Dec-21-12	16:40	Dec-21-12	16:40	Dec-21-12	16:40	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	
Hexavalent Chromium		ND	0.0100	0.183	0.0100	0.161	0.100	0.693	0.100	0.180	0.0100	
Dissolved Metals per ICP by SW846	Extracted:	Dec-28-12	10:30	Dec-28-12	10:30	Dec-28-12	10:30	Dec-28-12	10:30	Dec-28-12	10:30	
6010B	Analyzed:	Dec-28-12	19:06	Dec-28-12	19:12	Dec-28-12	19:18	Dec-28-12	19:24	Dec-28-12	19:29	
SUB: TX104704215	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	
Iron		ND	0.200	ND	0.200	99.3	0.200	ND	0.200	ND	0.200	
Inorganic Anions by EPA 300/300.1	Extracted:	Dec-26-12	21:08	Dec-26-12 2	21:25	Dec-26-12 2	21:42	Dec-26-12 2	21:59	Dec-26-12	22:16	
SUB: TX104704215	Analyzed:	Dec-26-12	21:08	Dec-26-12 2	21:25	Dec-26-12 2	21:42	Dec-26-12 2	21:59	Dec-26-12	22:16	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	
Bromide		3.32	0.100	7.80	0.100	250	1.00	4.07	0.100	10.3	0.100	
Chloride		205	2.00	930 D	20.0	702	20.0	641 D	20.0	964 D	20.0	
Sulfate		306	2.00	1610 D	20.0	2930	20.0	1080 D	20.0	1570 D	20.0	
Sulfide by SM4500-S-F-00	Extracted:											
SUB: 1X104/04215	Analyzed:	Dec-28-12	09:06	Dec-28-12 (09:08	Dec-28-12 (09:10	Dec-28-12 (09:12	Dec-28-12 (09:14	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	
Sulfide, total		ND	5.00	ND	5.00	5600	2500	ND	5.00	ND	5.00	
TOC by SM 5310C	Extracted:											
SUB: TX104704215	Analyzed:	Dec-27-12	17:53	Dec-27-12	18:08	Dec-27-12	18:36	Dec-27-12 2	20:21	Dec-27-12	20:39	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	
Total Organic Carbon		1.84	1.00	6.71	1.00	52.2	1.00	4.41	1.00	6.86	1.00	

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

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

Version: 1.%

Ch Nul

Nicholas Straccione Project Manager



Certificate of Analysis Summary 454667

Conestoga Rovers & Associates, Midland, TX

Project Name: N. Eunice



Date Received in Lab: Fri Dec-21-12 03:30 pm

Project Location: TX

Project Id: 073018

Contact: Mike Wisniowiecki

Report Date: 08-JAN-13

								Project Ma	nager:	Nicholas Stra	ccione	
	Lab Id:	454667-	001	454667-0	002	454667-0	003	454667-0	004	454667-0	005	
Analysis Dogwood of	Field Id:	MW-096-1	22112	MW-097-12	22112	IW-029-12	22179	MW-007A-1	22112	Dup-1-122	2112	
Analysis Kequesiea	Depth:											
	Matrix:	WATE	R	WATE	R	WATE	R	WATE	R	WATE	R	
	Sampled:	Dec-21-12	13:40	Dec-21-12	12:20	Dec-21-12	12:40	Dec-21-12	13:40	Dec-21-12	00:00	
Total Metals by EPA 6010B	Extracted:	Dec-27-12	11:00	Dec-27-12	11:00	Dec-27-12	11:00	Dec-27-12	11:00	Dec-27-12	11:00	
SUB: TX104704215	Analyzed:	Dec-27-12	16:40	Dec-27-12	17:08	Dec-27-12	17:14	Dec-27-12	17:31	Dec-27-12	17:37	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	
Chromium		0.0149	0.0100	0.207	0.0100	0.0214	0.0100	0.633	0.0100	0.213	0.0100	
Iron		ND	0.200	ND	0.200	164	20.0	ND	0.200	ND	0.200	
Sodium		144	0.500	574	0.500	4610	50.0	344	0.500	598	0.500	

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.

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

Version: 1.%

Ch Nul

Nicholas Straccione Project Manager



Flagging Criteria

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

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

Certified and approved by numerous States and Agencies.

LOQ Limit of Quantitation

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

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

4143 Greenbriar Dr, Stafford, TX 77477 9701 Harry Hines Blvd, Dallas, TX 75220 5332 Blackberry Drive, San Antonio TX 78238 2505 North Falkenburg Rd, Tampa, FL 33619 12600 West I-20 East, Odessa, TX 79765 6017 Financial Drive, Norcross, GA 30071 3725 E. Atlanta Ave, Phoenix, AZ 85040
 Phone
 Fax

 (281) 240-4200
 (281) 240-4280

 (214) 902 0300
 (214) 351-9139

 (210) 509-3334
 (210) 509-3335

 (813) 620-2000
 (813) 620-2033

 (432) 563-1800
 (432) 563-1713

 (770) 449-8800
 (770) 449-5477

 (602) 437-0330
 (432) 563-1713

Final 1.000





Work Order #: 454667				073018			
Lab Batch #: 904183	S	ample: 904183-	-1-BKS	Matrix:	Water		
Date Analyzed: 12/21/2012	Date Pre	pared: 12/21/20)12	Analyst:	WRU		
Reporting Units: mg/L	Ba	atch #: 1	OVERY S	TUDY			
Chromium, Hexavalent by SW 7196	A	Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags
Analytes	,		1	[C]	[D]	1	
Hexavalent Chromium		< 0.0100	0.0250	0.0222	89	80-120	
Lab Batch #: 903797	S	ample: 903797-	-1-BKS	Matrix:	Water		
Date Analyzed: 12/27/2012	Date Pre	pared: 12/27/20)12	Analyst:	JOL		
Reporting Units: mg/L	Ba	atch #: 1	BLANK /F	BLANK SPI	KE REC	OVERY S	JUDY
TOC by SM 5310C		Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags
Analytes				[C]	[D]		
Total Organic Carbon		<1.00	15.0	14.2	95	90-110	

Blank Spike Recovery [D] = 100*[C]/[B] All results are based on MDL and validated for QC purposes. BRL - Below Reporting Limit





Work Order #: 454667								Pro	ject ID: (073018			
Analyst: MKO		Da	ate Prepar	red: 12/28/201	2			Date A	nalyzed: 1	2/28/2012			
Lab Batch ID: 903998	Sample: 631828-1-B	BKS	Batc	h #: 1					Matrix: \	Water			
Units: mg/L			BLAN	K /BLANK S	SPIKE / H	BLANK S	SPIKE DUPI	LICATE	RECOVE	ERY STUD	Y		
Dissolved Metals per ICP Analytes	by SW846 6010B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
Iron		< 0.0300	5.00	5.14	103	5.00	5.04	101	2	75-125	25		
Analyst: JOL		Da	ate Prepar	ed: 12/26/201	2			Date A	nalyzed: 1	2/26/2012			
Lab Batch ID: 903782	Sample: 631805-1-B	BKS	Batc	h #: 1					Matrix: \	Water			
Units: mg/L		BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Inorganic Anions by E Analytes	CPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
Inorganic Anions by E Analytes Bromide	CPA 300/300.1	Blank Sample Result [A] <0.100	Spike Added [B] 10.0	Blank Spike Result [C] 9.76	Blank Spike %R [D] 98	Spike Added [E] 10.0	Blank Spike Duplicate Result [F] 9.41	Blk. Spk Dup. %R [G] 94	RPD %	Control Limits %R 90-110	Control Limits %RPD	Flag	
Inorganic Anions by E Analytes Bromide Sulfate	CPA 300/300.1	Blank Sample Result [A] <0.100 <2.00	Spike Added [B] 10.0 50.0	Blank Spike Result [C] 9.76 53.2	Blank Spike %R [D] 98 106	Spike Added [E] 10.0 50.0	Blank Spike Duplicate Result [F] 9.41 51.5	Blk. Spk Dup. %R [G] 94 103	RPD %	Control Limits %R 90-110 90-110	Control Limits %RPD 10 20	Flag	
Inorganic Anions by E Analytes Bromide Sulfate Analyst: PRB Lab Batch ID: 903817	EPA 300/300.1 Sample: 903817-1-B	Blank Sample Result [A] <0.100 <2.00 Da SKS	Spike Added [B] 10.0 50.0 ate Prepar Batcl	Blank Spike Result [C] 9.76 53.2 red: 12/28/201 h #: 1	Blank Spike %R [D] 98 106 2	Spike Added [E] 10.0 50.0	Blank Spike Duplicate Result [F] 9.41 51.5	Blk. Spk Dup. %R [G] 94 103 Date A	RPD % 4 3 nalyzed: 1 Matrix: V	Control Limits %R 90-110 90-110 2/28/2012 Water	Control Limits %RPD	Flag	
Inorganic Anions by E Analytes Bromide Sulfate Analyst: PRB Lab Batch ID: 903817 Units: mg/L	EPA 300/300.1 Sample: 903817-1-B	Blank Sample Result [A] <0.100 <2.00 Da BKS	Spike Added [B] 10.0 50.0 ate Prepar Batcl BLAN	Blank Spike Result [C] 9.76 53.2 red: 12/28/201 h #: 1 K /BLANK S	Blank Spike %R [D] 98 106 2 2 SPIKE / H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H H <th>Spike Added [E] 10.0 50.0 BLANK S</th> <th>Blank Spike Duplicate Result [F] 9.41 51.5 SPIKE DUPI</th> <th>Blk. Spk Dup. %R [G] 94 103 Date A</th> <th>RPD % 4 analyzed: 1 Matrix: V RECOVE</th> <th>Control Limits %R 90-110 90-110 2/28/2012 Water ERY STUD</th> <th>Control Limits %RPD 10 20</th> <th>Flag</th>	Spike Added [E] 10.0 50.0 BLANK S	Blank Spike Duplicate Result [F] 9.41 51.5 SPIKE DUPI	Blk. Spk Dup. %R [G] 94 103 Date A	RPD % 4 analyzed: 1 Matrix: V RECOVE	Control Limits %R 90-110 90-110 2/28/2012 Water ERY STUD	Control Limits %RPD 10 20	Flag	
Inorganic Anions by E Analytes Bromide Sulfate Analyst: PRB Lab Batch ID: 903817 Units: mg/L Sulfide by SM450 Analytes	EPA 300/300.1 Sample: 903817-1-B 00-S-F-00	Blank Sample Result [A] <0.100 <2.00 Da BKS Blank Sample Result [A]	Spike Added [B] 10.0 50.0 ate Prepar Batcl BLAN Spike Added [B]	Blank Spike Result [C] 9.76 53.2 red: 12/28/201 h #: 1 K /BLANK S Blank Spike Result [C]	Blank Spike %R [D] 98 106 2 SPIKE / H Blank Spike %R [D]	Spike Added [E] 10.0 50.0 BLANK S Spike Added [E]	Blank Spike Duplicate Result [F] 9.41 51.5 SPIKE DUPI Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G] 94 103 Date A LICATE Blk. Spk Dup. %R [G]	RPD % 4 3 malyzed: 1 Matrix: V RECOVE RPD %	Control Limits %R 90-110 90-110 2/28/2012 Water CRY STUD Control Limits %R	Control Limits %RPD 10 20 Y Control Limits %RPD	Flag	





Work Order #: 454667 Analyst: MKO		Date Prepared: 12/27/2012 Project ID: 073018 Date Analyzed: 12/27/2012 12/27/2012													
Lab Batch ID: 903812	Sample: 631777-1-B	KS	S Batch #: 1 Matrix: Water												
Units: mg/L			BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY												
Total Metals by E	PA 6010B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R [D]	lankSpikeBlankBlk. SpkControlControlpikeAddedSpikeDup.RPDLimitsLimits%RDuplicate%R%%R%RPD									
Analytes			נשן		[12]	[E]	Kesutt [F]	[0]							
Chromium		< 0.0100	1.00	0.940	94	1.00	0.932	93	1	80-120	20				
Iron		< 0.200	5.00	4.75	95	5.00	4.65	93	2	80-120	20				
Sodium		<0.500 25.0 24.1 96 25.0 23.9 96 1 80-120 25													



Form 3 - MS Recoveries

Project Name: N. Eunice

Work Order #: 454667											
Lab Batch #: 903782			Pr	oject ID:	073018						
Date Analyzed: 12/26/2012 Da	ate Prepared: 12/2	6/2012	A	nalyst: J(DL						
QC- Sample ID: 454268-001 S	Batch #: 1		I	Matrix: W	ater						
Reporting Units: mg/L	MATRIX / MATRIX SPIKE RECOVERY STUDY										
Inorganic Anions by EPA 300	Parent Sample Result	Spike Added	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag					
Analytes	[A]	[B]									
Bromide	1.22	10.0	10.3	91	80-120						
Sulfate	64.5	50.0	103	77	80-120	X					
Lab Batch #: 903782											
Date Analyzed: 12/26/2012 Da	ate Prepared: 12/2	6/2012	A	nalyst: J(DL						
QC- Sample ID: 454366-002 S	Batch #: 1		I	Matrix: W	ater						
Reporting Units: mg/L	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					
Bromide	3.84	50.0	48.6	90	80-120						
0.10	1		0.7.4								

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: N. Eunice



Work Order #: 454667 **Project ID: 073018** Lab Batch ID: 904183 QC- Sample ID: 454667-001 S Matrix: Water Batch #: 1 **Date Prepared:** 12/21/2012 Analyst: WRU Date Analyzed: 12/21/2012 **Reporting Units:** mg/L MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY Parent Spiked Sample Duplicate Control Spiked Spiked Control Chromium, Hexavalent by SW 7196A Sample Spiked Sample Spike Result Sample Spike Dup. RPD Limits Limits Flag Result Added [C] %R Added Result [F] %R %R %RPD % Analytes [A] [B] [D] [E] [G] Hexavalent Chromium < 0.0100 0.200 0.238 119 0.200 0.239 120 0 80-120 20 Lab Batch ID: 903998 QC- Sample ID: 454686-025 S Batch #: 1 Matrix: Water Analyst: MKO Date Prepared: 12/28/2012 Date Analyzed: 12/28/2012 Reporting Units: mg/L MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY Parent Spiked Sample Duplicate Spiked Control Control Spiked **Dissolved Metals per ICP by SW846 6010B** Sample Spike Result Spiked Sample RPD Limits Limits Sample Spike Dup. Flag Result Added [C] %R Added Result [F] %R % %R %RPD Analytes [A] [**B**] [D] [E] [G] 0.0407 5.22 104 75-125 Iron 5.00 104 5.00 5.23 0 25 Lab Batch ID: 903797 OC- Sample ID: 453975-004 S Batch #: 1 Matrix: Water Date Prepared: 12/27/2012 Analyst: JOL Date Analyzed: 12/27/2012 Reporting Units: mg/L MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY Parent Spiked Sample Duplicate Spiked Control Spiked Control TOC by SM 5310C Sample Spike Result Sample Spike Spiked Sample Dup. RPD Limits Limits Flag Result Added [C] %R Added Result [F] %R % %R %RPD Analytes [A] [**B**] [D] [E] [G] Total Organic Carbon 1.76 15.0 11.6 66 15.0 12.5 72 7 90-110 20 Х

Matrix Spike Percent Recovery $[D] = 100^{\circ}(C-A)/B$ Relative Percent Difference RPD = $200^{\circ}|(C-F)/(C+F)|$ 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



Form 3 - MS / MSD Recoveries

Project Name: N. Eunice



Work Order #: 454667 **Project ID: 073018** Lab Batch ID: 903797 QC- Sample ID: 454667-003 S Matrix: Water Batch #: 1 **Date Prepared:** 12/27/2012 Analyst: JOL **Date Analyzed:** 12/27/2012 **Reporting Units:** mg/L MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY Parent Spiked Sample Spiked Duplicate Spiked Control Control TOC by SM 5310C Sample Result Spiked Sample Spike Sample Spike Dup. RPD Limits Limits Flag Result Added [C] %R Added Result [F] %R %R %RPD % Analytes [A] [B] [D] [E] [G] Х Total Organic Carbon 52.2 15.0 64.9 85 15.0 64.6 83 0 90-110 20 Lab Batch ID: 903812 QC- Sample ID: 454667-001 S Batch #: 1 Matrix: Water Analyst: MKO Date Prepared: 12/27/2012 Date Analyzed: 12/27/2012 Reporting Units: mg/L MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY Parent Duplicate Spiked Sample Spiked Spiked Control Control **Total Metals by EPA 6010B** Sample Spike Result Sample Spiked Sample RPD Limits Limits Flag Spike Dup. Result Added [C] %R Added Result [F] %R % %R %RPD Analytes [A] [**B**] [D] [E] [G] 1.00 Chromium 0.0149 1.00 0.925 91 0.928 91 0 75-125 20 5.00 4.54 91 5.00 4.48 90 75-125 Iron < 0.200 1 20 144 25.0 167 92 25.0 88 75-125 25 Sodium 166 1

Matrix Spike Percent Recovery $[D] = 100^{\circ}(C-A)/B$ Relative Percent Difference RPD = $200^{\circ}|(C-F)/(C+F)|$ 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: N. Eunice

Work Order #: 454667

Lab Batch #: 904183				Project I	D: 073018	
Date Analyzed: 12/21/2012 16:40 Date Pr	repare	ed: 12/21/2012	2 Anal	yst:WRU		
QC- Sample ID: 454667-001 D	Batch	#: 1	Mat	rix: Water		
Reporting Units: mg/L	[SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Chromium, Hexavalent by SW 7196A]	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte			[B]			
Hexavalent Chromium		< 0.0100	< 0.0100	0	20	U
Lab Batch #: 903817						
Date Analyzed: 12/28/2012 09:16 Date Pr	repare	ed: 12/28/2012	2 Anal	yst:PRB		
QC- Sample ID: 454667-005 D	Batch	#: 1	Mat	rix: Water		
Reporting Units: mg/L	[SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Sulfide by SM4500-S-F-00 Analyte]	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Sulfide total		< 5.00	< 5.00	0	20	U

Spike Relative Difference RPD 200 * | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes. BRL - Below Reporting Limit

Cor	CNA/Midle	and	G	132	5	86-	οοÿ	6							15	<u>)4</u>	lel	01															
Pro	ject Name-Location	Previously	/ done at XE	NCO			Pro D7	oject II Sol 8)		TA It is	،T: م styp	ASA icall	\P 5h ly 5-7	12 Wo	h 24 Prking	lh ⊿ ;Day	8h s for	3d (5 level	d)7 II an	d 10 d 10	0d 2 + Wo	21d orking	Stand g day:	lard T s for le	AT is ∋vel II'	proje i and	ct spe IV da	ecific. ita.				
Pro	j. State: TX, AL, FL, GA	A, LA, MS, NC,	Proj. Mana	ger (l	PM)	The	ech	<u>,</u>							NLL		Ŋ	(sg				Y					7			R	ema	rks	;
NJ, E-n	PA, SC, TN, UT Other	PM and	mine	<u>ر</u> (43	2)81	Fa 86-	x No: Or 86			VOAs	Other:			x-2 C/		1 Appd	e PO				he-1		101			0d 21	est Hit	proved)			T	
Inv Bill	oice to Accounting	Inc. Invoice w	th Final Rep	ort [] Inv	oice	must	have a	P.0	•	VOHs	CALL		H	e Appo	esticides	Appdx	st. Hei	108			79610		- 90			PZ	S High	e pre-ap	ded			
Qu	ote/Pricing:		P.O. No:				C] Call I	for P	.0.		×-2		₹	d o	ď d	3TAL	പ്	707	2 2				240			Pg	12	nd ar	nee			
Re	Program: UST DR)	-CLEAN Land-	Fill Waste-	Disp	NPC	DES	DW	TRRP)			∆ppc		MA	тсы	ō	Ь	0 V	1			4	2	3			8	l mg/	ly a	sd as			
QA	PP Per-Contract CLP	AGCEE NAV	ODE DO	DL	ISAC	EO	THEF	र:			띮			H	щ	sides	ĘΪ	Ś	1		8	100		\sim			48h	N N	app	prove			
Sp	ecial DLs (GW DW Q/	APP MDLs RLs	See Lab P	M In	clud	ed C	Call	PM)			-MTBE	Appdx	8270	MAE	BN&A	Herbic	A-4 Pb	S VOCS	She		27	² ³	N S	Ę			24h	mg/L \	Irges wil	pre-app			
Sa	npler Name Justin	Nikan	Signatur	e	Jus	K	Ny	ζ		4	Ĕ	MD	310	GRC	M	SCBs	RCR	letals			N/V	2		10			12h		urche	s are			
		Sampling		J		e	ners	ir Size	er Type	tives	I-List E	, TCL	SIM 8	DRO	Full-List	cides F	CRA-8	e) CLP	- Int		Sales		<u>C</u>	ssolve			ь Б	NH above	nples (S	Clean-up			
	Sample ID	Date	Time	epth ' In" m	latrix	compos	Contai	ontaine	ontaine	reserva	/OA: Fu	/OA: PI	AHs	X-1005	svocs:	DC Pest	Aetals: R					37	Ĩf	â			TASA	Vddn: P/	Hold Sar	Sample (
1	NW-096-122112	12-21	1340	□₽	2		6	V	V	V	F	Ń			0,		-		X	T v	X	X	X	x			╀		Ħ		b ai	\neg	
n	16-12 9-122112	D-21	120		1	Ť	5	V	1	V	1									v		14	×	X		1	1	T	\square			1	
T	W- 029-12211	10-21	1240		-	T _x	5	V	C	14	F								X	1		x	1	Ý			十	\uparrow	\square			1	
m	41-007A-12211	2 17-21	1340		î	ť	15		L	L	1										X	X	X	x		-	1	† –		•		1	
<u>יין</u> א	A 1 12 2 1/2				B-	- I -	12		L	- 10	╞	┢─┦					-1	i.	+				$\frac{1}{x}$	x				+				-+	-
	2P-1-15-5112	1 + - 01 - 12				f	ľ						<u> </u>					+				+			\vdash	+	╈	+				+	
<u> </u>									-				-					╉			╉	-	+	┢			1			. <u></u>		\neg	
\vdash																				1	T	T				+		1	\square				
<u> </u>													1										1		-		1		\square	• •			
-																	_		1	1		1	Γ			1	1	1			· .		
<u> </u>	Relinquished by (Initial	s and Sign)	Date & T	l Fime		Ręl	inqui	shed to) (Ini	tials a	nd S	ign)			Date	e &	Гime	1	otal C	ontai	ners	per C	coc:	â	\sim	c	coler	Tem	p:15	0	°C		
1)	We Not		12-21-12	12:	ઝેઇ	2) ()	he	Lu	N	28	m	R	h	19	121	12	15	30 (Otherw	ise a	gree	d on v	writin	g. Re	ports a	ire the	Intelle	ectua	l Prop	erty o	IF XEN	ICO	
3)						4)	2			<u> </u>	<u> </u>			<u> </u>				L	intil pa	id. S	ampl	es wi	ll be l	held 3	0 days	3 after	final r	eport	is e-r	nailed	unles od if r	3S Joode	~
5)			ļ			6)					44 <u>.</u>			1				(r	ereny	.equ	Jaied	. inus		arges		JIEGUIC		3 ale	-910-9	Phi04	ou ii l	-coue	يار —
Pre	servatives: Various (V)	, HCl pH<2 (H), H	2SO4 pH<2	(S), 1		3 pH<	<2 (N)), Asbc	Acid	&NaO	H (A), Zn	Ac&	NaO	H (Z	.), (C	ool, <	4C) (C), No	one (NA),	See	Labe	i (L), Amb (Othe ∆)G	r (Ö) - lass (Cloar	(C)	Diget	(P)	Vario		$\overline{\mathbf{v}}$



XENCO Laboratories



Prelogin/Nonconformance Report- Sample Log-In

Client: Conestoga Rovers & AssociatesAcceptable Temperature Range: 0 - 6 degCDate/ Time Received: 12/21/2012 03:30:00 PMAir and Metal samples Acceptable Range: AmbientWork Order #: 454667Temperature Measuring device used :

S	ample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?		15	
#2 *Shipping container in good condition?		Yes	
#3 *Samples received on ice?		Yes	
#4 *Custody Seals intact on shipping contain	er/ cooler?	Yes	
#5 Custody Seals intact on sample bottles?		Yes	
#6 *Custody Seals Signed and dated?		Yes	
#7 *Chain of Custody present?		Yes	
#8 Sample instructions complete on Chain of	Custody?	Yes	
#9 Any missing/extra samples?		No	
#10 Chain of Custody signed when relinquish	ed/ received?	Yes	
#11 Chain of Custody agrees with sample lab	pel(s)?	Yes	
#12 Container label(s) legible and intact?		Yes	
#13 Sample matrix/ properties agree with Cha	ain 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 te	est(s)?	Yes	
#18 All samples received within hold time?		Yes	
#19 Subcontract of sample(s)?		Yes	
#20 VOC samples have zero headspace (les	s than 1/4 inch bubble)?	Yes	
#21 <2 for all samples preserved with HNO3,	HCL, H2SO4?	Yes	
#22 >10 for all samples preserved with NaAs	O2+NaOH, ZnAc+NaOH?	Yes	

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Date: _____

Checklist reviewed by:

Date: _____

Analytical Report 456341

for

Conestoga Rovers & Associates

Project Manager: Mike Wisniowiecki

N. Eunice

073018

05-FEB-13

Collected By: Client





12600 West I-20 East Odessa, Texas 79765

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

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

> Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900) Xenco-Lakeland: Florida (E84098) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX) Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757) Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



05-FEB-13



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

Reference: XENCO Report No(s): **456341 N. Eunice** Project Address: NM

Mike Wisniowiecki:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 456341. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 456341 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 456341



Conestoga Rovers & Associates, Midland, TX

N. Eunice

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-097-012413	W	01-24-13 10:45		456341-001
IW029-012413	W	01-24-13 12:20		456341-002
MW-007A012413	W	01-24-13 14:00		456341-003
Dup	W	01-24-13 00:00		456341-004



CASE NARRATIVE

Client Name: Conestoga Rovers & Associates Project Name: N. Eunice



 Project ID:
 073018

 Work Order Number(s):
 456341

Report Date: 05-FEB-13 Date Received: 01/24/2013

Sample receipt non conformances and comments: None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-905554 Inorganic Anions by EPA 300/300.1 E300

Batch 905554, Sulfate recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Samples affected are: 456341-003, -002, -004, -001. The Laboratory Control Sample for Sulfate is within laboratory Control Limits

Batch: LBA-905593 Total Metals by EPA 6010B SW6010B

Batch 905593, Sodium recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Samples affected are: 456341-003, -002, -004, -001. The Laboratory Control Sample for Sodium is within laboratory Control Limits

Batch: LBA-905761 TOC by SM 5310C SM5310C

Batch 905761, Total Organic Carbon recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Samples affected are: 456341-003, -002, -004, -001. The Laboratory Control Sample for Total Organic Carbon is within laboratory Control Limits


Certificate of Analysis Summary 456341

Conestoga Rovers & Associates, Midland, TX

Project Name: N. Eunice



Date Received in Lab: Thu Jan-24-13 04:15 pm

Report Date: 05-FEB-13

Project Location: NM

Project Id: 073018

Contact: Mike Wisniowiecki

J · · · _ · · · · · · · · · · · · · · ·								Project Ma	nager:	Nicholas Straccione	
	Lab Id:	456341-0	001	456341-0	02	456341-0	03	456341-0	004		
Are aliante De are este d	Field Id:	MW-097-01	2413	IW029-012	2413	MW-007A0	12413	Dup			
Analysis Kequestea	Depth:										
	Matrix:	WATE	R	WATER	٤	WATE	R	WATE	R		
	Sampled:	Jan-24-13 1	10:45	Jan-24-13 1	2:20	Jan-24-13 1	4:00	Jan-24-13 (00:00		
Chromium, Hexavalent by SW 7196A	Extracted:										
	Analyzed:	Jan-25-13	10:25	Jan-25-13 1	0:25	Jan-25-13 1	0:25	Jan-25-13	10:25		
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL		
Hexavalent Chromium		0.272	0.0100	0.197	0.100	0.254	0.0100	0.164	0.0100		
Dissolved Metals per ICP by SW846	Extracted:	Jan-25-13	11:30	Jan-25-13 1	1:30	Jan-25-13 1	1:30	Jan-25-13	11:30		
6010B	Analyzed:	Jan-25-13	17:09	Jan-25-13 1	7:15	Jan-25-13 1	7:21	Jan-25-13	17:26		
SUB: 1X104/04215	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL		
Iron		ND	0.200	108	0.200	ND	0.200	ND	0.200		
Inorganic Anions by EPA 300/300.1	Extracted:	Jan-25-13	12:34	Jan-25-13 1	3:09	Jan-25-13 1	3:43	Jan-25-13	14:00		
SUB: TX104704215	Analyzed:	Jan-25-13	12:34	Jan-25-13 1	3:09	Jan-25-13 1	3:43	Jan-25-13	14:00		
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL		
Bromide		18.4	1.00	183	1.00	6.47	0.500	14.1	1.00		
Sulfate		1590	10.0	2930	10.0	518	5.00	1570	10.0		
Sulfide by SM4500-S-F-00	Extracted:										
SUB: TX104704215	Analyzed:	Jan-29-13	17:52	Jan-29-13 1	7:54	Jan-29-13 1	7:56	Jan-29-13	17:58		
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL		
Sulfide, total		ND	5.00	1600	250	ND	5.00	ND	5.00		
TOC by SM 5310C	Extracted:										
SUB: TX104704215	Analyzed:	Jan-29-13	19:44	Jan-29-13 2	0:31	Jan-29-13 2	2:06	Jan-29-13	22:21		
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL		
Total Organic Carbon		6.33	1.00	28.7	1.00	2.95	1.00	6.36	1.00		

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

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

Ch Nul

Nicholas Straccione Project Manager



Project Id: 073018

Contact: Mike Wisniowiecki

Certificate of Analysis Summary 456341

Conestoga Rovers & Associates, Midland, TX

Project Name: N. Eunice



Date Received in Lab: Thu Jan-24-13 04:15 pm

Report Date: 05-FEB-13

roject Location: NM								Report	Date:	05-FEB-13	
								Project Ma	nager:	Nicholas Straccione	
	Lab Id:	456341-0	001	456341-0	002	456341-0	003	456341-0	004		
Are alwain Domesort of	Field Id:	MW-097-0	12413	IW029-01	2413	MW-007A0	12413	Dup			
Analysis Kequesiea	Depth:										
	Matrix:	WATE	R	WATE	R	WATE	R	WATE	R		
	Sampled:	Jan-24-13	10:45	Jan-24-13	12:20	Jan-24-13	14:00	Jan-24-13 (00:00		
Total Metals by EPA 6010B	Extracted:	Jan-25-13	11:30	Jan-25-13	11:30	Jan-25-13	11:30	Jan-25-13	11:30		
SUB: TX104704215	Analyzed:	Jan-25-13	16:06	Jan-25-13	16:34	Jan-25-13	16:40	Jan-25-13	16:57		
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL		
Chromium		0.307	0.0100	0.0125	0.0100	0.258	0.0100	0.182	0.0100		
Iron		ND	0.200	155	0.200	ND	0.200	ND	0.200		
Sodium		635	50.0	3580	50.0	208	50.0	602	50.0		

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 data 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

_____ Nul

Nicholas Straccione Project Manager



Flagging Criteria

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

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

Certified and approved by numerous States and Agencies.

LOQ Limit of Quantitation

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

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

4143 Greenbriar Dr, Stafford, TX 77477 9701 Harry Hines Blvd, Dallas, TX 75220 5332 Blackberry Drive, San Antonio TX 78238 2505 North Falkenburg Rd, Tampa, FL 33619 12600 West I-20 East, Odessa, TX 79765 6017 Financial Drive, Norcross, GA 30071 3725 E. Atlanta Ave, Phoenix, AZ 85040
 Phone
 Fax

 (281) 240-4200
 (281) 240-4280

 (214) 902 0300
 (214) 351-9139

 (210) 509-3334
 (210) 509-3335

 (813) 620-2000
 (813) 620-2033

 (432) 563-1800
 (432) 563-1713

 (770) 449-8800
 (770) 449-5477

 (602) 437-0330
 (432) 563-1713

Final 1.000





Project Name: N. Eunice

Work Order #: 456341	Project ID:								
Lab Batch #: 905888	Sample: 905888-	1-BKS	Matrix:	Water					
Date Analyzed: 01/25/2013 Date Pr	repared: 01/25/20	013	Analyst:	WRU					
Reporting Units: mg/L	Batch #: 1	BLANK /I	BLANK SPI	KE REC	COVERY S	STUDY			
Chromium, Hexavalent by SW 7196A	Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags			
Hexavalent Chromium	<0.0100	0.0250	0.0229	92	80-120				
Lab Batch #: 905554	Sample: 632940-	1-BKS	Matrix:	Water					
Date Analyzed: 01/25/2013 Date Pr	repared: 01/25/20	013							
Reporting Units: mg/L	Batch #: 1	BLANK /I	BLANK /BLANK SPIKE RECOVERY						
Inorganic Anions by EPA 300/300.1 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags			
Bromide	<0.100	10.0	10.4	104	90-110				
Sulfate	<1.00	50.0	52.4	105	90-110				
Lab Batch #: 905761 Date Analyzed: 01/29/2013 Date Pr	Sample: 905761- repared: 01/29/20	1-BKS 013	Matrix: Analyst:	Water RKO					
Reporting Units: mg/L	Batch #: 1	BLANK /I	BLANK SPI	KE REC	COVERY S	STUDY			
TOC by SM 5310C	Blank Result	Spike Added	Blank Spike	Blank Spike	Control Limits	Flags			
Analytes	[A]	[B]	Result [C]	%R [D]	%R	_			

Blank Spike Recovery [D] = 100*[C]/[B] All results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit





Project Name: N. Eunice

Work Order #: 456341		Project ID: 073018										
Analyst: DHE		Da	ate Prepar	ed: 01/29/201	13			Date A	nalyzed: (01/29/2013		
Lab Batch ID: 905751	Sample: 905751-1-E	3KS	Batch	n#: 1					Matrix: V	Water		
Units: mg/L			BLAN	K/BLANK S	SPIKE / E	BLANK S	SPIKE DUPI	LICATE	RECOVI	ERY STUD	Y	
Sulfide by SM45	00-S-F-00	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes			[B]	[C]	[D]	[E]	Result [F]	[G]				
Sulfide, total		<5.00	1000	960	96	1000	1000	100	4	75-120	20	
Analyst: MKO		Da	ate Prepar	ed: 01/25/201	13			Date A	nalyzed: (01/25/2013		
Analyst: MKO Lab Batch ID: 905593	Sample: 632888-1-E	Da BKS	ate Preparo Batch	ed: 01/25/201 n#: 1	13			Date A	nalyzed: (Matrix: \)1/25/2013 Water		
Analyst: MKO Lab Batch ID: 905593 Units: ^{mg/L}	Sample: 632888-1-E	Da BKS	ate Prepar Batch BLAN	ed: 01/25/201 n #: 1 K /BLANK S	13 SPIKE / F	BLANK S	PIKE DUPI	Date A	nalyzed: (Matrix: \ RECOVI	01/25/2013 Water E RY STUD	θY	
Analyst: MKO Lab Batch ID: 905593 Units: ^{mg/L} Total Metals by F	Sample: 632888-1-E EPA 6010B	Da BKS Blank Sample Result [A]	ate Prepare Batch BLAN Spike Added	ed: 01/25/201 n #: 1 K /BLANK \$ Blank Spike Result	SPIKE / F Blank Spike %R	Spike Added	BIANK Blank Spike Duplicate Besult [F]	Date A	nalyzed: (Matrix: \ RECOVI RPD %	01/25/2013 Water ERY STUD Control Limits %R	Control Limits %RPD	Flag
Analyst: MKO Lab Batch ID: 905593 Units: mg/L Total Metals by E Analytes	Sample: 632888-1-E EPA 6010B	Da BKS Blank Sample Result [A]	nte Preparo Batch BLAN Spike Added [B]	ed: 01/25/201 n #: 1 K /BLANK S Blank Spike Result [C]	SPIKE / F Blank Spike %R [D]	Spike Added [E]	Blank Blank Spike Duplicate Result [F]	Date A	nalyzed: (Matrix: RECOVI RPD %	01/25/2013 Water ERY STUD Control Limits %R	Y Control Limits %RPD	Flag
Analyst: MKO Lab Batch ID: 905593 Units: mg/L Total Metals by F Analytes Chromium	Sample: 632888-1-E	Da BKS Blank Sample Result [A] <0.0100	Ante Preparo Batch BLAN Spike Added [B] 1.00	ed: 01/25/201 n #: 1 K /BLANK S Blank Spike Result [C] 0.948	I3 SPIKE / F Blank Spike %R [D] 95	Spike Added [E]	Blank Spike Duplicate Result [F] 0.948	Date A	nalyzed: (Matrix: RECOVI RPD % 0	01/25/2013 Water CRY STUD Control Limits %R 80-120	Y Control Limits %RPD 20	Flag
Analyst: MKO Lab Batch ID: 905593 Units: mg/L Total Metals by E Analytes Chromium Iron	Sample: 632888-1-E EPA 6010B	Da 3KS Blank Sample Result [A] <0.0100 <0.200	Atte Preparo Batch BLAN Spike Added [B] 1.00 5.00	ed: 01/25/201 n #: 1 K /BLANK \$ Blank Spike Result [C] 0.948 4.78	I3 SPIKE / F Blank Spike %R [D] 95 96	Spike Added [E] 1.00 5.00	Blank Spike Duplicate Result [F] 0.948 4.68	Date A LICATE Blk. Spk Dup. %R [G] 95 94	nalyzed: (Matrix: N RECOVE % 0 2	01/25/2013 Water ERY STUD Control Limits %R 80-120 80-120	Control Limits %RPD 20 20	Flag

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 / MSD Recoveries

Project Name: N. Eunice



Work Order #: 456341 **Project ID: 073018** Lab Batch ID: 905888 QC- Sample ID: 456341-001 S Matrix: Water Batch #: 1 Date Prepared: 01/25/2013 Analyst: WRU Date Analyzed: 01/25/2013 **Reporting Units:** mg/L MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY Parent Spiked Sample Duplicate Control Spiked Spiked Control Chromium, Hexavalent by SW 7196A Sample Spiked Sample Spike Result Sample Spike Dup. RPD Limits Limits Flag Result Added [C] %R Added Result [F] %R %R %RPD % Analytes [A] [**B**] [D] [E] [G] Hexavalent Chromium 0.272 0.200 0.508 118 0.200 0.510 119 0 80-120 20 Lab Batch ID: 905554 QC- Sample ID: 456335-001 S Batch #: 1 Matrix: Drinking Water Analyst: RKO Date Prepared: 01/25/2013 Date Analyzed: 01/25/2013 Reporting Units: mg/L MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY Parent Spiked Sample Duplicate Control Control Spiked Spiked **Inorganic Anions by EPA 300/300.1** Sample Spike Result Spiked Sample RPD Limits Sample Spike Dup. Limits Flag Result Added [C] %R Added Result [F] %R %R %RPD % Analytes [A] [**B**] [D] [E] [G] 97 97 Bromide 0.814 10.0 10.5 10.0 10.5 0 80-120 20 1.29 57.1 112 Sulfate 50.0 56.3 110 50.0 1 80-120 20 Lab Batch ID: 905554 Matrix: Water QC- Sample ID: 456341-004 S Batch #: 1 Date Prepared: 01/25/2013 RKO Analyst: Date Analyzed: 01/25/2013 Reporting Units: mg/L MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY Parent Spiked Sample Spiked Duplicate Spiked Control Control Inorganic Anions by EPA 300/300.1 Sample Spike Result Sample Spike Spiked Sample Dup. RPD Limits Limits Flag Result Added [C] %R Added Result [F] %R % %R %RPD Analytes [A] [**B**] [D] [E] [G] Bromide 14.1 100 112 98 100 112 98 0 80-120 20 1570 1770 80-120 Х Sulfate 500 40 500 1770 40 0 20

