

**1R – 258**

**2008 AGWMR**

**10/12/2009**

# **2008 ANNUAL GROUNDWATER MONITORING REPORT**

**FORMER NEW MEXICO STATE "F" TANK BATTERY  
CASE NO. 1R258  
OGRID NO. 4323  
NE/4, SE/4, SECTION 24, T-19-S, R-36-E  
LATITUDE: N 32° 38' 34.9" LONGITUDE: W 103° 18' 0.49"  
LEA COUNTY, NEW MEXICO**

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LEA COUNTY, NEW MEXICO**

**Prepared For:**

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## **1.0 INTRODUCTION**

This Annual Groundwater Monitoring Report presents groundwater data collected during the 2008 reporting period by Conestoga-Rovers & Associates (CRA) on behalf of Chevron Environmental Management Company (CEMC) at the former New Mexico State "F" Tank Battery (hereafter referred to as the "Site"). Groundwater gauging and sampling events were performed on March, June, September and November 2008.

The Site is located on Lea County Road 41 (Maddox Road), approximately 3.1 miles northwest of Monument, New Mexico and situated in the northeast quarter (NE/4) of the southeast quarter (SE/4), Section 24, Township 19 South, Range 36 East, Lea County, New Mexico. Site Location and Site Details maps are illustrated on FIGURES 1 and 2, respectively. Historically, Texaco Exploration and Production, Inc. (Texaco) operated the Site as an oil field tank battery. An earthen emergency reserve pit was located approximately 175 feet north of the tank battery. The tank battery and reserve pit are visible in aerial photographs dated February 1949, July 1983, and June 1986. Sometime after 1986, the tank battery and associated equipment were removed from the Site. The former reserve pit was subsequently unearthed during construction of a production facility immediately south of the pit by the Amerada-Hess Corporation.

The former pit was excavated and approximately 7,400 cubic yards of soil and caliche rock were stockpiled adjacent to the excavated pit. In 1998, Highlander Environmental Corporation (Highlander) performed a subsurface assessment at the Site. The assessment activities included collection of soil samples from the sidewalls and bottom of the excavation and from the stockpiled soil generated during excavation activities. Chemical analyses of the soil samples confirmed that concentrations of all constituents of concern were below the New Mexico Oil Conservation Division (NMOCD) recommended remediation action levels for the Site. The soil sampling activities and laboratory analyses are documented in the *Subsurface Investigation Report, New Mexico "F" State Tank Battery, Lea County, New Mexico* (Highlander, September 1998). The *Annual Groundwater Monitoring Report, New Mexico "F" State Tank Battery, Lea County, New Mexico* (Larson and Associates, Inc., 2005) indicates that the pit was closed between September 1998 and November 2003 according to closure requirements stipulated by the NMOCD in correspondence dated January 20, 1999. The bottom of the excavated pit was lined with two feet of compacted clay, the stockpiled soil was returned to the excavation and the backfilled excavation was contoured to natural grade.

In addition to the soil assessment activities, nine monitor wells (MW-1 through MW-9) were installed at the Site between 1998 and 1999. Light non-aqueous phase liquid (LNAPL) was observed in wells MW-1 and MW-2. In November 1999, wells MW-1, MW-2 and MW-9 were plugged and abandoned and replaced with recovery wells RW-1, RW-2 and RW-3. On February 17, 2003, New Mexico Office of the State Engineer (NMOSE) approved applications (File No. L-11029, L-11030 and L-11031) submitted by Texaco to divert underground water for remediation of LNAPL. The remediation system was installed from October 2004 through February 2005 and was activated on February 14, 2005. Excluding brief periods for routine maintenance, the groundwater recovery/gradient control system operated from February 14, 2005 to

November 20, 2006. In November 2006, LNAPL recovery methods were re-evaluated and the total fluids groundwater recovery/gradient control system was shut down. An LNAPL skimmer pump system was installed in RW-1 and absorbent socks were installed in RW-2 and RW-3 on November 28, 2006. This system is currently in operation at the Site. Semi-annual groundwater monitoring and weekly operation and maintenance (O&M) activities have been performed by CRA since 2005 along with annual reporting to the NMOCD for this Site. In addition, quarterly gauging activities were performed in 2008 at the Site.