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



Form 3 - MS / MSD Recoveries

Project Name: N. Eunice



Work Order #: 456341						Project I	D: 073018					
Lab Batch ID: 905761 Date Analyzed: 01/29/2013	QC- Sample ID: Date Prepared:	456128 01/29/2	-001 S 013	Ba An	tch #: alyst:	1 Matri RKO	x: Ground	l Water				
Reporting Units: mg/L		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY			
TOC by SM 5310C	Parent Sample	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag	
Analytes	[A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD		
Total Organic Carbon	1.64	15.0	16.2	97	15.0	16.2	97	0	90-110	20		
Lab Batch ID: 905761	QC- Sample ID:	456341	-002 S	Ba	tch #:	1 Matri	x: Water					
Date Analyzed: 01/29/2013	Date Prepared:	01/29/2	013	An	alyst:	RKO						
Reporting Units: mg/L	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
TOC by SM 5310C	Parent Sample	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag	
Analytes	[A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD		
Total Organic Carbon	28.7	15.0	41.1	83	15.0	41.1	83	0	90-110	20	X	
Lab Batch ID: 905593	QC- Sample ID:	456341	-001 S	Ba	tch #:	1 Matri	x: Water					
Date Analyzed: 01/25/2013	Date Prepared:	01/25/2	013	An	alyst:	МКО						
Reporting Units: mg/L		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY			
Total Metals by EPA 6010B	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag	
Analytes	[A]	[B]	[~]	[D]	[E]		[G]					
Chromium	<0.0100	1.00	1.20	120	1.00	1.18	118	2	75-125	20		
Iron	<0.200	5.00	4.72	94	5.00	4.67	93	1	75-125	20		
Sodium	635	25.0	625	0	25.0	611	0	2	75-125	25	Х	

Matrix Spike Percent Recovery $[D] = 100^{\circ}(C-A)/B$ Relative Percent Difference RPD = $200^{\circ}|(C-F)/(C+F)|$ 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: N. Eunice

Work Order #: 456341

Lab Batch #: 905888				Project I	D: 073018	
Date Analyzed: 01/25/2013 10:25 Date	Prepar	ed: 01/25/2013	3 Anal	yst:WRU		
QC- Sample ID: 456341-001 D	Batch	n #: 1	Mat	rix: Water		
Reporting Units: mg/L		SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Chromium, Hexavalent by SW 7196A	L	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte			[B]			
Hexavalent Chromium		0.272	0.272	0	20	
Lab Batch #: 905751						
Date Analyzed: 01/29/2013 18:00 Date	Prepar	ed: 01/29/2013	3 Anal	yst:DHE		
QC- Sample ID: 456341-004 D	Batch	n#: 1	Mat	rix: Water		
Reporting Units: mg/L		SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Sulfide by SM4500-S-F-00 Analyte		Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Sulfide total		<5.00	< 5.00	0	20	U

Spike Relative Difference RPD 200 * | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes. BRL - Below Reporting Limit

Project Name-Locatio		isly done at XI	ENCO		Pre	oject IE)		TAT	Г: А	SAP	5h 1	7ι 2h2	ノ(4) 24h	<u>48h</u>	<u>7</u>] 3d 5	d 7	d 1()d 2	21d \$	Standa	ard TAT i	is pro	ject s	pecifi		<u> </u>	
NEmice.	NM				073	518			lt is	typic	ally 5	5-7 W	orkin	g Da	ys fo	level	ll an	d 10+	Wo	rking	days	for level	III an	d IV c	lata.			
<u>'roj. State: TX, AL, F</u> J.J. PA, SC, TN, UT O	<u>., GA, LA, MS, NC,</u> lher	Proj. Mana	lger,(PN) ¢Wi	sni	owi	e chi			As	ц,		E		X	(BS)								7	<u>p</u>		R	emarl	ks
-mail Results to MWIS niou	PM and ie chio Cro	world: (Um	43	2-6	,86-1	5186			Hs VO	Othe		×-2	Se	x 1 App	erb. PC		191 4	È.			5701		4 C	TUG Z	oproved			
Ivoice to D Account ill to:	ng 🗖 Inc. Invoice	with Final Rep	oort □I	nvoice	e must	have a	P.O.		VO 6V	2 CAL	L L	Appda	esticide	Appd	est. H		1				60		7	인 년 민년	e pre-a	ded		Erom
Quote/Pricing:		P.O. No:			Ê] Call f	or P.C) .	õ	-xpd) L	4	3TAL	ы С		2				146		L L	Ka J	ndar	snee		
Reg Program: UST	DRY-CLEAN Lan	d-Fill Waste-	Disp N	PDES	DW	TRRP			Ð	₹	W	티디	s s	4	NOC			S	2	0	1		ſ	ก็ไม่	olv a	ed a:		Å
APP Per-Contract	CLP AGCEE NA	VY DOE D	OD US	ACE (DTHEF	<u>}:</u>			ш	dX-1		5 ₩	icide	o 13F	s S	X	3	,	5	31	3		401	104 V	ll ap	prov		L D D D D D D D D D D D D D D D D D D D
Special DLs (GW D)	V QAPP MDLs R	Ls See Lab F	M Inclu	Ided	Call	PM)			(-MTBI	V App	MA	BN8	Herb	A-4 PI	VOC	100	3 M	8	5	S	S S		1		Ides Wi	pre-ap		
Sampler Name Jus	thrikan	Signatu	re D	us?	Th	sign -	a		BTE	ы Б	C C C C C C C		PCBs	RCR	(Metals	7	- ha	2	0	S	ş		401	1121. Q	Surcha	ips are		Date
Sample ID	Sampling Date	Time	Depth t' In" m Matrix	Composite	Grab ≰ Containers	Container Size	Container Typ	Preservatives	VCOs: Full-List	VCO'S PP TO	PAHS SIM	SVOCs: Full-Li	OC Pesticides	Metals: RCRA-8	SPLP - TCLP	EDB/DBCP <u> <u> </u> </u>	Lev Change	Anions	Sulfer	700	Disselved			AIAOAF OI		Sample Clean-L		Aridn-
mu6970124/2	1-24-13	1045			S											1	t x	1	1	X	×			$\overline{\mathbf{x}}$				\top
Two29 01241	3 1	120			5											ľ		1	1	1	1			F				
WW 007A0124	13	1400		\square	5	· .													\square				1	R				
Dup		~			5	-											l	T			1		\square	X _				
		····															-						-		-			+
									_							-			1 1 1					+	+			
												+					+						-		+	<u> </u>		
an a						<u> </u>	<u> </u>	1					\square							<u>-15- 11-</u> 1								
											1.1 × 1.1		1.							н. ¹								+
Relinguished by (I	nitials and Sign)	Date &	Time	R	elinqui	shed to) (Initia	als an	d Sig	gn)		Da	te &	Time	•	Total C	ontai	ners	per C	OC:	20		Cool	er Ter	np: ľ	75	°C	
1) the ha	ð~	1-2413	1615	2)				11								Otherw	ise a	greec	l on v	vriting	. Rep	orts are th	ne Inte	ellectu	al Pro	perty o	f XENC	ō
3) ()				4)	2			0				i	fize			until pa	id. Sa	ample	s wil	l be h	eld 30	days afte	er final	l repor	rt is e-	mailed	unless	
5)				6)	na	ur	ĽŰ	Ym	74	KK_	$\perp \!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!$	<u>IQY</u>	13	16.	15	hereby	reque	ested.	Rus	n Cha	rges a	Ind Collec	tion Fe	ees ar	e pre-	approv	ed if nee	eded.

Ń



XENCO Laboratories



Prelogin/Nonconformance Report- Sample Log-In

Client: Conestoga Rovers & Associates	Acceptable Temperature Range: 0 - 6 degC
Date/ Time Received: 01/24/2013 04:15:00 PM	Air and Metal samples Acceptable Range: Ambient
Work Order #: 456341	Temperature Measuring device used :

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	17.5	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	
#4 *Custody Seals intact on shipping container/ cooler?	Yes	
#5 Custody Seals intact on sample bottles?	Yes	
#6 *Custody Seals Signed and dated?	Yes	
#7 *Chain of Custody present?	Yes	
#8 Sample instructions complete on Chain of Custody?	Yes	
#9 Any missing/extra samples?	No	
#10 Chain of Custody signed when relinquished/ received?	Yes	
#11 Chain of Custody agrees with sample label(s)?	Yes	
#12 Container label(s) legible and intact?	Yes	
#13 Sample matrix/ properties agree with Chain of Custody?	Yes	
#14 Samples in proper container/ bottle?	Yes	
#15 Samples properly preserved?	Yes	
#16 Sample container(s) intact?	Yes	
#17 Sufficient sample amount for indicated test(s)?	Yes	
#18 All samples received within hold time?	Yes	
#19 Subcontract of sample(s)?	Yes	
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes	
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes	
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	Yes	

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Date:

Checklist reviewed by:

Date: _____

Analytical Report 456437

for

Conestoga Rovers & Associates

Project Manager: Mike Wisniowiecki

N. Eunice

073018

05-FEB-13

Collected By: Client





12600 West I-20 East Odessa, Texas 79765

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

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

> Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900) Xenco-Lakeland: Florida (E84098) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX) Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757) Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



05-FEB-13



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

Reference: XENCO Report No(s): **456437 N. Eunice** Project Address: NM

Mike Wisniowiecki:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 456437. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 456437 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 456437



Conestoga Rovers & Associates, Midland, TX

N. Eunice

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-96012513	W	01-25-13 09:50		456437-001
IW030012513	W	01-25-13 11:50		456437-002
MW-895A012513	W	01-25-13 12:50		456437-003
IW28012513	W	01-25-13 13:20		456437-004
MW009A012513	W	01-25-13 14:00		456437-005
DUP2 012513	W	01-25-13 00:00		456437-006
METAL QCI(MW96)	W	01-25-13 00:00		456437-007
IW28 METAL QC2	W	01-25-13 13:20		456437-008



CASE NARRATIVE

Client Name: Conestoga Rovers & Associates Project Name: N. Eunice



Project ID:073018Work Order Number(s):456437

Report Date: 05-FEB-13 Date Received: 01/25/2013

Sample receipt non conformances and comments: None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-905617 Inorganic Anions by EPA 300/300.1 E300

Batch 905617, Sulfate recovered below QC limits in the Matrix Spike Duplicate. Samples affected are: 456437-001, -003, -004, -006, -002, -005. The Laboratory Control Sample for Sulfate is within laboratory Control Limits

Batch: LBA-905964 Chromium, Hexavalent by SW 7196A SW7196A

Batch 905964, Hexavalent Chromium recovered above QC limits in the Matrix Spike. Samples affected are: 456437-001, -003, -004, -006, -002, -005. The Laboratory Control Sample for Hexavalent Chromium is within laboratory Control Limits



Certificate of Analysis Summary 456437

Conestoga Rovers & Associates, Midland, TX

Project Name: N. Eunice



Project Location: NM

Project Id: 073018

Contact: Mike Wisniowiecki

Date Received in Lab:	Fri Jan-25-13 04:00 pm
Report Date:	05-FEB-13

								Project Ma	nager:]	Nicholas Strac	cione			
	Lab Id:	456437-0	01	456437-0	02	456437-0	03	456437-0	004	456437-0	05	456437-0	06	
Analysis Doguested	Field Id:	MW-96012	.513	IW030012	513	MW-895A01	12513	IW28012	513	MW009A01	2513	DUP2 012	513	
Analysis Kequestea	Depth:													
	Matrix:	WATER	٤	WATER	e	WATER	ર	WATE	R	WATER	٤	WATE	R	
	Sampled:	Jan-25-13 0	9:50	Jan-25-13 1	1:50	Jan-25-13 12:50		Jan-25-13 13:20		Jan-25-13 14:00		Jan-25-13 (00:00	
Chromium, Hexavalent by SW 7196A	Extracted:													
	Analyzed:	Jan-25-13 1	6:50	Jan-25-13 1	6:50	Jan-25-13 16:50		Jan-25-13 16:50		Jan-25-13 16:50		Jan-25-13 16:50		
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	
Hexavalent Chromium		ND	0.0100	0.448	0.200	0.0256	0.0100	0.0563	0.0100	0.652	0.100	0.0556	0.0100	
Dissolved Metals per ICP by SW846	Extracted:	Feb-01-13 (Feb-01-13 08:00 F		8:00	Feb-01-13 (Feb-01-13 08:00		08:00	Feb-01-13 (08:00	Feb-01-13 08:00		
6010B	Analyzed:	Feb-02-13 (Feb-02-13 01:16 F		Feb-02-13 01:22		Feb-02-13 01:27		Feb-02-13 01:33		Feb-02-13 01:50)1:55	
SUB: 1A104/04215	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	
Iron		ND	0.200	82.9	0.200	ND	0.200	ND	0.200	ND	0.200	ND	0.200	
Inorganic Anions by EPA 300/300.1	Extracted:	Jan-26-13 2	2:01	Jan-26-13 2	2:18	Jan-26-13 2	2:36	Jan-26-13	22:53	Jan-26-13 2	3:10	Jan-26-13 2	23:27	
SUB: TX104704215	Analyzed:	Jan-26-13 2	2:01	Jan-26-13 2	2:18	Jan-26-13 2	2:36	Jan-26-13	22:53	Jan-26-13 2	3:10	Jan-26-13 2	23:27	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	
Bromide		ND	0.200	149	1.00	ND	0.200	ND	1.00	ND	1.00	ND	1.00	
Sulfate		318	2.00	ND	10.0	206	2.00	754	10.0	687	10.0	738	10.0	
Sulfide by SM4500-S-F-00	Extracted:													
SUB: TX104704215	Analyzed:	Jan-30-13 1	6:34	Jan-30-13 1	6:36	Jan-30-13 1	6:38	Jan-30-13	16:40	Jan-30-13 1	6:42	Jan-30-13 1	6:44	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	
Sulfide, total		ND	50.0	ND	5.00	ND	5.00	ND	5.00	ND	5.00	ND	5.00	
TOC by SM 5310C	Extracted:													
SUB: TX104704215	Analyzed:	Jan-30-13 1	4:53	Jan-30-13 1	7:42	Jan-30-13 1	5:25	Jan-30-13	16:02	Jan-30-13 1	6:17	Jan-30-13 1	6:32	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	
Total Organic Carbon		1.47	1.00	1800	100	3.00	1.00	3.99	1.00	2.84	1.00	4.05	1.00	

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

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

Ctr. Nul

Nicholas Straccione Project Manager



Project Id: 073018

Contact: Mike Wisniowiecki

Certificate of Analysis Summary 456437

Conestoga Rovers & Associates, Midland, TX

Project Name: N. Eunice



Date Received in Lab: Fri Jan-25-13 04:00 pm

Project Location: NM

Report Date: 05-FEB-13

								Project Ma	nager:	Nicholas Stra	ccione		
	Lab Id:	456437-0	001	456437-0	456437-002		003	456437-0	004	456437-0	005	456437-006	
Analysis Paguested	Field Id:	MW-9601	2513	IW030012	2513	MW-895A0	12513	IW28012	513	MW009A0	12513	DUP2 012	2513
Analysis Kequestea	Depth:												
	Matrix:	WATE	R	WATE	R	WATE	R	WATE	R	WATE	R	WATE	R
	Sampled:	Jan-25-13 (Jan-25-13 09:50		11:50	Jan-25-13 12:50		Jan-25-13 13:20		Jan-25-13 14:00		Jan-25-13 00:00	
Total Metals by EPA 6010B	Extracted:	Feb-01-13	08:00	Feb-01-13	08:00	Feb-01-13	08:00	Feb-01-13	08:00	Feb-01-13	08:00	Feb-01-13	08:00
SUB: TX104704215	Analyzed:	Feb-01-13	23:52	Feb-02-13	00:20	Feb-02-13	00:25	Feb-02-13	00:42	Feb-02-13	00:48	Feb-02-13	00:53
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Chromium		ND	0.0100	0.0684	0.0100	0.0298	0.0100	0.0609	0.0100	0.628	0.0100	0.0598	0.0100
Iron	Iron		0.200	103	0.200	ND	0.200	ND	0.200	ND	0.200	ND	0.200
Sodium		153	0.500	160	0.500	205	0.500	389	0.500	289	0.500	381	0.500

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.

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

Ch Nul

Nicholas Straccione Project Manager



Certificate of Analysis Summary 456437

Conestoga Rovers & Associates, Midland, TX

Project Name: N. Eunice





Date Received in Lab: Fri Jan-25-13 04:00 pm Report Date: 05-FEB-13

Project Manager: Nicholas Straccione

	Lab Id:	456437-0	007	456437-0	008		
Analysis Paguastad	Field Id:	METAL QCI	(MW96)	IW28 META	L QC2		
Analysis Kequesiea	Depth:						
	Matrix:	WATE	R	WATE	R		
	Sampled:	Jan-25-13 (00:00	Jan-25-13	13:20		
RCRA Metals by SW846-6010B	Extracted:	Feb-01-13	08:00	Feb-01-13	08:00		
SUB: TX104704215	Analyzed:	Feb-02-13	00:59	Feb-02-13	01:05		
	Units/RL:	mg/L	RL	mg/L	RL		
Chromium		ND	0.0100	0.0608	0.0100		
Iron		ND	0.200	ND	0.200		
Sodium		152	0.500	381	0.500		

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.

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

Ch Nul

Nicholas Straccione Project Manager



Flagging Criteria

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

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

Certified and approved by numerous States and Agencies.

LOQ Limit of Quantitation

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

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

4143 Greenbriar Dr, Stafford, TX 77477 9701 Harry Hines Blvd, Dallas, TX 75220 5332 Blackberry Drive, San Antonio TX 78238 2505 North Falkenburg Rd, Tampa, FL 33619 12600 West I-20 East, Odessa, TX 79765 6017 Financial Drive, Norcross, GA 30071 3725 E. Atlanta Ave, Phoenix, AZ 85040
 Phone
 Fax

 (281) 240-4200
 (281) 240-4280

 (214) 902 0300
 (214) 351-9139

 (210) 509-3334
 (210) 509-3335

 (813) 620-2000
 (813) 620-2033

 (432) 563-1800
 (432) 563-1713

 (770) 449-8800
 (770) 449-5477

 (602) 437-0330
 (432) 563-1713

Final 1.000





Project Name: N. Eunice

Work Order #: 456437		Pr		073018		
Lab Batch #: 905964	Sample: 905964-	1-BKS	Matrix:	Water		
Date Analyzed: 01/25/2013 Date Pr	repared: 01/25/20	013	Analyst:	WRU		
Reporting Units: mg/L	Batch #: 1	BLANK /I	BLANK SPI	KE REC	COVERY S	STUDY
Chromium, Hexavalent by SW 7196A Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Hexavalent Chromium	<0.0100	0.0250	0.0222	89	80-120	
Lab Batch #: 905617	Sample: 632975-	1-BKS	Matrix:	Water		
Date Analyzed: 01/26/2013 Date Pr	repared: 01/26/20	013	Analyst:	RKO		
Reporting Units: mg/L	Batch #: 1	BLANK /I	BLANK SPI	KE REC	COVERY S	STUDY
Inorganic Anions by EPA 300/300.1 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Bromide	<0.100	10.0	10.1	101	90-110	
Sulfate	<1.00	50.0	51.3	103	90-110	
Lab Batch #: 905858 Date Analyzed: 01/30/2013 Date Pr	Sample: 905858- repared: 01/30/20	1-BKS 013	Matrix: Analyst:	Water RKO		
Reporting Units: mg/L	Batch #: 1	BLANK /I	BLANK SPI	KE REC	COVERY S	STUDY
TOC by SM 5310C	Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags
Analytes			[C]	[D]		

Blank Spike Recovery [D] = 100*[C]/[B] All results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit



Project Name: N. Eunice

Work Order #: 456437								Pro	ject ID: (073018		
Analyst: MKO		Da	ate Prepar	red: 02/01/201	.3			Date A	nalyzed: (02/01/2013		
Lab Batch ID: 906137	Sample: 633230-1-B	SKS	S Batch #: 1 Matrix: Water									
Units: mg/L			BLAN	K/BLANK S	SPIKE / H	BLANK S	SPIKE DUPI	LICATE	RECOVE	ERY STUD	Y	
RCRA Metals by S	W846-6010B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes			[B]	[C]	נטן		Kesuit [F]	[6]				
Chromium		< 0.0100	1.00	0.937	94	1.00	0.954	95	2	80-120	20	
Iron		< 0.200	5.00	4.92	98	5.00	5.05	101	3	80-120	20	
Sodium		<0.500	25.0	24.1	96	25.0	24.3	97	1	80-120	20	
Analyst: DHE		Da	ate Prepar	red: 01/30/201	.3			Date A	nalyzed: (01/30/2013		
Lab Batch ID: 905840	Sample: 905840-1-B	KS	Batc	h #: 1					Matrix: \	Water		
Units: mg/L			BLAN	K /BLANK S	SPIKE / F	BLANK S	SPIKE DUPI	LICATE	RECOVE	ERY STUD	Y	
Sulfide by SM45 Analytes	00-S-F-00	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Sulfide, total		<5.00	1000	960	96	1000	1000	100	4	75-120	20	

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 / MSD Recoveries

Project Name: N. Eunice



Work Order #: 456437 **Project ID: 073018** Lab Batch ID: 905964 QC- Sample ID: 456425-001 S Matrix: Water Batch #: 1 Date Prepared: 01/25/2013 Analyst: WRU Date Analyzed: 01/25/2013 **Reporting Units:** mg/L MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY Parent Spiked Sample Duplicate Control Spiked Spiked Control Chromium, Hexavalent by SW 7196A Sample Spiked Sample Spike Result Sample Spike Dup. RPD Limits Limits Flag Result Added [C] %R Added Result [F] %R %R %RPD % Analytes [A] [**B**] [D] [E] [G] Hexavalent Chromium < 0.0100 0.200 0.242 121 0.200 0.240 120 1 80-120 20 Х Lab Batch ID: 905617 QC- Sample ID: 456395-003 S Batch #: 1 Matrix: Water Analyst: RKO Date Prepared: 01/26/2013 Date Analyzed: 01/26/2013 Reporting Units: mg/L MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY Parent Spiked Sample Duplicate Spiked Control Control Spiked **Inorganic Anions by EPA 300/300.1** Sample Spike Result Spiked Sample RPD Limits Sample Spike Dup. Limits Flag Result Added [C] %R Added Result [F] %R %R %RPD % Analytes [A] [**B**] [D] [E] [G] Bromide < 0.10010.0 10.9 109 10.0 10.3 103 6 80-120 20 Х 105 79 Sulfate 65.3 50.0 106 81 50.0 1 80-120 20 Lab Batch ID: 905617 Matrix: Water QC- Sample ID: 456408-001 S Batch #: 1 Date Prepared: 01/26/2013 RKO Analyst: Date Analyzed: 01/26/2013 Reporting Units: mg/L MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY Parent Spiked Sample Spiked Duplicate Spiked Control Control Inorganic Anions by EPA 300/300.1 Sample Spike Result Sample Spike Spiked Sample Dup. RPD Limits Limits Flag Result Added Added [C] %R Result [F] %R % %R %RPD Analytes [A] [**B**] [D] [E] [G] Bromide 2.64 20.0 23.8 106 20.0 24.2 108 2 80-120 20 Sulfate 413 100 518 105 100 522 109 1 80-120 20

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



Form 3 - MS / MSD Recoveries

Project Name: N. Eunice



Work Order #: 456437						Project I	D: 073018	3			
Lab Batch ID: 906137 Date Analyzed: 02/01/2013	QC- Sample ID Date Prepared	456437 02/01/2	-001 S 013	Ba An	tch #: alyst:	1 Matri MKO	x: Water				
Reporting Units: mg/L		MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY									
RCRA Metals by SW846-6010B	Parent Sample Result	Spike	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	[A]	[B]	[-]	[D]	[E]	[-]	[G]		,		1
Chromium	<0.0100	1.00	0.939	94	1.00	0.942	94	0	75-125	20	
Iron	<0.200	5.00	4.47	89	5.00	4.48	90	0	75-125	20	
Sodium	153	25.0	162	36	25.0	163	40	1	75-125	20	Х
Lab Batch ID: 905858	QC- Sample ID:	456437	-006 S	Ba	tch #:	1 Matri	x: Water				
Date Analyzed: 01/30/2013	Date Prepared	: 01/30/2	013	An	alyst:	RKO					
Reporting Units: mg/L		MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY									
TOC by SM 5310C	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	[A]	[B]		[D]	[E]		[G]				
Total Organic Carbon	4.05	15.0	18.1	94	15.0	18.2	94	1	90-110	20	

Matrix Spike Percent Recovery $[D] = 100^{\circ}(C-A)/B$ Relative Percent Difference RPD = $200^{\circ}|(C-F)/(C+F)|$ 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: N. Eunice

Work Order #: 456437

Lab Batch #: 905964			Project I	D: 073018	
Date Analyzed: 01/25/2013 16:50 Date Prep	ared: 01/25/2013	3 Anal	lyst:WRU		
QC- Sample ID: 456425-001 D Bat	ch #: 1	Mat	rix: Water		
Reporting Units: mg/L	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Chromium, Hexavalent by SW 7196A	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		[B]			
Hexavalent Chromium	< 0.0100	< 0.0100	0	20	U
Lab Batch #: 905840					
Date Analyzed: 01/30/2013 16:32 Date Prep	ared: 01/30/2013	3 Anal	lyst:DHE		
QC- Sample ID: 456455-012 D Bat	ch #: 1	Mat	rix: Groun	d Water	
Reporting Units: mg/L	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Sulfide by SM4500-S-F-00 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag

Spike Relative Difference RPD 200 * | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes. BRL - Below Reporting Limit

Laboratories 🔳	9701 Harry Hines B	lvd., Dallas, T>	(75220) Ph	214-902	-0300				842 (Cantwo	ell, Co	pus Ch	risti, T	TX 784	08 :	61-8	8403	71	5	Serial	#:	30	19	<u> </u>	- F	² age	<u> </u>	of (
CIRA - M	idad			132 -	-686-	0086	•			y .		a	*	4	54	24	13	7)						
Project Name-Location		y done at XI	ENCO		Proje	ct ID D) 8	3	T/ It i	\T: is typ	ASAI ically	⊃ 5h 5-7	12h Norkir	ig Da	48h ays fo	3d or leve		7d nd 1(10d)+ W	21d orkin	Stan g day	dard 's for	TAT i level	s proje III and	ect spe IV da	ecific ata.	,		
Proj. State: TX, AL, FL, G	A, LA, MS, NC,	Proj. Mana	ger (PM)	owi	ech							9-	(ŝ		2		_		-						R	emar	rks
NJ, PA, SC, TN, UT Other	IPM and	puijr	u •0	13471	Fax	<u></u>	<u>.</u>	−Į§	ther:			Z	pdd	DO 1	10,0	20	3			18			3	₩	(ed)			— —
WWSNUL	iveckiC	Craw	or ld (c	m	432-	686-	0186	_s	0			N S	4	ę		5	$\mathbb{E}^{\mathbb{E}}$	ğ		20			ğ	est	prov			
Invoice to Accounting	Inc. Invoice w	ith Final Rep	port 🗖 ir	nvoice n	nust ha	ve a F	P.O.	٦Ş	CALL			cide 0	xpdd	He	្រុ	sľ	$\left \right $	<u>S</u>					2	High	e-ap			
Bill to:					<u> </u>		<u></u>	– Š	5		풘	Pesti		est.		3	20	2		846				S	p D	aded		
Quote/Pricing:		P.O. No:		· · · ·	0	all for	r P.O.	٥	xpdc		2	<u>בן</u>	3TA	S.		<u>,</u>	\sim	ŝ		1			<u>م</u>	Kg	nda	s ne		
Reg Program: UST DR	Y-CLEAN Land	Fill Waste-	Disp NF	PDES	DW T	RRP		Ē	Α¢		≧	s s	P 2	N N	•		31	20		3			l m	l Bu	oly a	eda		-
QAPP Per-Contract CLI	P AGCEE NAV	Y DOE D	OD USA	ACE OT	HER:				dx-1	:	H	de ⊓	13F	S S		ร่	2	$\frac{1}{8}$	20				48h	Ň	lapi	orov		
Special DLs (GW DW C	APP MDLs RL	s See Lab F	M Inclu	ded C	ali PM)		TBE	App		AA AA	SN&/	Ӗ	Ő	•	٥	3	۲ اک	5	S			Ş		s wil	9-apl		
] <u>-</u>	N		0	N N	₹	<u>s</u>			ŝ		کار	A			₩.	′ ►	arge	e pre		
Sampler Name Just	nnikun	Signatu	re ffri	AV	by .	1 1 1 1	ni Linear		L L		Ю	PCB U	R	Meta	-	2	2	40	1 5				42	e		0s ar		
Sample ID	Sampling Date	Time	Depth ft' In" m Matrix	Composite Grab	# Containers	Container Size	Container Type	VCOs: Full-List	VCO'S PP TC	PAHS SIM	TX-1005 DRO	OC Pesticides	Metals: RCRA-8	SPLP - TCLP (EDB / DBCP	- M- - M- - M- - M- - M- - M- - M- - M-		くちょうし		D:50/10			TATASAP 5h	Addn: PAH abov	Hold Samples ((Sample Clean-u		
mw96012513	1-25-13	950			5											X /	KV	$\langle \chi \rangle$	X	X								
Tw 030012513		1150			6											11		1	1	1								
10 4 89 SA 01 2513		1250			6											Π				T						sta i t	1	
D. 128012513		1320			6												\square			T								1
MW1009A012513		1400			6												\square			T								
1002012513		~			6							1.e				Ш			\mathbf{H}	\mathbf{H}				- 				
metal QCI/MW9		-																		\parallel				1	$ \uparrow $			\top
1.78 metal 007		1370			1														\mathbf{H}	\mathbf{H}								÷ 1 *
10 -0 1 - 0 0 - 0																							+				<u>. 28</u> 1997 -	
								-																1				
Reinauished by (Initia	Is and Sian)	Date &	Time	Rein	l l quishe	d to (Initials,	and S	Sign)			ate &	Time	e	Total	Cont	ainer	s per	COC.	3-	<u>,</u> 1		Cooler	Temr		30		ينيا <u>ني.</u>
1) In the	/	1-25-13	1600	2)	Ú	1	UN,	M	Ň	1	12	5/13	16	00	Other	wise	agree	ed on	writin	ig. Re	ports	are th	e Intell	ectual	Prop	perty o	f XEN(20
3)				4)							1	1			until p	aid. S	Samp	les w	ill be	held 3	80 day	/s afte	r final r	eport	is e-n	nailed	unles	3
5)		1 .		6)		-		4, 8,	1.11		- ÷				nereb	y reqi	Jeste	a. Ru	sn Ch	arges	and (Jollect	ion Fee	∋s are	pre-a	pprov	ed if ne	eded

Cont. Size: 4oz (4), 8oz (8), 32oz (32), 40ml VOA (40), 1L (1), 500ml (5), Tedlar Bag (B), Various (V), Other _ Cont. Type: Glass Amb (A), Glass Clear (C), Plastic (P), Various (V) Committed to Excellence in Service and Quality Matrix: Air (A), Product (P), Solid (S), Water (W), Liquid (L)

www.xenco.com

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

Page 14 of 15



XENCO Laboratories



Prelogin/Nonconformance Report- Sample Log-In

Client: Conestoga Rovers & AssociatesAcceptable Temperature Range: 0 - 6 degCDate/ Time Received: 01/25/2013 04:00:00 PMAir and Metal samples Acceptable Range: AmbientWork Order #: 456437Temperature Measuring device used :

S	ample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?		18	
#2 *Shipping container in good condition?		Yes	
#3 *Samples received on ice?		Yes	
#4 *Custody Seals intact on shipping contain	er/ cooler?	Yes	
#5 Custody Seals intact on sample bottles?		Yes	
#6 *Custody Seals Signed and dated?		Yes	
#7 *Chain of Custody present?		Yes	
#8 Sample instructions complete on Chain o	f Custody?	Yes	
#9 Any missing/extra samples?		No	
#10 Chain of Custody signed when relinquis	hed/ received?	Yes	
#11 Chain of Custody agrees with sample la	bel(s)?	Yes	
#12 Container label(s) legible and intact?		Yes	
#13 Sample matrix/ properties agree with Ch	ain 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 to	est(s)?	Yes	
#18 All samples received within hold time?		Yes	
#19 Subcontract of sample(s)?		Yes	
#20 VOC samples have zero headspace (les	s than 1/4 inch bubble)?	Yes	
#21 <2 for all samples preserved with HNO3	,HCL, H2SO4?	Yes	
#22 >10 for all samples preserved with NaAs	O2+NaOH, ZnAc+NaOH?	Yes	

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Date:

Checklist reviewed by:

Date: _____



B&A Laboratories, Inc. 10650 Culebra Rd., Suite 104-154 San Antonio, TX 78251-4949 Ph: (210) 509-3334 Fax (210) 509-3335 Houston - Dallas - San Antonio - Odessa Tampa - Atlanta - Phoenix

294958

Invoice No. 294958

	Client Information	Invoice Information
Invoice to: Contact:	Conestoga Rovers & Associates	Invoice Date: 05/07/2013
Address:	2055 Niagra Falls Blvd. Suite #3	Due Date: 06/06/2013
Project Name:	Midland, TX 14304	Terms: 30 Days
Project #:	073018	PO #: 4057942
		Lab PM: Kelsey Brooks

Comments:

Products / Services	WO Number	Matrix	ТАТ	Qty	Price	Ext. Price
Chromium, Hexavalent by SW 7196A	462048	Water	5 Day TAT	5	25.00	\$125.00
Total Metals by EPA 6010B	462048	Water	5 Day TAT	5	30.00	\$150.00
Dissolved Metals per ICP by SW846 6010B	462048	Water	5 Day TAT	5	10.00	\$50.00
Inorganic Anions by EPA 300/300.1	462048	Water	5 Day TAT	5	54.00	\$270.00
TOC by SM 5310C	462048	Water	5 Day TAT	5	35.00	\$175.00
Sulfide by SM4500-S-F-00	462048	Water	5 Day TAT	5	40.00	\$200.00
Nitrogen Ammonia by SM4500-NH3C	462048	Water	5 Day TAT	5	35.00	\$175.00
Total Anaerobic Bacteria	462048	Water	5 Day TAT	5	35.00	\$175.00

Total:

\$1,320.00

Please detach this portion and return with your payment

	Client Information
Client:	Conestoga Rovers & Associates
Contact:	Jennifer Devonshire
Terms:	30 Days
PO #:	4057942

Invoice Inform	ation: 294958
Work Order Number:	462048
Due Date:	06/06/2013
Invoice Amount:	\$1,320.00
Amount Remitted:	

Past Due Invoices are subject to a 1.5% per Month service charge, plus collection fees.

Please send your payments to: Xenco Laboratories, Inc. 10650 Culebra Rd., Suite 104-154, San Antonio, Texas 78251-4949 Houston - Dallas - San Antonio - Odessa Tampa - Atlanta

Make checks payable or Credit Card payments to B&A Laboratories, Inc.

visit our webpage at www.xenco.com

Analytical Report 456437

for

Conestoga Rovers & Associates

Project Manager: Mike Wisniowiecki

N. Eunice

073018

05-FEB-13

Collected By: Client





12600 West I-20 East Odessa, Texas 79765

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

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

> Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900) Xenco-Lakeland: Florida (E84098) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX) Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757) Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



05-FEB-13



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

Reference: XENCO Report No(s): **456437 N. Eunice** Project Address: NM

Mike Wisniowiecki:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 456437. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 456437 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 456437



Conestoga Rovers & Associates, Midland, TX

N. Eunice

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-96012513	W	01-25-13 09:50		456437-001
IW030012513	W	01-25-13 11:50		456437-002
MW-895A012513	W	01-25-13 12:50		456437-003
IW28012513	W	01-25-13 13:20		456437-004
MW009A012513	W	01-25-13 14:00		456437-005
DUP2 012513	W	01-25-13 00:00		456437-006
METAL QCI(MW96)	W	01-25-13 00:00		456437-007
IW28 METAL QC2	W	01-25-13 13:20		456437-008



CASE NARRATIVE

Client Name: Conestoga Rovers & Associates Project Name: N. Eunice



Project ID:073018Work Order Number(s):456437

Report Date: 05-FEB-13 Date Received: 01/25/2013

Sample receipt non conformances and comments: None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-905617 Inorganic Anions by EPA 300/300.1 E300

Batch 905617, Sulfate recovered below QC limits in the Matrix Spike Duplicate. Samples affected are: 456437-001, -003, -004, -006, -002, -005. The Laboratory Control Sample for Sulfate is within laboratory Control Limits

Batch: LBA-905964 Chromium, Hexavalent by SW 7196A SW7196A

Batch 905964, Hexavalent Chromium recovered above QC limits in the Matrix Spike. Samples affected are: 456437-001, -003, -004, -006, -002, -005. The Laboratory Control Sample for Hexavalent Chromium is within laboratory Control Limits



Certificate of Analysis Summary 456437

Conestoga Rovers & Associates, Midland, TX

Project Name: N. Eunice



Project Location: NM

Project Id: 073018

Contact: Mike Wisniowiecki

Date Received in Lab:	Fri Jan-25-13 04:00 pm
Report Date:	05-FEB-13

								Project Ma	nager:]	Nicholas Strac	cione		
	Lab Id:	456437-001		456437-0	02	456437-003		456437-004		456437-0	05	456437-006	
Analysis Doguested	Field Id:	MW-96012	.513	IW030012	513	MW-895A01	12513	IW28012	513	MW009A01	2513	DUP2 012	513
Analysis Kequestea	Depth:												
	Matrix:	WATER		WATER	e	WATER	ર	WATE	R	WATER	٤	WATER	
	Sampled:	Jan-25-13 0	9:50	Jan-25-13 1	1:50	Jan-25-13 1	2:50	Jan-25-13	13:20	Jan-25-13 14:00		Jan-25-13 00:00	
Chromium, Hexavalent by SW 7196A	Extracted:												
	Analyzed:	Jan-25-13 1	6:50	Jan-25-13 1	6:50	Jan-25-13 16:50		Jan-25-13	16:50	Jan-25-13 1	6:50	Jan-25-13 16:50	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Hexavalent Chromium		ND	0.0100	0.448	0.200	0.0256	0.0100	0.0563	0.0100	0.652	0.100	0.0556	0.0100
Dissolved Metals per ICP by SW846	Extracted:	Feb-01-13 (08:00	Feb-01-13 0	8:00	Feb-01-13 08:00		Feb-01-13 08:00		Feb-01-13 08:00		Feb-01-13 08:00	
6010B	Analyzed:	Feb-02-13 01:16		Feb-02-13 01:22		Feb-02-13 01:27		Feb-02-13 01:33		Feb-02-13 01:50		Feb-02-13 01:55	
SUB: 1A104/04215	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Iron		ND	0.200	82.9	0.200	ND	0.200	ND	0.200	ND	0.200	ND	0.200
Inorganic Anions by EPA 300/300.1	Extracted:	Jan-26-13 2	2:01	Jan-26-13 22:18		Jan-26-13 22:36		Jan-26-13 22:53		Jan-26-13 23:10		Jan-26-13 23:27	
SUB: TX104704215	Analyzed:	Jan-26-13 2	2:01	Jan-26-13 22:18		Jan-26-13 22:36		Jan-26-13 22:53		Jan-26-13 23:10		Jan-26-13 23:27	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Bromide		ND	0.200	149	1.00	ND	0.200	ND	1.00	ND	1.00	ND	1.00
Sulfate		318	2.00	ND	10.0	206	2.00	754	10.0	687	10.0	738	10.0
Sulfide by SM4500-S-F-00	Extracted:												
SUB: TX104704215	Analyzed:	Jan-30-13 1	6:34	Jan-30-13 16:36		Jan-30-13 1	6:38	Jan-30-13 16:40		Jan-30-13 1	6:42	Jan-30-13 16:44	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Sulfide, total		ND	50.0	ND	5.00	ND	5.00	ND	5.00	ND	5.00	ND	5.00
TOC by SM 5310C	Extracted:												
SUB: TX104704215	Analyzed:	Jan-30-13 1	4:53	Jan-30-13 1	7:42	Jan-30-13 1	5:25	Jan-30-13	16:02	Jan-30-13 16:17		Jan-30-13 1	6:32
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Total Organic Carbon		1.47	1.00	1800	100	3.00	1.00	3.99	1.00	2.84	1.00	4.05	1.00

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

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

Ctr. Nul

Nicholas Straccione Project Manager



Project Id: 073018

Contact: Mike Wisniowiecki

Certificate of Analysis Summary 456437

Conestoga Rovers & Associates, Midland, TX

Project Name: N. Eunice



Date Received in Lab: Fri Jan-25-13 04:00 pm

Project Location: NM

Report Date: 05-FEB-13

								Project Ma	nager:	Nicholas Stra	ccione		
	Lab Id:	456437-0	456437-001		456437-002		456437-003		456437-004		005	456437-006	
Analysis Requested Total Metals by EPA 6010B SUB: TX104704215 Chromium Iron	Field Id:	MW-9601	MW-96012513		IW030012513		MW-895A012513		513	MW009A0	12513	DUP2 012513	
	Depth:												
	Matrix:	WATER		WATE	WATER		WATER		R	WATER		WATER	
	Sampled:	Jan-25-13 09:50		Jan-25-13 11:50		Jan-25-13 12:50		Jan-25-13 13:20		Jan-25-13 14:00		Jan-25-13 00:00	
Total Metals by EPA 6010B	Extracted:	Feb-01-13	Feb-01-13 08:00		Feb-01-13 08:00		Feb-01-13 08:00		08:00	Feb-01-13 08:00		Feb-01-13 08:00	
SUB: TX104704215	Analyzed:	Feb-01-13 23:52		Feb-02-13 00:20		Feb-02-13 00:25		Feb-02-13 00:42		Feb-02-13 00:48		Feb-02-13 00:53	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Chromium		ND	0.0100	0.0684	0.0100	0.0298	0.0100	0.0609	0.0100	0.628	0.0100	0.0598	0.0100
Iron		ND	0.200	103	0.200	ND	0.200	ND	0.200	ND	0.200	ND	0.200
Sodium		153	0.500	160	0.500	205	0.500	389	0.500	289	0.500	381	0.500

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.