## **2.0 REGULATORY FRAMEWORK**

The NMOCD guidelines require groundwater to be analyzed for potential contaminants as defined by the New Mexico Water Quality Control Commission (NMWQCC) regulations. In addition, the NMWQCC regulations provide the Human Health Standards for Groundwater. The constituent of concern in affected groundwater at the Site is LNAPL in the form of crude oil. In this report, groundwater analytical results for benzene, toluene, ethylbenzene, total xylenes (BTEX) and chloride are compared to the NMWQCC standards as shown in the following table:

Analyte	NMWQCC Standard for Groundwater (mg/L)
Benzene	0.01
Toluene	0.75
Ethylbenzene	0.75
Total xylenes	0.62
Chloride	250

### **3.0 GROUNDWATER SAMPLING AND ANALYSIS**

The Site is monitored with a network of six monitor wells (MW-3, MW-4, MW-5, MW-6, MW-7 and MW-8), two offsite water wells (WW-1 and WW-2) and three recovery wells (RW-1, RW-2 and RW-3). Four quarterly monitoring and sampling events were performed during the 2008 calendar year. The first (March) and third (September) quarter 2008 events included the collection of static fluid levels and LNAPL thicknesses (if present) in the six monitor wells and the three recovery wells and the collection of a groundwater sample from a single monitor well (MW-6). The second (June) and fourth (November) quarter 2008 events included the collection of static fluid levels and LNAPL thicknesses (if present) in the six monitor wells and the three recovery wells and the collection of groundwater samples from all six monitor wells and the two offsite water wells. Static fluid levels were not collected from the two offsite water wells (WW-1 and WW-2) during the 2008 calendar year.

The first and third quarter monitoring and sampling activities were performed on March 6, 2008 and September 4, 2008. The second and fourth quarter monitoring and sampling activities were performed on June 4, 2008 and November 13, 2008. Prior to purging, static fluid levels and LNAPL thicknesses were measured from top of casing (TOC) with an electric interface probe to the nearest hundredth of a foot and recorded. Purging was considered complete when three well volumes had been removed or the wells were purged dry. Geochemical field parameters including pH, temperature and conductivity were collected during the purging/sampling process. All non-disposable groundwater sampling equipment was decontaminated with a soap (Liquinox®) and potable water wash, a potable water rinse and a final deionized water rinse to minimize potential cross-contamination between each monitor well. Subsequent to the purging process, groundwater samples were collected using clean, disposable PVC bailers. Laboratory-supplied sample containers were then filled directly from the disposable PVC bailers.

Wells that contained measurable (>0.01 foot) LNAPL were not purged or sampled during the March 6, 2008, September 4, 2008 and November 13, 2008 sampling events. During the June 4, 2008 sampling event, all wells were purged and sampled, including wells that contained measurable LNAPL (>0.01 foot). The groundwater samples were placed on ice in an insulated cooler and chilled to a temperature of approximately 4°C (40°F). The coolers were sealed for shipment and proper chain-of-custody documentation accompanied the samples to the laboratory (Test America Laboratories, Inc. located in Houston, Texas) for analyses of BTEX by EPA Method 8021B and chlorides by EPA-approved methods. The fluids recovered and generated during the sampling events were containerized onsite in labeled drums and subsequently managed at an NMOCD-permitted salt water disposal (SWD) facility by Nabors Well Services LTD. (Nabors).

### **3.1 POTENTIOMETRIC SURFACE ELEVATION AND GRADIENT**

Groundwater elevation data are presented in TABLE I. Groundwater gradient maps for each quarterly event (March, June, September and November 2008) are presented on FIGURES 3, 4, 5 and 6 respectively. Depth to groundwater ranged from 50.42 feet to 65.68 feet below TOC on March 3, 2008, from 50.32 feet to 65.39 feet below TOC on June 4, 2008, from 50.90 feet to 65.56 feet below TOC on September 4, 2008 and from 50.15 feet to 65.32 feet below TOC on November 13, 2008. Groundwater elevations at the Site appear to be consistent with historical levels with groundwater flow to the southeast. The maximum gradient observed during the 2008 calendar year was 0.004 feet/foot.

LNAPL was not detected in the monitor wells during the 2008 monitoring period. Historically, three onsite recovery wells have contained measurable amounts of LNAPL. LNAPL was present in recovery well RW-1 with a thickness of 0.48 feet in March 2008, 0.78 feet in June 2008, 0.31 feet in September 2008 and 2.49 feet in November 2008. Although measurable LNAPL was not encountered in RW-2 and RW-3 during the November sampling event, residual LNAPL (sheen) was observed in both recovery wells and the wells were not sampled. LNAPL thickness maps for March, June, September and November 2008 are presented as FIGURES 7, 8, 9 and 10, respectively.

### **3.2 ANALYTICAL RESULTS**

Analytical results are summarized in TABLE II. Groundwater BTEX and chloride concentration maps for March, June, September and November 2008 are presented as FIGURES 11, 12, 13 and 14, respectively. BTEX and chloride concentrations were below the NMWQCC standards in all samples collected from the monitor wells and offsite water wells WW-1 and WW-2 during the 2008 monitoring period except for RW-1. Recovery well RW-1 exhibited a benzene concentration of 0.0119 mg/L. Copies of the certified laboratory reports are provided in APPENDIX A.