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

Ch Nul

Nicholas Straccione Project Manager



Certificate of Analysis Summary 456437

Conestoga Rovers & Associates, Midland, TX

Project Name: N. Eunice





Date Received in Lab: Fri Jan-25-13 04:00 pm Report Date: 05-FEB-13

Project Manager: Nicholas Straccione

	Lab Id:	456437-0	007	456437-0	008		
Arrahusia Demusated	Field Id:	METAL QCI	(MW96)	IW28 META	L QC2		
Analysis Kequesieu	Depth:						
	Matrix:	WATE	R	WATER			
	Sampled:	Jan-25-13 (Jan-25-13 00:00		13:20		
RCRA Metals by SW846-6010B	Extracted:	Feb-01-13	08:00	Feb-01-13	08:00		
SUB: TX104704215	Analyzed:	Feb-02-13 00:59		Feb-02-13 01:05			
	Units/RL:	mg/L	RL	mg/L	RL		
Chromium		ND	0.0100	0.0608	0.0100		
Iron		ND	0.200	ND	0.200		
Sodium		152	0.500	381	0.500		

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.

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

Ch Nul

Nicholas Straccione Project Manager



Flagging Criteria

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

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

Certified and approved by numerous States and Agencies.

LOQ Limit of Quantitation

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

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

4143 Greenbriar Dr, Stafford, TX 77477 9701 Harry Hines Blvd, Dallas, TX 75220 5332 Blackberry Drive, San Antonio TX 78238 2505 North Falkenburg Rd, Tampa, FL 33619 12600 West I-20 East, Odessa, TX 79765 6017 Financial Drive, Norcross, GA 30071 3725 E. Atlanta Ave, Phoenix, AZ 85040
 Phone
 Fax

 (281) 240-4200
 (281) 240-4280

 (214) 902 0300
 (214) 351-9139

 (210) 509-3334
 (210) 509-3335

 (813) 620-2000
 (813) 620-2033

 (432) 563-1800
 (432) 563-1713

 (770) 449-8800
 (770) 449-5477

 (602) 437-0330
 (432) 563-1713

Final 1.000





Project Name: N. Eunice

Work Order #: 456437	Pr	Project ID:						
Lab Batch #: 905964	Sample: 905964-	1-BKS						
Date Analyzed: 01/25/2013 Date Pr	repared: 01/25/20)13	Analyst:	WRU				
Reporting Units: mg/L	Batch #: 1	BLANK /I	BLANK SPI	KE REC	COVERY S	STUDY		
Chromium, Hexavalent by SW 7196A Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags		
Hexavalent Chromium	<0.0100	0.0250	0.0222	89	80-120			
Lab Batch #: 905617	Sample: 632975-	1-BKS	Matrix:	Water				
Date Analyzed: 01/26/2013 Date Pr	repared: 01/26/20)13	3 Analyst: RKO					
Reporting Units: mg/L	Batch #: 1 BLANK /BLANK SPIKE RECOVERY							
Inorganic Anions by EPA 300/300.1 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags		
Bromide	<0.100	10.0	10.1	101	90-110			
Sulfate	<1.00	50.0	51.3	103	90-110			
Lab Batch #: 905858 Date Analyzed: 01/30/2013 Date Pr	Sample: 905858- repared: 01/30/20	1-BKS)13						
Reporting Units: mg/L	Batch #: 1	BLANK /I	BLANK SPI	KE REC	COVERY S	STUDY		
TOC by SM 5310C	Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags		
Analytes			[C]	[D]				

Blank Spike Recovery [D] = 100*[C]/[B] All results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit



Project Name: N. Eunice

Work Order #: 456437		Project ID: 073018											
Analyst: MKO		Da	ate Prepar	ed: 02/01/201	.3		Date Analyzed: 02/01/2013						
Lab Batch ID: 906137	Sample: 633230-1-B	BKS Batch #: 1 Matrix: Water											
Units: mg/L		BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
RCRA Metals by S	W846-6010B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag	
Analytes			[B]	[C]	נטן		Kesuit [F]	[6]					
Chromium		< 0.0100	1.00	0.937	94	1.00	0.954	95	2	80-120	20		
Iron		< 0.200	5.00	4.92	98	5.00	5.05	101	3	80-120	20		
Sodium		< 0.500	25.0	24.1	96	25.0	24.3	97	1	80-120	20		
Analyst: DHE		Da	ate Prepar	red: 01/30/201	.3			Date A	nalyzed: (01/30/2013			
Lab Batch ID: 905840	Sample: 905840-1-B	KS	Batc	h #: 1					Matrix: \	Water			
Units: mg/L			BLAN	K /BLANK S	SPIKE / F	BLANK S	SPIKE DUPI	LICATE	RECOVE	ERY STUD	Y		
Sulfide by SM45 Analytes	00-S-F-00	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
Sulfide, total		<5.00	1000	960	96	1000	1000	100	4	75-120	20		

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 / MSD Recoveries

Project Name: N. Eunice



Work Order #: 456437 **Project ID: 073018** Lab Batch ID: 905964 QC- Sample ID: 456425-001 S Matrix: Water Batch #: 1 Date Prepared: 01/25/2013 Analyst: WRU Date Analyzed: 01/25/2013 **Reporting Units:** mg/L MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY Parent Spiked Sample Duplicate Control Spiked Spiked Control Chromium, Hexavalent by SW 7196A Sample Spiked Sample Spike Result Sample Spike Dup. RPD Limits Limits Flag Result Added [C] %R Added Result [F] %R %R %RPD % Analytes [A] [**B**] [D] [E] [G] Hexavalent Chromium < 0.0100 0.200 0.242 121 0.200 0.240 120 1 80-120 20 Х Lab Batch ID: 905617 QC- Sample ID: 456395-003 S Batch #: 1 Matrix: Water Analyst: RKO Date Prepared: 01/26/2013 Date Analyzed: 01/26/2013 Reporting Units: mg/L MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY Parent Spiked Sample Duplicate Spiked Control Control Spiked **Inorganic Anions by EPA 300/300.1** Sample Spike Result Spiked Sample RPD Limits Sample Spike Dup. Limits Flag Result Added [C] %R Added Result [F] %R %R %RPD % Analytes [A] [**B**] [D] [E] [G] Bromide < 0.10010.0 10.9 109 10.0 10.3 103 6 80-120 20 Х 105 79 Sulfate 65.3 50.0 106 81 50.0 1 80-120 20 Lab Batch ID: 905617 Matrix: Water QC- Sample ID: 456408-001 S Batch #: 1 Date Prepared: 01/26/2013 RKO Analyst: Date Analyzed: 01/26/2013 Reporting Units: mg/L MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY Parent Spiked Sample Spiked Duplicate Spiked Control Control Inorganic Anions by EPA 300/300.1 Sample Spike Result Sample Spike Spiked Sample Dup. RPD Limits Limits Flag Result Added Added [C] %R Result [F] %R % %R %RPD Analytes [A] [**B**] [D] [E] [G] Bromide 2.64 20.0 23.8 106 20.0 24.2 108 2 80-120 20 Sulfate 413 100 518 105 100 522 109 1 80-120 20

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



Form 3 - MS / MSD Recoveries

Project Name: N. Eunice



Work Order #: 456437						Project I	D: 073018	3			
Lab Batch ID: 906137 Date Analyzed: 02/01/2013	QC- Sample ID Date Prepared	456437 02/01/2	-001 S 013	Ba An	tch #: alyst:	1 Matri MKO	x: Water				
Reporting Units: mg/L		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
RCRA Metals by SW846-6010B	Parent Sample Result	Spike	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	[A]	[B]	[-]	[D]	[E]	[-]	[G]		,		
Chromium	<0.0100	1.00	0.939	94	1.00	0.942	94	0	75-125	20	
Iron	<0.200	5.00	4.47	89	5.00	4.48	90	0	75-125	20	
Sodium	153	25.0	162	36	25.0	163	40	1	75-125	20	X
Lab Batch ID: 905858	QC- Sample ID:	456437	-006 S	Ba	tch #:	1 Matri	x: Water				
Date Analyzed: 01/30/2013	Date Prepared	: 01/30/2	013	An	alyst:	RKO					
Reporting Units: mg/L		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
TOC by SM 5310C	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	[A]	[B]		[D]	[E]		[G]				
Total Organic Carbon	4.05	15.0	18.1	94	15.0	18.2	94	1	90-110	20	

Matrix Spike Percent Recovery $[D] = 100^{\circ}(C-A)/B$ Relative Percent Difference RPD = $200^{\circ}|(C-F)/(C+F)|$ 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: N. Eunice

Work Order #: 456437

Lab Batch #: 905964			Project I	D: 073018	
Date Analyzed: 01/25/2013 16:50 Date Prep	ared: 01/25/2013	3 Anal	lyst:WRU		
QC- Sample ID: 456425-001 D Bat	ch #: 1	Mat	rix: Water		
Reporting Units: mg/L	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Chromium, Hexavalent by SW 7196A	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		[B]			
Hexavalent Chromium	< 0.0100	< 0.0100	0	20	U
Lab Batch #: 905840					
Date Analyzed: 01/30/2013 16:32 Date Prep	ared: 01/30/2013	3 Anal	lyst:DHE		
QC- Sample ID: 456455-012 D Bat	ch #: 1	Mat	rix: Groun	d Water	
Reporting Units: mg/L	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Sulfide by SM4500-S-F-00 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag

Spike Relative Difference RPD 200 * | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes. BRL - Below Reporting Limit

Laboratories 🔳	9701 Harry Hines B	lvd., Dallas, T>	(75220) Dh	214-902	-0300				842 (Cantwo	ell, Co	pus Ch	risti, T	TX 784	08 :	61-8	8403	71	5	Serial	#:	30	19	<u> </u>	- F	² age	<u> </u>	of (
CIRA - M	idad			132 -	-686-	0086)			y .		a	*	4	54	24	13	7)						
Project Name-Location		y done at XI	ENCO		Proje	ct ID D) 8	3	T/ It i	\T: is typ	ASAI ically	⊃ 5h 5-7	12h Norkir	ig Da	48h ays fo	3d or leve	(D) I I I A	7d nd 1(10d)+ W	21d orkin	Stan g day	dard 's for	TAT i level	s proje III and	ect spe IV da	ecific ata.	,		
Proj. State: TX, AL, FL, G	A, LA, MS, NC,	Proj. Mana	ger (PM)	owi	ech							9-	(ŝ		2		_		-						R	emar	rks
NJ, PA, SC, TN, UT Other	IPM and	puijr	u •0	13471	Fax	<u></u>	<u>.</u>	−Į§	ther:			Z	pdd	DO 1	10,0	20	3			18			3	₩	(ed)			— —
WWSNUL	iveckiC	Craw	or ld (c	m	432-	686-	0186	_s	0			N S	4	ę		5	$\mathbb{E}^{\mathbb{E}}$	ğ		20			ğ	est	prov			
Invoice to Accounting	Inc. Invoice w	ith Final Rep	port 🗖 ir	nvoice n	nust ha	ve a F	P.O.	٦Ş	CALL			cide 0	xpdd	He	្រុ	sľ	$\left \right $	<u>S</u>					2	High	e-ap			
Bill to:					<u> </u>		<u></u>	– Š	5		표	Pesti		est.		3	20	2		846				S	p D	aded		
Quote/Pricing:		P.O. No:		· · · ·	0	all for	r P.O.	٥	xpdc		2	בן <u>ה</u>	3TA	S.		<u>,</u>	\sim	ŝ		1			<u>م</u>	Kg	nda	s ne		
Reg Program: UST DR	Y-CLEAN Land	Fill Waste-	Disp NF	PDES	DW T	RRP		Ē	Α¢		≧	s s	P 2	N N	•		31	20		3			Т с	l Bu	oly a	eda		-
QAPP Per-Contract CLI	P AGCEE NAV	Y DOE D	OD USA	ACE OT	HER:				dx-1	:	H	de ⊓	13F	S S		ร่	2	$\frac{1}{8}$	20				48h	Ň	lapi	orov		
Special DLs (GW DW C	APP MDLs RL	s See Lab F	M Inclu	ded C	ali PM)		TBE	App		AA AA	SN&/	르	Ő	•	٥	3	۲ ار	5	S			Ş		s wil	9-apl		
] <u>-</u>	N		0	N N	₹	<u>s</u>			ŝ		کار	A			₩.	′ ►	arge	e pre		
Sampler Name Just	nnikun	Signatu	re ffri	AV	by .	1 1 1 1	ni Linear		L L		Ю	PCB U	R	Meta	-	2	2	40	1 5				42	e		0s ar		
Sample ID	Sampling Date	Time	Depth ft' In" m Matrix	Composite Grab	# Containers	Container Size	Container Type	VCOs: Full-List	VCO'S PP TC	PAHS SIM	TX-1005 DRO	OC Pesticides	Metals: RCRA-8	SPLP - TCLP (EDB / DBCP	- M- - M- - M- - M- - M- - M- - M- - M-		くちょうし		D:50/10			TATASAP 5h	Addn: PAH abov	Hold Samples ((Sample Clean-u		
mw96012513	1-25-13	950			5											X /	KV	$\langle \chi \rangle$	X	X								
Tw 030012513		1150			6											11		1	5	1								
10 4 89 SA 01 2513		1250			6											Π				T						sta i t	1	
D. 128012513		1320			6												\square			T								1
MW1009A012513		1400			6												\square			T								
1002012513		~			6							1.e				Ш			\mathbf{H}	\mathbf{H}				- 				
metal QCI/MW9		-																		\parallel				1	$ \uparrow $			\top
1.78 metal 007		1370			1														\mathbf{H}	\mathbf{H}								÷ 1 *
10 -0 1 - 0 0 - 0																							+				<u>. 28</u> 1977	
								-																1				
Reinauished by (Initia	Is and Sian)	Date &	Time	Rein	l l quishe	d to (Initials,	and S	Sign)			ate &	Time	e	Total	Cont	ainer	s per	COC.	3-	/ : / :		Cooler	Temr		30		ينيا <u>ني.</u>
1) In the	/	1-25-13	1600	2)	Ú	1	UN,	M	Ň	1	12	5/13	16	00	Other	wise	agree	ed on	writin	ig. Re	ports	are th	e Intell	ectual	Prop	perty o	f XEN(20
3)				4)							1	1			until p	aid. S	Samp	les w	ill be	held 3	80 day	/s afte	r final r	eport	is e-n	nailed	unles	3
5)		1 .		6)		-		4, 8,	1.11		- ÷				nereb	y reqi	Jeste	a. Ru	sn Ch	arges	and (Jollect	ion Fee	∋s are	pre-a	pprov	ed if ne	eded

Cont. Size: 4oz (4), 8oz (8), 32oz (32), 40ml VOA (40), 1L (1), 500ml (5), Tedlar Bag (B), Various (V), Other _ Cont. Type: Glass Amb (A), Glass Clear (C), Plastic (P), Various (V) Committed to Excellence in Service and Quality Matrix: Air (A), Product (P), Solid (S), Water (W), Liquid (L)

www.xenco.com

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

Page 14 of 15



XENCO Laboratories



Prelogin/Nonconformance Report- Sample Log-In

Client: Conestoga Rovers & AssociatesAcceptable Temperature Range: 0 - 6 degCDate/ Time Received: 01/25/2013 04:00:00 PMAir and Metal samples Acceptable Range: AmbientWork Order #: 456437Temperature Measuring device used :

S	ample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?		18	
#2 *Shipping container in good condition?		Yes	
#3 *Samples received on ice?		Yes	
#4 *Custody Seals intact on shipping contain	er/ cooler?	Yes	
#5 Custody Seals intact on sample bottles?		Yes	
#6 *Custody Seals Signed and dated?		Yes	
#7 *Chain of Custody present?		Yes	
#8 Sample instructions complete on Chain o	f Custody?	Yes	
#9 Any missing/extra samples?		No	
#10 Chain of Custody signed when relinquis	hed/ received?	Yes	
#11 Chain of Custody agrees with sample la	bel(s)?	Yes	
#12 Container label(s) legible and intact?		Yes	
#13 Sample matrix/ properties agree with Ch	ain 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 to	est(s)?	Yes	
#18 All samples received within hold time?		Yes	
#19 Subcontract of sample(s)?		Yes	
#20 VOC samples have zero headspace (les	s than 1/4 inch bubble)?	Yes	
#21 <2 for all samples preserved with HNO3	,HCL, H2SO4?	Yes	
#22 >10 for all samples preserved with NaAs	O2+NaOH, ZnAc+NaOH?	Yes	

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Date: _____

Checklist reviewed by:

Date: _____

Analytical Report 462048

for

Conestoga Rovers & Associates

Project Manager: Jennifer Devonshire

Midland Odessa Discounted Fee Schedule

073018

08-MAY-13

Collected By: Client





12600 West I-20 East Odessa, Texas 79765

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

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

> Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900) Xenco-Lakeland: Florida (E84098) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX) Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757) Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



08-MAY-13



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

Reference: XENCO Report No(s): 462048 Midland Odessa Discounted Fee Schedule Project Address: N. Eunice

Jennifer Devonshire:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 462048. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 462048 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully.

Kelsey Brooks Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994. Certified and approved by numerous States and Agencies. A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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



Sample Cross Reference 462048



Conestoga Rovers & Associates, Midland, TX

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
IW028042613	W	04-26-13 10:55		462048-001
MW-0089SA042613	W	04-26-13 11:05		462048-002
MW009A042613	W	04-26-13 12:45		462048-003
IW030042613	W	04-26-13 12:15		462048-004
DUP1042613	W	04-26-13 00:00		462048-005



CASE NARRATIVE

Client Name: Conestoga Rovers & Associates Project Name: Midland Odessa Discounted Fee Schedule



Project ID:	073018
Work Order Number(s):	462048

Report Date: 08-MAY-13 Date Received: 04/26/2013

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-912347 Chromium, Hexavalent by SW 7196A SW7196A

Batch 912347, Hexavalent Chromium recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 462048-002, -001, -005, -003, -004.

The Laboratory Control Sample for Hexavalent Chromium is within laboratory Control Limits

Batch: LBA-912600 Total Metals by EPA 6010B SW6010B

Batch 912600, Sodium recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Samples affected are: 462048-002, -001, -005, -003, -004. The Laboratory Control Sample for Sodium is within laboratory Control Limits

Batch: LBA-912872 Inorganic Anions by EPA 300/300.1 E300

Batch 912872, Bromide, Ortho-Phosphate recovered below QC limits in the Matrix Spike. Samples affected are: 462048-002, -001, -005, -003, -004. The Laboratory Control Sample for Ortho-Phosphate, Bromide is within laboratory Control Limits





Conestoga Rovers & Associates, Midland, TX

Sample Id:	IW028042613		Matri	ix: Water	Sa	Sample Depth:				
Lab Sample Id:	462048-001	D	ate Collected: 04	.26.13 10.55	Da	te Received	l: 04.26	.13 14.45		
Analytical Method:	Inorganic Anions b	y EPA 300/300	.1	%	Moist:	Pr	ep Meth	nod: E300P		
Date Anal:	04.26.13 15.01	Analyst:	AMB	Date Prep: 04.	26.13 15.01		T	ech: AMB		
Anal seq:	912872			Prep seq: 637	7540					
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Bromide		24959-67-9	7.82	4.00	0.120	mg/L		20		
Ortho-Phosphate		14265-44-2	ND	4.00	0.720	mg/L	U	20		
Sulfate		14808-79-8	1460	40.0	0.920	mg/L		20		
Analytical Method:	Nitrogen Ammonia	by SM4500-N	нзс	%	Moist:	Pr	ep Meth	nod: SM4500NH_]		
Date Anal:	04.29.13 17.22	Analyst:	DEP	Date Prep: 04.	26.13 16.30		T	ech: DEP		
Anal seq:	912513			Prep seq: 637	7314					
Subcontractor:	SUB: E871002									
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Nitrogen, Ammonia	a (as N)	7664-41-7	ND	0.100	0.0110	mg/L	U	1		
Analytical Method:	TOC by SM 5310C			%	Moist:	Pr	ep Metł	nod:		
Date Anal:	04.29.13 13.57	Analyst:	MAB	Date Prep:			Т	ech: MAB		
Anal seq:	912472	5		Prep sea:						
Subcontractor:	SUB: E871002									
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Total Organic Car	rbon	7440-44-0	5.32	1.00	0.500	mg/L		1		
Analytical Method:	Total Metals by EP	A 6010B		%	Moist:	Pr	ep Metł	nod: 3010A		
Date Anal:	04.29.13 15.28	Analyst:	МКО	Date Prep: 04.	29.13 11.30		Te	ech: MKO		
Anal seq:	912600	•		Prep seq: 637	7271					
Subcontractor:	SUB: E871002									
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Chromium		7440-47-3	0.848	0.0100	0.00355	mg/L		1		
Iron		7439-89-6	ND	0.200	0.0188	mg/L	U	1		
Sodium		7440-23-5	569	0.500	0.0541	mg/L		1		





Conestoga Rovers & Associates, Midland, TX

Sample Id:	IW028042613			Sample Depth:					
Lab Sample Id:	462048-001	Da	ate Collected: 04	.26.13 10.55		Date Received	l: 04.26	.13 14.45	
Analytical Method:	Dissolved Metals	per ICP by SW84	l6 6010B	%]	Moist:	Prep Method: 3010A			
Date Anal:	04.29.13 17.32	Analyst:	МКО	Date Prep: 04.2	29.13 11.30	0 Tech: M			
Anal seq:	912600			Prep seq: 637	271				
Subcontractor:	SUB: E871002								
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor	
Iron		7439-89-6	ND	0.200	0.0188	mg/L	U	1	
Analytical Method:	Sulfide by SM450	00-S-F-00		%]	Moist:	Pr	ep Metł	nod:	
Date Anal:	04.29.13 15.49	Analyst:	DHE	Date Prep:			Т	ech: DHE	
Anal seq:	912467			Prep seq:					
Subcontractor:	SUB: E871002								
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor	
Sulfide, total		18496-25-8	ND	5.00	1.00	mg/L	U	1	
Analytical Method:	Chromium, Hexa	valent by SW 719	96A	%]	Moist:	Pr	ep Metł	nod:	
Date Anal:	04.26.13 15.25	Analyst: WRU		Date Pren:			Т	ech: WRU	
Anal seq:	912347			Prep seq:					
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor	
	•	19540 20 0	. =						





Conestoga Rovers & Associates, Midland, TX

Sample Id:	MW-0089SA042613	3	Matri	x: Water	Sa	Sample Depth:				
Lab Sample Id:	462048-002	D	ate Collected: 04	.26.13 11.05	Dat	te Received	l: 04.26	.13 14.45		
Analytical Method:	Inorganic Anions b	y EPA 300/300	.1	%	Moist:	Pr	ep Metł	nod: E300P		
Date Anal:	04.27.13 09.43	Analyst:	AMB	Date Prep: 04.	27.13 09.43		Te	ech: AMB		
Anal seq:	912872			Prep seq: 637	7540					
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Bromide		24959-67-9	8.70	4.00	0.120	mg/L		20		
Ortho-Phosphate		14265-44-2	ND	4.00	0.720	mg/L	U	20		
Sunate		14008-79-8	1500	40.0	0.920	Ing/L		20		
Analytical Method:	Nitrogen Ammonia	by SM4500-N	H3C	%	Moist:	Pr	ep Metł	nod: SM4500NH_]		
Date Anal:	04.29.13 17.25	Analyst:	DEP	Date Prep: 04.	26.13 16.30		T	ech: DEP		
Anal seq:	912513			Prep seq: 637	7314					
Subcontractor:	SUB: E871002									
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Nitrogen, Ammonia	a (as N)	7664-41-7	ND	0.100	0.0110	mg/L	U	1		
Analytical Method:	TOC by SM 5310C			%	Moist:	Pr	ep Metł	iod:		
Date Anal:	04.29.13 16.00	Analyst:	MAB	Date Prep:			Т	ech: MAB		
Anal seq:	912472	, see a second		Prep seq:						
Subcontractor:	SUB: E871002			1 . 1						
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Total Organic Car	rbon	7440-44-0	6.75	1.00	0.500	mg/L		1		
Analytical Method:	Total Metals by EP	A 6010B		%	Moist:	Pr	ep Metł	nod: 3010A		
Date Anal:	04.29.13 15.46	Analyst:	МКО	Date Prep: 04	29.13 11.30		T	ech: MKO		
Anal seq:	912600	,		Prep seq: 637	7271					
Subcontractor:	SUB: E871002			1 1						
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Chromium		7440-47-3	1.23	0.0100	0.00355	mg/L		1		
Iron		7439-89-6	ND	0.200	0.0188	mg/L	U	1		
Sodium		7440-23-5	491	0.500	0.0541	mg/L		1		





Conestoga Rovers & Associates, Midland, TX

Sample Id:	MW-0089SA0426	513	Matri	x: Water	S	ample Depth	n:		
Lab Sample Id:	462048-002	D	ate Collected: 04	.26.13 11.05	D	ate Received	l: 04.26	5.13 14.45	
Analytical Method:	Dissolved Metals	per ICP by SW84	46 6010B	%	Moist:	Prep Method: 3010A			
Date Anal:	04.29.13 17.38	Analyst:	МКО	Date Prep: 04.2	29.13 11.30		ech: MKO		
Anal seq:	912600			Prep seq: 637	271				
Subcontractor:	SUB: E871002								
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor	
Iron		7439-89-6	ND	0.200	0.0188	mg/L	U	1	
Analytical Method:	Sulfide by SM450	00-S-F-00		%	Moist:	Pr	ep Metl	nod:	
Date Anal:	04.29.13 15.49	Analyst:	DHE	Date Prep:			Т	ech: DHE	
Anal seq:	912467			Prep seq:					
Subcontractor:	SUB: E871002								
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor	
Sulfide, total		18496-25-8	ND	5.00	1.00	mg/L	U	1	
Analytical Method:	Chromium, Hexa	valent by SW 719	96A	%	Moist:	Pr	rep Metl	nod:	
Date Anal:	04.26.13 15.25	Analyst:	WRU	Date Prep:			Т	ech: WRU	
Anal seq:	912347			Prep seq:					
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor	
Hexavalent Chron	nium	18540-29-9	1.15	0.100	0.0500	mg/L		10	
					0.0200	3			





Conestoga Rovers & Associates, Midland, TX

Sample Id:	MW009A042613		Matri	ix: Water	Sa	Sample Depth:				
Lab Sample Id:	462048-003	D	ate Collected: 04	.26.13 12.45	Da	te Received	l: 04.26	.13 14.45		
Analytical Method:	Inorganic Anions b	y EPA 300/300	.1	%	Moist:	Pr	ep Meth	nod: E300P		
Date Anal:	04.27.13 10.05	Analyst:	AMB	Date Prep: 04.	27.13 10.05		T	ech: AMB		
Anal seq:	912872			Prep seq: 637	7540					
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Bromide		24959-67-9	5.05	2.00	0.0600	mg/L		10		
Ortho-Phosphate Sulfate		14265-44-2 14808-79-8	ND 808	2.00 20.0	0.360 0.460	mg/L mg/L	U	10 10		
Analytical Method:	Nitrogen Ammonia	by SM4500-N	H3C	%	Moist:	Pr	ep Meth	nod: SM4500NH_]		
Date Anal:	04.29.13 17.27	Analyst:	DEP	Date Prep: 04.	26.13 16.30		Т	ech: DEP		
Anal seq:	912513	2		Prep seq: 637	7314					
Subcontractor:	SUB: E871002									
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Nitrogen, Ammonia	a (as N)	7664-41-7	ND	0.100	0.0110	mg/L	U	1		
Analytical Method:	TOC by SM 5310C			%	Moist:	Pr	ep Meth	nod:		
Date Anal:	04.29.13 16.17	Analyst:	MAB	Date Prep:			Te	ech: MAB		
Anal seq:	912472			Prep seq:						
Subcontractor:	SUB: E871002									
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Total Organic Car	rbon	7440-44-0	3.13	1.00	0.500	mg/L		1		
Analytical Method:	Total Metals by EP	PA 6010B		%	Moist:	Pr	ep Metł	nod: 3010A		
Date Anal:	04.29.13 17.15	Analyst:	МКО	Date Prep: 04.	29.13 11.30		T	ech: MKO		
Anal seq:	912600			Prep seq: 637	7271					
Subcontractor:	SUB: E871002									
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Chromium		7440-47-3	0.683	0.0100	0.00355	mg/L	_	1		
Iron Sodium		7439-89-6	ND	0.200	0.0188	mg/L	U	1		
Soaium		1440-23-3	282	5.00	0.541	mg/L		10		





Conestoga Rovers & Associates, Midland, TX

Sample Id:	MW009A042613	Matrix: Water				Sample Depth:					
Lab Sample Id:	462048-003	Da	ate Collected: 04	.26.13 12.45]	Date Received	l: 04.26	.13 14.45			
Analytical Method:	Dissolved Metals p	er ICP by SW84	6 6010B	%	Moist:	Prep Method: 3010A					
Date Anal:	04.29.13 17.44	Analyst:	МКО	Date Prep: 04.2	29.13 11.30	0 Tech: M					
Anal seq:	912600			Prep seq: 637	271						
Subcontractor:	SUB: E871002										
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor			
Iron		7439-89-6	ND	0.200	0.0188	mg/L	U	1			
Analytical Method:	Sulfide by SM4500)-S-F-00		%	Moist:	Pr	ep Metł	nod:			
Date Anal:	04.29.13 15.49	Analyst:	DHE	Date Prep:			Т	ech: DHE			
Anal seq:	912467			Prep seq:							
Subcontractor:	SUB: E871002										
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor			
Sulfide, total		18496-25-8	ND	5.00	1.00	mg/L	U	1			
Analytical Method:	Chromium, Hexav	alent by SW 719	6A	%	Moist:	Pr	ep Metł	nod:			
Date Anal:	04.26.13 15.25	Analyst:	WRU	Date Prep:		Tech: WR		ech: WRU			
Anal seq:	912347			Prep seq:							
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor			
Hovevalent Chrom		18540 20.0	0.(57	0.0100		···· - /T		1			





Conestoga Rovers & Associates, Midland, TX

Sample Id:	IW030042613		Matri	x: Water	Sample Depth:					
Lab Sample Id:	462048-004	D	ate Collected: 04	.26.13 12.15	Da	te Received	1: 04.26	.13 14.45		
Analytical Method:	Inorganic Anions b	y EPA 300/300	.1	%	Moist:	Pr	ep Meth	nod: E300P		
Date Anal:	04.27.13 10.27	Analyst:	AMB	Date Prep: 04.	27.13 10.27		Te	ech: AMB		
Anal seq:	912872			Prep seq: 637	7540					
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Bromide		24959-67-9	112	2.00	0.0600	mg/L		10		
Ortho-Phosphate		14265-44-2	ND	2.00	0.360	mg/L	U	10		
Sulfate		14808-79-8	ND	20.0	0.460	mg/L	U	10		
Analytical Method:	Nitrogen Ammonia	by SM4500-NH3C		%	Moist:	Pr	nod: SM4500NH_]			
Date Anal:	04.29.13 17.28	Analyst:	DEP	Date Prep: 04.	26.13 16.30		T	ech: DEP		
Anal seq:	912513			Prep seq: 637	7314					
Subcontractor:	SUB: E871002									
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Nitrogen, Ammon	ia (as N)	7664-41-7	3.01	0.100	0.0110	mg/L		1		
Analytical Method:	TOC by SM 5310C			%	Moist:	Pr	ep Metł	nod:		
Date Anal:	04.29.13 15.21	Analyst:	MAB	Date Prep:			Т	ech: MAB		
Anal seq:	912472	,		Prep sea:						
Subcontractor:	SUB: E871002			1 . 1						
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Total Organic Car	rbon	7440-44-0	816	50.0	25.0	mg/L		50		
Analytical Method:	Total Metals by EP	A 6010B		%	Moist:	Pr	ep Metł	nod: 3010A		
Date Anal:	04.29.13 17.20	Analyst:	МКО	Date Prep: 04.	29.13 11.30		Te	ech: MKO		
Anal seq:	912600			Prep seq: 637	7271					
Subcontractor:	SUB: E871002									
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Chromium		7440-47-3	ND	0.0100	0.00355	mg/L	U	1		
Iron		7439-89-6	54.2	0.200	0.0188	mg/L		1		
Sodium	Iron 7439-89-60 54,2 Sodium 7440-23-5 131				0.0541	mg/L		1		





Conestoga Rovers & Associates, Midland, TX

Sample Id:	IW030042613		Matri		Sample Depth:					
Lab Sample Id:	462048-004	Da	ate Collected: 04	.26.13 12.15		Date Received	l: 04.26	.13 14.45		
Analytical Method:	Dissolved Metals	per ICP by SW84	46 6010B	%	Moist:	Pr	ep Meth	nod: 3010A		
Date Anal:	04.29.13 17.50	Analyst:	МКО	Date Prep: 04.2	04.29.13 11.30			ech: MKO		
Anal seq:	912600			Prep seq: 637	271					
Subcontractor:	SUB: E871002									
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Iron		7439-89-6	5.29	0.200	0.0188	mg/L		1		
Analytical Method:	Sulfide by SM45(00-S-F-00		%	Moist:	Pr	ep Metł	nod:		
Date Anal:	04.29.13 15.49	Analyst:	DHE	Date Prep:			Te	ech: DHE		
Anal seq:	912467			Prep seq:						
Subcontractor:	SUB: E871002									
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Sulfide, total		18496-25-8	ND	5.00	1.00	mg/L	U	1		
Analytical Method:	Chromium, Hexa	valent by SW 719	96A	%	Moist:	Pr	ep Metł	nod:		
Date Anal:	04.26.13 15.25	Analyst:	WRU	Date Prep:			Т	ech: WRU		
Anal seq:	912347			Prep seq:						
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Hexavalent Chromi	um	18540-29-9	ND	0.0100	0.00500	mg/L	U	1		
	um	18540-29-9	ND	0.0100	0.00500	IIIg/L	U	1		





Conestoga Rovers & Associates, Midland, TX

Sample Id:	DUP1042613		Matri	ix: Water	Sample Depth:					
Lab Sample Id:	462048-005	D	ate Collected: 04	.26.13 00.00	Da	te Received	l: 04.26	5.13 14.45		
Analytical Method:	Inorganic Anions b	y EPA 300/300	.1	%	Moist:	Pr	ep Metl	nod: E300P		
Date Anal:	04.27.13 10.48	Analyst:	AMB	Date Prep: 04.	27.13 10.48		Т	ech: AMB		
Anal seq:	912872			Prep seq: 637	7540					
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Bromide		24959-67-9	5.45	2.00	0.0600	mg/L		10		
Ortho-Phosphate		14265-44-2	ND	2.00	0.360	mg/L	U	10		
Sulfate		14808-79-8	1500	20.0	0.460	mg/L		10		
Analytical Method:	Nitrogen Ammonia	by SM4500-N	y SM4500-NH3C		Moist:	Pr	ep Metl	nod: SM4500NH_]		
Date Anal:	04.29.13 17.29	Analyst:	DEP	Date Prep: 04.	26.13 16.30		Т	ech: DEP		
Anal seq:	912513			Prep seq: 637						
Subcontractor:	SUB: E871002									
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Nitrogen, Ammonia	a (as N)	7664-41-7	ND	0.100	0.0110	mg/L	U	1		
Analytical Method:	TOC by SM 5310C			%	Moist:	Pr	ep Metł	nod:		
Date Anal:	04.29.13 15.33	Analyst:	MAB	Date Prep:			Т	ech: MAB		
Anal seq:	912472	•		Prep seq:						
Subcontractor:	SUB: E871002									
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Total Organic Car	bon	7440-44-0	5.92	1.00	0.500	mg/L		1		
Analytical Method:	Total Metals by EP	A 6010B		%	Moist:	Pr	ep Metł	nod: 3010A		
Date Anal:	04.29.13 17.26	Analyst:	МКО	Date Prep: 04.	29.13 11.30		Т	ech: MKO		
Anal seq:	912600			Prep seq: 637	7271					
Subcontractor:	SUB: E871002									
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Chromium		7440-47-3	0.786	0.0100	0.00355	mg/L		1		
Iron		7439-89-6	ND	0.200	0.0188	mg/L	U	1		
Sodium		534	0.500	0.0541	mg/L		1			





Conestoga Rovers & Associates, Midland, TX

Sample Id:	DUP1042613		Matri	x: Water	Sai	mple Depth	ı:	
Lab Sample Id:	462048-005	D	ate Collected: 04	.26.13 00.00	Dat	e Received	l: 04.26	5.13 14.45
Analytical Method:	Dissolved Metals	per ICP by SW84	46 6010B	%]	Moist:	Pr	ep Metl	nod: 3010A
Date Anal:	04.29.13 17.56	Analyst:	МКО	Date Prep: 04.2	29.13 11.30		T	ech: MKO
Anal seq:	912600			Prep seq: 637	271			
Subcontractor:	SUB: E871002			1 1				
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor
Iron		7439-89-6	ND	0.200	0.0188	mg/L	U	1
Analytical Method:	Sulfide by SM45(00-S-F-00		%]	Moist:	Pr	ep Metl	nod:
Date Anal:	04.29.13 15.49	Analyst:	DHE	Date Pren:			T	ech: DHE
Anal seq:	912467			Pren sea				
Subcontractor:	SUB· F871002			i tep seq.				
Subcontractor.	505. 2071002							
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor
Sulfide, total		18496-25-8	ND	5.00	1.00	mg/L	U	1
Analytical Method:	Chromium, Hexa	walent by SW 719	96A	%]	Moist:	Pr	ep Metl	nod:
Date Anal·	04 26 13 15 25	Analyst.	WRI	Data Prop			T	ech: WRU
Anal seq:	912347	1		Prep seq:				
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor
Hexavalent Chron	nium	18540-29-9	0.757	0.100	0.0500	mg/L		10
Sample Id:	637271-1-BLK		Matri	x: Water	Sa	mple Depth	1:	
Lab Sample Id:	637271-1-BLK	D	ate Collected:		Dat	e Received	1:	
Analytical Method:	Total Metals by I	EPA 6010B		%]	Moist:	Pr	ep Meth	nod: 3010A
Date Anal:	04.29.13 15.10	Analyst:	МКО	Date Prep: 04.2	29.13 11.30		Te	ech: MKO
Anal seq:	912600			Prep seq: 637	271			
Subcontractor:	SUB: E871002			_				
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor
Chromium		7440-47-3	ND	0.0100	0.00355	mg/L	U	1
Iron		7439-89-6	ND	0.200	0.0188	mg/L	U	1
Sodium		7440-23-5	ND	0.500	0.0541	mg/L	U	1





Conestoga Rovers & Associates, Midland, TX

Sample Id:	637314-1-BLK		Matri	x: Water	Water Sample Depth:						
Lab Sample Id:	637314-1-BLK	D	ate Collected:		Dat	te Received	l:				
Analytical Method:	Nitrogen Ammon	ia by SM4500-NI	H3C	%	Moist:	Pr	ep Metl	nod: SM4500NH_]			
Date Anal:	04.29.13 17.19	Analyst:	DEP	Date Prep: 04.	26.13 16.30		Т	ech: DEP			
Anal seq:	912513			Prep seq: 637	7314						
Subcontractor:	SUB: E871002										
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor			
Nitrogen, Ammonia	ı (as N)	7664-41-7	ND	0.100	0.0110	mg/L	U	1			
Sample Id:	637540-1-BLK		Matri	x: Water	Sa	mple Depth	.:				
Lab Sample Id:	637540-1-BLK	D	ate Collected:		Dat	te Received	l:				
Analytical Method:	Inorganic Anions	by EPA 300/300.	1	%	Moist:	Pr	ep Metł	nod: E300P			
Date Anal:	04.26.13 13.56	Analyst:	AMB	Date Prep: 04.	26.13 13.56		Т	ech: AMB			
Anal seq:	912872			Prep seq: 637	7540						
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor			
Bromide		24959-67-9	ND	0.200	0.00600	mg/L	U	1			
Ortho-Phosphate		14265-44-2	ND	0.200	0.0360	mg/L	U	1			
Sulfate		14808-79-8	ND	2.00	0.0460	mg/L	U	1			
Sample Id:	912347-1-BLK		Matri	x: Water	Sai	mple Depth	:				
Lab Sample Id:	912347-1-BLK	D	ate Collected:		Dat	te Received	l:				
Analytical Method:	Chromium, Hexa	valent by SW 719	96A	%	Moist:	Pr	nod:				
Date Anal:	04.26.13 11.20	Analyst:	WRU	Date Prep:			Т	ech: WRU			
Anal seq:	912347			Prep seq:							
Parameter	Parameter CAS Number Result		MQL	SDL	Units	Flag	Dil Factor				
Hexavalent Chromi	um	18540-29-9	ND	0.0100	0.00500	mg/L	U	1			





Conestoga Rovers & Associates, Midland, TX

Sample Id:	912467-1-BLK		Matri	x: Water	Sample Depth:							
Lab Sample Id:	912467-1-BLK	D	ate Collected:		Date Received:							
Analytical Method:	Sulfide by SM4500-	S-F-00			% Moist:	Prep Method:						
Date Anal:	04.29.13 15.49	Analyst:	DHE	Date Prep:			Т	ech: DHE				
Anal seq:	912467			Prep seq:								
Subcontractor:	SUB: E871002											
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor				
Sulfide, total		18496-25-8	ND	5.00	1.00	mg/L	U	1				
Sample Id:	912472-1-BLK		Matri	x: Water	San	Sample Depth:						
Lab Sample Id:	912472-1-BLK	D	ate Collected:		Date	Date Received:						
Analytical Method:	TOC by SM 5310C				% Moist:	Pr	ep Metl	nod:				
Date Anal:	04.29.13 13.33	Analyst:	MAB	Date Prep:			Т	ech: MAB				
Anal seq:	912472			Prep seq:								
Subcontractor:	SUB: E871002											
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor				
Total Organic Carb	on	7440-44-0	ND	1.00	0.500	mg/L	U	1				



Flagging Criteria

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

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

Certified and approved by numerous States and Agencies.