#### **4.0 CORRECTIVE ACTION**

Excluding brief periods for routine maintenance, the Xitech® LNAPL skimmer pump system installed in RW-1 operated continuously from January to December 2008. The best course of action for the two other recovery wells (RW-2 and RW-3) was determined to be absorbent socks based on trace amounts of LNAPL observed in both wells.

Operation and maintenance (O&M) activities were performed on a weekly basis. As of December 30, 2008, approximately 204 gallons of LNAPL have been recovered since January 2, 2008 from RW-1. Additionally, approximately 551 gallons of LNAPL have been recovered since November 28, 2006 when the skimmer system was installed in RW-1.

## **5.0 PLANNED ACTIVITIES**

The Xitech® skimmer pump system will continue to be utilized for LNAPL recovery at the Site in 2009. The recovered product will be pumped into the 225-gallon tank which is situated inside a secondary containment structure.

Semi-annual groundwater sampling events are scheduled to be performed during June and November 2009. Groundwater samples will be collected from all wells that do not contain measurable LNAPL and from the two offsite water wells (WW-1 and WW-2). The wells (RW-1, RW-2 and RW-3) will be sampled during the June 2009 sampling event. In addition, quarterly gauging and monitor well MW-6 sampling activities will be performed to monitor the groundwater gradient and the potential for offsite plume migration. Weekly O&M activities will also be performed to monitor the performance of the LNAPL recovery system and to periodically replace the absorbent socks in the other two recovery wells (RW-2 and RW-3) as necessary.

## **6.0 SUMMARY OF FINDINGS**

Based on groundwater monitoring activities performed at the Site, CRA presents the following summary:

- The Site is monitored semi-annually with a network of six monitor wells (MW-3, MW-4, MW-5, MW-6, MW-7 and MW-8), three recovery wells (RW-1, RW-2 and RW-3) and two offsite water wells (WW-1 and WW-2). Depth to groundwater ranged from 50.42 feet to 65.68 feet below TOC on March 3, 2008, from 50.32 feet to 65.39 feet below TOC on June 4, 2008, from 50.90 feet to 65.56 feet below TOC on September 4, 2008 and from 50.15 feet to 65.32 feet below TOC on November 13, 2008. Groundwater flow at the Site is to the southeast and the maximum gradient observed in 2008 was 0.004 feet/foot.
- LNAPL was not detected in the monitor wells during the 2008 monitoring period. LNAPL was present in recovery well RW-1 with a thickness of 0.48 feet in March 2008, 0.78 feet in June 2008, 0.31 feet in September 2008 and 2.46 feet in November 2008. Although measurable LNAPL was not encountered in RW-2 and RW-3 during the November sampling event, residual LNAPL (sheen) was observed in both recovery wells and the wells were not sampled.
- BTEX and chloride concentrations were below the NMWQCC standards in all samples collected from the monitor wells and offsite water wells WW-1 and WW-2 during the 2008 monitoring period. However, RW-1 exhibited a benzene concentration of 0.0119 mg/L during the June 2008 sampling event. This was above NMWQCC standards.
- The Xitech® LNAPL skimmer pump system in RW-1 operated continuously from January to December 2008. As of December 30, 2008, approximately 204 gallons of LNAPL have been recovered since January 2, 2008 from RW-1. Additionally, approximately 551 gallons of LNAPL have been recovered since November 28, 2006 when the skimmer pump system was installed in RW-1.
- The 2009 semi-annual groundwater sampling events are scheduled to be performed during June and November 2009. Groundwater samples will be collected from all wells that do not contain measurable LNAPL and from the two offsite water wells (WW-1 and WW-2). The wells (RW-1, RW-2 and RW-3) will be sampled during the June 2009 sampling event. In addition, quarterly gauging and monitor well MW-6 sampling activities will be performed to monitor the groundwater gradient and the potential for offsite plume migration. Weekly O&M activities will be performed to monitor the performance of the LNAPL recovery system and to periodically replace the absorbent socks in the other two recovery wells (RW-2 and RW-3) as necessary.