LOQ Limit of Quantitation

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

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

4143 Greenbriar Dr, Stafford, TX 77477 9701 Harry Hines Blvd, Dallas, TX 75220 5332 Blackberry Drive, San Antonio TX 78238 2505 North Falkenburg Rd, Tampa, FL 33619 12600 West I-20 East, Odessa, TX 79765 6017 Financial Drive, Norcross, GA 30071 3725 E. Atlanta Ave, Phoenix, AZ 85040
 Phone
 Fax

 (281) 240-4200
 (281) 240-4280

 (214) 902 0300
 (214) 351-9139

 (210) 509-3334
 (210) 509-3335

 (813) 620-2000
 (813) 620-2033

 (432) 563-1800
 (432) 563-1713

 (770) 449-8800
 (770) 449-5477

 (602) 437-0330
 (210) 509-3335

Final 1.000





Project Name: Midland Odessa Discounted Fee Schedule

Work Order #: 462048		Project ID:							
Lab Batch #: 912347	Sample: 912347-	-1-BKS	Matrix:	Water					
Date Analyzed:04/26/2013Date P	repared: 04/26/2	013	Analyst:	WRU					
Reporting Units: mg/L	Batch #: 1	BLANK /	BLANK SPI	KE REC	COVERY S	STUDY			
Chromium, Hexavalent by SW 7196A	Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags			
Analytes			[C]	[D]					
Hexavalent Chromium	< 0.0100	0.0250	0.0204	82	80-120				
Lab Batch #: 912513	Sample: 637314	-1-BKS	Matrix:	Water					
Date Analyzed:04/29/2013Date P	repared: 04/26/20	013	Analyst:	DEP					
Reporting Units: mg/L	Batch #: 1	BLANK /	BLANK /BLANK SPIKE RECOVERY STUDY						
					1				
Nitrogen Ammonia by SM4500-NH3C Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags			
Nitrogen Ammonia by SM4500-NH3C Analytes Nitrogen, Ammonia (as N)	Blank Result [A]	Spike Added [B] 2.50	Blank Spike Result [C] 2.53	Blank Spike %R [D] 101	Control Limits %R 80-120	Flags			
Nitrogen Ammonia by SM4500-NH3C Analytes Nitrogen, Ammonia (as N) Lab Batch #: 912472 Date Analyzed: 04/29/2013 Date P	Blank Result [A] <0.100 Sample: 912472- repared: 04/29/20	Spike Added [B] 2.50 -1-BKS 013	Blank Spike Result [C] 2.53 Matrix: Analyst:	Blank Spike %R [D] 101 Water MAB	Control Limits %R 80-120	Flags			
Nitrogen Ammonia by SM4500-NH3C Analytes Nitrogen, Ammonia (as N) Lab Batch #: 912472 Date Analyzed: 04/29/2013 Date P Reporting Units: mg/L	Blank Result [A] <0.100 Sample: 912472- repared: 04/29/20 Batch #: 1	Spike Added [B] 2.50 -1-BKS 013 BLANK /F	Blank Spike Result [C] 2.53 Matrix: Analyst: BLANK SPI	Blank Spike %R [D] 101 Water MAB KE REC	Control Limits %R 80-120	Flags			
Nitrogen Ammonia by SM4500-NH3C Analytes Nitrogen, Ammonia (as N) Lab Batch #: 912472 Date Analyzed: 04/29/2013 Date P Reporting Units: mg/L TOC by SM 5310C Analytes	Blank Result [A] <0.100 Sample: 912472- repared: 04/29/20 Batch #: 1 Blank Result [A]	Spike Added [B] 2.50 -1-BKS 013 BLANK /F Spike Added [B]	Blank Spike Result [C] 2.53 Matrix: Analyst: BLANK SPI Blank Spike Result [C]	Blank Spike %R [D] 101 Water MAB KE REC Blank Spike %R [D]	Control Limits %R 80-120 COVERY S Control Limits %R	Flags STUDY Flags			

Blank Spike Recovery [D] = 100*[C]/[B] All results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit



Project Name: Midland Odessa Discounted Fee Schedule

Work Order #: 462048	Project ID: 073018										
Analyst: AMB	D	ate Prepai	red: 04/26/201	13			Date A	nalyzed: (04/26/2013		
Lab Batch ID: 912872Same	ple: 637540-1-BKS	Bate	h #: 1					Matrix: V	Water		
Units: mg/L		BLAN	K /BLANK S	SPIKE / I	BLANK S	PIKE DUPI	LICATE 1	RECOVI	ERY STUD	Y	
Inorganic Anions by EPA 3	00/300.1 Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[C]	נטן	[E]	Kesuit [F]	[6]				
Bromide	<0.200	5.00	4.23	85	5.00	4.21	84	0	80-120	20	
Ortho-Phosphate	<0.200	5.00	5.13	103	5.00	4.68	94	9	80-120	20	
Sulfate	<2.00	25.0	24.2	97	25.0	23.4	94	3	80-120	20	
Analyst: DHE	D	ate Prepai	red: 04/29/20	13			Date A	nalyzed: (04/29/2013		
Lab Batch ID: 912467 Sam	ple: 912467-1-BKS	Bate	h #: 1					Matrix: \	Water		
Units: mg/L		BLAN	K /BLANK S	SPIKE / F	BLANK S	PIKE DUPI	LICATE I	RECOVE	ERY STUD	Y	
Sulfide by SM4500-S-F	-00 Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Sulfide, total	<5.00	1000	960	96	1000	960	96	0	75-120	20	

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





Project Name: Midland Odessa Discounted Fee Schedule

Work Order #: 462048 Analyst: MKO	Date Prepared: 04/29/2013						Project ID: 073018 Date Analyzed: 04/29/2013						
Lab Batch ID: 912600	Sample: 637271-1-B	KS	S Batch #: 1				Matrix: Water						
Units: mg/L		BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Total Metals by E Analytes	PA 6010B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	
Chromium		<0.0100	1.00	1.10	110	1.00	1.10	110	0	80-120	20		
Iron		< 0.200	5.00	5.28	106	5.00	5.18	104	2	80-120	20		
Sodium		< 0.500	25.0	27.4	110	25.0	27.2	109	1	80-120	20		

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: Midland Odessa Discounted Fee Schedule

Work Order #: 462048								
Lab Batch #: 912872			Pro	oject ID:	073018			
Date Analyzed: 04/26/2013	Date Prepared: 04/2	26/2013	А	nalyst: A	MB			
QC- Sample ID: 462048-001 S	Batch #: 1		Matrix: Water					
Reporting Units: mg/L	MATI	RIX / MA	TRIX SPIKE	DY				
Inorganic Anions by EPA 300	Parent Sample Result	Spike Added	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag		
Analytes	[23]							
Bromide	7.82	100	89.7	82	80-120			
Ortho-Phosphate	<4.00	100	111	111	80-120			
Sulfate	1460	500	2000	108	80-120			
Lab Batch #: 912872								
Date Analyzed: 04/27/2013	Date Prepared: 04/2	27/2013	Α	nalyst: A	MB			
QC- Sample ID: 462056-002 S	Batch #: 1		Ν	Aatrix: V	Vater			
Reporting Units: mg/L	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		
Bromide	1.38	25.0	20.7	77	80-120	X		
Ortho-Phosphate	<1.00	25.0	<1.00	0	80-120	X		
Sulfate	14.1	125	148	107	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: Midland Odessa Discounted Fee Schedule

Work Order #: 462048	Project ID: 073018										
Lab Batch ID: 912347 Date Analyzed: 04/26/2013	QC- Sample ID: Date Prepared:	461962 04/26/2	-001 S 013	Ba An	tch #: alyst:	1 Matri WRU	x: Water				
Reporting Units: mg/L		Μ	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
Chromium, Hexavalent by SW 7196A	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	[A]	[B]		[D]	[E]		[G]				
Hexavalent Chromium	<0.0100	0.200	0.248	124	0.200	0.249	125	0	80-120	20	X
Lab Batch ID: 912513 Date Analyzed: 04/29/2013	QC- Sample ID: Date Prepared:	462048 04/26/2	-001 S 013	Ba An	tch #: alyst:	1 Matri DEP	x: Water				
Reporting Units: mg/L	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
Nitrogen Ammonia by SM4500-NH3C 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 %R	Control Limits %RPD	Flag
Nitrogen Ammonia by SM4500-NH3C Analytes Nitrogen, Ammonia (as N)	Parent Sample Result [A] <0.100	Spike Added [B] 2.50	Spiked Sample Result [C] 2.56	Spiked Sample %R [D] 102	Spike Added [E] 2.50	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G] 104	RPD %	Control Limits %R 80-120	Control Limits %RPD	Flag
Nitrogen Ammonia by SM4500-NH3C Analytes Nitrogen, Ammonia (as N) Lab Batch ID: 912472 Date Analyzed: 04/29/2013	Parent Sample Result [A] <0.100 QC- Sample ID: Date Prepared:	Spike Added [B] 2.50 462048 04/29/2	Spiked Sample Result [C] 2.56 -001 S 013	Spiked Sample %R [D] 102 Ba An	Spike Added [E] 2.50 atch #: alyst:	Duplicate Spiked Sample Result [F] 2.60 1 Matri MAB	Spiked Dup. %R [G] 104 x: Water	RPD %	Control Limits %R 80-120	Control Limits %RPD 20	Flag
Nitrogen Ammonia by SM4500-NH3C Analytes Nitrogen, Ammonia (as N) Lab Batch ID: 912472 Date Analyzed: 04/29/2013 Reporting Units: mg/L	Parent Sample Result [A] <0.100 QC- Sample ID: Date Prepared:	Spike Added [B] 2.50 462048 04/29/2 M	Spiked Sample Result [C] 2.56 -001 S 013 (ATRIX SPIK)	Spiked Sample %R [D] 102 Ba An E / MAT	Spike Added [E] 2.50 atch #: alyst: RIX SPI	Duplicate Spiked Sample Result [F] 2.60 1 Matri MAB KE DUPLICA	Spiked Dup. %R [G] 104 x: Water TE REC	RPD %	Control Limits %R 80-120 STUDY	Control Limits %RPD	Flag
Nitrogen Ammonia by SM4500-NH3C Analytes Nitrogen, Ammonia (as N) Lab Batch ID: 912472 Date Analyzed: 04/29/2013 Reporting Units: mg/L TOC by SM 5310C Analytes	Parent Sample Result [A] <0.100 QC- Sample ID: Date Prepared: Parent Sample Result [A]	Spike Added [B] 2.50 462048 04/29/2 M Spike Added [B]	Spiked Sample Result [C] 2.56 -001 S 013 (ATRIX SPIK) Spiked Sample Result [C]	Spiked Sample %R [D] 102 Ba An E / MAT Spiked Sample %R [D]	Spike Added [E] 2.50 atch #: alyst: RIX SPI Spike Added [E]	Duplicate Spiked Sample Result [F] 2.60 1 Matri MAB KE DUPLICA Spiked Sample Result [F]	Spiked Dup. %R [G] 104 x: Water TE REC Spiked Dup. %R [G]	RPD % 2 OVERY %	Control Limits %R 80-120 STUDY Control Limits %R	Control Limits %RPD 20 Control Limits %RPD	Flag

Matrix Spike Percent Recovery $[D] = 100^{\circ}(C-A)/B$ Relative Percent Difference RPD = $200^{\circ}|(C-F)/(C+F)|$ 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



Form 3 - MS / MSD Recoveries



Project Name: Midland Odessa Discounted Fee Schedule

Work Order #: 462048	Project ID: 073018										
Lab Batch ID: 912600 Q Date Analyzed: 04/29/2013 1	C- Sample ID: Date Prepared:	462048- 04/29/20	-001 S 013	Ba An	tch #: alyst:	1 Matri MKO	x: Water				
Reporting Units: mg/L	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
Total Metals by EPA 6010B 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 %R	Control Limits %RPD	Flag
Chromium	0.949	1.00	1.90	05	1.00	1.71	0 <i>C</i>	5	80.120	20	
Chronnum	0.848	1.00	1.80	93	1.00	1./1	80	3	80-120	20	
Iron	<0.200	5.00	4.98	100	5.00	4.68	94	6	80-120	20	
Sodium	569	25.0	569	0	25.0	556	0	2	75-125	20	Х

Matrix Spike Percent Recovery $[D] = 100^{\circ}(C-A)/B$ Relative Percent Difference RPD = $200^{\circ}|(C-F)/(C+F)|$ 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



Work Order #: 462048



Project Name: Midland Odessa Discounted Fee Schedule

Lab Batch #: 912347				Project I	D: 073018	
Date Analyzed: 04/26/2013 11:20	Date Prepar	ed: 04/26/2013	3 Anal	yst: WRU		
QC- Sample ID: 461962-001 D	Batch	#: 1	Mat	rix: Water		
Reporting Units: mg/L		SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Chromium, Hexavalent by SW 7	196A	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte			[B]			
Hexavalent Chromium		< 0.0100	< 0.0100	0	20	U
Lab Batch #: 912467						
Date Analyzed: 04/29/2013 15:49	Date Prepar	ed: 04/29/2013	3 Anal	yst:DHE		
QC- Sample ID: 461995-017 D	Batch	# : 1	Mat	rix: Water		
Reporting Units: mg/L		SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Sulfide by SM4500-S-F-00 Analyte		Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Sulfide, total		< 5.00	< 5.00	0	20	U

Spike Relative Difference RPD 200 * | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes. BRL - Below Reporting Limit

ompany-City CRA-mid	and			Phon	13	7-t	,86-c	086		Lab (Only	/:			4	le	201	48	ζ												
oject Name-Location ハ Eいい	Previous!	y done at XE	ENCO			Pro D	ject II 7301	8		TAT: It is ty	AS pica/	SAP 5 ally 5-	h 12 7 Wo	h 24 rking	4h 4 g Day	18h 's for	3d 5 level	d/7 II an	d 1(d 10-)d ⊦Wo	21d orkin	Stan g day	dard /s foi	TAT	⊺isp el III ≀	and l	t spe V dat	cific. ta.			<u>.</u>
oj. State: TX, AL, FL, GA	, LA, MS, NC,	Proj. Mana Mike	iger (F W	°M) เวก	eod	vier	hi			S			ÄLL		СХ Д	(Bs)	S									21d		÷ ⊊	Re	mar	rks
mail Results to	PM and			C	132	Fax -68	No:	2		VOA Other			dx-2 C	S	(1 App	ę.	4	010					0		tis	10d	nest Hit	provec			
voice to □Accounting [Il to:] Inc. Invoice w	ith Final Rep	oort [] Invo	oice r	nust	have a	P.O.		HON F	Ż		P App	esticide	Appd>	est. He	5.5					201	150	ŝ	K-1 Co	7d	S Fig	e pre-al	eded		
uote/Pricing:		P.O. No:				Ľ	Call f	or P.C) . 1	OX VC	7-4			а а	3TAL	с v		841				2	V		18	ŭ	, Kg	ndal	s nee		
g Program: UST DRY	-CLEAN Land-	Fill Waste-	Disp	NPD	ES	DW	TRRP			HC		A	걸	° °	р 2	S S	13		2 12			2		S S	ž	Г м	В Ш	ply a	eqa		
APP Per-Contract CLP	AGCEE NAV	Y DOE DO	D U	SACI	EOT	HER	•			Щ,	Į	Hd	Ψ	icide	b 13F	S S	5	۲Ľ) Ŵe			28	200			48	Š	il ap	prov		
ecial DLs (GW DW QA	APP MDLs RL	s See Lab P	M In	clude	d C	ali i	PM)		1	TBE	Drint.	W	BN8	Herb	4 P	Nov Nov					م ل	3		¢	5	EF	mg/L	es w	re-at		
					_f		1			M-X=		۲ ۲	ž	Bs	SRA-	als					S.S.		15	14	10	र राज्य		sharg	are p		
mpler Name Just	Nikan	Signatur	e /	2	1		-	8		BTE	71,5%	50	st	D	ж М	(Met					3 6	2	2	150			e e	Surc	sdn		
			ľ			ers	Size	ŢYp	ves	List T	<u> </u>	≊ S		des	RA-8	<u>م</u>		5	$\left \right\rangle$	لح ا	V	13	ŝ	1	40	5	Labo	oles (ean-		
Sample ID	Sampling Date	Time	Depth ť In" m	Matrix Composit:	Grab	¢ Containe	Container	Container	reservati	VOA: Full-		TX-1005	SVOCs: F	OC Pestic	Metals: RC	SPLP - TC	Add A	1141101		JINS .	700-	Uissi()	Amer	A A	いた	TATASAP	Addn: PAH	Hold Sam	Sample CI		
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	4-26-3	1055		2	X	\$					1-			-		Ť	X	オ		X	1	权	X	X	抔						
210-895A04263	1	1105		1	1	1						· .					1	1	1	1	1	1	1	1	T						
M20092047613		1245														Τ	П	T		$\Box$											
2003004263		1215			П														0	R		$\mathbf{J}$			Π	Y					
101042613	- V	-		V	V	V					Ţ						V	7	$\gamma$	1	ſΨ	<u>1</u> V	10	ÍV	P	1				· · ·	
	· · · · · ·																														
																								<u> </u>							
					Τ																										
Relinquished by (Initials	and Sign)	Date &	Time		Rej	nquis	hed to	(Initia	alejar	nd Sigr	1)		Date	&	Time	T	otal_C	ontai	ners	per (	COC:	<u>2</u>	25		Co	oler 7	Temp:	4	5	<u>C.</u>	
105 per	··· · · · · · · · · · · · · · · · · ·	4-26131	445	- 12	Y	10	m	U	M	NH	N	_ 4/	<u>əcq</u> ı	5	y ju	<b>€</b> ]c	therw	ise a id S	greec amole	l on	writin II he	g. Re held :	eporte 30 de	s are ivs a	the li ffer fi	ntelle inal re	ctual l	Prope is e-n	erty of nailed	XENC	ЭС s
				4	)		<u></u>		<u>.</u> 								erehv	reniu	anpie hatee	Rus	sh Ch	arces	s and	Colle	ection	Fee	sarei	nre-a	DDIOVE	d if ne	ec

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

Page 25 of 33

Final 1.000

Committed to Excellence in Service and Quality

www.xenco.com

**ANALYSIS REQUEST & CHAIN OF CUSTODY RECORD** 

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



### **XENCO Laboratories**



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

Client: Conestoga Rovers & Associates Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Date/ Time Received: 04/26/2013 02:45:00 PM **Temperature Measuring device used :** Work Order #: 462048

Sample Receip	ot Checklist Comment	ts
#1 *Temperature of cooler(s)?	1.5	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	
#4 *Custody Seals intact on shipping container/ cooler?	Yes	
#5 Custody Seals intact on sample bottles?	Yes	
#6 *Custody Seals Signed and dated?	Yes	
#7 *Chain of Custody present?	Yes	
#8 Sample instructions complete on Chain of Custody?	Yes	
#9 Any missing/extra samples?	No	
#10 Chain of Custody signed when relinquished/ received?	Yes	
#11 Chain of Custody agrees with sample label(s)?	Yes	
#12 Container label(s) legible and intact?	Yes	
#13 Sample matrix/ properties agree with Chain of Custody?	Yes	
#14 Samples in proper container/ bottle?	Yes	
#15 Samples properly preserved?	Yes	
#16 Sample container(s) intact?	Yes	
#17 Sufficient sample amount for indicated test(s)?	Yes	
#18 All samples received within hold time?	Yes	
#19 Subcontract of sample(s)?	Yes	
#20 VOC samples have zero headspace (less than 1/4 inch b	bubble)? Yes	
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes	
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnA	Ac+NaOH? Yes	

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

Analyst:

PH Device/Lot#:

 Checklist completed by:
 Mussian for the set of the se

### **Quantitative Bacterial Report**

Heterotrophic Plate Count

(Hygeia SOP-09)



Client No.: 30311 Kelsey Brooks Xenco Laboratories 4141 Greenbriar Stafford, TX 77477			Proje C F <i>F</i>	oject No.: ct Name: Collected: Received: Analyzed:	04/26/ 04/27/ 04/27/	/2013 /2013 /2013 1/	1:30 AM							
Hygeia Sample ID		10	)1126			1(	)1127 G	C X		1(	01128			
Client Sample ID		4620	048-001			462	048-002			462	048-003			
Location		IW02	8042613			MW89	5A042613			MW00	9A042613			
Sample Type		W	/ater			V	Vater			V	Vater			
Sample Amount		1	mL			1	l mL				1 mL			
Medium / Method Dilution Factor(s)		F 1:1	R2A		R2A 1:1					R2A 1:1				
Bacteria Isolated:	Raw Count	Dilution	CFU / 100 mL	. %	Raw Count	Dilution	CFU / 100 mL		Raw Count	Dilution	CFU / 100 ml	L %		
Anaerobic heterotrophic bacteria	0	1	<100		4	1	400	100	1	1	100	100		
Total CFU Comments		<100	/ 100 mL			400	/ 100 mL			100	/ 100 mL			

### **Quantitative Bacterial Report**

Heterotrophic Plate Count

(Hygeia SOP-09)

ſ



Client No.: 30311			Pi	oject No.:					
Kelsey Brooks			Proje	ect Name:					
Xenco Laboratories				Collected	04/26/	2013			
4141 Greenbriar				Received	04/27/	2013			
Stafford, TX 77477				Analyzed	04/27/	2013 11	:30 AM		
Hygeia Sample ID		10	)1129			10	)1130		
Client Sample ID		4620	048-004			4620	048-005		
Location		IA03	0042613			DUP	1042613		
Sample Type		v	Vater			v	/ater		
Sample Amount		1	l mL			0.	1 mL		
Medium / Method			R2A				R2A		
Dilution Factor(s)		1:1				1:1			
Bacteria Isolated:	Raw Count	Dilution	CFU / 100 ml	%	Raw Count	Dilution	CFU / 100 mL	%	
Anaerobic heterotrophic bacteria	1	1	100	100	480	1	480,000	100	
				+					
					-				
				+					
				+					
			ļ						
Total CFU		100	/ 100 mL			480,00	0 / 100 mL		
Comments									
					L				1

### **Quantitative Bacterial Report**

Heterotrophic Plate Count

(Hygeia SOP-09)



Client No.: 30311	Project No.:
Kelsey Brooks	Project Name:
Xenco Laboratories	Collected: 04/26/2013
4141 Greenbriar	Received: 04/27/2013
Stafford, TX 77477	Analyzed: 04/27/2013 11:30 AM

Analyst 'anessa Garcia

Lab Director

**Crystal Enloe** 

#### Thank you for using Hygeia Laboratories Inc. We strive to provide superior quality and service.

This report may not be reproduced except in full, and only with the written approval of this laboratory. Please contact Hygeia regarding any questions about these results, this report, or the analytical methods employed.

Data in this report are reliable within two significant figures. Sample results are not corrected based on results of blanks. The minimum reporting limit (MRL) is calculated as the lowest dilution tested/volume. Estimates of uncertainty are available upon request. CFU = colony forming units. CFU/unit is calculated as raw count*dilution/sample amount. Total CFU/unit is the sum of individual CFUs/unit and is considered <MRL if no colonies are present.

Confidentiality Notice:

The information contained herein is confidential and privileged, intended for the exclusive use of the individual or entity named above. If the reader of this document is not the intended recipient, or the employee or agent responsible for delivering it to the intended recipient, you are hereby notified that any dissemination, distribution or copying of the document(s) is strictly prohibited. If you have received this document in error, please immediately notify us by telephone to arrange for its return.

Guidelines for Interpretation:

Interpretation of the data and information within this document is left to the company, consultant, and/or persons who conducted the fieldwork. Bacteria have been associated with a variety of health effects and sensitivity varies from person to person. Contact the CDC (www.cdc.gov) for information regarding potential health risks related to exposure in air or on surfaces and the USEPA (www.epa.gov) for existing established standards including regulated water quality standards.

Liability Notice:

Hygeia Laboratories Inc. and its personnel shall not be held liable for any misinformation provided to us by the client regarding these samples or for any misuse or interpretation of information supplied by us. Liability shall extend to providing replicate analyses only. This report relates only to samples submitted and analyzed.

Revision 0 04/29/2013 ce

#### Laboratory Data Package Cover Page Attachment A

Laboratory Number: 462048

This Data package consists of : Laboratory Batch No(s) 912600 ■ This signature page, the laboratory review checklist, and the following reportable data: R1 Field chain-of-custody documentation; R2 Sample identification cross-reference; R3 Test reports (analytical data sheets) for each environmental sample that includes: Items consistent with NELAC 5 a) b) dilution factors, c) preparation methods, d) cleanup methods, and

> if required for the project, tentatively identified compounds (TICs). e)

Midland Odessa Discounted

R4 Surrogate Recovery data including:

Project Name:

- Calculated recovery (%R), and a)
- The laboratory's surrogate QC limits. b)
- R5 Test reports/summary forms for blank samples;
  - Test reports/summary forms for laboratory control samples (LCSs) including: R6
    - LCS spiking amounts, a)
    - Calculated %R for each analyte, and b)
    - The laboratory's LCS QC limits. c)
- Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including: R7
  - Samples associated with the MS/MSD clearly identified, a)
  - MS/MSD spiking amounts, b)
  - Concentration of each MS/MSD analyte measured in the parent and spiked samples, c)
  - Calculated %Rs and relative percent differences (RPDs) and d)
  - e) The laboratory's MS/MSD QC limits

🗖 R8 Laboratory anaytical duplicate (if applicable) recovery and precision:

- the amount of analyte measured in the duplicate, a)
- b) the calculated RPD, and
- c) the laboratory's QC limits for analytical duplicates.
- | R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix;

**R**10 Other problems or anomalies.

Exception Report for every "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

**Release Statement:** I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted

in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies, observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Check, if applicable: [] This laboratory meets an exception under 30 TAC 25.6 and was last inspection by [] TCEQ or [] on (enter date of last inspection). Any findings affecting the data in this laboratory data package are noted in the

Exception

Reports herein. The offical signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true. 1

#### Alejandro Montoya

Name (Printed)

Signature

4 Lyondro

**Odessa Laboratory Directo** Official Title (printed)

05/07/13 Date

Att	ach	ment A (cont'd) : Laboratory Review Cl	necklist: Reportable Data						
Labo	rator	y Name: XENCO Laboratories	LRC Date : 05/07/13					_	
Proje	ect Na	ame: Midland Odessa Discounted Fee Schedule	Laboratory Job Number: 462048					_	
Revi	ewer	Name: AMB	Batch Number(s): 912600					_	
#1	A ²	Description	Yes	No	NA ³	⁴ ER#	₽ ⁵		
R1	OI	Chain-of-Custody (COC)							
		Did samples meet the laboratory's standard conditions of s	ample acceptability upon receipt?	X				_	
		Were all departures from standard conditions described in	an exception report?			X			
R2	OI	Sample and Quality Control (OC) Identification	<b>x x</b>						
		Are all field sample ID numbers cross-referenced to the la	boratory ID numbers?	X				-	
		Are all laboratory ID numbers cross-referenced to the corr	esponding QC data?	X					
R3	OI	Test Renorts							
		Were all samples prepared and analyzed within holding ti	nes?	X				_	
		Other than those results <mol, all="" other="" raw="" td="" values<="" were=""><td>bracketed by calibration standards?</td><td>X</td><td></td><td></td><td></td><td></td></mol,>	bracketed by calibration standards?	X					
		Were calculations checked by a peer or supervisor?		X					
		Were all analyte identifications checked by a peer or super	visor?	X					
		Were sample detection limits reported for all analytes not	detected?	X					
		Were all results for soil and sediment samples reported on	a dry weight basis?			X			
		Were % moisture (or solids) reported for all soil and sedin	nent samples?			Х			
		Were bulk soil/solid samples for volatile analysis extracted	d with methanol per SW846 Method 5035?	X					
		If required for the project, were TICs reported?				Х		_	
R4	0	Surrogate Recovery Data			-				
		Were surrogates added prior to extraction?				Х		_	
		Were surrogate percent recoveries in all samples within th	e laboratory QC limits?			X			
R5	OI	Test Reports/Summary Forms for Blank Sample	8						
		Were appropriate type(s) of blanks analyzed?	**	X					
		Were blanks analyzed at the appropriate frequency ?		X					
		Were method blanks taken through the entire analytical pr	ocedure, including preparation and, if applicable, cleanup	X					
		procedures ? Were Blank Concentrations <mql?< td=""><td></td><td>X</td><td></td><td></td><td></td><td></td></mql?<>		X					
R6	OI	Laboratory Control Samples (LCS):							
		Were all COCs included in the LCS?		X				_	
		Was each LCS taken through the entire analytical procedu	re, including prep and cleanup steps?	X					
		Were LCSs analyzed at the required frequency?		X					
		Were LCS (and LCSD, if applicable) %Rs within the labo	ratory QC limits?	X					
		Does the detectability check sample data document the lab calculate the SDI $s^2$	oratory's capability to detect the COCs at the MDL used to	X					
		Was the LCSD RPD within the QC limits?		X				-	
R7	OI	Matrix Spike (MS) and Matrix Spike Duplicate (	MSD) data						
		Were the project/method specified analytes included in the	MS and MSD?	X					
		Were MS/MSD analyzed at the appropriate frequency?		X					
		Were MS (and MSD, if applicable) %Rs within the labora	tory QC limits?	X			1	_	
		Were MS/MSD RPDs within the laboratory QC limits?		X					
R8	OI	Analytical Duplicate Data							
		Were appropriate analytical duplicates analyzed for each r	natrix?			Х			
		Were analytical duplicates analyzed at the appropriate free	juency?			Х			
		Were RPDs or relative standard deviations within the labo	ratory QC limits?			Х			
R9	OI	Method Quantitation Limits (MQLs)							
		Are the MQLs for each method analyte included in the lab	oratory data package?	X					
		Do the MQLs correspond to the concentration of the lower	st non-zero calibration standard?	X					
L		Are unadjusted MQLs and DCSs included in the laborator	y data package?	X					
R10	OI	Other Problems/Anomalies							
		Are all known problems/anomalies/special conditions note	ed in this LRC and ER?	Х					
		Is the laboratory NELAC-accredited under the Texas Laboratory data package?	oratory Accreditation Program for the analytes, matrices and	X				_	
		Was applicable and available technology used to lower the	SDL to minimize the matrix interference effects on the	X					
L		sample results?							
Laboratory Name:         XENO Calaboratories         Description         Second Calaboratories         Description         Second Calaboratories         Second Calaboratories           Project Nume:         Add Calaboratories         Eact Numbers):         '0'200         Second Calaboratories	Att	ach	ment A (cont'd) : Laboratory Review Cl	necklist: Reportable Data					
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------	----------------	--------------------------------------------------------------	-----------------------------------------------------------------------------------	-----	----	-----------------	---	------------------
Projectware:         Midland Outcoas Discounted File Stehulu         Laboratory Job Number:         40200           Review:         AMB         Bach Number(s):         912000           St         01         Initial Calibration (ICAL)         Vo         No	Labo	orator	y Name: XENCO Laboratories	LRC Date : 05/07/13					
Review Hame:       AMB       Batch Number(s):       912000         4 ¹ A ² Description       Yes       No	Proje	ect Na	me: Midland Odessa Discounted Fee Schedule	Laboratory Job Number: 462048					
Image: Probability of the second state second state second state second state the second state seco	Revi	ewer	Name: AMB	Batch Number(s): 912600					
S1       OI       Initial Calibration (ICAL)       No	#1	A ²	Description		Yes	No	NA ³	4	ER# ⁵
Normal Control (Control)         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X         X <td><u>S1</u></td> <td>OI</td> <td>Initial Calibration (ICAL)</td> <td></td> <td></td> <td></td> <td>1111</td> <td></td> <td></td>	<u>S1</u>	OI	Initial Calibration (ICAL)				1111		
refrrefr $\lambda$ <th< td=""><td></td><td></td><td>Were response factors and/or relative response factors for</td><td>each analyte within OC limite?</td><td>v</td><td></td><td></td><td></td><td></td></th<>			Were response factors and/or relative response factors for	each analyte within OC limite?	v				
Map Procession and Controlmed in the method used for all analytes?         X         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I <thi<< td=""><td></td><td></td><td>Were percent RSDs or correlation coefficient criteria met</td><td></td><td></td><td></td><td></td><td></td><td></td></thi<<>			Were percent RSDs or correlation coefficient criteria met						
Were all points generated between the lowest and the highest standard used to calculate the curve?         X         I         I         I           Are ICAL data available for all instruments used?         X         X         X         I         I           Has the initial calibration curve been verified using an appropriate second source standard?         X         I         I         I           S2         OI         Initial and Continuing Calibration Verified (requency)?         X         I         I         I           Was the CCV analyzed at the method-required QC limits?         X         I         I         I         I           Was the appropriate compound for the method used for tuning?         X         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I <td></td> <td></td> <td>Was the number of standards recommended in the method</td> <td>used for all analytes?</td> <td>X</td> <td></td> <td></td> <td></td> <td></td>			Was the number of standards recommended in the method	used for all analytes?	X				
Are ICAL data available for all instruments used?       X       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I			Were all points generated between the lowest and the high	est standard used to calculate the curve?	X				
Has the initial calibration curve been verified using an appropriate second source standard?       X       Image: Constraint of the initial calibration curve been verified using an appropriate second source standard?       X       Image: Constraint of the initial calibration curve been verified frequency?       X       Image: Constraint of the initial calibration curve verified frequency?       X       Image: Constraint of the initial calibration curve verified for each analyte within the method-required QC limits?       X       Image: Constraint of the initial calibration curve verified for each analyte within the method-required QC limits?       X       Image: Constraint of the initial calibration curve verified for each analyte within the method-required QC limits?       X       Image: Constraint of the initial calibration curve verified for each analyte within the method-required QC limits?       X       Image: Constraint of the initial calibration curve verified for each analyte within the method-required QC limits?       X       Image: Constraint of the initial calibration curve verified for each analyte within the method-required QC limits?       X       Image: Constraint of the initial calibration curve verified for each analyte within the method-required QC limits?       X       Image: Constraint of the initial calibration curve verified for each analyte constraint on the inorpanic curve verified for each analyte constraint on the inorpanic curve verified for each analyte constraint on the inorpanic curve verified for each analyte constraint on the inorpanic curve verified for each analyte constraint on the inorpanic curve verified Constraint on the inorpanic curve verified for each analyte constraint on the inorpanic curverified for each analyte constraint on the inorpanicurve			Are ICAL data available for all instruments used?		X				
S2       0.1       Initial and Continuing Calibration Verification (ICCV and CCV) and continuing calibration blank,       Image: Continuing Calibration Verification (ICCV and CCV) and continuing calibration blank,         Was the CCV analyzed at the method-required QC limits?       X       Image: Continuing Calibration Verification (ICCV and CCV) and continuing Calibration blank,         Was the CCV canalyzed at the method-required QC limits?       X       Image: Continuing Calibration Verification (ICCV and CCV) and Continuing Calibration Verification Compound for the method sequired QC limits?       X       Image: Continuing Calibration Verification (ICCV and CCV) and Continuing Calibration Verification Compound for the method required QC limits?       X       Image: Continuing Calibration Verification (ICCV and CCV) and Continuing Calibration Verification (ICCV and CCV).         S0       O Instrum Standard (IS)       Image: Continuing Calibration Verification (ICCV and CCV).       X       Image: Continuing Calibration Verification Verificatin Verification Verificatin Verification Verification			Has the initial calibration curve been verified using an app	propriate second source standard?	X				
Was the CCV analyzed at the method-required QC limits?       X       I         Were percent differences for each analyte within the method-required QC limits?       X       I         Was the absolute value of the analyte within the method-required QC limits?       X       I         Was the absolute value of the analyte concentration in the inorganic CCB -MDL?       X       I       I         Was the absolute value of the method used for tuning?       X       I       X       I         Was the absolute value of the method-required QC limits?       X       I       X       I         Was the absolute relevant of the method-required QC limits?       X       I       I       X       I         Were ion abundance dua within the method-required QC limits?       X       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I <td< td=""><td><b>S</b>2</td><td>OI</td><td>Initial and Continuing Calibration Verification (</td><td>ICCV and CCV) and continuing calibration blank</td><td></td><td></td><td></td><td></td><td></td></td<>	<b>S</b> 2	OI	Initial and Continuing Calibration Verification (	ICCV and CCV) and continuing calibration blank					
Write percent differences for each analyte within the method-required QC limits?         X         I         I         I           Was the absolue value of the analyte concentration in the inorganic CCB <mdl?< td="">         X         I         I           S3         O         Mass Spectral Tuning         I         X         I         I           Was the absolue value of the analyte concentration in the inorganic CCB <mdl?< td="">         X         I         X         I           Was the absolue value of the method-required QC limits?         I         X         I         X         I           Vere in andmalance data within the method-required QC limits?         I         X         I         I         X         I         I         X         I         I         I         X         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I         I<td></td><td></td><td>Was the CCV analyzed at the method-required frequency?</td><td></td><td>X</td><td></td><td></td><td></td><td></td></mdl?<></mdl?<>			Was the CCV analyzed at the method-required frequency?		X				
Was the C.A. curve verified for each analyte?       X       X       X       X       X       X       X         S3       O       Mass Spectral Tuning       X       X       X       X       X         Was the appropriate compound for the method vector tuning?       X       X       X       X       X       X         Vector can abundance data within the method-required QC limits?       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X			Were percent differences for each analyte within the meth-	od-required QC limits?	X				
Image: Section of the analyte concentration in the inorgamic CCB <mdl?< td="">       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X</mdl?<>			Was the ICAL curve verified for each analyte?		X				
S3       0       Mass Spectral Tuning       Image:			Was the absolute value of the analyte concentration in the	inorganic CCB <mdl?< td=""><td>X</td><td></td><td></td><td></td><td></td></mdl?<>	X				
Note	<b>S</b> 3	0	Mass Spectral Tuning						
Wree ion abundance data within the method-required QC limits?       Image: Second			Was the appropriate compound for the method used for tu	ning?			X		
S4       0       Internal Standard (IS)       Image: Section of the section of times within the method-required QC limits?       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       <			Were ion abundance data within the method-required QC	limits?			X		
Normal Sector       Normal Sector<	<b>S</b> 4	0	Internal Standard (IS)						
S5       OI       Raw Data (NELAC 5.5.10)       Image: Second S			Were IS area counts and retention times within the method	1-required QC limits?	X				
Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?       X       I       I       I         Were data associated with manual integrations flagged on the raw data?       X       I       I         S6       O       Dual Column Confirmation       I       I       I         Did dual colume confirmation results meet the method-required QC?       I       X       I       I         S7       O       Fentatively Identified Compounds (TICs)       I       X       I       I         If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?       I       X       I       I         S8       1       Interference Check Sample (ICS) Results       I       X       I       X       I         Were percent erecoveries within method QC limits?       I       X       I       X       I       I         Were percent differences, recoveries, and the linearity within the QC limits specified in the method?       X       I       I       I         Was a MDL study performed for each reported analyte?       X       I       I       I       I       I         Vas as MDL study performance acceptable on the applicable proficiency tests or evaluation studies?       X       I       I       I       I       I	<b>S</b> 5	OI	Raw Data (NELAC 5.5.10)						
were data associated with manual integrations flagged on the raw data?XIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII			Were the raw data (for example, chromatograms, spectral	data) reviewed by an analyst?	X				
S6       O       Dual Column Confirmation       Image: Section Sectin Section Section Section Sectin Section Sectin Section			Were data associated with manual integrations flagged on	the raw data?	X				
Image: bial dual column confirmation results meet the method-required QC?Image: bial dual column confirmation results meet the method-required QC?Image: bial dual column confirmation results meet the method-required QC?Image: bial dual column confirmation results meet the method-required QC?Image: bial dual column confirmation results meet the mass spectra and TIC data subject to appropriate checks?Image: bial dual column confirmation results meet the mass spectra and TIC data subject to appropriate checks?Image: bial dual column confirmation results meet the method required QC?Image: bial dual column confirmation results meet the mass spectra and TIC data subject to appropriate checks?Image: bial dual column confirmation results meet the method required checks?Image: bial dual column confirmation results meet the method required checks?Image: bial dual column confirmation results meet the method required checks?Image: bial dual column confirmation results meet the method required checks?Image: bial dual column confirmation results meet the method required checks?Image: bial dual column confirmation results meet the method required checks?Image: bial dual column confirmation results meet the method required checks?Image: bial dual column confirmation results meet the method required checks?Image: bial dual column confirmation results meet the method required checks?Image: bial dual column confirmation results meet the method required checks?Image: bial dual column confirmation results meet the method required checks?Image: bial dual column confirmation results meet the method required checks?Image: bial dual column confirmation results meet the method required checks?Image: bial dual column confirmation results meet the method reguired checks?Image: bial dual column confirmation results meet the mean	<b>S</b> 6	0	Dual Column Confirmation						
S7       0       Fentatively Identified Compounds (TICs)       Image: Section Sectin Section Section Sectin Section Sectin Section Sectin Section Se			Did dual column confirmation results meet the method-rec	quired QC?			X		
Index of the sequence of the s	<b>S</b> 7	0	Tentatively Identified Compounds (TICs)						
S8       1       Interference Check Sample (ICS) Results       Image: Section Sectin Section Section Sectin Section Sectin Section Sectin Section Se			If TICs were requested, were the mass spectra and TIC da	ta subject to appropriate checks?			X		
Image: Norm of the procent recoveries within method QC limits?Image: Norm of the procent recoveries within method QC limits?Image: Norm of the procent differences, recoveries, and Method of Standard AdditionsImage: Norm of the procent differences, recoveries, and the linearity within the QC limits specified in the method?Image: Norm of the procent differences, recoveries, and the linearity within the QC limits specified in the method?Image: Norm of the procent differences, recoveries, and the linearity within the QC limits specified in the method?Image: Norm of the procent differences, recoveries, and the linearity within the QC limits specified in the method?Image: Norm of the procent differences, recoveries, and the linearity within the QC limits specified in the method?Image: Norm of the procent differences, recoveries, and the linearity within the QC limits specified in the method?Image: Norm of the procent differences, recoveries, and the linearity within the QC limits specified in the method?Image: Norm of the procent differences, recoveries, and the linearity within the QC limits specified in the method?Image: Norm of the procent differences, recoveries, and the linearity within the QC limits specified in the method?Image: Norm of the proceeding of the proceeding of the process specified in the method?Image: Norm of the proceeding of the procee	<b>S</b> 8	Ι	Interference Check Sample (ICS) Results						
S9       I       Serial Dilutions, Post Digestions Spikes, and Method of Standard Additions       I       I       I         Were percent differences, recoveries, and the linearity within the QC limits specified in the method?       I       X       I         S10       OI       Method Detection Limit (MDL) Studies       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       <			Were percent recoveries within method QC limits?				X		
Image: sequence of the sequence	<b>S</b> 9	Ι	Serial Dilutions, Post Digestions Spikes, and Met	hod of Standard Additions					
S10       OI       Method Detection Limit (MDL) Studies       Image: stability of the stability of th			Were percent differences, recoveries, and the linearity with	hin the QC limits specified in the method?			X		
Was a MDL study performed for each reported analyte?       X       I       I       I         Is the MDL either adjusted or supported by the analysis of DCSs?       X       I       I       I         S11       OI       Proficiency Test Reports       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I	S10	OI	Method Detection Limit (MDL) Studies						
Is the MDL either adjusted or supported by the analysis of DCSs?       X       I       I       III       III       III       III       IIII       IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII			Was a MDL study performed for each reported analyte?		X				
S11       OI       Proficiency Test Reports       Image: state			Is the MDL either adjusted or supported by the analysis of	DCSs?	X				
Image: Normal state in the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?XImage: Normal state in the applicable proficiency tests or evaluation studies?XImage: Normal state in the applicable proficiency tests or evaluation studies?XImage: Normal state in the applicable proficiency tests or evaluation studies?XImage: Normal state in the applicable proficiency tests or evaluation studies?XImage: Normal state in the applicable proficiency tests or evaluation studies?XImage: Normal state in the applicable proficiency tests or evaluation studies?XImage: Normal state in the applicable proficiency tests or evaluation studies?XImage: Normal state in the applicable proficiency tests or evaluation studies?XImage: Normal state in the applicable proficiency tests or evaluation studies?XImage: Normal state in the applicable proficiency tests or evaluation studies?XImage: Normal state is the applicable proficiency test or evaluation studies?XImage: Normal state is the applicable proficiency test or evaluation studies?XImage: Normal state is the applicable proficiency test or evaluation studies?XImage: Normal state is the applicable proficiency test or evaluation studies?XImage: Normal state is the applicable proficiency test or evaluation studies and on file?XImage: Normal state is the applicable proficiency test or evaluation studies and on file?XImage: Normal state is the applicable proficiency test or evaluation studies and on file?XImage: Normal state is the applicable proficiency test or evaluation studies and on file?XImage: Normal state is the applicable proficiency test or evaluation state proficiency test or evaluatio	S11	OI	Proficiency Test Reports						
S12       OI       Standards Documentation       Image: Similar Simi			Was the laboratory's performance acceptable on the applic	able proficiency tests or evaluation studies?	X				
Image: A real standards used in the analyses NIST-traceable or obtained from other appropriate sources?       X       Image: A real standards used in the analyses NIST-traceable or obtained from other appropriate sources?       X       Image: A real standards used in the analyses NIST-traceable or obtained from other appropriate sources?       X       Image: A real standards used in the analyses NIST-traceable or obtained from other appropriate sources?       X       Image: A real standards used in the analyses NIST-traceable or obtained from other appropriate sources?       X       Image: A real standards used for compound/analyte identification documented?       X       Image: A real standards used for compound/analyte identification documented?       X       Image: A real standards used consistent with NELAC Chapter 5?       X       Image: A real standards used for compound/analyte identification of file?       X       Image: A real standards used for generate the data documented, verified, and validated, where applicable?       X       Image: A real standards used for generate the data documented, verified, and validated, where applicable?       X       Image: A real standards used for generate field on the performed?       X       Image: A real standards used for generating Procedures (SOPs)       Image: A real standards used for generate field on the performed?       X       Image: A real standards used for generate field on the performed?       X       Image: A real standards used for generate field on the performed?       Image: A real standards used for generate field on the performed?       X       Image: A real standards used for generate field on the performed?       Image: A r	S12	OI	Standards Documentation						
S13       OI       Compound/Analyte Identification Procedures       Image: Simple Si			Are all standards used in the analyses NIST-traceable or o	btained from other appropriate sources?	X				
Image: style in the procedures for compound/analyte identification documented?       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X	S13	OI	Compound/Analyte Identification Procedures						
S14       OI       Demonstration of Analyst Competency (DOC)       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X			Are the procedures for compound/analyte identification do	ocumented?	X				
Was DOC conducted consistent with NELAC Chapter 5?       X       Image: Conducted consistent with NELAC Chapter 5?         Image: Solution of the analyst's competency up-to-date and on file?       X       Image: Conducted consistent with NELAC Chapter 5?         S15       OI       Verification/Validation Documentation for Methods (NELAC Chapter 5)       Image: Conducted constant with NELAC Chapter 5?         Are all methods used to generate the data documented, verified, and validated, where applicable?       X       Image: Conducted conduc	S14	OI	Demonstration of Analyst Competency (DOC)						
Is documentation of the analyst's competency up-to-date and on file?       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X       X			Was DOC conducted consistent with NELAC Chapter 5?		X				
S15       OI       Verification/Validation Documentation for Methods (NELAC Chapter 5)       Image: Constant of the second sec			Is documentation of the analyst's competency up-to-date a	nd on file?	X				
Are all methods used to generate the data documented, verified, and validated, where applicable?       X       V       V         S16       OI       Laboratory Standard Operating Procedures (SOPs)       V       V       V       V         Are laboratory SOPs current and on file for each method performed?       X       V       V       V       V	S15	OI	Verification/Validation Documentation for Meth	ods (NELAC Chapter 5)	]				
S16       OI       Laboratory Standard Operating Procedures (SOPs)       Image: Constant of the second se			Are all methods used to generate the data documented, ver	ified, and validated, where applicable?	X				
Are laboratory SOPs current and on file for each method performed?	S16	OI	Laboratory Standard Operating Procedures (SC	PPs)					
			Are laboratory SOPs current and on file for each method p	performed?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted to the TCEQ-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.

2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).

3. NA = Not applicable;

4. NR = Not reviewed;

5. ER# = Exception Report Identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Attachment A (cont'd): Laboratory Review	Checklist: Exception Reports							
Attachment A (cont'd):       Laboratory Review Checklist:       Exception Reports         Laboratory Name:       XENCO Laboratories       LRC Date:       05/07/13         Project Name:       Midland Odessa Discounted Fee Schedule       Laboratory Job Number:       462048         Reviewer Name:       AMB       Batch Number(s) :       912600         ER# 1       DESCRIPTION       I         1       SW6010B       Batch 912600, Sodium recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.								
Attachment A (cont'd): Laboratory Review Checklist: Exception Reports         Laboratory Name: XENCO Laboratories       LRC Date: 05/07/13         Project Name: Midland Odessa Discounted Fee Schedule       Laboratory Job Number: 462048         Reviewer Name: AMB       Batch Number(s): 912600         ER# 1       DESCRIPTION         1       SW6010B         Batch 912600, Sodium recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.         Samples affected are: 462048-002, -001, -005, -003, -004.         The Laboratory Control Sample for Sodium is within laboratory Control Limits								
Attachment A (cont'd): Laboratory Review Checklist: Exception Reports         Laboratory Name: XENCO Laboratories       LRC Date: 05/07/13         Project Name: Midland Odessa Discounted Fee Schedule       Laboratory Job Number: 462048         Reviewer Name: AMB       Batch Number(s): 912600         ER# 1       DESCRIPTION         I       SW6010B         Batch 912600, Sodium recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.         Samples affected are: 462048-002, -001, -005, -003, -004. The Laboratory Control Sample for Sodium is within laboratory Control Limits								
ER# 1 DESCRIPTION								
1       SW6010B         Batch 912600, Sodium recovered below QC limits in the Samples affected are: 462048-002, -001, -005, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -003, -0	ne Matrix Spike and Matrix Spike Duplicate. 04. aboratory Control Limits							
1 ER# = Exception Report identification number (an Exception	n Report should be completed for an item if "NR" or "No is checked on the LRC).							

ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No is checked on the LRC).

# Analytical Report 462048

for

**Conestoga Rovers & Associates** 

Project Manager: Mike Wisniowiecki

#### Midland Odessa Discounted Fee Schedule

### 073018

#### 08-MAY-13

Collected By: Client





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

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

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

> Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900) Xenco-Lakeland: Florida (E84098) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX) Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757) Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



08-MAY-13



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

Reference: XENCO Report No(s): 462048 Midland Odessa Discounted Fee Schedule Project Address: N. Eunice

#### Mike Wisniowiecki:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 462048. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 462048 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully.

Kelsey Brooks Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994. Certified and approved by numerous States and Agencies. A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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



## Sample Cross Reference 462048



### Conestoga Rovers & Associates, Midland, TX

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
IW028042613	W	04-26-13 10:55		462048-001
MW-0089SA042613	W	04-26-13 11:05		462048-002
MW009A042613	W	04-26-13 12:45		462048-003
IW030042613	W	04-26-13 12:15		462048-004
DUP1042613	W	04-26-13 00:00		462048-005



### CASE NARRATIVE

Client Name: Conestoga Rovers & Associates Project Name: Midland Odessa Discounted Fee Schedule



Project ID:	073018
Work Order Number(s):	462048

Report Date: 08-MAY-13 Date Received: 04/26/2013

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-912347 Chromium, Hexavalent by SW 7196A SW7196A

Batch 912347, Hexavalent Chromium recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 462048-002, -001, -005, -003, -004.

The Laboratory Control Sample for Hexavalent Chromium is within laboratory Control Limits

Batch: LBA-912600 Total Metals by EPA 6010B SW6010B

Batch 912600, Sodium recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Samples affected are: 462048-002, -001, -005, -003, -004. The Laboratory Control Sample for Sodium is within laboratory Control Limits

Batch: LBA-912872 Inorganic Anions by EPA 300/300.1 E300

Batch 912872, Bromide, Ortho-Phosphate recovered below QC limits in the Matrix Spike. Samples affected are: 462048-002, -001, -005, -003, -004. The Laboratory Control Sample for Ortho-Phosphate, Bromide is within laboratory Control Limits





### Conestoga Rovers & Associates, Midland, TX

Sample Id: IW028042613			Matrix: Water			mple Depth	:		
Lab Sample Id:	462048-001	D	.26.13 10.55	Date Received: 04.26.13 14.45					
Analytical Method:	Inorganic Anions b	y EPA 300/300	.1	%	Moist:	Pr	ep Meth	nod: E300P	
Date Anal:	04.26.13 15.01	Analyst:	AMB	Date Prep: 04.	26.13 15.01	Tech: AMB			
Anal seq:	912872			Prep seq: 637	7540				
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor	
Bromide		24959-67-9	7.82	4.00	0.120	mg/L		20	
Ortho-Phosphate		14265-44-2	ND	4.00	0.720	mg/L	U	20	
Sulfate		14808-79-8	1460	40.0	0.920	mg/L		20	
Analytical Method: Nitrogen Ammon		by SM4500-N	нзс	%	Moist:	Pr	ep Meth	nod: SM4500NH_]	
Date Anal:	04.29.13 17.22	Analyst:	DEP	Date Prep: 04.	26.13 16.30		T	ech: DEP	
Anal seq:	912513			Prep seq: 637314					
Subcontractor:	SUB: E871002								
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor	
Nitrogen, Ammonia	a (as N)	7664-41-7	ND	0.100	0.0110	mg/L	U	1	
Analytical Method:	TOC by SM 5310C		% Moist:			Pr	ep Metł	nod:	
Date Anal:	04.29.13 13.57	Analyst:	MAB	Date Prep:			Т	ech: MAB	
Anal seq:	912472	5		Prep sea:					
Subcontractor:	SUB: E871002								
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor	
Total Organic Car	rbon	7440-44-0	5.32	1.00	0.500	mg/L		1	
Analytical Method:	Total Metals by EP	A 6010B		%	Moist:	Pr	ep Metł	nod: 3010A	
Date Anal:	04.29.13 15.28	Analyst:	МКО	Date Prep: 04.	29.13 11.30		Te	ech: MKO	
Anal seq:	912600	•		Prep seq: 637	7271				
Subcontractor:	SUB: E871002								
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor	
Chromium		7440-47-3	0.848	0.0100	0.00355	mg/L		1	
Iron		7439-89-6	ND	0.200	0.0188	mg/L	U	1	
Sodium		7440-23-5	569	0.500	0.0541	mg/L		1	





### Conestoga Rovers & Associates, Midland, TX

Sample Id:	IW028042613	Matrix: Water				Sample Depth:			
Lab Sample Id:	462048-001	Da	ate Collected: 04	.26.13 10.55		Date Received: 04.26.13 14.45			
Analytical Method:	Dissolved Metals	per ICP by SW84	l6 6010B	% Moist:		Prep Method: 3010A			
Date Anal:	04.29.13 17.32	Analyst:	МКО	Date Prep: 04.29.13 11.30			Т	ech: MKO	
Anal seq:	912600			Prep seq: 637	271				
Subcontractor:	SUB: E871002								
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor	
Iron		7439-89-6	ND	0.200	0.0188	mg/L	U	1	
Analytical Method:	Sulfide by SM450	00-S-F-00	- <b>S-F-00</b> % Moist:			Pr	ep Metł	nod:	
Date Anal:	04.29.13 15.49	Analyst: DHE		Date Prep:			Т	ech: DHE	
Anal seq:	912467			Prep seq:					
Subcontractor:	SUB: E871002								
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor	
Sulfide, total		18496-25-8	ND	5.00	1.00	mg/L	U	1	
Analytical Method:	Chromium, Hexa	valent by SW 719	96A	% ]	Moist:	Prep Method:			
Date Anal:	04.26.13 15.25	Analyst:	WRU	Date Prep:			Т	ech: WRU	
Anal seq:	912347			Prep seq:					
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor	
Hexavalent Chromium		19540 20 0	. =						





### Conestoga Rovers & Associates, Midland, TX

Sample Id: MW-0089SA04261		3	Matrix: Water			Sample Depth:				
Lab Sample Id:	462048-002	D	ate Collected: 04	.26.13 11.05	Dat	te Received	l: 04.26	.13 14.45		
Analytical Method:	Inorganic Anions b	y EPA 300/300	.1	%	Pr	ep Metł	nod: E300P			
Date Anal:	04.27.13 09.43	Analyst:	AMB	Date Prep: 04.	27.13 09.43		Te	ech: AMB		
Anal seq:	912872			Prep seq: 637	7540					
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Bromide		24959-67-9	8.70	4.00	0.120	mg/L		20		
Ortho-Phosphate		14265-44-2	ND	4.00	0.720	mg/L	U	20		
Sunate		14008-79-8	1500	40.0	0.920	Ing/L		20		
Analytical Method: Nitrogen Ammo		by SM4500-N	H3C	%	Moist:	Prep Method: SM4500				
Date Anal:	04.29.13 17.25	Analyst:	DEP	Date Prep: 04.	26.13 16.30	Tech: DEP				
Anal seq:	912513			Prep seq: 637	7314					
Subcontractor:	SUB: E871002									
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Nitrogen, Ammonia	a (as N)	7664-41-7	ND	0.100	0.0110	mg/L	U	1		
Analytical Method:	TOC by SM 5310C			%	Moist:	Pr	ep Metł	iod:		
Date Anal:	04.29.13 16.00	Analyst:	MAB	Date Prep:			Т	ech: MAB		
Anal seq:	912472	, see a second		Prep seq:						
Subcontractor:	SUB: E871002			1 . 1						
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Total Organic Car	rbon	7440-44-0	6.75	1.00	0.500	mg/L		1		
Analytical Method:	Total Metals by EP	A 6010B		%	Moist:	Pr	ep Metł	nod: 3010A		
Date Anal:	04.29.13 15.46	Analyst:	МКО	Date Prep: 04	29.13 11.30		T	ech: MKO		
Anal seq:	912600	<b>,</b>		Prep seq: 637	7271					
Subcontractor:	SUB: E871002			1 1						
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Chromium		7440-47-3	1.23	0.0100	0.00355	mg/L		1		
Iron		7439-89-6	ND	0.200	0.0188	mg/L	U	1		
Sodium		7440-23-5	491	0.500	0.0541	mg/L		1		





### Conestoga Rovers & Associates, Midland, TX

Sample Id:	MW-0089SA0426	513	Matri	x: Water	S	ample Depth	x: Water Sample Depth:				
Lab Sample Id:	462048-002	D	Date Collected: 04.26.13 11.05			Date Received: 04.26.13 14.45					
Analytical Method:	Dissolved Metals	per ICP by SW84	46 6010B	% Moist:		Prep Method: 3010A					
Date Anal:	04.29.13 17.38	Analyst:	МКО	Date Prep: 04.2	29.13 11.30		Т	ech: MKO			
Anal seq:	912600			Prep seq: 637	271						
Subcontractor:	SUB: E871002										
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor			
Iron		7439-89-6	ND	0.200	0.0188	mg/L	U	1			
Analytical Method: Sulfide by SM450		00-S-F-00	00 % Moi			Prep Method:					
Date Anal:	04.29.13 15.49	Analyst:	DHE	Date Prep:			Т	ech: DHE			
Anal seq:	912467			Prep seq:							
Subcontractor:	SUB: E871002										
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor			
Sulfide, total		18496-25-8	ND	5.00	1.00	mg/L	U	1			
Analytical Method:	Chromium, Hexa	valent by SW 719	96A	%	Moist:	Pr	Prep Method:				
Date Anal:	04.26.13 15.25	Analyst:	WRU	Date Prep:			Т	ech: WRU			
Anal seq:	912347			Prep seq:							
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor			
Hexavalent Chromium		18540-29-9	1.15	0.100	0.0500	mg/L		10			
					0.0200	3					





### Conestoga Rovers & Associates, Midland, TX

Sample Id: MW009A042613			Matrix: Water			Sample Depth:				
Lab Sample Id:	462048-003	D	ate Collected: 04	.26.13 12.45	Da	te Received	l: 04.26	.13 14.45		
Analytical Method:	Inorganic Anions b	y EPA 300/300	.1	% Moist:		Pr	ep Meth	nod: E300P		
Date Anal:	04.27.13 10.05	Analyst:	AMB	Date Prep: 04.	27.13 10.05	Tech: AMB				
Anal seq:	912872			Prep seq: 637	7540					
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Bromide		24959-67-9	5.05	2.00	0.0600	mg/L		10		
Ortho-Phosphate Sulfate		14265-44-2 14808-79-8	ND 808	2.00 20.0	0.360 0.460	mg/L mg/L	U	10 10		
Analytical Method:	Nitrogen Ammonia	by SM4500-N	H3C	%	Moist:	Pr	ep Meth	nod: SM4500NH_]		
Date Anal:	04.29.13 17.27	Analyst:	DEP	Date Prep: 04.	26.13 16.30		Т	ech: DEP		
Anal seq:	912513	2		Prep seq: 637314						
Subcontractor:	SUB: E871002									
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Nitrogen, Ammonia	a (as N)	7664-41-7	ND	0.100	0.0110	mg/L	U	1		
Analytical Method:	TOC by SM 5310C			%	Moist:	Pr	ep Metł	nod:		
Date Anal:	04.29.13 16.17	Analyst:	MAB	Date Prep:			Т	ech: MAB		
Anal seq:	912472			Prep seq:						
Subcontractor:	SUB: E871002									
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Total Organic Car	rbon	7440-44-0	3.13	1.00	0.500	mg/L		1		
Analytical Method:	Total Metals by EP	PA 6010B		%	Moist:	Pr	ep Metł	nod: 3010A		
Date Anal:	04.29.13 17.15	Analyst:	МКО	Date Prep: 04.	29.13 11.30		T	ech: MKO		
Anal seq:	912600			Prep seq: 637	7271					
Subcontractor:	SUB: E871002									
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Chromium		7440-47-3	0.683	0.0100	0.00355	mg/L	_	1		
Iron Sodium		7439-89-6	ND	0.200	0.0188	mg/L	U	1		
Soaium		1440-23-3	282	5.00	0.541	mg/L		10		





### Conestoga Rovers & Associates, Midland, TX

Sample Id:	MW009A042613	Matrix: Water				Sample Depth:			
Lab Sample Id:	462048-003	Da	ate Collected: 04	.26.13 12.45	.26.13 12.45 E			.13 14.45	
Analytical Method:	Dissolved Metals p	er ICP by SW84	6 6010B	%	Moist:	Prep Method: 3010A			
Date Anal:	04.29.13 17.44	Analyst:	МКО	Date Prep: 04.2	29.13 11.30		Т	ech: MKO	
Anal seq:	912600			Prep seq: 637	271				
Subcontractor:	SUB: E871002								
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor	
Iron		7439-89-6	ND	0.200	0.0188	mg/L	U	1	
Analytical Method:	Sulfide by SM4500	)-S-F-00	S-F-00 % Mois			Prep Method:			
Date Anal:	04.29.13 15.49	Analyst:	DHE	Date Prep:			Т	ech: DHE	
Anal seq:	912467			Prep seq:					
Subcontractor:	SUB: E871002								
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor	
Sulfide, total		18496-25-8	ND	5.00	1.00	mg/L	U	1	
Analytical Method:	Chromium, Hexav	alent by SW 719	6A	%	Pr	Prep Method:			
Date Anal:	04.26.13 15.25	Analyst:	WRU	Date Prep:			Т	ech: WRU	
Anal seq:	912347			Prep seq:					
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor	
Hexavalent Chromium		18540 20.0	0.(57	0.0100		···· - /T		1	





### Conestoga Rovers & Associates, Midland, TX

Sample Id:	IW030042613		Matrix: Water			mple Depth	:		
Lab Sample Id: <b>462048-004</b>		D	ate Collected: 04	.26.13 12.15	Date Received: 04.26.13 14.45				
Analytical Method:	Inorganic Anions b	y EPA 300/300	.1	%	Moist:	Pr	ep Meth	nod: E300P	
Date Anal:	04.27.13 10.27	Analyst: AMB		Date Prep: 04.	27.13 10.27	Tech: AMB			
Anal seq:	912872			Prep seq: 637	7540				
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor	
Bromide		24959-67-9	112	2.00	0.0600	mg/L		10	
Ortho-Phosphate		14265-44-2	ND	2.00	0.360	mg/L	U	10	
Sulfate		14808-79-8	ND	20.0	0.460	mg/L	U	10	
Analytical Method: Nitrogen Ammon		by SM4500-N	H3C	%	Moist:	Pr	ep Meth	nod: SM4500NH_]	
Date Anal:	04.29.13 17.28	Analyst:	DEP	Date Prep: 04.	26.13 16.30		T	ech: DEP	
Anal seq:	912513			Prep seq: 637314					
Subcontractor:	SUB: E871002								
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor	
Nitrogen, Ammon	ia (as N)	7664-41-7	3.01	0.100	0.0110	mg/L		1	
Analytical Method:	TOC by SM 5310C			%	Moist:	Pr	ep Metł	nod:	
Date Anal:	04.29.13 15.21	Analyst:	MAB	Date Prep:			Т	ech: MAB	
Anal seq:	912472	,		Prep sea:					
Subcontractor:	SUB: E871002			1 . 1					
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor	
Total Organic Car	rbon	7440-44-0	816	50.0	25.0	mg/L		50	
Analytical Method:	Total Metals by EP	A 6010B		%	Moist:	Pr	ep Metł	nod: 3010A	
Date Anal:	04.29.13 17.20	Analyst:	МКО	Date Prep: 04.	29.13 11.30		Te	ech: MKO	
Anal seq:	912600			Prep seq: 637	7271				
Subcontractor:	SUB: E871002								
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor	
Chromium		7440-47-3	ND	0.0100	0.00355	mg/L	U	1	
Iron		7439-89-6	54.2	0.200	0.0188	mg/L		1	
Sodium		7440-23-5	131	0.500	0.0541	mg/L		1	





### Conestoga Rovers & Associates, Midland, TX

Sample Id:	IW030042613		Matrix: Water				Sample Depth:			
Lab Sample Id:	462048-004	Da	ate Collected: 04	.26.13 12.15	.26.13 12.15 E			.13 14.45		
Analytical Method:	Dissolved Metals	per ICP by SW84	46 6010B	% Moist:		Prep Method: 3010				
Date Anal:	04.29.13 17.50	Analyst:	МКО	Date Prep: 04.29.13 11.30			T	ech: MKO		
Anal seq:	912600			Prep seq: 637	271					
Subcontractor:	SUB: E871002									
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Iron		7439-89-6	5.29	0.200	0.0188	mg/L		1		
Analytical Method:	Sulfide by SM45(				Moist:	Prep Method:				
Date Anal:	04.29.13 15.49	Analyst:	DHE	Date Prep:			Te	ech: DHE		
Anal seq:	912467			Prep seq:						
Subcontractor:	SUB: E871002									
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Sulfide, total		18496-25-8	ND	5.00	1.00	mg/L	U	1		
Analytical Method:	Chromium, Hexa	valent by SW 719	96A	%	Moist:	Pr	Prep Method:			
Date Anal:	04.26.13 15.25	Analyst:	WRU	Date Prep:			Т	ech: WRU		
Anal seq:	912347			Prep seq:						
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Hexavalent Chromium		18540-29-9	ND	0.0100	0.00500	mg/L	U	1		
Thexavalent Chronnum		18540-29-9	ND	0.0100	0.00500	IIIg/L	U	1		





### Conestoga Rovers & Associates, Midland, TX

Sample Id:	DUP1042613           462048-005         Date Coll	Matri	ix: Water	Sa	mple Depth					
Lab Sample Id:	DUP1042613 462048-005 Date C Inorganic Anions by EPA 300/300.1	ate Collected: 04	.26.13 00.00	Da	te Received	l: 04.26	5.13 14.45			
Analytical Method:	Inorganic Anions b	y EPA 300/300	.1	%	Moist:	Pr	ep Metl	nod: E300P		
Date Anal:	04.27.13 10.48	Analyst:	AMB	Date Prep: 04.	27.13 10.48		Т	ech: AMB		
Anal seq:	912872			Prep seq: 637	7540					
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Bromide		24959-67-9	5.45	2.00	0.0600	mg/L		10		
Ortho-Phosphate		14265-44-2	ND	2.00	0.360	mg/L	U	10		
Sulfate		14808-79-8	1500	20.0	0.460	mg/L		10		
Analytical Method:	Nitrogen Ammonia	by SM4500-N	нзс	%	Moist:	Pr	ep Metl	nod: SM4500NH_]		
Date Anal:	04.29.13 17.29	Analyst:	DEP	Date Prep: 04.	26.13 16.30		Т	ech: DEP		
Anal seq:	912513			Prep seq: 637	7314					
ubcontractor: SUB: E871002										
Parameter	Parameter CAS Number Result		Result	MQL	SDL	Units	Flag	Dil Factor		
Parameter     Nun       Nitrogen, Ammonia (as N)     7664-		7664-41-7	ND	0.100	0.0110	mg/L	1			
Analytical Method:	TOC by SM 5310C			%	Moist:	Pr	ep Metł	nod:		
Date Anal:	(as N) 7664-41-7 <b>TOC by SM 5310C</b> 04.29.13 15.33 Analyst: MAB		MAB	Date Prep:			Т	ech: MAB		
Anal seq:	912472	•		Prep seq:						
Subcontractor:	SUB: E871002									
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Total Organic Car	bon	7440-44-0	5.92	1.00	0.500	mg/L		1		
Analytical Method:	Total Metals by EP	A 6010B		%	Moist:	Pr	ep Metł	nod: 3010A		
Date Anal:	04.29.13 17.26	Analyst:	МКО	Date Prep: 04.	29.13 11.30		Т	ech: MKO		
Anal seq:	912600			Prep seq: 637	7271					
Subcontractor:	SUB: E871002									
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Chromium		7440-47-3	0.786	0.0100	0.00355	mg/L		1		
Iron		7439-89-6	ND	0.200	0.0188	mg/L	U	1		
Sodium		7440-23-5	534	0.500	0.0541	mg/L		1		





### Conestoga Rovers & Associates, Midland, TX

Sample Id:	DUP1042613		Matri	x: Water	Sample Depth:					
Lab Sample Id:	462048-005	D	ate Collected: 04	.26.13 00.00	Dat	e Received	l: 04.26	5.13 14.45		
Analytical Method:	Dissolved Metals	per ICP by SW84	46 6010B	% ]	Moist:	Pr	ep Metl	nod: 3010A		
Date Anal:	04.29.13 17.56	Analyst:	МКО	Date Prep: 04.2	29.13 11.30		T	ech: MKO		
Anal seq:	912600			Prep seq: 637	271					
Subcontractor:	SUB: E871002			1 1						
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Iron		7439-89-6	ND	0.200	0.0188	mg/L	U	1		
Analytical Method:	Sulfide by SM45(	00-S-F-00		% ]	Moist:	Pr	ep Metl	nod:		
Date Anal:	04.29.13 15.49	Analyst:	DHE	Date Pren:			T	ech: DHE		
Anal seq:	912467			Pren sea						
Subcontractor:	SUB· F871002			r rep seq.						
Subcontractor.										
Parameter	ter CAS Result		Result	MQL	SDL	Units	Flag	Dil Factor		
Sulfide, total		18496-25-8 ND		5.00	1.00	mg/L	U	1		
Analytical Method:	Chromium, Hexa	walent by SW 719	96A	% ]	Moist:	Pr	ep Metl	nod:		
Date Anal·	04 26 13 15 25	Analyst.	WRI	Data Prop			T	ech: WRU		
Anal seq:	912347	1		Prep seq:						
Parameter	seq: 912347 arameter CAS Number		Result	MQL	SDL	Units	Flag	Dil Factor		
Hexavalent Chron	nium	18540-29-9	0.757	0.100	0.0500	mg/L		10		
Sample Id:	637271-1-BLK	Matrix: V		x: Water	Sa	mple Depth	1:			
Lab Sample Id:	637271-1-BLK	<b>B7271-1-BLK</b> Date Collected:			Dat	Date Received:				
Analytical Method:	nod: Total Metals by EPA 6010B		% ]	Moist:	Prep Method: 3010					
Date Anal:	04.29.13 15.10	Analyst:	МКО	Date Prep: 04.2	29.13 11.30		Te	ech: MKO		
Anal seq:	912600			Prep seq: 637	271					
Subcontractor:	SUB: E871002			_						
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor		
Chromium		7440-47-3	ND	0.0100	0.00355	mg/L	U	1		
Iron		7439-89-6	ND	0.200	0.0188	mg/L	U	1		
Sodium		7440-23-5	ND	0.500	0.0541	mg/L	U	1		





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

Sample Id:	637314-1-BLK		Matri	x: Water	Sa	Sample Depth:					
Lab Sample Id:	637314-1-BLK	D	ate Collected:		Dat	te Received	l:				
Analytical Method:	Nitrogen Ammon	ia by SM4500-NI	H3C	%	Moist:	Pr	ep Metl	nod: SM4500NH_]			
Date Anal:	04.29.13 17.19	Analyst:	DEP	Date Prep: 04.	26.13 16.30		Т	ech: DEP			
Anal seq:	912513			Prep seq: 637	7314						
Subcontractor:	SUB: E871002										
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor			
Nitrogen, Ammonia	ı (as N)	7664-41-7	ND	0.100	0.0110	mg/L	U	1			
Sample Id:	637540-1-BLK		Matri	x: Water	Sa	mple Depth	.:				
Lab Sample Id:	637540-1-BLK	D	ate Collected:		Dat	te Received	l:				
Analytical Method:	Inorganic Anions	by EPA 300/300.	1	%	Moist:	Pr	ep Metł	nod: E300P			
Date Anal:	04.26.13 13.56 Analyst: AMB		AMB	Date Prep: 04.	26.13 13.56		ech: AMB				
Anal seq:	912872			Prep seq: 637	7540						
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor			
Bromide	637540-1-BLK 637540-1-BLK d: Inorganic Anions by EPA 30 04.26.13 13.56 Ar 912872 CAS Number 24959-67 14265-44 14808-79	24959-67-9	ND	0.200	0.00600	mg/L	U	1			
Ortho-Phosphate		14265-44-2	ND	0.200	0.0360	mg/L	U	1			
Sulfate		14808-79-8	ND	2.00	0.0460	mg/L	U	1			
Sample Id:	912347-1-BLK		Matri	x: Water	Sai	mple Depth	:				
Lab Sample Id:	912347-1-BLK	D	ate Collected:		Dat	te Received	l:				
Analytical Method:	Chromium, Hexa	valent by SW 719	96A	%	Moist:	Pr	ep Metł	nod:			
Date Anal:	04.26.13 11.20	Analyst:	WRU	Date Prep:			Т	ech: WRU			
Anal seq:	912347			Prep seq:							
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor			
Hexavalent Chromi	um	18540-29-9	ND	0.0100	0.00500	mg/L	U	1			





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

Sample Id:	912467-1-BLK		Matri	x: Water	San	1:					
Lab Sample Id:	912467-1-BLK	D	ate Collected:		Date	e Received	l:				
Analytical Method:	Sulfide by SM4500-	S-F-00			% Moist:	Pr	ep Metl	nod:			
Date Anal:	04.29.13 15.49	Analyst:	DHE	Date Prep:			Т	ech: DHE			
Anal seq:	912467			Prep seq:							
Subcontractor:	SUB: E871002										
Parameter		CAS Number Re 18496-25-8	Result	MQL	SDL	Units	Flag	Dil Factor			
Sulfide, total		18496-25-8	ND	5.00	1.00	mg/L	U	1			
Sample Id:	912472-1-BLK		Matri	x: Water	San	nple Depth	1:				
Lab Sample Id:	912472-1-BLK	D	ate Collected:		Date						
Analytical Method:	TOC by SM 5310C				% Moist:	Pr	ep Metl	nod:			
Date Anal:	04.29.13 13.33	Analyst:	MAB	Date Prep:			Т	ech: MAB			
Anal seq:	912472			Prep seq:							
Subcontractor:	SUB: E871002										
Parameter		CAS Number	Result	MQL	SDL	Units	Flag	Dil Factor			
Total Organic Carb	on	7440-44-0	ND	1.00	0.500	mg/L	U	1			



## **Flagging Criteria**

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

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

Certified and approved by numerous States and Agencies.