All of Which is Respectfully Submitted,  
Conestoga - Rovers & Associates



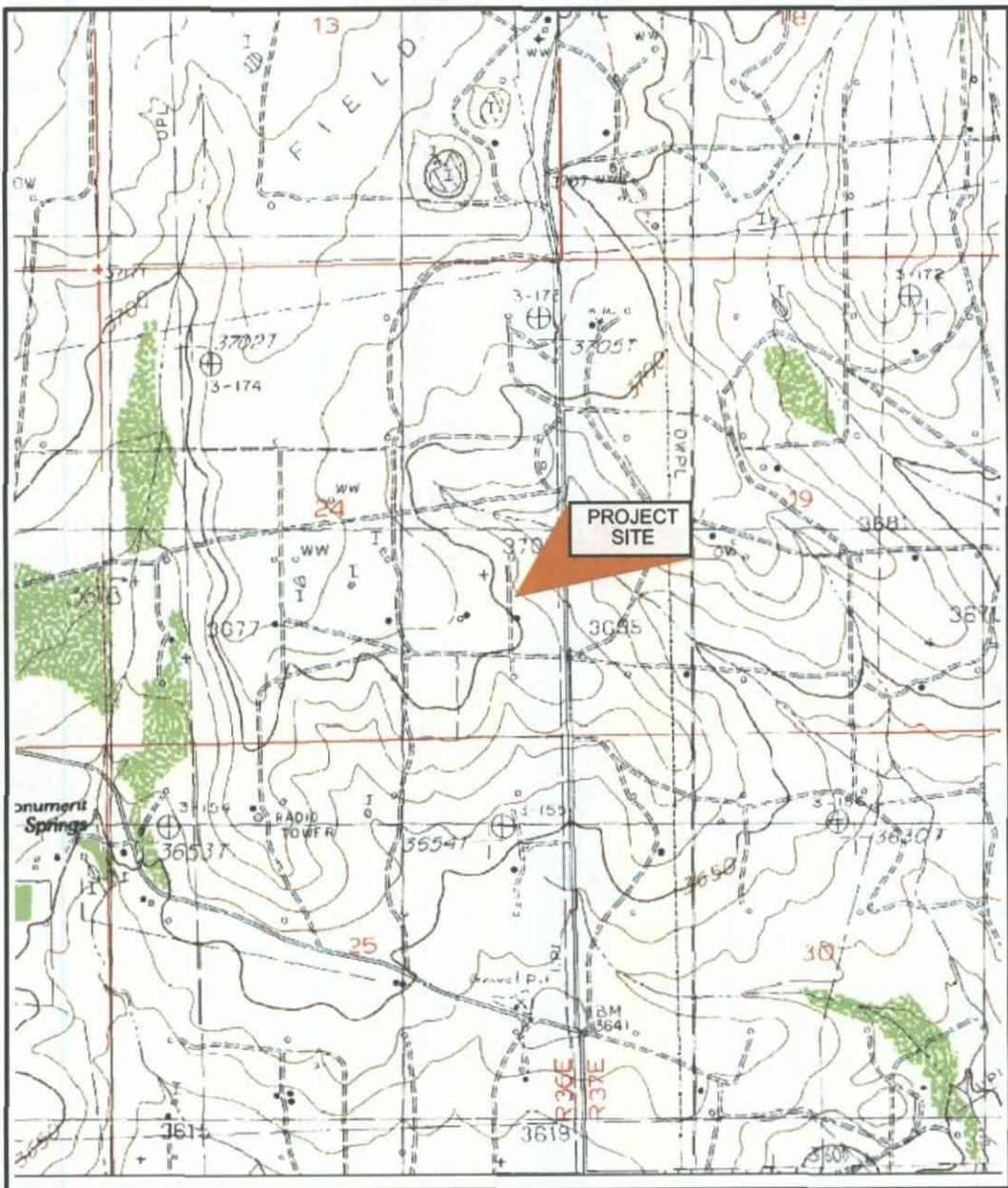
Todd Wells  
Project Manager



Thomas C. Larson  
Operations Manager

MONUMENT NORTH QUADRANGLE  
NEW MEXICO

LAT= 32° 38' 34.59" N  
LONG= 103° 18' 4.74" W  
PHOTOREVISED 1985



USGS MAP SERIES 1:24,000

0 1/2 1 2  
(Miles)

0 2000 4000 6000 8000  
(Feet)

CONTOUR INTERVAL 10 FEET



039122-08(005)GN-MD001 FEB 16/2009

figure 1

SITE LOCATION MAP  
NEW MEXICO "F" STATE  
GROUNDWATER REMEDIATION PROJECT  
LEA COUNTY, NEW MEXICO  
*Chevron Environmental Management Company*

IR 258, P. 15-28



figure 2  
**SITE DETAILS MAP**  
**NEW MEXICO "F" STATE**  
**GROUNDWATER REMEDIATION PROJECT**  
**LEA COUNTY, NEW MEXICO**  
*Chevron Environmental Management Company*