LOQ Limit of Quantitation

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

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

4143 Greenbriar Dr, Stafford, TX 77477 9701 Harry Hines Blvd, Dallas, TX 75220 5332 Blackberry Drive, San Antonio TX 78238 2505 North Falkenburg Rd, Tampa, FL 33619 12600 West I-20 East, Odessa, TX 79765 6017 Financial Drive, Norcross, GA 30071 3725 E. Atlanta Ave, Phoenix, AZ 85040 
 Phone
 Fax

 (281) 240-4200
 (281) 240-4280

 (214) 902 0300
 (214) 351-9139

 (210) 509-3334
 (210) 509-3335

 (813) 620-2000
 (813) 620-2033

 (432) 563-1800
 (432) 563-1713

 (770) 449-8800
 (770) 449-5477

 (602) 437-0330
 (210) 509-3335

Final 1.000





## Project Name: Midland Odessa Discounted Fee Schedule

Work Order #: 462048		Pre	Project ID:									
Lab Batch #: 912347	Sample: 912347-	-1-BKS	Matrix:	Water								
Date Analyzed:04/26/2013Date P	repared: 04/26/2	013	Analyst:	WRU								
<b>Reporting Units:</b> mg/L	Batch #: 1	BLANK /	BLANK SPI	KE REC	COVERY S	STUDY						
Chromium, Hexavalent by SW 7196A	Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags						
Analytes			[C]	[D]								
Hexavalent Chromium	< 0.0100	<0.0100 0.0250 0.0204 82 80-120										
Lab Batch #: 912513	Sample: 637314	-1-BKS	Matrix:	Water								
Date Analyzed:04/29/2013Date P	repared: 04/26/20	013	Analyst:									
Reporting Units: mg/L	Batch #: 1	BLANK /	BLANK SPI	KE REC	OVERY S	STUDY						
					1							
Nitrogen Ammonia by SM4500-NH3C Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags						
Nitrogen Ammonia by SM4500-NH3C Analytes Nitrogen, Ammonia (as N)	Blank Result [A]	Spike Added [B] 2.50	Blank Spike Result [C] 2.53	Blank Spike %R [D] 101	Control Limits %R 80-120	Flags						
Nitrogen Ammonia by SM4500-NH3C Analytes Nitrogen, Ammonia (as N) Lab Batch #: 912472 Date Analyzed: 04/29/2013 Date P	Blank Result [A] <0.100 Sample: 912472- repared: 04/29/20	Spike Added [B] 2.50 -1-BKS 013	Blank Spike Result [C] 2.53 Matrix: Analyst:	Blank Spike %R [D] 101 Water MAB	Control Limits %R 80-120	Flags						
Nitrogen Ammonia by SM4500-NH3C Analytes Nitrogen, Ammonia (as N) Lab Batch #: 912472 Date Analyzed: 04/29/2013 Date P Reporting Units: mg/L	Blank Result [A] <0.100 Sample: 912472- repared: 04/29/20 Batch #: 1	Spike Added [B] 2.50 -1-BKS 013 BLANK /F	Blank Spike Result [C] 2.53 Matrix: Analyst: BLANK SPI	Blank Spike %R [D] 101 Water MAB KE REC	Control Limits %R 80-120	Flags						
Nitrogen Ammonia by SM4500-NH3C Analytes Nitrogen, Ammonia (as N) Lab Batch #: 912472 Date Analyzed: 04/29/2013 Date P Reporting Units: mg/L TOC by SM 5310C Analytes	Blank Result [A] <0.100 Sample: 912472- repared: 04/29/20 Batch #: 1 Blank Result [A]	Spike Added [B] 2.50 -1-BKS 013 BLANK /F Spike Added [B]	Blank Spike Result [C] 2.53 Matrix: Analyst: BLANK SPI Blank Spike Result [C]	Blank Spike %R [D] 101 Water MAB KE REC Blank Spike %R [D]	Control Limits %R 80-120 COVERY S Control Limits %R	Flags STUDY Flags						

Blank Spike Recovery [D] = 100*[C]/[B] All results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit



#### Project Name: Midland Odessa Discounted Fee Schedule

Work Order #: 462048							Proj	ject ID: (	073018		
Analyst: AMB	D	ate Prepai	red: 04/26/201	13			Date A	nalyzed: (	04/26/2013		
Lab Batch ID: 912872Same	ple: 637540-1-BKS	Bate	<b>h #:</b> 1					Matrix: V	Water		
Units: mg/L		BLAN	K /BLANK S	SPIKE / I	BLANK S	PIKE DUPI	LICATE 1	RECOVI	ERY STUD	Y	
Inorganic Anions by EPA 3	00/300.1 Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[C]	נטן	[E]	Kesuit [F]	[6]				
Bromide	<0.200	5.00	4.23	85	5.00	4.21	84	0	80-120	20	
Ortho-Phosphate	<0.200	5.00	5.13	103	5.00	4.68	94	9	80-120	20	
Sulfate	<2.00	25.0	24.2	97	25.0	23.4	94	3	80-120	20	
Analyst: DHE	D	ate Prepai	red: 04/29/20	13			Date A	nalyzed: (	04/29/2013		
Lab Batch ID: 912467 Sam	ple: 912467-1-BKS	Bate	<b>h #:</b> 1					Matrix: \	Water		
Units: mg/L		BLAN	K /BLANK S	SPIKE / F	BLANK S	PIKE DUPI	LICATE 1	RECOVE	ERY STUD	Y	
Sulfide by SM4500-S-F	-00 Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Sulfide, total	<5.00	1000	960	96	1000	960	96	0	75-120	20	

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





#### Project Name: Midland Odessa Discounted Fee Schedule

Work Order #: 462048 Analyst: MKO		Da	ate Prepar	red: 04/29/201	3			Pro Date A	ject ID: 0 nalyzed: 0	73018 4/29/2013		
Lab Batch ID: 912600	Sample: 637271-1-B	KS	Batc	<b>h #:</b> 1					Matrix: V	Vater		
Units: mg/L			BLAN	K/BLANK S	SPIKE / E	BLANK S	PIKE DUPL	ICATE	RECOVE	ERY STUD	Y	
Total Metals by E Analytes	PA 6010B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chromium		<0.0100	1.00	1.10	110	1.00	1.10	110	0	80-120	20	
Iron		< 0.200	5.00	5.28	106	5.00	5.18	104	2	80-120	20	
Sodium		< 0.500	25.0	27.4	110	25.0	27.2	109	1	80-120	20	

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: Midland Odessa Discounted Fee Schedule

Work Order #: 462048						
Lab Batch #: 912872			Pro	oject ID:	073018	
<b>Date Analyzed:</b> 04/26/2013	Date Prepared: 04/2	26/2013	А	nalyst: A	MB	
QC- Sample ID: 462048-001 S	<b>Batch #:</b> 1		Ν	Aatrix: V	Vater	
Reporting Units: mg/L	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	[23]					
Bromide	7.82	100	89.7	82	80-120	
Ortho-Phosphate	<4.00	100	111	111	80-120	
Sulfate	1460	500	2000	108	80-120	
Lab Batch #: 912872						
Date Analyzed: 04/27/2013	Date Prepared: 04/2	27/2013	Α	nalyst: A	MB	
QC- Sample ID: 462056-002 S	<b>Batch #:</b> 1		Ν	Aatrix: V	Vater	
Reporting Units: mg/L	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
Bromide	1.38	25.0	20.7	77	80-120	X
Ortho-Phosphate	<1.00	25.0	<1.00	0	80-120	X
Sulfate	14.1	125	148	107	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: Midland Odessa Discounted Fee Schedule

Work Order #: 462048						Project I	<b>D:</b> 073018	5			
Lab Batch ID: 912347 Date Analyzed: 04/26/2013	QC- Sample ID: Date Prepared:	461962 04/26/2	-001 S 013	Ba An	tch #: alyst:	1 <b>Matri</b> WRU	<b>x:</b> Water				
Reporting Units: mg/L		Μ	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
Chromium, Hexavalent by SW 7196A	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	[A]	[ <b>B</b> ]		[D]	[E]		[G]				
Hexavalent Chromium	<0.0100	0.200	0.248	124	0.200	0.249	125	0	80-120	20	X
Lab Batch ID: 912513 Date Analyzed: 04/29/2013	QC- Sample ID: Date Prepared:	462048 04/26/2	-001 S 013	Ba An	tch #: alyst:	1 <b>Matri</b> DEP	<b>x:</b> Water				
Reporting Units: mg/L		Μ	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
Nitrogen Ammonia by SM4500-NH3C 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 %R	Control Limits %RPD	Flag
Nitrogen Ammonia by SM4500-NH3C Analytes Nitrogen, Ammonia (as N)	Parent Sample Result [A] <0.100	Spike Added [B] 2.50	Spiked Sample Result [C] 2.56	Spiked Sample %R [D] 102	Spike Added [E] 2.50	Duplicate Spiked Sample Result [F]	<b>Spiked</b> <b>Dup.</b> %R [G] 104	<b>RPD</b> %	Control Limits %R 80-120	Control Limits %RPD	Flag
Nitrogen Ammonia by SM4500-NH3C Analytes Nitrogen, Ammonia (as N) Lab Batch ID: 912472 Date Analyzed: 04/29/2013	Parent Sample Result [A] <0.100 QC- Sample ID: Date Prepared:	Spike           Added           [B]           2.50           462048           04/29/2	Spiked Sample Result [C] 2.56 -001 S 013	Spiked Sample %R [D] 102 Ba An	Spike Added [E] 2.50 atch #: alyst:	Duplicate Spiked Sample Result [F] 2.60 1 Matri MAB	Spiked Dup. %R [G] 104 x: Water	<b>RPD</b> %	Control Limits %R 80-120	Control Limits %RPD 20	Flag
Nitrogen Ammonia by SM4500-NH3C Analytes Nitrogen, Ammonia (as N) Lab Batch ID: 912472 Date Analyzed: 04/29/2013 Reporting Units: mg/L	Parent Sample Result [A] <0.100 QC- Sample ID: Date Prepared:	Spike Added [B] 2.50 462048 04/29/2 M	Spiked Sample Result [C] 2.56 -001 S 013 (ATRIX SPIK)	Spiked Sample %R [D] 102 Ba An E / MAT	Spike Added [E] 2.50 atch #: alyst: RIX SPI	Duplicate Spiked Sample Result [F] 2.60 1 Matri MAB KE DUPLICA	Spiked Dup. %R [G] 104 x: Water TE REC	<b>RPD</b> %	Control Limits %R 80-120 STUDY	Control Limits %RPD	Flag
Nitrogen Ammonia by SM4500-NH3C Analytes Nitrogen, Ammonia (as N) Lab Batch ID: 912472 Date Analyzed: 04/29/2013 Reporting Units: mg/L TOC by SM 5310C Analytes	Parent Sample Result [A] <0.100 QC- Sample ID: Date Prepared: Parent Sample Result [A]	Spike Added [B] 2.50 462048 04/29/2 M Spike Added [B]	Spiked Sample Result [C] 2.56 -001 S 013 (ATRIX SPIK) Spiked Sample Result [C]	Spiked Sample %R [D] 102 Ba An E / MAT Spiked Sample %R [D]	Spike Added [E] 2.50 atch #: alyst: RIX SPI Spike Added [E]	Duplicate Spiked Sample Result [F] 2.60 1 Matri MAB KE DUPLICA Spiked Sample Result [F]	Spiked Dup. %R [G] 104 x: Water TE REC Spiked Dup. %R [G]	RPD % 2 OVERY %	Control Limits %R 80-120 STUDY Control Limits %R	Control Limits %RPD 20 Control Limits %RPD	Flag

Matrix Spike Percent Recovery  $[D] = 100^{\circ}(C-A)/B$ Relative Percent Difference RPD =  $200^{\circ}|(C-F)/(C+F)|$  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



### Form 3 - MS / MSD Recoveries



#### Project Name: Midland Odessa Discounted Fee Schedule

Work Order #: 462048						Project I	<b>D:</b> 073018	8			
Lab Batch ID:         912600         Q           Date Analyzed:         04/29/2013         1	C- Sample ID: Date Prepared:	462048- 04/29/20	-001 S 013	Ba An	tch #: alyst:	1 <b>Matri</b> MKO	<b>x:</b> Water				
Reporting Units: mg/L		Μ	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY S	STUDY		
Total Metals by EPA 6010B 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 %R	Control Limits %RPD	Flag
Chromium	0.949	1.00	1.90	05	1.00	1.71	0 <i>C</i>	5	80.120	20	
Chronnum	0.848	1.00	1.80	93	1.00	1./1	80	3	80-120	20	
Iron	<0.200	5.00	4.98	100	5.00	4.68	94	6	80-120	20	
Sodium	569	25.0	569	0	25.0	556	0	2	75-125	20	Х

Matrix Spike Percent Recovery  $[D] = 100^{\circ}(C-A)/B$ Relative Percent Difference RPD =  $200^{\circ}|(C-F)/(C+F)|$  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



Work Order #: 462048



### Project Name: Midland Odessa Discounted Fee Schedule

Lab Batch #: 912347				Project I	<b>D:</b> 073018	
Date Analyzed: 04/26/2013 11:20	Date Prepar	ed: 04/26/2013	3 Anal	yst: WRU		
QC- Sample ID: 461962-001 D	Batch	#: 1	Mat	rix: Water		
Reporting Units: mg/L		SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Chromium, Hexavalent by SW 7	196A	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte			[B]			
Hexavalent Chromium		< 0.0100	< 0.0100	0	20	U
Lab Batch #: 912467						
Date Analyzed: 04/29/2013 15:49	Date Prepar	ed: 04/29/2013	3 Anal	yst:DHE		
QC- Sample ID: 461995-017 D	Batch	# <b>:</b> 1	Mat	rix: Water		
Reporting Units: mg/L		SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Sulfide by SM4500-S-F-00 Analyte		Parent Sample Result [A]	Sample Duplicate RPD       Control Limits %RPD         Sample Duplicate Result [B]       RPD       Control Limits %RPD         <0.0100       0       20       U         Analyst: DHE Matrix: Water       Matrix: Water       Flag         / SAMPLE DUPLICATE RECOVERY       Sample %RPD       Flag         <0.0100       0       20       U         / SAMPLE DUPLICATE RECOVERY       Sample Matrix: Water       Flag         / SAMPLE DUPLICATE RECOVERY       Sample Note: %RPD       Flag         0uplicate Result [B]       RPD       Control Limits %RPD       Flag         <<5.00       0       20       U	Flag		
Sulfide, total		Program       Program         Pate Prepared: 04/26/2013       Analyst: WRU         Batch #:       1       Matrix: Water         SAMPLE / SAMPLE DUPLICATE RECOVER         96A       Parent Sample Result [A]       Sample Duplicate Result [B]       RPD       Control Limits %RPD       Flag         0       <0.0100	U			

Spike Relative Difference RPD 200 * | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes. BRL - Below Reporting Limit

ompany-City CRA-mid	and			Phon	13	7-t	586-C	086		Lab (	Only	/:			4	le	201	48	ζ												
oject Name-Location ハ Eいい	Previous!	y done at XE	ENCO			Pro D	ject II 7301	8		TAT: It is ty	AS pica/	SAP 5 ally 5-	h 12 7 Wo	h 24 rking	4h 4 g Day	18h 's for	3d 5 level	d/7 II an	d 1( d 10-	)d ⊦Wo	21d orkin	Stan g day	dard /s foi	r leve	Tisp el III	and l	t spe V dat	cific. ta.			
oj. State: TX, AL, FL, GA	, LA, MS, NC,	Proj. Mana Mike	iger (F W	°M) เวิก	eod	vier	hi			S			ÄLL		СХ Д	(Bs)	S									21d		G G	Re	mar	'ks
mail Results to	PM and			C	132	Fax -68	No:	2		VOA Other			dx-2 C	S	(1 App	ę.	4	010					0		tis	10d	nest Hit	provec			
voice to □Accounting [ Il to:	] Inc. Invoice w	ith Final Rep	oort [	] Invo	oice r	nust	have a	P.O.		HON F	Ż		P App	esticide	Appd>	est. He	5.5					201	150	ŝ	KI CO	7d	S Fig	e pre-al	eded		
uote/Pricing:		P.O. No:				Ľ	] Call f	or P.C	<b>)</b> . 1	OX VC	7-4			а а	3TAL	с v		841				2	V		<u> </u> }	ŭ	, Kg	ndal	s nee		
g Program: UST DRY	-CLEAN Land-	Fill Waste-	Disp	NPD	ES	DW	TRRP			HC		A	걸	° °	р 2	S S	13		2 12			2		3	ž	Г м	В Ш	ply a	eqa		
APP Per-Contract CLP	AGCEE NAV	Y DOE DO	D U	SACI	EOT	HER	-			Щ,	Į	Hd	Ψ	icide	b 13F	S S	5	۲Ľ	) Ŵe			28	00			48	Š	il ap	prov		
ecial DLs (GW DW QA	APP MDLs RL	s See Lab P	M In	clude	d C	ali i	PM)		1	TBE	Drint.	W	BN8	Herb	4 P	Nov Nov					م ل	3		6	5	<b>EH</b>	mg/L	les w	re-at		
					_f		1			M-X=		۲ ۲	ž	Bs	SRA-	als					S.S.		15	14	100	र राज्य		sharg	are p		
mpler Name Just	Nikan	Signatur	e /	2	1		-	8		BTE	710	50	st	D	ж М	(Met					3 6	2	1	130			e e	Surc	sdn		
			ľ			ers	Size	ŢYp	ves	List T	<u> </u>	≥  S		des	RA-8	<u>م</u>		5	$\left  \right\rangle$	لح ا	V	13	ŝ	1	40	5	Labo	oles (	ean-		
Sample ID	Sampling Date	Time	Depth ť In" m	Matrix Composit:	Grab	¢ Containe	Container	Container	reservati	VOA: Full-		TX-1005	SVOCs: F	OC Pestic	Metals: RC	SPLP - TC	Add A	1141101		JINS .	700-	Uissi()	Amer	A A	下户	TATASAP	Addn: PAH	Hold Sam	Sample CI		
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	4-26-3	1055		2	X	\$					1-			-		Ť	X	オ		X	1	权	X	K	区						
210-895A04263	1	1105		1	1	1						· .					1	1	1	1	1	1	1	1	1						
M20092047613		1245														Τ	П	T		\Box											
2003004263		1215			П														0	R		\mathcal{L}				Y					
101042613	- V	-		V	V	V					Ţ						V	7	γ	1	ſΨ	<u>1</u> V	V	ΊV	P	1				· · ·	
					Τ																										
Relinquished by (Initials	and Sign)	Date &	Time		Rej	nquis	hed to	(Initia	alejar	nd Sigr	1)		Date	&	Time	T	otal_C	ontai	ners	per (COC:	<u>2</u>	5	-	Co	oler 7	Temp:	4	5	<u>C.</u>	
105 per	··· · · · · · · · · · · · · · · · · ·	4-26131	445	2	Y	10	im	U	M	NH	N	_ 4/	<u>əcq</u> ı	5	y ju	¶ ¶C	therw	ise a id S	greec amole	l on	writin II he	g. Re held ∶	eporte 30 de	s are ivs a	the l	ntelle inal re	ctual l	Prope is e-n	erty of nailed	XENC	ЭС s
				4)		<u>,</u>		<u>.</u> 								erehv	reniu	anpie hatee	Rus	sh Ch	arces	and	Colle	ection	Fee	sarei	pre-a	DDIOVE	d if ne	ec

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

Page 25 of 33

Final 1.000

Committed to Excellence in Service and Quality

www.xenco.com

ANALYSIS REQUEST & CHAIN OF CUSTODY RECORD

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



XENCO Laboratories



Prelogin/Nonconformance Report- Sample Log-In

Client: Conestoga Rovers & Associates Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Date/ Time Received: 04/26/2013 02:45:00 PM **Temperature Measuring device used :** Work Order #: 462048

Sample Receip	ot Checklist Comment	ts
#1 *Temperature of cooler(s)?	1.5	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	
#4 *Custody Seals intact on shipping container/ cooler?	Yes	
#5 Custody Seals intact on sample bottles?	Yes	
#6 *Custody Seals Signed and dated?	Yes	
#7 *Chain of Custody present?	Yes	
#8 Sample instructions complete on Chain of Custody?	Yes	
#9 Any missing/extra samples?	No	
#10 Chain of Custody signed when relinquished/ received?	Yes	
#11 Chain of Custody agrees with sample label(s)?	Yes	
#12 Container label(s) legible and intact?	Yes	
#13 Sample matrix/ properties agree with Chain of Custody?	Yes	
#14 Samples in proper container/ bottle?	Yes	
#15 Samples properly preserved?	Yes	
#16 Sample container(s) intact?	Yes	
#17 Sufficient sample amount for indicated test(s)?	Yes	
#18 All samples received within hold time?	Yes	
#19 Subcontract of sample(s)?	Yes	
#20 VOC samples have zero headspace (less than 1/4 inch b	bubble)? Yes	
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes	
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnA	Ac+NaOH? Yes	

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

Analyst:

PH Device/Lot#:

 Checklist completed by:
 Mussian for the set of the se

Quantitative Bacterial Report

Heterotrophic Plate Count

(Hygeia SOP-09)



Client No.: 30311 Kelsey Brooks Xenco Laboratories 4141 Greenbriar Stafford, TX 77477			Proje C F <i>F</i>	oject No.: ct Name: Collected: Received: Analyzed:	04/26/ 04/27/ 04/27/	/2013 /2013 /2013 1/	1:30 AM						
Hygeia Sample ID		10)1126			1()1127 G	C X		1(01128		
Client Sample ID		4620	048-001			462	048-002			462	048-003		
Location		IW02	8042613			MW89	5A042613			MW00	9A042613		
Sample Type		W	/ater		Water					Water			
Sample Amount		1	mL			1	l mL				1 mL		
Medium / Method Dilution Factor(s)	R2A 1:1				R2A 1:1				R2A 1:1				
Bacteria Isolated:	Raw Count	Dilution	CFU / 100 mL	. %	Raw Count	Dilution	CFU / 100 mL		Raw Count	Dilution	CFU / 100 ml	L %	
Anaerobic heterotrophic bacteria	0	1	<100		4	1	400	100	1	1	100	100	
Total CFU Comments		<100	/ 100 mL			400	/ 100 mL			100	/ 100 mL		

Quantitative Bacterial Report

Heterotrophic Plate Count

(Hygeia SOP-09)

ſ



Client No.: 30311			Pi	oject No.:					
Kelsey Brooks			Proje	ect Name:					
Xenco Laboratories				Collected	04/26/	2013			
4141 Greenbriar				Received	04/27/	2013			
Stafford, TX 77477				Analyzed	04/27/	2013 11	:30 AM		
Hygeia Sample ID		10)1129			10)1130		
Client Sample ID		4620	048-004			4620	048-005		
Location		IA03	0042613			DUP1042613			
Sample Type		v	Vater			v	/ater		
Sample Amount		1	l mL			0.	1 mL		
Medium / Method			R2A				R2A		
Dilution Factor(s)		1:1				1:1			
Bacteria Isolated:	Raw Count	Dilution	CFU / 100 ml	%	Raw Count	Dilution	CFU / 100 mL	%	
Anaerobic heterotrophic bacteria	1	1	100	100	480	1	480,000	100	
				+					
					-				
				+					
				+					
			ļ						
Total CFU		100	/ 100 mL			480,00	0 / 100 mL		
Comments									
					L				1

Quantitative Bacterial Report

Heterotrophic Plate Count

(Hygeia SOP-09)



Client No.: 30311	Project No.:
Kelsey Brooks	Project Name:
Xenco Laboratories	Collected: 04/26/2013
4141 Greenbriar	Received: 04/27/2013
Stafford, TX 77477	Analyzed: 04/27/2013 11:30 AM

Analyst 'anessa Garcia

Lab Director

Crystal Enloe

Thank you for using Hygeia Laboratories Inc. We strive to provide superior quality and service.

This report may not be reproduced except in full, and only with the written approval of this laboratory. Please contact Hygeia regarding any questions about these results, this report, or the analytical methods employed.

Data in this report are reliable within two significant figures. Sample results are not corrected based on results of blanks. The minimum reporting limit (MRL) is calculated as the lowest dilution tested/volume. Estimates of uncertainty are available upon request. CFU = colony forming units. CFU/unit is calculated as raw count*dilution/sample amount. Total CFU/unit is the sum of individual CFUs/unit and is considered <MRL if no colonies are present.

Confidentiality Notice:

The information contained herein is confidential and privileged, intended for the exclusive use of the individual or entity named above. If the reader of this document is not the intended recipient, or the employee or agent responsible for delivering it to the intended recipient, you are hereby notified that any dissemination, distribution or copying of the document(s) is strictly prohibited. If you have received this document in error, please immediately notify us by telephone to arrange for its return.

Guidelines for Interpretation:

Interpretation of the data and information within this document is left to the company, consultant, and/or persons who conducted the fieldwork. Bacteria have been associated with a variety of health effects and sensitivity varies from person to person. Contact the CDC (www.cdc.gov) for information regarding potential health risks related to exposure in air or on surfaces and the USEPA (www.epa.gov) for existing established standards including regulated water quality standards.

Liability Notice:

Hygeia Laboratories Inc. and its personnel shall not be held liable for any misinformation provided to us by the client regarding these samples or for any misuse or interpretation of information supplied by us. Liability shall extend to providing replicate analyses only. This report relates only to samples submitted and analyzed.

Revision 0 04/29/2013 ce

Laboratory Data Package Cover Page Attachment A

Laboratory Number: 462048

This Data package consists of : Laboratory Batch No(s) 912600 ■ This signature page, the laboratory review checklist, and the following reportable data: R1 Field chain-of-custody documentation; R2 Sample identification cross-reference; R3 Test reports (analytical data sheets) for each environmental sample that includes: Items consistent with NELAC 5 a) b) dilution factors, c) preparation methods, d) cleanup methods, and

> if required for the project, tentatively identified compounds (TICs). e)

Midland Odessa Discounted

R4 Surrogate Recovery data including:

Project Name:

- Calculated recovery (%R), and a)
- The laboratory's surrogate QC limits. b)
- R5 Test reports/summary forms for blank samples;
 - Test reports/summary forms for laboratory control samples (LCSs) including: R6
 - LCS spiking amounts, a)
 - Calculated %R for each analyte, and b)
 - The laboratory's LCS QC limits. c)
- Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including: R7
 - Samples associated with the MS/MSD clearly identified, a)
 - MS/MSD spiking amounts, b)
 - Concentration of each MS/MSD analyte measured in the parent and spiked samples, c)
 - Calculated %Rs and relative percent differences (RPDs) and d)
 - e) The laboratory's MS/MSD QC limits

🗖 R8 Laboratory anaytical duplicate (if applicable) recovery and precision:

- the amount of analyte measured in the duplicate, a)
- b) the calculated RPD, and
- c) the laboratory's QC limits for analytical duplicates.
- | R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix;

R10 Other problems or anomalies.

Exception Report for every "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted

in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies, observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Check, if applicable: [] This laboratory meets an exception under 30 TAC 25.6 and was last inspection by [] TCEQ or [] on (enter date of last inspection). Any findings affecting the data in this laboratory data package are noted in the

Exception

Reports herein. The offical signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true. 1

Alejandro Montoya

Name (Printed)

Signature

4 Lyondro

Odessa Laboratory Directo Official Title (printed)

05/07/13 Date

Att	ach	ment A (cont'd) : Laboratory Review Cl	necklist: Reportable Data					
Labo	rator	y Name: XENCO Laboratories	LRC Date : 05/07/13					_
Proje	ect Na	ame: Midland Odessa Discounted Fee Schedule	Laboratory Job Number: 462048					_
Revi	ewer	Name: AMB	Batch Number(s): 912600					_
#1	A ²	Description		Yes	No	NA ³	⁴ ER#	₽ ⁵
R1	OI	Chain-of-Custody (COC)						
		Did samples meet the laboratory's standard conditions of s	ample acceptability upon receipt?	X				_
		Were all departures from standard conditions described in	an exception report?			X		
R2	OI	Sample and Quality Control (OC) Identification	x x					
		Are all field sample ID numbers cross-referenced to the la	boratory ID numbers?	X				-
		Are all laboratory ID numbers cross-referenced to the corr	esponding QC data?	X				
R3	OI	Test Renorts						
		Were all samples prepared and analyzed within holding ti	nes?	X				_
		Other than those results <mol, all="" other="" raw="" td="" values<="" were=""><td>bracketed by calibration standards?</td><td>X</td><td></td><td></td><td></td><td></td></mol,>	bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?		X				
		Were all analyte identifications checked by a peer or super	visor?	X				
		Were sample detection limits reported for all analytes not	detected?	X				
		Were all results for soil and sediment samples reported on	a dry weight basis?			X		
		Were % moisture (or solids) reported for all soil and sedin	nent samples?			Х		
		Were bulk soil/solid samples for volatile analysis extracted	d with methanol per SW846 Method 5035?	X				
		If required for the project, were TICs reported?				Х		_
R4	0	Surrogate Recovery Data			-			
		Were surrogates added prior to extraction?				X		_
		Were surrogate percent recoveries in all samples within th	e laboratory QC limits?			X		
R5	OI	Test Reports/Summary Forms for Blank Sample	8					
		Were appropriate type(s) of blanks analyzed?	**	X				
		Were blanks analyzed at the appropriate frequency ?		X				
		Were method blanks taken through the entire analytical pr	ocedure, including preparation and, if applicable, cleanup	X				
		procedures ? Were Blank Concentrations <mql?< td=""><td></td><td>X</td><td></td><td></td><td></td><td></td></mql?<>		X				
R6	R6 OI Laboratory Control Samples (LCS):							
	Were all COCs included in the LCS?							
		Was each LCS taken through the entire analytical procedu	re, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?		X				
		Were LCS (and LCSD, if applicable) %Rs within the labo	ratory QC limits?	X				
		Does the detectability check sample data document the lab calculate the SDI s^2	oratory's capability to detect the COCs at the MDL used to	X				
		Was the LCSD RPD within the QC limits?		X				-
R7	OI	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) data					
		Were the project/method specified analytes included in the	MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?		X				
		Were MS (and MSD, if applicable) %Rs within the labora	tory QC limits?	X			1	_
		Were MS/MSD RPDs within the laboratory QC limits?		X				
R8	OI	Analytical Duplicate Data						
		Were appropriate analytical duplicates analyzed for each r	natrix?			Х		
		Were analytical duplicates analyzed at the appropriate free	juency?			Х		
		Were RPDs or relative standard deviations within the labo	ratory QC limits?			Х		
R9	OI	Method Quantitation Limits (MQLs)						
		Are the MQLs for each method analyte included in the lab	oratory data package?	X				
		Do the MQLs correspond to the concentration of the lower	st non-zero calibration standard?	X				
L		Are unadjusted MQLs and DCSs included in the laborator	y data package?	X				
R10	OI	Other Problems/Anomalies						
		Are all known problems/anomalies/special conditions note	ed in this LRC and ER?	Х				
		Is the laboratory NELAC-accredited under the Texas Laboratory data package?	oratory Accreditation Program for the analytes, matrices and	X				_
		Was applicable and available technology used to lower the	SDL to minimize the matrix interference effects on the	X				
L		sample results?						

Att	Attachment A (cont'd) : Laboratory Review Checklist: Reportable Data							
Labo	orator	y Name: XENCO Laboratories	LRC Date : 05/07/13					
Proje	ect N	me: Midland Odessa Discounted Fee Schedule	Laboratory Job Number: 462048					
Revi	ewer	Name: AMB	Batch Number(s): 912600					
#1	A ²	Description		Yes	No	NA ³	4	ER# ⁵
<u>S1</u>	OI	Initial Calibration (ICAL)				1111		
		Were response factors and/or relative response factors for	each analyte within OC limite?	v				
		Were percent RSDs or correlation coefficient criteria met						
		Was the number of standards recommended in the method	used for all analytes?	X				
		Were all points generated between the lowest and the high	est standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?		X				
		Has the initial calibration curve been verified using an app	propriate second source standard?	X				
S2	OI	Initial and Continuing Calibration Verification (ICCV and CCV) and continuing calibration blank					
		Was the CCV analyzed at the method-required frequency?		X				
		Were percent differences for each analyte within the meth	od-required QC limits?	X				
		Was the ICAL curve verified for each analyte?		X				
		Was the absolute value of the analyte concentration in the	inorganic CCB <mdl?< td=""><td>X</td><td></td><td></td><td></td><td></td></mdl?<>	X				
S 3	0	Mass Spectral Tuning						
		Was the appropriate compound for the method used for tu	ning?			X		
		Were ion abundance data within the method-required QC	limits?			X		
S 4	0	Internal Standard (IS)						
		Were IS area counts and retention times within the method	1-required QC limits?	X				
S5	OI	Raw Data (NELAC 5.5.10)	<u> </u>					
		Were the raw data (for example, chromatograms, spectral	data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on	the raw data?	X				
S 6	0	Dual Column Confirmation						
		Did dual column confirmation results meet the method-rec	quired QC?			X		
S 7	0	Tentatively Identified Compounds (TICs)						
		If TICs were requested, were the mass spectra and TIC da	ta subject to appropriate checks?			X		
S 8	Ι	Interference Check Sample (ICS) Results						
		Were percent recoveries within method QC limits?				X		
S 9	Ι	Serial Dilutions, Post Digestions Spikes, and Met	hod of Standard Additions					
		Were percent differences, recoveries, and the linearity with	hin the QC limits specified in the method?			X		
S10	OI	Method Detection Limit (MDL) Studies						
		Was a MDL study performed for each reported analyte?		X				
		Is the MDL either adjusted or supported by the analysis of	DCSs?	X				
S11	OI	Proficiency Test Reports						
		Was the laboratory's performance acceptable on the applic	able proficiency tests or evaluation studies?	X				
S12	OI	Standards Documentation						
		Are all standards used in the analyses NIST-traceable or o	btained from other appropriate sources?	X				
S13	OI	Compound/Analyte Identification Procedures						
		Are the procedures for compound/analyte identification do	ocumented?	X				
S14	OI	Demonstration of Analyst Competency (DOC)						
		Was DOC conducted consistent with NELAC Chapter 5?		X				
		Is documentation of the analyst's competency up-to-date a	nd on file?	X				
S15	OI	Verification/Validation Documentation for Meth	ods (NELAC Chapter 5)					
		Are all methods used to generate the data documented, ver	ified, and validated, where applicable?	X				
S16	OI	Laboratory Standard Operating Procedures (SC	Ps)					
		Are laboratory SOPs current and on file for each method r	performed?	X				
L	1	,		1	I	1	1	1

1. Items identified by the letter "R" must be included in the laboratory data package submitted to the TCEQ-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.

2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).

3. NA = Not applicable;

4. NR = Not reviewed;

5. ER# = Exception Report Identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Attachment A (cont'd): Laboratory Review	Attachment A (cont'd): Laboratory Review Checklist: Exception Reports						
Laboratory Name: XENCO Laboratories	Laboratory Name: XENCO Laboratories LRC Date: 05/07/13						
Project Name: Midland Odessa Discounted Fee Schedule	Laboratory Job Number: 462048						
Reviewer Name: AMB	Reviewer Name: AMB Batch Number(s) : 912600						
ER# 1 DESCRIPTION							
ER# 1 DESCRIPTION SW6010B Sw6010B Batch 912600, Sodium recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Samples affected are: 462048-002, -001, -005, -003, -004. The Laboratory Control Sample for Sodium is within laboratory Control Limits							
1 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No is checked on the LRC).							

ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No is checked on the LRC).

Analytical Report 472775

for

Conestoga Rovers & Associates

Project Manager: Mike Wisniowiecki

N. Eunice/Eunice

073018

04-NOV-13

Collected By: Client





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-13-15-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)


Table of Contents

Report Cover	1
Cover Letter	3
Sample ID Cross Reference	4
Case Narrative	5
Certificate of Analysis (Detailed Report)	7
Explanation of Qualifiers (Flags)	18
Blank Spike Recoveries	19
Blank Spike - Blank Spike Duplicate Recoveries	20
Matrix Spike Recoveries	22
Matrix Spike - Matrix Spike Duplicate Recoveries	23
Method Duplicate	26
Chain of Custody	27
Additional Information	28
Bacteria	28



04-NOV-13

SAP ACCREDUES

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

Reference: XENCO Report No(s): **472775 N. Eunice/Eunice** Project Address: New Mexico

Mike Wisniowiecki:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 472775. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 472775 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.

Ams boah

 Kelsey Brooks

 Project Manager

 Recipient of the Prestigious Small Business Administration Award of Excellence in 1994. Certified and approved by numerous States and Agencies.

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

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



Sample Cross Reference 472775



Conestoga Rovers & Associates, Midland, TX

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-895A-102413	W	10-24-13 11:20		472775-001
IW-30-102413	W	10-24-13 12:10		472775-002
MW-009A-102413	W	10-24-13 13:05		472775-003
DUP-102413	W	10-24-13 00:00		472775-004
Metals Trip Blank	W	10-22-13 09:45		472775-005



CASE NARRATIVE



Client Name: Conestoga Rovers & Associates Project Name: N. Eunice/Eunice

Project ID:073018Work Order Number(s):472775

Report Date: 04-NOV-13 Date Received: 10/24/2013

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-926075 Total Metals by EPA 6010B SW6010B

Batch 926075, Sodium recovered below QC limits in the Matrix Spike Duplicate. Samples affected are: 472775-001, -004, -003, -002, -005. The Laboratory Control Sample for Sodium is within laboratory Control Limits

Batch: LBA-926124 Chromium, Hexavalent by SW 7196A SW7196A

Batch 926124, Hexavalent Chromium recovered above QC limits in the laboratory control sample. Samples affected are: 472775-001, -004, -003, -002.