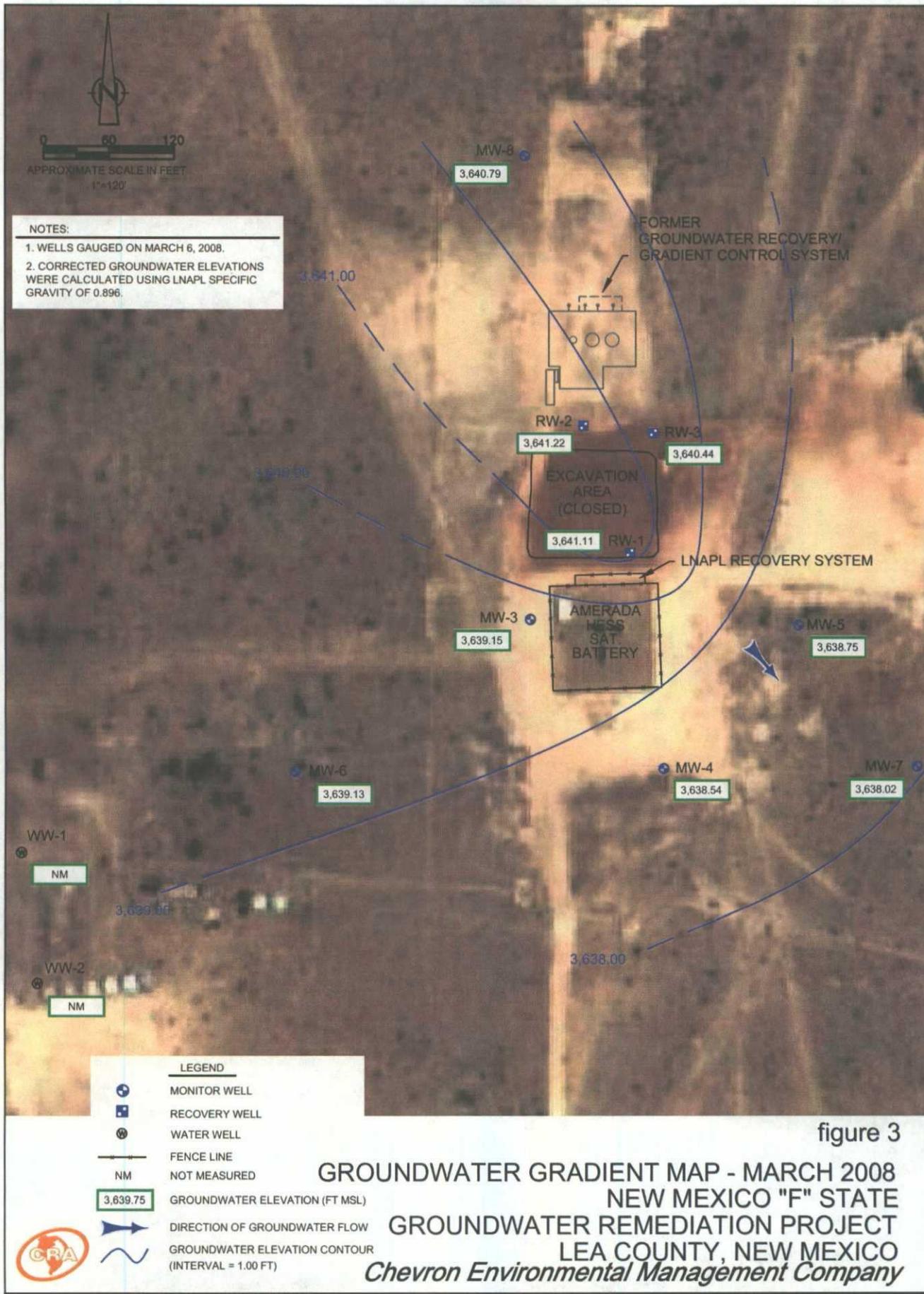
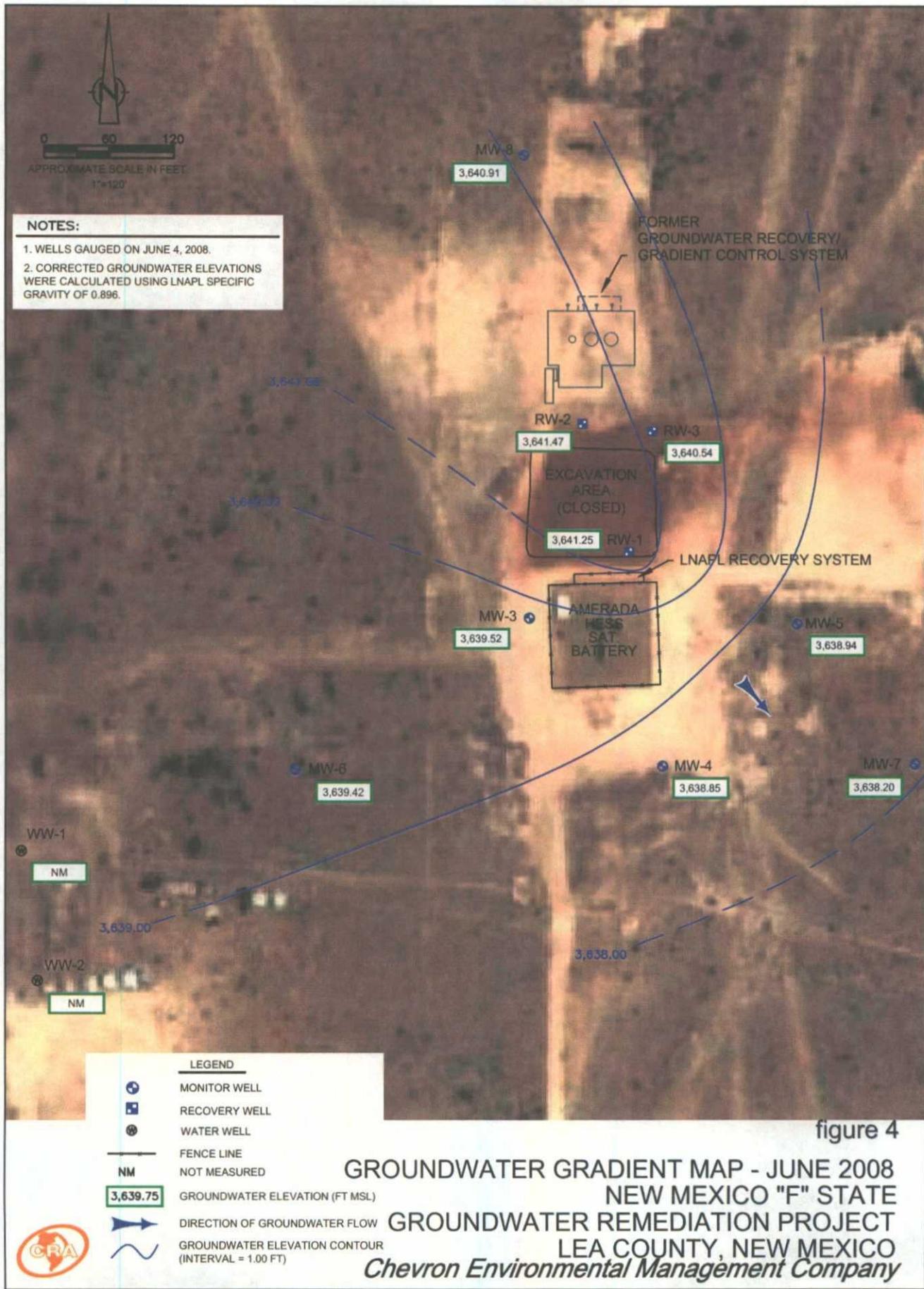