SW7196A

Batch 926124, Hexavalent Chromium recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Samples affected are: 472775-001, -004, -003, -002.

Batch: LBA-926163 Inorganic Anions by EPA 300/300.1 E300

Batch 926163, Ortho-Phosphate recovered above QC limits in the Matrix Spike. Samples affected are: 472775-001, -004, -003, -002. The Laboratory Control Sample for Ortho-Phosphate is within laboratory Control Limits



CASE NARRATIVE



Client Name: Conestoga Rovers & Associates Project Name: N. Eunice/Eunice

 Project ID:
 073018

 Work Order Number(s):
 472775

 Report Date:
 04-NOV-13

 Date Received:
 10/24/2013





Conestoga Rovers & Associates, Midland, TX

Sample Id:	MW-895A-102413		Matrix:	Water		Sample	e Depth:		
Lab Sample Id	: 472775-001		Date Collecte	ed: 10.24.13 1	1.20	Date R	eceived: 10.24.1	13 16.3	30
Analytical Me	thod: Inorganic Anions by I	EPA 300/300.1				Prep M	lethod: E300P		
Analyst:	AMB		% Moist:			Tech:	AMB		
Seq Number:	926163		Date Prep: 10	0.25.13 10.00					
			Prep seq: 64	46019					
Parameter	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Bromide		24959-67-9	8.20	8.00	0.120	mg/L	10.26.13 02:36		20
Ortho-Phos Sulfate	phate	14265-44-2 14808-79-8	ND 1360	8.00 40.0	0.720 0.920	mg/L mg/L	10.26.13 02:36 10.26.13 02:36	U	20 20
A 1.4 1.7	4 1 TOCL SM 5210C							0.0	
Analytical Me	RKO		% Moist:			Tech	RKO	OP	
Seq Number:	926309		Date Prep: 10	0.29.13 10.00		reen.	hito		
Subcontractor	: SUB: E871002		Prep seq: 64	46103					
Parameter	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total Orga	nic Carbon	7440-44-0	6.91	1.00	0.500	mg/L	10.29.13 14:45		1
Analytical Me	thod: Total Metals by EPA	6010B				Prep M	Iethod: 3010A		
Analyst:	МКО		% Moist:			Tech:	МКО		
Seq Number:	926075		Date Prep: 10	0.25.13 11.00					
Subcontractor	: SUB: E871002		Prep seq: 64	45946					
Parameter	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chromium	L	7440-47-3	1.17	0.0100	0.00355	mg/L	10.25.13 17:20		1
Iron Sodium		7439-89-6	ND 434	0.200	0.0188	mg/L mg/I	10.25.13 17:20	U	1
Sourum		/440-23-3	-6-	0.500	0.0541	mg/L	10.23.13 17.20		1
Analytical Me	thod: Dissolved Metals per	ICP by SW846 6	6010B			Prep M	lethod: 3010A		
Analyst:	МКО		% Moist:			Tech:	МКО		
Seq Number:	926231		Date Prep: 10	0.28.13 07.10					
Subcontractor	: SUB: E871002		Prep seq: 64	46001					
Parameter	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Iron		7439-89-6	ND	0.200	0.0188	mg/L	10.28.13 20:44	U	1





Conestoga Rovers & Associates, Midland, TX

Sample Id:	MW-895A-102413		Matrix:	Water		Sample	e Depth:		
Lab Sample Id	1: 472775-001		Date Collect	ed: 10.24.13	11.20	Date R	eceived: 10.24.	13 16.3	30
Analytical Me	thod: Nitrogen Ammonia	by EPA 350.1				Prep M	lethod: E350.1	P	
Analyst:	DEP		% Moist:			Tech:	DEP		
Seq Number:	926199		Date Prep: 1	0.28.13 14.25					
Subcontractor	: SUB: E871002		Prep seq: 6	46038					
Parameter	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Nitrogen, A	ammonia (as N)	7664-41-7	ND	0.100	0.0115	mg/L	10.28.13 17:05	U	1
Analytical Me	thod: Sulfide by SM4500	-S-F-00				Prep M	lethod:		
Analyst:	DHE		% Moist:			Tech:	DHE		
Seq Number:	926356		Date Prep:						
Subcontractor	: SUB: E871002		Prep seq:						
Parameter	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Sulfide, tot	al	18496-25-8	5.00	5.00	1.00	mg/L	10.30.13 13:09		1
Analytical Me	thod: Chromium, Hexava	lent by SW 7196A				Prep M	lethod:		
Analyst:	WRU		% Moist:			Tech:	WRU		
Seq Number:	926124		Date Prep:						
			Prep seq:						
Parameter	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalen	t Chromium	18540-29-9	1.16	0.200	0.100	mg/L	10.25.13 10:30		20





Conestoga Rovers & Associates, Midland, TX

Sample Id:	IW-30-102413		Matrix:	Water		Sample	e Depth:		
Lab Sample Id	1: 472775-002		Date Collecte	ed: 10.24.13 1	2.10	Date R	eceived: 10.24.1	13 16.3	30
Analytical Me	thod: Inorganic Anions by	EPA 300/300.1				Prep M	lethod: E300P		
Analyst:	AMB		% Moist:			Tech:	AMB		
Seq Number:	926163		Date Prep: 10	0.25.13 10.00					
			Prep seq: 64	46019					
Parameter	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Bromide		24959-67-9	291	8.00	0.120	mg/L	10.26.13 02:59	Е	20
Ortho-Phos Sulfate	phate	14265-44-2 14808-79-8	ND ND	8.00 40.0	0.720 0.920	mg/L mg/L	10.26.13 02:59 10.26.13 02:59	U U	20 20
Analytical Me	thod: TOC by SM 5310C					Prep M	lethod: SM531	0P	
Analyst:	RKO		% Moist:			Tech:	RKO		
Seq Number:	926424		Date Prep: 10	0.30.13 08.17					
Subcontractor	: SUB: E871002		Prep seq: 64	46203					
Parameter	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total Orga	nnic Carbon	7440-44-0	761	100	50.0	mg/L	10.30.13 13:23		100
Analytical Me	thod: Total Metals by EPA	6010B				Prep M	Iethod: 3010A		
Analyst:	МКО		% Moist:			Tech:	МКО		
Sea Number:	926075		Date Prep: 10	0.25.13 11.00					
Subcontractor	: SUB: E871002		Prep seq: 64	45946					
Parameter	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chromium	l	7440-47-3	0.0168	0.0100	0.00355	mg/L	10.25.13 17:26		1
Iron		7439-89-6	118	0.200	0.0188	mg/L	10.25.13 17:26		1
Sodium		/440-23-5	206	0.500	0.0541	mg/L	10.25.13 17:26		1
Analytical Me	thod: Dissolved Metals per	ICP by SW846 6	5010B			Prep M	Iethod: 3010A		
Analyst:	МКО		% Moist:			Tech:	МКО		
Seq Number:	926231		Date Prep: 10	0.28.13 07.10					
Subcontractor	: SUB: E871002		Prep seq: 64	46001					
Parameter	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Iron		7439-89-6	38.3	0.200	0.0188	mg/L	10.28.13 21:12		1





Conestoga Rovers & Associates, Midland, TX

Sample Id:	IW-30-102413		Matrix:	Water		Sample	Depth:		
Lab Sample Id	l: 472775-002		Date Collecte	ed: 10.24.13	12.10	Date R	eceived: 10.24.	13 16.3	30
Analytical Me	thod: Nitrogen Ammor	ia by EPA 350.1				Prep M	ethod: E350.1	IP	
Analyst:	DEP		% Moist:			Tech:	DEP		
Seq Number:	926199		Date Prep: 10	0.28.13 14.25					
Subcontractor	: SUB: E871002		Prep seq: 64	46038					
Parameter	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Nitrogen, A	Ammonia (as N)	7664-41-7	0.100	0.100	0.0115	mg/L	10.28.13 17:08		1
Analytical Me	thod: Sulfide by SM45	00-S-F-00				Prep M	lethod:		
Analyst:	DHE		% Moist:			Tech:	DHE		
Seq Number:	926356		Date Prep:						
Subcontractor	: SUB: E871002		Prep seq:						
Parameter	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Sulfide, tota	al	18496-25-8	ND	5.00	1.00	mg/L	10.30.13 13:09	U	1
Analytical Me	thod: Chromium, Hexa	valent by SW 7196A				Prep M	lethod:		
Analyst:	WRU	-	% Moist:			Tech:	WRU		
Seq Number:	926124		Date Prep:						
			Prep seq:						
Parameter	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent	Chromium	18540-29-9	ND	0.200	0.100	mg/L	10.25.13 10:30	U	20





Conestoga Rovers & Associates, Midland, TX

N. Eunice/Eunice

Sample Id:	MW-009A-102413		Matrix:	Water		Sample	e Depth:		
Lab Sample Id	1: 472775-003		Date Collecte	ed: 10.24.13 1	3.05	Date R	eceived: 10.24.1	13 16.3	30
Analytical Me	thod: Inorganic Anions by	EPA 300/300.1				Prep M	lethod: E300P		
Analyst:	AMB		% Moist:			Tech:	AMB		
Seq Number:	926163		Date Prep: 10	0.25.13 10.00					
			Prep seq: 64	46019					
Parameter	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Bromide	_	24959-67-9	9.60	8.00	0.120	mg/L	10.26.13 03:22		20
Ortho-Phos Sulfate	phate	14265-44-2 14808-79-8	ND 611	8.00 40.0	0.720	mg/L mg/L	10.26.13 03:22 10.26.13 03:22	U	20 20
A 1.4 134								0.0	
Analytical Me	thod: TOC by SM 5310C		% Moist			Prep M	RKO	0P	
Sea Number	926309		Date Prep: 1	0.29.13 10.00		reen.	KKO		
Subcontractor	: SUB: E871002		Pren sea: 64	46103					
Parameter	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total Orga	nnic Carbon	7440-44-0	3.47	1.00	0.500	mg/L	10.29.13 16:37		1
Analytical Me	thod: Total Metals by EPA	6010B				Pren V	lethod: 3010A		
Analyst:	MKO	00102	% Moist:			Tech:	MKO		
Seq Number:	926075		Date Prep: 10	0.25.13 11.00					
Subcontractor	: SUB: E871002		Prep seq: 64	45946					
Parameter	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chromium	l	7440-47-3	0.549	0.0100	0.00355	mg/L	10.25.13 17:32		1
Iron Sodium		7439-89-6 7440-23-5	ND 287	0.200	0.0188	mg/L mg/I	10.25.13 17:32	U	1
Sourum		7440-23-3	207	0.500	0.0541	ing/L	10.25.15 17.52		1
Analytical Me	thod: Dissolved Metals per	ICP by SW846 6	6010B			Prep M	lethod: 3010A		
Analyst:	МКО		% Moist:			Tech:	МКО		
Seq Number:	926231		Date Prep: 10	0.28.13 07.10					
Subcontractor	: SUB: E871002		Prep seq: 64	46001					
Parameter	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Iron		7439-89-6	ND	0.200	0.0188	mg/L	10.28.13 21:18	U	1





Conestoga Rovers & Associates, Midland, TX

Sample Id:	MW-009A-102413		Matrix:	Water		Sample	e Depth:		
Lab Sample Id	1: 472775-003		Date Collect	ed: 10.24.13	13.05	Date R	eceived: 10.24.	13 16.3	30
Analytical Me	thod: Nitrogen Ammonia	by EPA 350.1				Prep M	lethod: E350.	IP	
Analyst:	DEP		% Moist:			Tech:	DEP		
Seq Number:	926199		Date Prep: 1	0.28.13 14.25	i				
Subcontractor	: SUB: E871002		Prep seq: 6	46038					
Parameter	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Nitrogen, A	mmonia (as N)	7664-41-7	ND	0.100	0.0115	mg/L	10.28.13 17:10	U	1
Analytical Me	thod: Sulfide by SM4500	I-S-F-00				Prep M	lethod:		
Analyst:	DHE		% Moist:			Tech:	DHE		
Seq Number:	926356		Date Prep:						
Subcontractor	: SUB: E871002		Prep seq:						
Parameter	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Sulfide, tota	al	18496-25-8	ND	5.00	1.00	mg/L	10.30.13 13:09	U	1
Analytical Me	thod: Chromium, Hexava	lent by SW 7196A				Prep M	lethod:		
Analyst:	WRU		% Moist:			Tech:	WRU		
Seq Number:	926124		Date Prep:						
			Prep seq:						
Parameter	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent	t Chromium	18540-29-9	0.552	0.0100	0.00500	mg/L	10.25.13 10:30		1





Conestoga Rovers & Associates, Midland, TX

Sample Id:	DUP-102413		Matrix:	Water		Sample	e Depth:		
Lab Sample Id	1: 472775-004		Date Collecte	ed: 10.24.13 0	00.00	Date R	eceived: 10.24.1	13 16.3	30
Analytical Me	thod: Inorganic Anions by I	EPA 300/300.1				Prep M	lethod: E300P		
Analyst:	AMB		% Moist:			Tech:	AMB		
Seq Number:	926163		Date Prep: 10	0.25.13 10.00					
			Prep seq: 64	46019					
Parameter	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Bromide		24959-67-9	9.20	8.00	0.120	mg/L	10.26.13 03:44		20
Ortho-Phos Sulfate	phate	14265-44-2 14808-79-8	ND 608	8.00 40.0	0.720 0.920	mg/L mg/L	10.26.13 03:44 10.26.13 03:44	U	20 20
Analytical Me	thod: TOC by SM 5310C					Prep V	lethod: SM531	0P	
Analyst:	RKO		% Moist:			Tech:	RKO		
Seq Number:	926309		Date Prep: 10	0.29.13 10.00					
Subcontractor	: SUB: E871002		Prep seq: 64	46103					
Parameter	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total Orga	nnic Carbon	7440-44-0	3.36	1.00	0.500	mg/L	10.29.13 16:52		1
Analytical Me	thod: Total Metals by EPA	6010B				Prep M	Iethod: 3010A		
Analyst:	МКО		% Moist:			Tech:	МКО		
Seq Number:	926075		Date Prep: 10	0.25.13 11.00					
Subcontractor	: SUB: E871002		Prep seq: 64	45946					
Parameter	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chromium	l	7440-47-3	0.537	0.0100	0.00355	mg/L	10.25.13 17:37		1
Iron Sodium		7439-89-6 7440-23-5	ND 282	0.200	0.0188	mg/L mg/I	10.25.13 17:37	U	1
Sourum		7770-25-5	202	0.500	0.0541	ing/L	10.23.13 17.37		1
Analytical Me	thod: Dissolved Metals per	ICP by SW846 6	5010B			Prep M	Iethod: 3010A		
Analyst:	МКО		% Moist:			Tech:	МКО		
Seq Number:	926231		Date Prep: 10	0.28.13 07.10					
Subcontractor	: SUB: E871002		Prep seq: 64	46001					
Parameter	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Iron		7439-89-6	ND	0.200	0.0188	mg/L	10.28.13 21:35	U	1





Conestoga Rovers & Associates, Midland, TX

N. Eunice/Eunice

Sample Id:	DUP-102413		Matrix:	Water		Sample	e Depth:		
Lab Sample Id	: 472775-004		Date Collecte	ed: 10.24.13	00.00	Date R	eceived: 10.24.	13 16.3	30
Analytical Me	thod: Nitrogen Ammonia	u by EPA 350.1				Prep M	lethod: E350.1	IP	
Analyst:	DEP		% Moist:			Tech:	DEP		
Seq Number:	926199		Date Prep: 10	0.28.13 14.25					
Subcontractor:	SUB: E871002		Prep seq: 64	46038					
Parameter	•	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Nitrogen, A	mmonia (as N)	7664-41-7	ND	0.100	0.0115	mg/L	10.28.13 17:11	U	1
Analytical Me	thod: Sulfide by SM4500)-S-F-00				Prep M	lethod:		
Analyst:	DHE		% Moist:			Tech:	DHE		
Seq Number:	926356		Date Prep:						
Subcontractor:	SUB: E871002		Prep seq:						
Parameter		CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Sulfide, tota	ป	18496-25-8	ND	5.00	1.00	mg/L	10.30.13 13:09	U	1
Analytical Me Analyst: Seq Number:	thod: Chromium, Hexava WRU 926124	alent by SW 7196A	% Moist: Date Prep:			Prep M Tech:	lethod: WRU		
Parameter		CAS Number	Prep seq: Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent	t Chromium	18540-29-9	0.549	0.0100	0.00500	mg/L	10.25.13 10:30		1
Sample Id:	Metals Trip Blank		Matrix:	Water		Sample	e Depth:		
Lab Sample Id	: 472775-005		Date Collecte	ed: 10.22.13	09.45	Date R	eceived: 10.24.	13 16.3	30
Analytical Me	thod: Total Metals by EF	PA 6010B				Prep M	lethod: 3010A		
Analyst:	МКО		% Moist:			Tech:	МКО		
Seq Number:	926075		Date Prep: 10	0.25.13 11.00	1				
Subcontractor	SUB: E871002		Prep seq: 64	45946					
Parameter	•	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chromium		7440-47-3	ND	0.0100	0.00355	mg/L	10.25.13 17:43	U	1
Iron		7439-89-6	ND	0.200	0.0188	mg/L	10.25.13 17:43	U	1
Sodium		7440-23-5	ND	0.500	0.0541	mg/L	10.25.13 17:43	U	1





Conestoga Rovers & Associates, Midland, TX

Sample Id:	645946-1-BLK		Matrix:	Water		Sample	e Depth:		
Lab Sample Id	: 645946-1-BLK		Date Collecte	ed:		Date R	eceived:		
Analytical Met	thod: Total Metals by EF	PA 6010B				Prep M	lethod: 3010A		
Analyst:	МКО		% Moist:			Tech:	МКО		
Seq Number:	926075		Date Prep: 10	0.25.13 11.00					
Subcontractor:	SUB: E871002		Prep seq: 64	15946					
Parameter		CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chromium		7440-47-3	ND	0.0100	0.00355	mg/L	10.25.13 15:38	U	1
Iron		7439-89-6	ND	0.200	0.0188	mg/L	10.25.13 15:38	U	1
Sodium		7440-23-5	ND	0.500	0.0541	mg/L	10.25.13 15:38	U	1
Sample Id:	646001-1-BLK		Matrix:	Water		Sample	e Depth:		
Lab Sample Id	: 646001-1-BLK		Date Collecte	ed:		Date R	eceived:		
Analytical Met	thod: Dissolved Metals r	oer ICP by SW846 6	010B			Prep M	lethod: 3010A		
Analyst:	МКО		% Moist:			Tech:	МКО		
Seq Number:	926231		Date Prep: 10	0.28.13 07.10					
Subcontractor:	SUB: E871002		Prep seq: 64	46001					
Parameter		CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Iron		7439-89-6	ND	0.200	0.0188	mg/L	10.28.13 20:27	U	1
Sample Id:	646019-1-BLK		Matrix:	Water		Sample	e Depth:		
Lab Sample Id	: 646019-1-BLK		Date Collecte	ed:		Date R	eceived:		
Analytical Met	thod: Inorganic Anions b	oy EPA 300/300.1				Prep M	lethod: E300P		
Analyst:	AMB		% Moist:			Tech:	AMB		
Seq Number:	926163		Date Prep: 10	0.25.13 10.00					
			Prep seq: 64	46019					
Parameter		CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Bromide		24959-67-9	ND	0.400	0.00600	mg/L	10.25.13 17:33	U	1
Ortho-Phosp	phate	14265-44-2	ND	0.400	0.0360	mg/L	10.25.13 17:33	U	1
Sulfate		14808-79-8	ND	2.00	0.0460	mg/L	10.25.13 17:33	U	1





Conestoga Rovers & Associates, Midland, TX

Sample Id:	646038-1-BLK		Matrix:	Water		Sample	Depth:		
Lab Sample Id	: 646038-1-BLK		Date Collecte	ed:		Date R	eceived:		
Analytical Me	thod: Nitrogen Ammonia by	EPA 350.1				Prep M	ethod: E350.1	Р	
Analyst:	DEP		% Moist:			Tech:	DEP		
Seq Number:	926199		Date Prep: 10	0.28.13 14.25					
Subcontractor:	SUB: E871002		Prep seq: 64	46038					
Parameter		CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Nitrogen, A	mmonia (as N)	7664-41-7	ND	0.100	0.0115	mg/L	10.28.13 16:40	U	1
Sample Id:	646103-1-BLK		Matrix:	Water		Sample	Depth:		
Lab Sample Id	: 646103-1-BLK		Date Collecte	ed:		Date R	eceived:		
Analytical Me	thod: TOC by SM 5310C					Prep M	ethod: SM531	10P	
Analyst:	RKO		% Moist:			Tech:	RKO		
Seq Number:	926309		Date Prep: 10	0.29.13 10.00					
Subcontractor:	SUB: E871002		Prep seq: 64	46103					
Parameter		CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total Organ	nic Carbon	7440-44-0	ND	1.00	0.500	mg/L	10.29.13 14:04	U	1
Sampla Id:	646203 1 BI K		Matrix	Water		Sample	Denth		
	040203-1-DLK			vv ater					
Lab Sample Id	: 646203-1-BLK		Date Collecte	ed:		Date R	eceived:		
Analytical Me	thod: TOC by SM 5310C					Prep M	ethod: SM531	l0P	
Analyst:	RKO		% Moist:			Tech:	RKO		
Seq Number:	926424		Date Prep: 10	0.30.13 08.17					
Subcontractor:	SUB: E871002		-						
Paramotor	Sebi Berree		Prep seq: 62	46203					
1 ai ainetei		CAS Number	Prep seq: 62 Result	46203 MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total Organ	ic Carbon	CAS Number 7440-44-0	Prep seq: 64 Result ND	MQL 1.00	SDL 0.500	Units mg/L	Analysis Date 10.30.13 11:53	Flag U	Dil Factor
Total Organ	nic Carbon 926124-1-BLK	CAS Number 7440-44-0	Prep seq: 64 Result ND Matrix:	MQL 1.00 Water	SDL 0.500	Units mg/L Sample	Analysis Date 10.30.13 11:53 Depth:	Flag U	Dil Factor
Total Organ Sample Id: Lab Sample Id	nic Carbon 926124-1-BLK : 926124-1-BLK	CAS Number 7440-44-0	Result ND Matrix: Date Collecte	46203 MQL 1.00 Water ed:	SDL 0.500	Units mg/L Sample Date Re	Analysis Date 10.30.13 11:53 Depth: eccived:	Flag U	Dil Factor
Total Organ Sample Id: Lab Sample Id Analytical Met	nic Carbon 926124-1-BLK : 926124-1-BLK thod: Chromium, Hexavaler	CAS Number 7440-44-0 nt by SW 7196A	Result ND Matrix: Date Collecte	46203 MQL 1.00 Water ed:	SDL 0.500	Units mg/L Sample Date Re Prep M	Analysis Date 10.30.13 11:53 Depth: ecceived: ethod:	Flag U	Dil Factor
Total Organ Sample Id: Lab Sample Id Analytical Met Analyst:	ic Carbon 926124-1-BLK : 926124-1-BLK thod: Chromium, Hexavaler WRU	CAS Number 7440-44-0 nt by SW 7196A	Result ND Matrix: Date Collecte % Moist:	46203 MQL 1.00 Water ed:	SDL 0.500	Units mg/L Sample Date Re Prep M Tech:	Analysis Date 10.30.13 11:53 Depth: ecceived: ethod: WRU	Flag U	Dil Factor
Total Organ Sample Id: Lab Sample Id Analytical Mer Analyst: Seq Number:	nic Carbon 926124-1-BLK : 926124-1-BLK thod: Chromium, Hexavaler WRU 926124	CAS Number 7440-44-0 nt by SW 7196A	Result ND Matrix: Date Collecte % Moist: Date Prep:	46203 MQL 1.00 Water ed:	SDL 0.500	Units mg/L Sample Date Ro Prep M Tech:	Analysis Date 10.30.13 11:53 Depth: ecceived: ethod: WRU	Flag U	Dil Factor
Total Organ Sample Id: Lab Sample Id Analytical Met Analyst: Seq Number:	ic Carbon 926124-1-BLK : 926124-1-BLK thod: Chromium, Hexavaler WRU 926124	CAS Number 7440-44-0 nt by SW 7196A	Result ND Matrix: Date Collecte % Moist: Date Prep: Prep seq:	MQL 1.00 Water ed:	SDL 0.500	Units mg/L Sample Date R Prep M Tech:	Analysis Date 10.30.13 11:53 Depth: ecceived: ethod: WRU	Flag U	Dil Factor
Total Organ Sample Id: Lab Sample Id Analytical Met Analyst: Seq Number: Parameter	ic Carbon 926124-1-BLK : 926124-1-BLK thod: Chromium, Hexavaler WRU 926124	CAS Number 7440-44-0 nt by SW 7196A CAS Number	Result ND Matrix: Date Collecte % Moist: Date Prep: Prep seq: Result	MQL 1.00 Water ed: MQL	SDL 0.500 SDL	Units mg/L Sample Date Ro Prep M Tech: Units	Analysis Date 10.30.13 11:53 Depth: ecceived: ethod: WRU Analysis Date	Flag	Dil Factor 1 Dil Factor





Conestoga Rovers & Associates, Midland, TX

Sample Id:	926356-1-BLK		Matrix:	Water		Sample	Depth:		
Lab Sample Id	: 926356-1-BLK		Date Collected	:		Date Re	ceived:		
Analytical Met	hod: Sulfide by SM4500-S-I	F-00				Prep Me	ethod:		
Analyst:	DHE		% Moist:			Tech:	DHE		
Seq Number:	926356		Date Prep:						
Subcontractor:	SUB: E871002		Prep seq:						
Parameter		CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Sulfide, tota	1	18496-25-8	ND	5.00	1.00	mg/L	10.30.13 13:09	U	1



Flagging Criteria



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

LOD Limit of Detection

Phone

(281) 240-4200

(214) 902 0300

(210) 509-3334

(813) 620-2000

(432) 563-1800

(770) 449-8800

(602) 437-0330

- ** Surrogate recovered outside laboratory control limit.
- **BRL** Below Reporting Limit.
- RL Reporting Limit
- MDL Method Detection Limit
 SDL Sample Detection Limit
- PQL Practical Quantitation Limit MQL Method Quantitation Limit 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

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 - San Antonio - Atlanta - Midland/Odessa - Tampa/Lakeland - Phoenix - Latin America

4143 Greenbriar Dr, Stafford, TX 77477
9701 Harry Hines Blvd , Dallas, TX 75220
5332 Blackberry Drive, San Antonio TX 78238
2505 North Falkenburg Rd, Tampa, FL 33619
12600 West I-20 East, Odessa, TX 79765
6017 Financial Drive, Norcross, GA 30071
3725 E. Atlanta Ave, Phoenix, AZ 85040

Fax

(281) 240-4280

(214) 351-9139

(210) 509-3335

(813) 620-2033

(432) 563-1713

(770) 449-5477



Blank Spike Recovery

Project Name: N. Eunice/Eunice



Work Order #:	472775				Project ID	:		07301	
Lab Batch #:	926124	S	ample: 926124	-1-BKS	Matrix	: Water			
Date Analyzed:	10/25/2013	Date Pre	pared: 10/25/2	013	Analyst	: WRU			
Reporting Units:	mg/L	B	atch #: 1	BLANK /I	BLANK SPI	KE REC	COVERY S	STUDY	
Chromi	um, Hexavalent by SW 71 Analytes	96A	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags	
Hexavalent Chromi	um		<0.0100	0.0200	0.0246	123	80-120	Н	
Lab Batch #:	926199	S	ample: 646038	-1-BKS	Matrix	: Water	1	1	
Date Analyzed:	10/28/2013	Date Pre	pared: 10/28/2	013	Analyst	: DEP			
Reporting Units:	mg/L	Ba	atch #: 1	BLANK /I	BLANK SPI	KE REC	COVERY S	STUDY	
Nitro	gen Ammonia by EPA 350 Analytes).1	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags	
Nitrogen, Ammonia	ı (as N)		<0.100	2.50	2.57	103	90-110		
Lab Batch #:	926309	S	ample: 646103	-1-BKS	Matrix	: Water	1	1	
Date Analyzed:	10/29/2013	Date Pre	pared: 10/29/2	013	Analyst	: RKO			
Reporting Units:	mg/L	В	atch #: 1	BLANK /I	BLANK SPI	COVERY S	STUDY		
	TOC by SM 5310C Analytes		Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags	
Total Organic Carb	on		<1.00	10.0	10.4	104	90-110		
Lab Batch #:	926424	S	Sample: 646203-1-BKS Matrix: Water						
Date Analyzed:	10/30/2013	Date Pre	repared: 10/30/2013 Analyst: RKO						
Reporting Units:	mg/L	Ва	atch #: 1	BLANK /I	BLANK SPI	KE REC	COVERY S	STUDY	
	TOC by SM 5310C Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags		
Total Organic Carb	on		<1.00	10.0	10.1	101	90-110		

Blank Spike Recovery [D] = 100*[C]/[B] All results are based on MDL and validated for QC purposes. BRL - Below Reporting Limit



BS / BSD Recoveries



Project Name: N. Eunice/Eunice

Work Order #: 472775							Proj	ject ID:(073018					
Analyst: MKO	D	ate Prepar	red: 10/28/202	13			Date A	nalyzed:	0/28/2013					
Lab Batch ID: 926231 Sample: 646001-1-H	3KS	Batc	h #: 1					Matrix: V	Water					
Units: mg/L		BLAN	K/BLANK	SPIKE /]	BLANK S	SPIKE DUP	LICATE	RECOVI	ERY STUI	DY				
Dissolved Metals per ICP by SW846 6010B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag			
Iron	<0.200	5.00	4.96	99	5.00	4.91	98	1	80-120	20				
Analyst: AMB	D	ate Prepar	red: 10/25/20	13	+	1	Date A	nalyzed:	0/25/2013	1				
Lab Batch ID: 926163 Sample: 646019-1-H	BKS	Bate	h #: 1		Matrix: Water									
Units: mg/L	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY													
Inorganic Anions by EPA 300/300.1	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike Duplicate	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag			
			Result	%0K		Duplicate	70K	/0	70 K	/OKID				
Analytes		[B]	[C]	%K [D]	[E]	Result [F]	[G]	70	70K					
Analytes Bromide	[A] <0.400	[B] 5.00	[C] 4.86	% K [D] 97	[E] 5.00	Result [F]	90 K [G] 97	0	80-120	20				
Analytes Bromide Ortho-Phosphate	[A] <0.400 <0.400	[B] 5.00 5.00	Kesuit [C] 4.86 5.39	97 (D) 97 108	[E] 5.00 5.00	August August<	70 K [G] 97 105	0 3	80-120 80-120	20 20				
Analytes Bromide Ortho-Phosphate Sulfate	[A] <0.400 <0.400 <2.00	[B] 5.00 5.00 25.0	Kesuit [C] 4.86 5.39 24.6	%K [D] 97 108 98 108	[E] 5.00 5.00 25.0	August August<	97 [G] 97 105 98	0 3 0	80-120 80-120 80-120	20 20 20				
Analytes Bromide Ortho-Phosphate Sulfate Analyst: DHE	[A] <0.400 <0.400 <2.00 D	[B] 5.00 5.00 25.0 ate Prepar	Kesuit [C] 4.86 5.39 24.6 10/30/202	90 K [D] 97 108 98	[E] 5.00 5.00 25.0	August August<	70K [G] 97 105 98 Date A	0 3 0 nalyzed: 1	80-120 80-120 80-120 0/30/2013	20 20 20				
Analytes Bromide Ortho-Phosphate Sulfate Analyst: DHE Lab Batch ID: 926356 Sample: 926356-1-E	[A] <0.400 <0.400 <2.00 D BKS	[B] 5.00 5.00 25.0 ate Prepar Bate	Result [C] 4.86 5.39 24.6 24.6 red: 10/30/201 h #: 1	% % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % % %	[E] 5.00 5.00 25.0	August August<	70K [G] 97 105 98 Date A	0 3 0 malyzed: 1 Matrix: V	80-120 80-120 80-120 10/30/2013 Water	20 20 20				
Analytes Bromide Ortho-Phosphate Sulfate Analyst: DHE Lab Batch ID: 926356 Sample: 926356-1-F Units: mg/L	[A] <0.400 <0.400 <2.00 D 3KS	[B] 5.00 5.00 25.0 ate Prepar Batel BLAN	Result [C] 4.86 5.39 24.6 24.6 red: 10/30/201 h #: 1 K /BLANK 1	70K [D] 97 108 98 13	[E] 5.00 5.00 25.0 BLANK S	August August<	70K [G] 97 105 98 Date A	0 3 0 nalyzed: 1 Matrix: V RECOVI	80-120 80-120 80-120 0/30/2013 Water ERY STUI	20 20 20 20				
Analytes Bromide Ortho-Phosphate Sulfate Analyst: DHE Lab Batch ID: 926356 Sample: 926356-1-H Units: mg/L Sulfide by SM4500-S-F-00 Analytes	[A] <0.400 <0.400 <2.00 D BKS Blank Sample Result [A]	[B] 5.00 5.00 25.0 ate Prepar Batcl BLAN Spike Added [B]	Result [C] 4.86 5.39 24.6 red: 10/30/202 h #: 1 K /BLANK Spike Result [C]	% % [D] 97 108 98 98 13 SPIKE / 1 Blank Spike %R [D]	[E] 5.00 5.00 25.0 BLANK S Spike Added [E]	Bupicate Result [F] 4.87 5.24 24.5 SPIKE DUP Blank Spike Duplicate Result [F]	70K [G] 97 105 98 Date A LICATE Blk. Spk Dup. %R [G]	0 3 0 nalyzed: 1 Matrix: V RECOVI	20K 80-120 80-120 80-120 0/30/2013 Water ERY STUI Control Limits %R	20 20 20 DY Control Limits %RPD	Flag			

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



BS / BSD Recoveries



Project Name: N. Eunice/Eunice

Work Order #: 472775							Pro	ject ID:(073018		
Analyst: MKO		Date Prepa	red: 10/25/202	13			Date A	nalyzed:	10/25/2013		
Lab Batch ID: 926075	Sample: 645946-1-BKS	Bate	c h #: 1					Matrix: V	Water		
Units: mg/L		BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY									
Total Metals by EP	A 6010B Blank Sample Res [A]	Ilt Spike [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chromium	<0.0100	1.00	1.02	102	1.00	1.01	101	1	80-120	20	
Iron	<0.200	5.00	4.80	96	5.00 4.78 96 0 80-120 20						
Sodium	<0.500	104	25.0	25.4	102	2	80-120	20			

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: N. Eunice/Eunice

Work Order #: 472775 Project ID: 073018 Lab Batch #: 926163 **Date Analyzed:** 10/25/2013 Date Prepared: 10/25/2013 Analyst: AMB QC- Sample ID: 472770-001 S Matrix: Water Batch #: 1 Reporting Units: mg/L MATRIX / MATRIX SPIKE RECOVERY STUDY Parent Spiked Sample Control **Inorganic Anions by EPA 300** Sample Spike Flag Result %R Limits Result Added [C] [D] %R [A] [B] Analytes Bromide < 2.00 25.0 26.0 104 80-120 Ortho-Phosphate <2.00 25.0 Х 32.1 128 80-120 Sulfate 39.2 125 166 101 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







Work Order # :	472775						Project II	D: 073018	3			
Lab Batch ID:	926124	QC- Sample ID:	472775	-002 S	Ba	tch #:	1 Matri	x: Water				
Date Analyzed:	10/25/2013	Date Prepared:	10/25/2	013	An	alyst: \	WRU					
Reporting Units:	mg/L		Μ	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
Chromiu	ım, Hexavalent by SW 7196A	Parent Sample Result	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
	Analytes	[A]	[B]		[D]	[E]	Kesunt [F]	[G]	/0	70K	70KF D	
Hexavalent Chro	omium	<0.200	4.00	0.862	22	4.00	0.868	22	1	80-120	20	Х
Lab Batch ID:	926231	QC- Sample ID:	472775	-001 S	Ba	tch #:	1 Matri	x: Water				
Date Analyzed:	10/28/2013	Date Prepared:	10/28/2	013	An	alyst: N	ИКО					
Reporting Units:	mg/L		Μ	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
Dissolved N	Metals per ICP by SW846 6010B	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Dissolved M	Metals per ICP by SW846 6010B 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 %R	Control Limits %RPD	Flag
Dissolved N	Metals per ICP by SW846 6010B Analytes	Parent Sample Result [A] <0.200	Spike Added [B] 5.00	Spiked Sample Result [C] 4.94	Spiked Sample %R [D] 99	Spike Added [E] 5.00	Duplicate Spiked Sample Result [F] 4.79	Spiked Dup. %R [G] 96	RPD %	Control Limits %R 75-125	Control Limits %RPD 20	Flag
Dissolved M Iron Lab Batch ID:	Metals per ICP by SW846 6010B Analytes 926199	Parent Sample Result [A] <0.200 QC- Sample ID:	Spike Added [B] 5.00 472599-	Spiked Sample Result [C] 4.94	Spiked Sample %R [D] 99 Ba	Spike Added [E] 5.00 tch #:	Duplicate Spiked Sample Result [F] 4.79 1 Matri	Spiked Dup. %R [G] 96 x: Waste	RPD %	Control Limits %R 75-125	Control Limits %RPD 20	Flag
Dissolved N Iron Lab Batch ID: Date Analyzed:	Vetals per ICP by SW846 6010B Analytes 926199 10/28/2013	Parent Sample Result [A] <<0.200QC- Sample ID:Date Prepared:	Spike Added [B] 5.00 472599- 10/28/20	Spiked Sample Result [C] 4.94 -002 S 013	Spiked Sample %R [D] 99 Ba An	Spike Added [E] 5.00 tch #: aalyst: I	Duplicate Spiked Sample Result [F] 4.79 1 Matri DEP	Spiked Dup. %R [G] 96 x: Waste	RPD % 3 Water	Control Limits %R	Control Limits %RPD 20	Flag
Dissolved M Iron Lab Batch ID: Date Analyzed: Reporting Units:	Metals per ICP by SW846 6010B Analytes 926199 10/28/2013 mg/L	Parent Sample Result [A] <0.200 QC- Sample ID: Date Prepared:	Spike Added [B] 5.00 472599- 10/28/20 M	Spiked Sample Result [C] 4.94 -002 S 013 ATRIX SPIK	Spiked Sample %R [D] 99 Ba An E / MAT	Spike Added [E] 5.00 tch #: alyst: I RIX SPI	Duplicate Spiked Sample Result [F] 4.79 1 Matri DEP KE DUPLICA	Spiked Dup. %R [G] 96 x: Waste TE REC	RPD % 3 Water	Control Limits %R 75-125 STUDY	Control Limits %RPD 20	Flag
Dissolved N Iron Lab Batch ID: Date Analyzed: Reporting Units: Nitrog	Metals per ICP by SW846 6010B Analytes 926199 10/28/2013 mg/L gen Ammonia by EPA 350.1	Parent Sample Result [A] <0.200 QC- Sample ID: Date Prepared: Parent Sample Result	Spike Added [B] 5.00 472599 10/28/20 M Spike Added	Spiked Sample Result [C] 4.94 -002 S 013 ATRIX SPIK Spiked Sample Result [C]	Spiked Sample %R [D] 99 Ba An E / MAT Spiked Sample %R	Spike Added [E] 5.00 tch #: alyst: I RIX SPI Spike Added	Duplicate Spiked Sample Result [F] 4.79 1 Matri DEP KE DUPLICA Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G] 96 x: Waste TE REC Spiked Dup. %R	RPD % 3 Water OVERY 5 RPD %	Control Limits %R 75-125 STUDY Control Limits %R	Control Limits %RPD 20 20 Control Limits %RPD	Flag
Dissolved M Iron Lab Batch ID: Date Analyzed: Reporting Units: Nitrog	Metals per ICP by SW846 6010B Analytes 926199 10/28/2013 mg/L gen Ammonia by EPA 350.1 Analytes	Parent Sample Result [A] C- Sample ID:Date Prepared:Parent Sample Result [A]	Spike [B] 5.00 472599 10/28/2 M Spike Added [B]	Spiked Sample Result [C] 4.94 002 S 013 ATRIX SPIK Spiked Sample Result [C]	Spiked Sample %R [D] 99 Ba An E / MAT Spiked Sample %R [D]	Spike Added [E] 5.00 tch #: alyst: I RIX SPI Spike Added [E]	Duplicate Spiked Sample Result [F] 4.79 1 Matri: DEP KE DUPLICA Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G] 96 x: Waste TE REC Spiked Dup. %R [G]	RPD % 3 Water OVERY 5 RPD %	Control Limits %R 75-125 STUDY Control Limits %R	Control Limits %RPD 20 Control Limits %RPD	Flag

Matrix Spike Percent Recovery $[D] = 100^{*}(C-A)/B$ Relative 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 Applicable N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.