figure 3



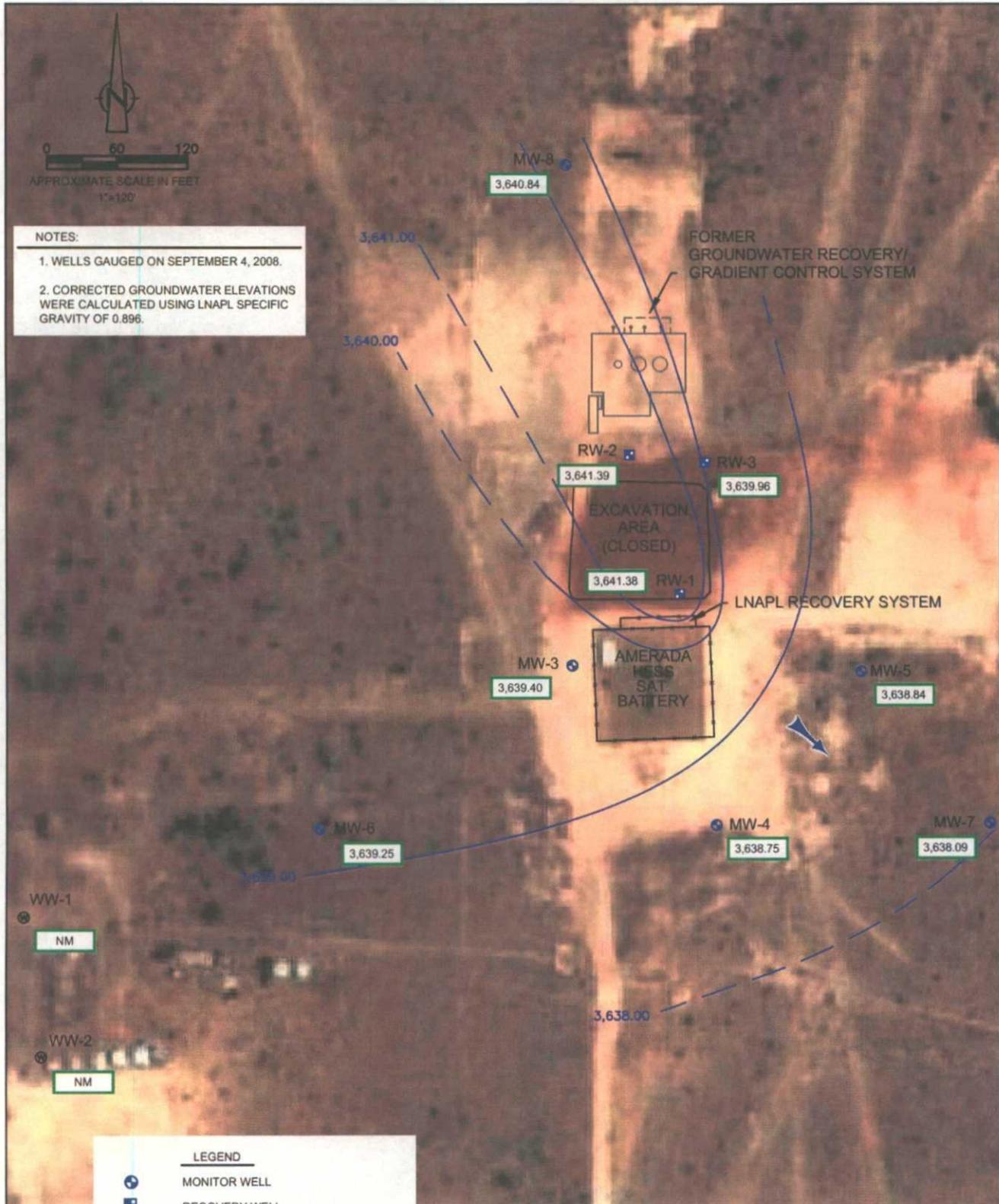


figure 5

GROUNDWATER GRADIENT MAP - SEPTEMBER 2008  
NEW MEXICO "F" STATE  
GROUNDWATER REMEDIATION PROJECT  
LEA COUNTY, NEW MEXICO  
*Chevron Environmental Management Company*