Work Order # :	472775						Project II	D: 073018	8			
Lab Batch ID:	926199	QC- Sample ID:	472750	-001 S	Ba	tch #:	1 Matri	x: Water				
Date Analyzed:	10/28/2013	Date Prepared:	10/28/2	.013	Ar	nalyst: I	DEP					
Reporting Units:	mg/L		Ν	IATRIX SPIK	E / MAT	'RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
Nitrog	gen Ammonia by EPA 350.1	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
			[D]	2.47	[D]		2.50	[G]	1	00.110	20	
Nitrogen, Ammo	onia (as N)	0.818	2.50	3.47	106	2.50	3.50	107		90-110	20	
Lab Batch ID:	926309	QC- Sample ID:	472775	-001 S	Ba	tch #:	1 Matrix	x: Water				
Date Analyzed:	10/29/2013	Date Prepared:	10/29/2	013	Ar	nalyst: I	RKO					
Reporting Units:	mg/L		Ν	IATRIX SPIK	E / MAT	'RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
	TOC by SM 5310C	Parent Sample	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
	Analytes	[A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Total Organic C	arbon	6.91	10.0	17.2	103	10.0	16.9	100	2	90-110	20	
Lab Batch ID:	926424	QC- Sample ID:	472852	-001 S	Ba	tch #:	1 Matrix	x: Water				
Date Analyzed:	10/30/2013	Date Prepared:	10/30/2	013	Ar	nalyst: I	RKO					
Reporting Units:	mg/L		Ν	IATRIX SPIK	E / MAT	'RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
	TOC by SM 5310C	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Analytes	[A]	[B]	[0]	[D]	[E]	itesuit [1]	[G]				
Total Organic C	arbon	49.5	100	156	107	100	152	103	3	90-110	20	

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 Applicable N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.







Work Order # :	472775						Project II): 073018	3			
Lab Batch ID:	926075	QC- Sample ID:	472685	-001 S	Ba	tch #:	1 Matrix	: Solid				
Date Analyzed:	10/25/2013	Date Prepared:	10/25/2	013	An	alyst: N	ИКО					
Reporting Units:	mg/L		TE REC	OVERY S	STUDY							
Tota	al Metals by EPA 6010B 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 %R	Control Limits %RPD	Flag
Chromium	• 	<0.0500	5.00	4.96	99	5.00	4.91	98	1	80-120	20	
Iron		<1.00	25.0	24.2	97	25.0	23.7	95	2	80-120	20	
Sodium		1560	125	1680	96	125	1580	16	6	75-125	20	Х

Matrix Spike Percent Recovery $[D] = 100^{\circ}(C-A)/B$ Relative Percent Difference RPD = $200^{\circ}|(C-F)/(C+F)|$ 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 Applicable N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.





Work Order #: 472775

Lab Batch #: 926356 Date Analyzed: 10/30/2013 13:09 QC- Sample ID: 472780-014 D	Date Prepar Batcl	red: 10/30/2013	Anal Mat	Project I yst:DHE rix: Water	D: 073018	
Reporting Units: mg/L		SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Sulfide by SM4500-S-F-00 Analyte		Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Sulfide, total		<5.00	< 5.00	0	20	U

Spike Relative Difference RPD 200 * | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes. BRL - Below Reporting Limit

mpany-City	vd., Dallas, Tx	75220 2	14-902- Phone	0300					Lab	842 Ca Only:	antwe	ell, Corp	Dus Ch	nristi,	Tx 784	108 3	61-884	-037	1			Seri	al #:	23	33	10	4 Page	<u>ə)</u>
CRA Name Leasting	43:	2-6	86.	0	09	35	ø		TAT	T. ACA	DE	7	1 6	- /	26 2	de		10	4 0		tand	and T	ATio		+	lfie		
Ecuico / Eunice	AL XENCO	07	130	18	5				It is	typica	lly 5	-7 Wo	z4i king	Day:	s for le	evel	Il and	10+	u z Work	ing c	ays f	or lev	/el III a	and IV	data			
oj State: TX, AL, FL ,GA, LA, MS, NC, P	roj. Manage	r (PM)				1	e							2	3s)		CIE)									Remar	ks
Aail Results to APPM and	Tike	Wis	nio Fax No	WI	ec.	KI			As	L.		_		xpdd	PCE		16 6	601			~		0	21d	Ŧ	(pa/		
wisniowiecki @ CRAWON	Id.com		713	-7:	34-	33	391	/	N	Oth		CAL		1 A	erb.		180				101		300	PO	ghest	oprov	pé	
oice to Accounting Inc. Invoice wi to:	th Final Repo	ort E] Invoi	ce m	ust h	ave a	a P.O		VOHs	CALL		dx-2	cides	Appdx	st. H		S	1 and 1			60		Ú	7d 1	S Hig	pre-al	leede	
ote/Pricing: P	.O No:			Call fo	or P.(о.			Dxyg	(-2 (App c	Pestic	TAL /	s Pe		1. W	2	0		de	500	S	5d	ng/Kg	d are	d as r	
g Program: UST DRY-CLEAN Land-Fill	Waste-Disp	D NPD	ES DI	V TF	RRP				НО	(pdd)	VVV	L PI	QD	P 23	NOC	10	elia .	20	20		1	20	hor	34	_	ily an	rove	
PP Per-Contract CLP AFCEE NAVY	OE DOD I	USACE	OTHE	R:					ШЩ.	-1 A	Ę	E D	des	13PI	S		S	10	0 3	20	5	5	850	Sh 8	Ń,	l app	appi	
ecial DLs (GW DW QAPP MDLs RLs	See Lab PM	Includ	led Ca	all PN	Л)				MTBI	xpdd		N&AE	erbici	Pb	VOC		19	ma	13	T G		00	Phi .	4	J/bu	s wil	pre-	
									EX-1	N N		A B	He	RA-4	als		4	24	o o	33	10	ties	e.	24	2	large	are	
mpler Name) e Mirelos	Signature	gr	en	1i.	rec	es	>		st BT	LD	C		CBs	RC	(Met		Wild.	4.	500	2	H	N.	hert	121	é	Surch	sdn-	
					s	ize	ype	Se	III-Lis	TC	00	II-List	les F	RA-8	ГЪ		1001	20	2		1 po	. 61	sol	55	abov	es (S	ean	
Sample ID Sampling	Time	E	0410	210	ainers	ner S	ner T	vative	EU IS	Ъ	1	L C(sticid	: RCI	- 10	DBC	C	2 Cal	P C C		de	non	oph	ASAF	PAH	ampl	le Cl	
Date		in"	atrix	ab	Conta	ontair	ntair	esen	00	DC's	SUL	/0C	CPe	etals	Ч	0B/I	ptal	· X	ALC.	10	25	mp	F	NT /	ddn:	old S.	amp	
	15.0	ă₩	ž č	5 0	#	Ŭ V	Ŭ	Pr	>	> 0	<u> </u>	- ís	Ō	Σ	S		H =	4	X X X X	27	X	アン	0 ,	F	Ac	Ĭ	ű	
W-895A-102413 10-24-13	1/20		u	X	6	V	1	V			_								-			~			-			
w-30-102413 10-24-13	1210		w	Y	Ģ	V	i/	V									X	1	X	X	X	X	X					
1W-009 A-102413 10-24-13	1305		n	1	6	V	~	V			_	_		_			67	X	X	X	X	X	X					
) 4P-102413 10-24-13	(- All suggestion		w	7	6	V	V	V									XX	X	X	X	X	X	X)	(
			te	¥	Ģ	V	V	V			-	_					_	-	-									
											-	_				_			_									
				_								_				_	_	_							-			
				-							-		-	_		-		_	-	-								
				-	-		1				_	-				-												
Relinguished by (Initials and Sign)	Date &	Time		Reli	ingui	shed	to (I	Initials	and	d Sign)		Date	e & '	Time	. Т	otal	Conta	iners	s per	COC	.7	J	C	oler 7	Temp		2,5	
Str Atram	10-24-	13 4	30 2	1	an	la	-	1	n	<u> </u>	1	0-1	4-	13	, L	pon	signing	s this	coc	you a	ccept	XEN	CO teri	ns and	Cond	itions	s unless othe	erw
			4)			/	10				4: 7	30		a	greed rill be	d on wi held 3	iting. 80 dar	Repo vs afte	ts are er fina	the line	ntelleo t is e-	tual P mailec	operty unless	of XEI herel	NCO	until paid. S quested. Ru	3an Jsh
			6)											C	harg	es and	Colle	ction	Fees	are pr	e-app	roved	fneede	ed.			

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

Quantitative Bacterial Report

Heterotrophic Plate Count

(Hygeia SOP-09)



Client No.: 30311 Kelsey Brooks Xenco Laboratories (Odessa)	t No.: 30311 ey Brooks o Laboratories (Odessa) 0 West I-20 East					87								
12600 West I-20 East Odessa, TX 79765				Received Analyzed	: 10/25/ : 10/29/	/2013 /2013								
Hygeia Sample ID		10	5317			10	5318			10	5319			
Client Sample ID		4727	75-001			4727	75-002			4727	75-003			
Location		MW-895	5A-102413			IW-30	-102413		MW-009A-102413					
Sample Type		W	ater			W	ater		Water					
Sample Amount		0.1	1 mL			0.1	1 mL		1 mL					
Medium / Method Dilution Factor(s)		SM 1:1	9215			SM 1:1	9215		1:1					
	Pow/				Bow				Raw					
Bacteria Isolated:	Count	Dilution	CFU / mL	%	Count	Dilution	CFU / mL	%	Count	Dilution	CFU / mL	%		
Anaerobic heterotrophic bacteria	31	1	310	100	580	1	5,800	100	4	1	4	100		
				+				+				+		
												_		
												+		
												+		
												+		
												+		
												+		
Total CFU		31(0 / mL	-		5,80)0 / mL	-		4	/mL			
Total CFU 310 / mL Comments 10/24/13 11:20					10/24	/13 12:10			10/24	/13 13:05				

Quantitative Bacterial Report

Heterotrophic Plate Count

(Hygeia SOP-09)



Client No.: 30311 Kelsey Brooks Xenco Laboratories (Odessa) 12600 West I-20 East Odessa, TX 79765 Hygeia Sample ID Client Sample ID Location Sample Type Sample Amount Medium / Method Dilution Factor(s)		10 4727 DUP- W 1 SM 1:1	5320 75-004 102413 /ater mL 9215	Project Na oject Na Collec Recei Analy QC X	No.: 1018187 ime: cted: 10/24/2013 ived: 10/25/2013 zed: 10/29/2013
	Raw	Dilution	0511 ()]
Anaerobic heterotrophic bacteria	10	1	10	100]
					-
					4
					-
					-
					-
					-
					1
					-
					-
				_	-
					1
				_	4
Total CFU		10	/mL		1
Comments	10/24	/13 00:00]

Quantitative Bacterial Report

Heterotrophic Plate Count

(Hygeia SOP-09)



Client No.: 30311	Project No.: 1018187
Kelsey Brooks	Project Name:
Xenco Laboratories (Odessa)	Collected: 10/24/2013
12600 West I-20 East	Received: 10/25/2013
Odessa, TX 79765	Analyzed: 10/29/2013

Analyst 'anessa Garcia

Lab Director

Crystal Enloe

Thank you for using Hygeia Laboratories Inc. We strive to provide superior quality and service.

This report may not be reproduced except in full, and only with the written approval of this laboratory. Please contact Hygeia regarding any questions about these results, this report, or the analytical methods employed.

Data in this report are reliable within two significant figures. Sample results are not corrected based on results of blanks. The minimum reporting limit (MRL) is calculated as the lowest dilution tested/volume. Estimates of uncertainty are available upon request. CFU = colony forming units. CFU/unit is calculated as raw count*dilution/sample amount. Total CFU/unit is the sum of individual CFUs/unit and is considered <MRL if no colonies are present.

Confidentiality Notice:

The information contained herein is confidential and privileged, intended for the exclusive use of the individual or entity named above. If the reader of this document is not the intended recipient, or the employee or agent responsible for delivering it to the intended recipient, you are hereby notified that any dissemination, distribution or copying of the document(s) is strictly prohibited. If you have received this document in error, please immediately notify us by telephone to arrange for its return.

Guidelines for Interpretation:

Interpretation of the data and information within this document is left to the company, consultant, and/or persons who conducted the fieldwork. Bacteria have been associated with a variety of health effects and sensitivity varies from person to person. Contact the CDC (www.cdc.gov) for information regarding potential health risks related to exposure in air or on surfaces and the USEPA (www.epa.gov) for existing established standards including regulated water quality standards.

Liability Notice:

Hygeia Laboratories Inc. and its personnel shall not be held liable for any misinformation provided to us by the client regarding these samples or for any misuse or interpretation of information supplied by us. Liability shall extend to providing replicate analyses only. This report relates only to samples submitted and analyzed.

Revision 0 11/01/2013 ce

Analytical Report 473427

for

Conestoga Rovers & Associates

Project Manager: Claudia Ramos

N. Eunice- Soy Lactate

073018

13-NOV-13

Collected By: Client





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-13-15-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)





13-NOV-13

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

Reference: XENCO Report No(s): 473427 N. Eunice- Soy Lactate Project Address: New Mexico

Claudia Ramos:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 473427. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 473427 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.

Kms Boah

 Kelsey Brooks

 Project Manager

 Recipient of the Prestigious Small Business Administration Award of Excellence in 1994. Certified and approved by numerous States and Agencies.

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

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



Sample Cross Reference 473427



Conestoga Rovers & Associates, Midland, TX

N. Eunice- Soy Lactate

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
IW28-110413	W	11-04-13 09:20		473427-001



CASE NARRATIVE



Client Name: Conestoga Rovers & Associates Project Name: N. Eunice- Soy Lactate

 Project ID:
 073018

 Work Order Number(s):
 473427

Report Date: 13-NOV-13 Date Received: 11/04/2013

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-926964 TOC by SM 5310C SM5310C

Batch 926964, Total Organic Carbon recovered below QC limits in the Matrix Spike. Samples affected are: 473427-001. The Laboratory Control Sample for Total Organic Carbon is within laboratory Control Limits

Batch: LBA-927013 Sulfide by SM4500-S-F-00 Nor enough sample for duplicate

Batch: LBA-927060 Total Metals by EPA 6010B SW6010B

Batch 927060, Sodium recovered below QC limits in the Matrix Spike Duplicate. Samples affected are: 473427-001. The Laboratory Control Sample for Sodium is within laboratory Control Limits



Project Id: 073018 Contact: Claudia Ramos Project Location: New Mexico

Certificate of Analysis Summary 473427

Conestoga Rovers & Associates, Midland, TX

Project Name: N. Eunice- Soy Lactate



Date Received in Lab: Mon Nov-04-13 04:45 pm

Report Date: 13-NOV-13 Project Manager: Kelsey Brooks

$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Analysis Requested	Lab Id:	473427-0	001			
Analysis RefuestedDepth: MatrixWATER SampledWATER MatrixWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledWATER SampledW		Field Id:	IW28-110	413			
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		Depth:					
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		Matrix:	WATEI	R			
$ \begin{array}{c c c c c c c } \mbox{Link} Prescription of the structure of the stru$		Sampled:	Nov-04-13	09:20			
$ \begin{array}{c c c c c c c } & Aadyzet & Nov-04-13 19:20 & & & & & & & & & & & & & & & & & & &$	Chromium, Hexavalent by SW 7196A	Extracted:					
Wits/RL: mg/L RL Nov-07-13 Nov		Analyzed:	Nov-04-13	19:20			
Hexavalent Chromium0.0300.0300.0300.0000.0300.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.0000.000 <th< th=""><th></th><th>Units/RL:</th><th>mg/L</th><th>RL</th><th></th><th></th><th></th></th<>		Units/RL:	mg/L	RL			
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Hexavalent Chromium		0.0302	0.0100			
6010B SUB: E871002 Analyzei Units/RL: Nov-07-13 16:45 mg/L RL	Dissolved Metals per ICP by SW846	Extracted:	Nov-07-13	10:00			
SUB: E8/1002 Units/RL: mg/L RL Chromium 0.0394 0.010	6010B	Analyzed:	Nov-07-13	16:45			
Chromium 0.0394 0.000 0.039 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 <th>SUB: E871002</th> <th>Units/RL:</th> <th>mg/L</th> <th>RL</th> <th></th> <th></th> <th></th>	SUB: E871002	Units/RL:	mg/L	RL			
Iron ND 0.200 Cond Cond <th< th=""><th>Chromium</th><th></th><th>0.0394</th><th>0.0100</th><th></th><th></th><th></th></th<>	Chromium		0.0394	0.0100			
Sodium 296 0.500 Image Image <thi< th=""><th>Iron</th><th></th><th>ND</th><th>0.200</th><th></th><th></th><th></th></thi<>	Iron		ND	0.200			
Inorganic Anions by EPA 300/300.1 Extracte: Analyze: Nov-07-13 00:20 Nov-06-13 10:00 Nov-07-13 00:20 Nov-07-13 10:00 Nov-07	Sodium		296	0.500			
$ \begin{array}{ c c c c c } & Analyzei & Nov-07-13 0:20 \\ \hline Units/RL: & mg/L & RL \\ \hline Bromide & & ND & 8.00 \\ \hline Sulfate & & & & & & & & & & & & & & & & & & &$	Inorganic Anions by EPA 300/300.1	Extracted:	Nov-06-13	10:00			
Units/RL: mg/L RL		Analyzed:	Nov-07-13	00:20			
Bromide ND 8.00 Image: marrier state ND 8.00 Image: marrier state ND 8.00 Image: marrier state Image: mar		Units/RL:	mg/L	RL			
Sulfate 500 40.0 Image: Control of the control of th	Bromide		ND	8.00			
Nitrogen Ammonia by EPA 350.1 SUB: E871002 Extracted: Nov-06-13 12:56 Nov-06-13 13:57 Analyzed: Nov-06-13 13:57 mg/L RL Nitrogen, Ammonia (as N) MD 0.100 0.100 Sulfide by SM4500-S-F-00 SUB: E871002 Extracted: Nov-07-13 13:06 Mov-07-13 13:06 Mov-07-13 13:06 Mov-07-13 13:06 Sulfide, total ND 5.00 ND 5.00 0.100 0.100	Sulfate		500	40.0			
SUB: E871002 Analyzed: Nov-06-13 13:57 Nov-06-13 13:57 Model	Nitrogen Ammonia by EPA 350.1	Extracted:	Nov-06-13	12:56			
Units/RL: mg/L RL Nitrogen, Ammonia (as N) ND 0.100 Image: Constraint of the second of	SUB: E871002	Analyzed:	Nov-06-13	13:57			
Nitrogen, Ammonia (as N) ND 0.100 Image: Control of the structure		Units/RL:	mg/L	RL			
Sulfide by SM4500-S-F-00 SUB: E871002 Extracted: Analyzed: Nov-07-13 13:06 Mov-07-13 13:06 mg/L RL Sulfide, total ND 5.00	Nitrogen, Ammonia (as N)		ND	0.100			
SUB: E871002 Analyzed: Nov-07-13 13:06 Mode <	Sulfide by SM4500-S-F-00	Extracted:					
Units/RL: mg/L RL Sulfide, total ND 5.00	SUB: E871002	Analyzed:	Nov-07-13	13:06			
Sulfide, total ND 5.00		Units/RL:	mg/L	RL			
	Sulfide, total		ND	5.00			

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

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

Kms Boah

Kelsey Brooks Project Manager



Project Id: 073018 Contact: Claudia Ramos Project Location: New Mexico

Certificate of Analysis Summary 473427

Conestoga Rovers & Associates, Midland, TX

Project Name: N. Eunice- Soy Lactate



Date Received in Lab: Mon Nov-04-13 04:45 pm

Report Date: 13-NOV-13

Project Manager: Kelsey Brooks

	Lab Id:	473427-00	1			
An alugia Dogwootod	Field Id:	IW28-11041	13			
Analysis Kequesieu	Depth:					
	Matrix:	WATER				
	Sampled:	Nov-04-13 09	9:20			
TOC by SM 5310C	Extracted:	Nov-06-13 11	1:00			
SUB: E871002	Analyzed:	Nov-06-13 14	4:23			
	Units/RL:	mg/L	RL			
Total Organic Carbon		4.24	1.00			
Total Metals by EPA 6010B	Extracted:	Nov-07-13 08	8:30			
SUB: E871002	Analyzed:	Nov-07-13 16	6:56			
	Units/RL:	mg/L	RL			
Chromium		0.0394	0.0100			
Iron		ND	0.200			
Sodium		292	0.500			

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.

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

Huns Roah

Kelsey Brooks Project Manager

Page 6 of 16



Flagging Criteria



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

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

- **DL** Method Detection Limit
- NC Non-Calculable
- + NELAC certification not offered for this compound.
- (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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 - San Antonio - Atlanta - Midland/Odessa - Tampa/Lakeland - Phoenix - Latin America

4143 Greenbriar Dr, Stafford, TX 77477
9701 Harry Hines Blvd , Dallas, TX 75220
5332 Blackberry Drive, San Antonio TX 78238
2505 North Falkenburg Rd, Tampa, FL 33619
12600 West I-20 East, Odessa, TX 79765
6017 Financial Drive, Norcross, GA 30071
3725 E. Atlanta Ave, Phoenix, AZ 85040

(281) 240-4200	(281) 240-4280
(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(432) 563-1800	(432) 563-1713
(770) 449-8800	(770) 449-5477
(602) 437-0330	

Phone


Blank Spike Recovery

Project Name: N. Eunice- Soy Lactate



Work Order #: 473427				Project ID:	:		073018				
Lab Batch #: 927210	Sam	ple: 927210-	1-BKS	Water							
Date Analyzed: 11/04/2013	Date Prepai	red: 11/04/20	013	3 Analyst: WRU							
Reporting Units: mg/L	Batcl	h #: 1	BLANK /B	LANK SPII	KE REC	OVERY S	TUDY				
Chromium, Hexavalent by SW 7196	A	Blank Result	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %B	Flags				
Analytes		[**]	[10]	[C]	[D]						
Hexavalent Chromium		< 0.0100	0.0200	0.0223	112	80-120					
Lab Batch #: 926927	Sam	ple: 646512-	1-BKS	Matrix	Water						
Date Analyzed: 11/06/2013	Date Prepai	red: 11/06/20	013	Analyst	DEP						
Reporting Units: mg/L	Batel	KE REC	OVERY S	TUDY							
Nitrogen Ammonia by EPA 350.1		Blank Result	Spike Added	Blank Spike Bosult	Blank Spike	Control Limits	Flags				
Analytes		[A]	נטן	[C]	[D]	70K					
Nitrogen, Ammonia (as N)		<0.100	2.50	2.67	107	90-110					
Lab Batch #: 926964	Sam	ple: 646551-	1-BKS	Matrix:	Water						
Date Analyzed: 11/06/2013	Date Prepai	red: 11/06/20	013	Analyst	RKO						
Reporting Units: mg/L	Batel	h #: 1	BLANK /B	LANK SPII	KE REC	OVERY S	TUDY				
TOC by SM 5310C		Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags				
Analytes				[C]	[D]						
Total Organic Carbon		<1.00	10.0	11.0	110	90-110					



BS / BSD Recoveries



Project Name: N. Eunice- Soy Lactate

Work Order #: 473427, 473427							Pro	ject ID:	073018						
Analyst: AMB	D	ate Prepar	red: 11/06/201	13			Date A	nalyzed:	11/06/2013						
Lab Batch ID: 927007 Sample: 646569-1-	BKS	Batc	h #: 1					Matrix: `	Water						
Units: mg/L		BLAN	K /BLANK	SPIKE /]	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	DY					
Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag				
Bromide	<0.400	5.00	4.03	81	5.00	4.05	81	0	80-120	20					
Sulfate	<2.00	25.0	24.2	97	25.0	24.2	97	0	80-120	20					
Analyst: DHE	D	Date Prepared: 11/07/2013 Date Analyzed: 11/07/2013													
Lab Batch ID: 927013 Sample: 927013-1-	tch ID: 927013 Sample: 927013-1-BKS Batch #: 1 Matr									ix: Water					
Units: mg/L	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY														
Sulfide by SM4500-S-F-00	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag				
Analytes		[B]	[C]	[D]	[E]	Result [F]	[G]								
Sulfide, total	<5.00	50.0	43.0	86	50.0	43.8	88	2	80-120	20					
Analyst: MKO	D	ate Prepar	red: 11/07/201	13			Date A	nalyzed:	11/07/2013						
Lab Batch ID: 927060 Sample: 646568-1-	BKS	Bate	h #: 1					Matrix: '	Water						
Units: mg/L		BLAN	K /BLANK	SPIKE / 1	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	DY					
Total Metals by EPA 6010B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag				
Chromium	<0.0100	1.00	1.01	101	1.00	1.01	101	0	80.120	20					
	<0.0100	5.00	5.05	101	5.00	5.06	101	0	80-120	20					
Sodium	<0.200	25.00	24.7	00	25.00	24.7	00	0	80-120	20					
	NO.300	25.0	27.7		23.0	27.7	,,	v	00120	20					

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



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





Project Name: N. Eunice- Soy Lactate



Work Order # :	473427						Project II): 073018	3			
Lab Batch ID:	927210	QC- Sample ID:	473427	-001 S	Ba	tch #:	1 Matrix	k: Water				
Date Analyzed:	11/04/2013	Date Prepared:	11/04/2	013	An	alyst: V	WRU					
Reporting Units:	mg/L		Μ	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
Chromiu	ım, Hexavalent by SW 7196A	Parent Sample Result	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample Bosult [F]	Spiked Dup. % P	RPD	Control Limits	Control Limits	Flag
	Analytes	[A]	[B]		[D]	[E]	Kesun [F]	[G]	70	/01		
Hexavalent Chro	mium	0.0302	0.200	0.238	104	0.200	0.232	101	3	80-120	20	
Lab Batch ID:	926927	QC- Sample ID:	473131	-004 S	Ba	tch #:	1 Matrix	k: Aqueo	us			
Date Analyzed:	11/06/2013	Date Prepared:	11/06/2	013	An	alyst: I	DEP					
Reporting Units:	mg/L		Μ	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
Nitrog	en Ammonia by EPA 350.1	Parent Sample Result	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup. % P	RPD	Control Limits	Control Limits	Flag
	Analytes	[A]	[B]	[C]	[D]	[E]	Kesun [F]	[G]	/0	70K	70KI D	
Nitrogen, Ammo	nia (as N)	<0.100	2.50	2.39	96	2.50	2.45	98	2	90-110	20	
Lab Batch ID:	026027	OC Samula ID.	472150	0.04 0								
	120121	QC- Sample ID:	4/3158	-001 S	Ba	tch #:	1 Matrix	k: Water				
Date Analyzed:	11/06/2013	Date Prepared:	4/3158	-001 S 013	Ba An	itch #: nalyst: I	1 Matri y DEP	k: Water				
Date Analyzed: Reporting Units:	11/06/2013 mg/L	Date Prepared:	473158 11/06/2 M	-001 S 013 IATRIX SPIK	Ba An E / MAT	itch #: nalyst: 1 RIX SPI	1 Matrix DEP KE DUPLICA	x: Water TE REC	OVERY	STUDY		
Date Analyzed: Reporting Units: Nitrog	11/06/2013 mg/L en Ammonia by EPA 350.1	Date Prepared: Parent Sample Result	4/3158 11/06/2 M Spike Added	-001 S 013 IATRIX SPIK Spiked Sample Result	Ba An E / MAT Spiked Sample %R	atch #: alyst: I RIX SPI Spike Added	1 Matrix DEP KE DUPLICA Duplicate Spiked Sample Result [F]	x: Water TE REC Spiked Dup. %R	OVERY RPD	STUDY Control Limits %B	Control Limits %RPD	Flag
Date Analyzed: Reporting Units: Nitrog	11/06/2013 mg/L en Ammonia by EPA 350.1 Analytes	Parent Sample Result [A]	4/3158 11/06/2 M Spike Added [B]	-001 S 013 IATRIX SPIK Spiked Sample Result [C]	Ba An E / MAT Spiked Sample %R [D]	ntch #: nalyst: [RIX SPI Spike Added [E]	1 Matrix DEP KE DUPLICA Duplicate Spiked Sample Result [F]	x: Water TE REC Spiked Dup. %R [G]	OVERY RPD %	STUDY Control Limits %R	Control Limits %RPD	Flag

Matrix Spike Percent Recovery $[D] = 100^{\circ}(C-A)/B$ Relative Percent Difference RPD = $200^{\circ}|(C-F)/(C+F)|$ 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 Applicable N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Form 3 - MS / MSD Recoveries

Project Name: N. Eunice- Soy Lactate



Work Order # :	473427						Project II	D: 073018	8			
Lab Batch ID:	926964	QC- Sample ID:	473427	-001 S	Ba	tch #:	1 Matri	x: Water				
Date Analyzed:	11/06/2013	Date Prepared:	11/06/2	013	Ar	alyst: 1	RKO					
Reporting Units:	mg/L		Ν	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
	TOC by SM 5310C	Parent Sample Despit	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
	Analytes	[A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%K	%RPD	
Total Organic C	arbon	4.24	10.0	15.7	115	10.0	15.7	115	0	90-110	20	X
Lab Batch ID:	927060	QC- Sample ID:	473290	-001 S	Ba	tch #:	1 Matri	x: Water				
Date Analyzed:	11/07/2013	Date Prepared:	11/07/2	013	Ar	alyst: 1	МКО					
Reporting Units:	mg/L		Ν	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
Tot	tal Metals by EPA 6010B	Parent Sample Posult	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
	Analytes	[A]	[B]	[C]	5%K [D]	[E]	Kesuit [F]	76K [G]	70	70K	70KPD	
Chromium		0.138	1.00	1.10	96	1.00	1.08	94	2	80-120	20	
Iron		<0.200	5.00	4.63	93	5.00	4.52	90	2	80-120	20	
Sodium		194	25.0	216	88	25.0	211	68	2	75-125	20	X

 $\begin{array}{ll} Matrix \ Spike \ Percent \ Recovery \quad [D] = 100*(C-A)/B \\ Relative \ Percent \ Difference \quad RPD = 200*|(C-F)/(C+F)| \end{array}$

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

B&A Laboratories, Inc.	9701 Harry Hines	Blvd., Dallas, T	x 75220	214-90 Phor	2-0300 I e					Lak	842 o On	Cant ly:	well,	Corp	us Ch	nristi,	Tx 78	3408 3 7	361-8	84-03	71			S	eria	#: <u>(</u>	23	3:	52	J Pag	
CKA Proj Name-Location	Previously don	Previously done at XENCO Project ID							TA ⁻ It is	T: AS	SAP cally	5h 5-7	12h Worl	24ł king	n 4 Days	8h 3 s for	3 Evel	5d II an	7d 1 d 10-	0d + Wo	21d orking	Sta g da	andaı ys fo	rd TA	∖T is p el III ar	rojec nd IV	t spe ′ data	cific.			
Proj State: TX, AL, FL, C JJ, PA, SC, TN, UT Oth -Mail Results to □ PM a	er MMS NC,	Proj Manag	er (PM)	Fax I	Ra.	<u>~~</u> .	25			OAs	her:			LL		Appdx 2	. PCBs)				Sphery	2			•	10	21d	st Hit	oved)	Remar	ks .
nvoice to	g 🛛 Inc. Invoice	with Final Re	port	🗆 Inv	oice n	nust h	ave a	a P.O)	V SHOV	CALL Of			pdx-2 CA	ticides	Appdx 1	est. Herb			~	e- Pho				1	12000.	7d 10d	(g S Highe	e pre-appr	needed	Dow hor
Quote/Pricing:		P.O No:		Ľ	Call	for P.	О.			Oxyg	x-2		νPH	P Ap	Pes	3TAL	Cs P			5	hat				35	~	5d	mg/k	nd an	ed as	
Reg Program: UST DRY	CLEAN Land-F	Fill Waste-Di	Waste-Disp NPDES DW TRRP							BE EtoH	dx-1 Appd		EPH MA	AE TCL P	cides OF	b 13PP 2%	Cs SVO		No	non	o phose	•).	La.	Nitra	rapi	48h 3d	L W,	vill apply a	e-approve	
Special DLs (GW DW Q	APP MDLs RLs	s See Lab Pl	M Inclu	Ided	Call PM)					TEX-MTI	W Appo		RO MA	W BN&/	s Herbi	CRA-4 P	etals VC	1	1-0	0	OCH			1	- 6	frat	24h 24h	/ɓɯ	charges v	s are pr	
Sampler Name		Signature	[-		1	1			ist B	CLD		GF	st D/	PCB	-8 R((Me	2	5	2+	5	e		1	14		h 12	ove	(Surc	dn-u	
Sample ID	Sampling Date	Time	epth ' In" m	latrix	omposite	Containers	ontainer Size	ontainer Type	reservatives	VOCs: Full-L	OC'S PP T	SHA	-X-1005 DRC	VOCs: Full-Li	DC Pesticides	Aetals: RCRA-	SPLP - TCLP	EDB / DBCP	ofal C	Hexavel	504 B	Sulfin	100	Dresolu	Amine	10101	AT ASAP 5	Addn: PAH abo	Hold Samples	sample Clea	
IW 28-110413	11-4-13	0420		Ŵ		5							1						X	Y	X	X	Y		× -	K					
						-				-		-									+		-	+	-		-				
Relinquished by (Init	ials and Sign)	Date	& Time		Re	lingui	shed	to (Initial	ls and	d Sig	jn)		Date	8	Time		Tota	I Cor	ntaine	ers p	er C	C:	0	5	Co	oler [·]	Temp): ~	1+16	5%
1) XBR Bell R. 3)	lima	11-4-13	16:	45	2) 4)	m	de	an	p	m	~		11-	-4	-1	35		Upon agree will be	signi ed on e helc	ngs th writing 1 30 c	nis C(g. Re lays a	DC yc ports after f	ou ac are t inal r	cept) he Int eport	KENC tellec is e-i	O term tual Pro	s and operty unles:	l Conc of XE s here	litions NCO by re	s unless oth until paid. quested. R	erwise Sample ush

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



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In

Comments

0

Yes

Yes

N/A

N/A

N/A

Yes

Yes

No

Yes

• •



Client: Conestoga Rovers & Associates Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Date/ Time Received: 11/04/2013 04:45:00 PM **Temperature Measuring device used :** Work Order #: 473427 Sample Receipt Checklist #1 *Temperature of cooler(s)? #2 *Shipping container in good condition? #3 *Samples received on ice? #4 *Custody Seals intact on shipping container/ cooler? #5 Custody Seals intact on sample bottles? #6 *Custody Seals Signed and dated? #7 *Chain of Custody present? #8 Sample instructions complete on Chain of Custody? #9 Any missing/extra samples? #10 Chain of Custody signed when relinquished/ received? #44 Chain of Quatad

#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)?	N/A
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	Yes

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

Analyst:

PH Device/Lot#:

Date: 11/05/2013

Checklist completed by: Candau fames Candace James Checklist reviewed by: Mary Moak Kelsey Brooks

Date: 11/05/2013

Quantitative Bacterial Report

Heterotrophic Plate Count

(Hygeia SOP-09)



Client No.: 30311				Project I	No.: 1018365			
Kelsey Brooks			F	Project Na	me:			
Xenco Laboratories (Odessa)				Collec	ted: 11/04/2013	9:20 AM		
12600 West I-20 East				Receiv	ved: 11/06/2013			
Odessa, TX 79765				Analyz	zed: 11/11/2013	4:30 PM		
	r							
Hygeia Sample ID		10	5495					
Client Sample ID		4734	27-001					
Location		IW28-	110413					
Sample Type		W	ater					
Sample Amount		0.1	1 mL					
Medium / Method		SM	9215					
Dilution Factor(s)		1:1						
Bacteria Isolated:	Raw Count	Dilution	CFU / r	nL%				
Anaerobic heterotrophic bacteria	284	1	2,840	100				
Total CFU		2,84	10 / mL	I	ĺ			
Comments		,						

Quantitative Bacterial Report

Heterotrophic Plate Count

(Hygeia SOP-09)



Client No.: 30311	Project No.: 1018365
Kelsey Brooks	Project Name:
Xenco Laboratories (Odessa)	Collected: 11/04/2013 9:20 AM
12600 West I-20 East	Received: 11/06/2013
Odessa, TX 79765	Analyzed: 11/11/2013 4:30 PM

Analyst 'anessa Garcia

Lab Director

Crystal Enloe

Thank you for using Hygeia Laboratories Inc. We strive to provide superior quality and service.

This report may not be reproduced except in full, and only with the written approval of this laboratory. Please contact Hygeia regarding any questions about these results, this report, or the analytical methods employed.

Data in this report are reliable within two significant figures. Sample results are not corrected based on results of blanks. The minimum reporting limit (MRL) is calculated as the lowest dilution tested/volume. Estimates of uncertainty are available upon request. CFU = colony forming units. CFU/unit is calculated as raw count*dilution/sample amount. Total CFU/unit is the sum of individual CFUs/unit and is considered <MRL if no colonies are present.

Confidentiality Notice:

The information contained herein is confidential and privileged, intended for the exclusive use of the individual or entity named above. If the reader of this document is not the intended recipient, or the employee or agent responsible for delivering it to the intended recipient, you are hereby notified that any dissemination, distribution or copying of the document(s) is strictly prohibited. If you have received this document in error, please immediately notify us by telephone to arrange for its return.

Guidelines for Interpretation:

Interpretation of the data and information within this document is left to the company, consultant, and/or persons who conducted the fieldwork. Bacteria have been associated with a variety of health effects and sensitivity varies from person to person. Contact the CDC (www.cdc.gov) for information regarding potential health risks related to exposure in air or on surfaces and the USEPA (www.epa.gov) for existing established standards including regulated water quality standards.

Liability Notice:

Hygeia Laboratories Inc. and its personnel shall not be held liable for any misinformation provided to us by the client regarding these samples or for any misuse or interpretation of information supplied by us. Liability shall extend to providing replicate analyses only. This report relates only to samples submitted and analyzed.

Revision 0 11/12/2013 ce