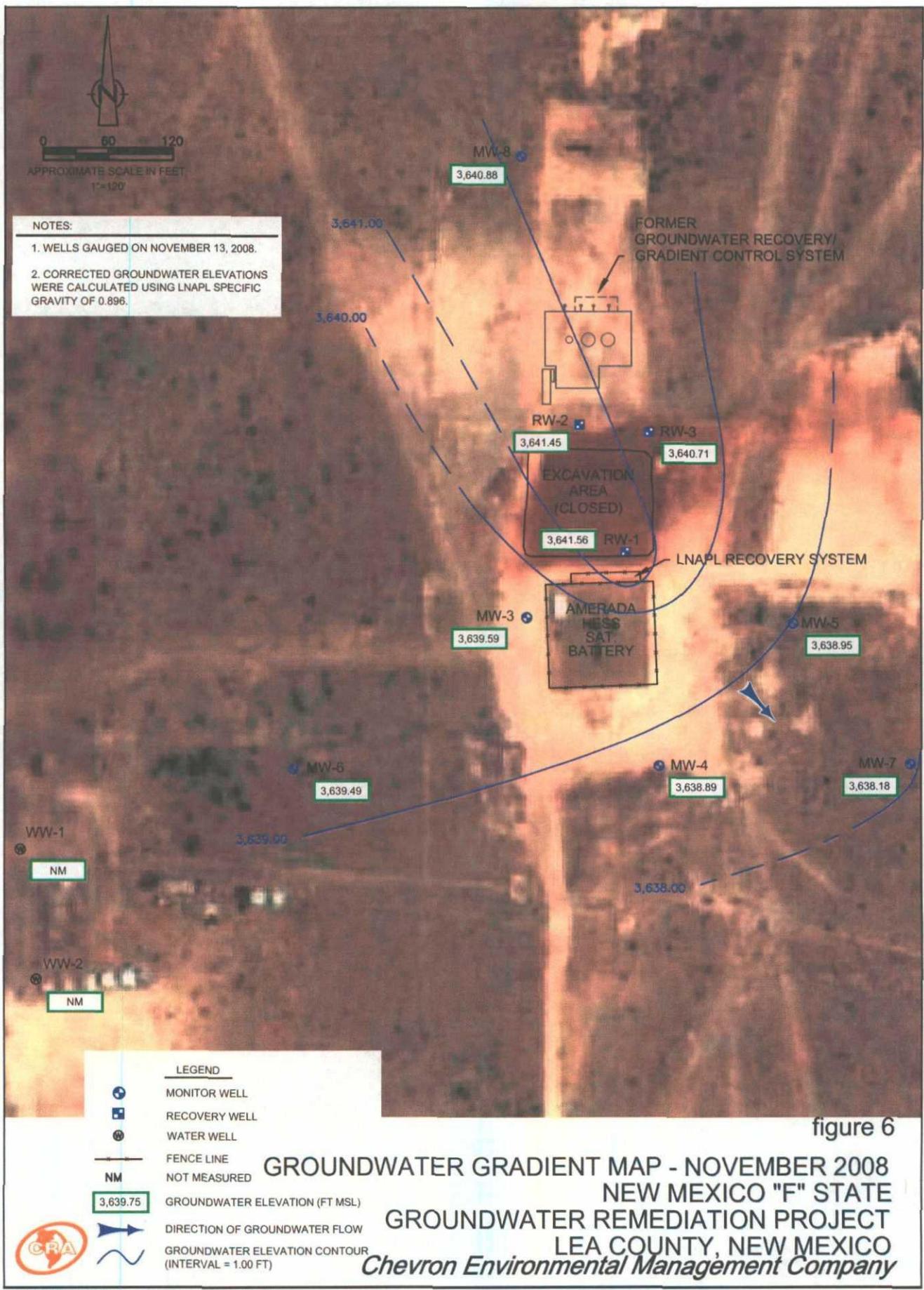
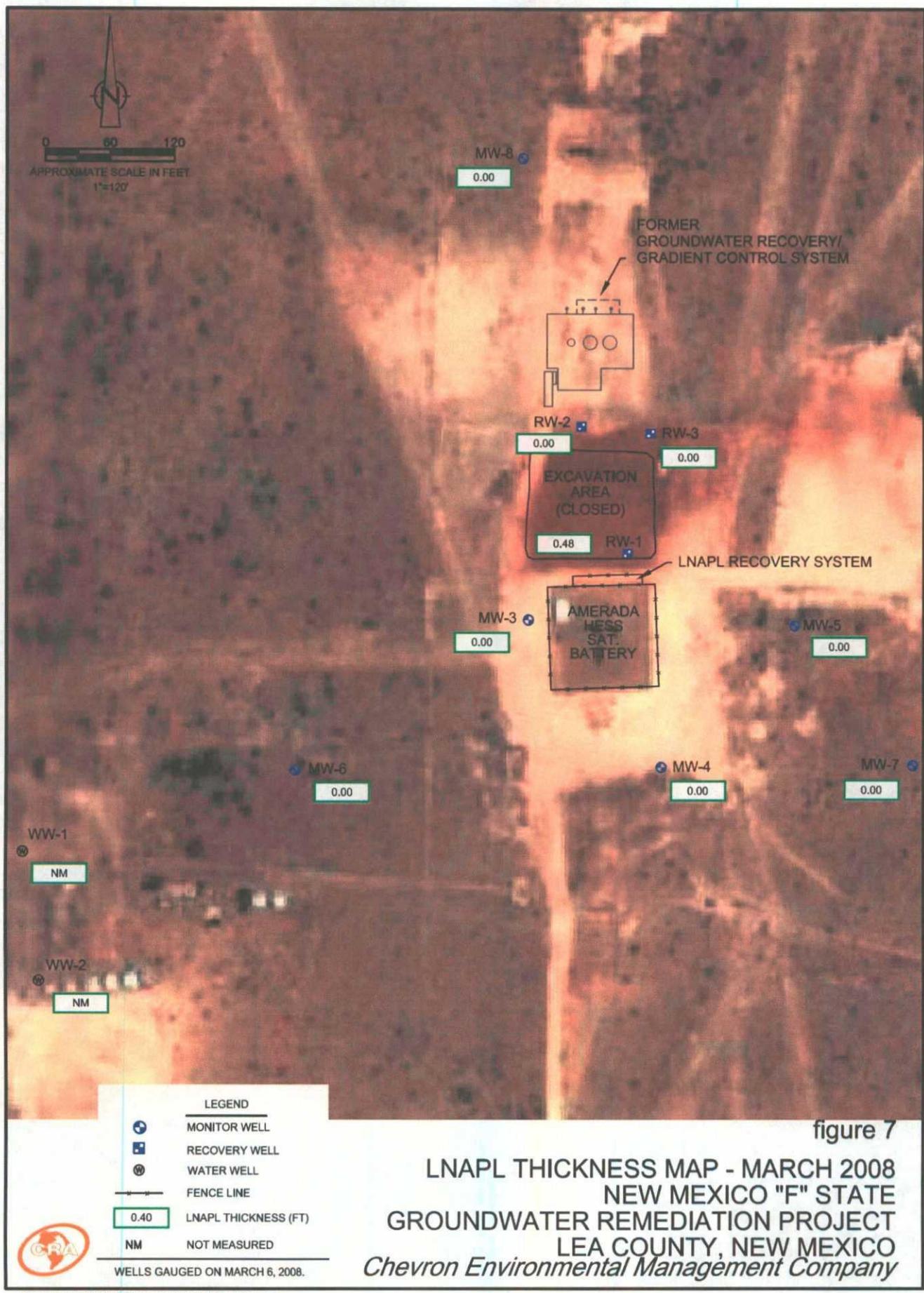


figure 6



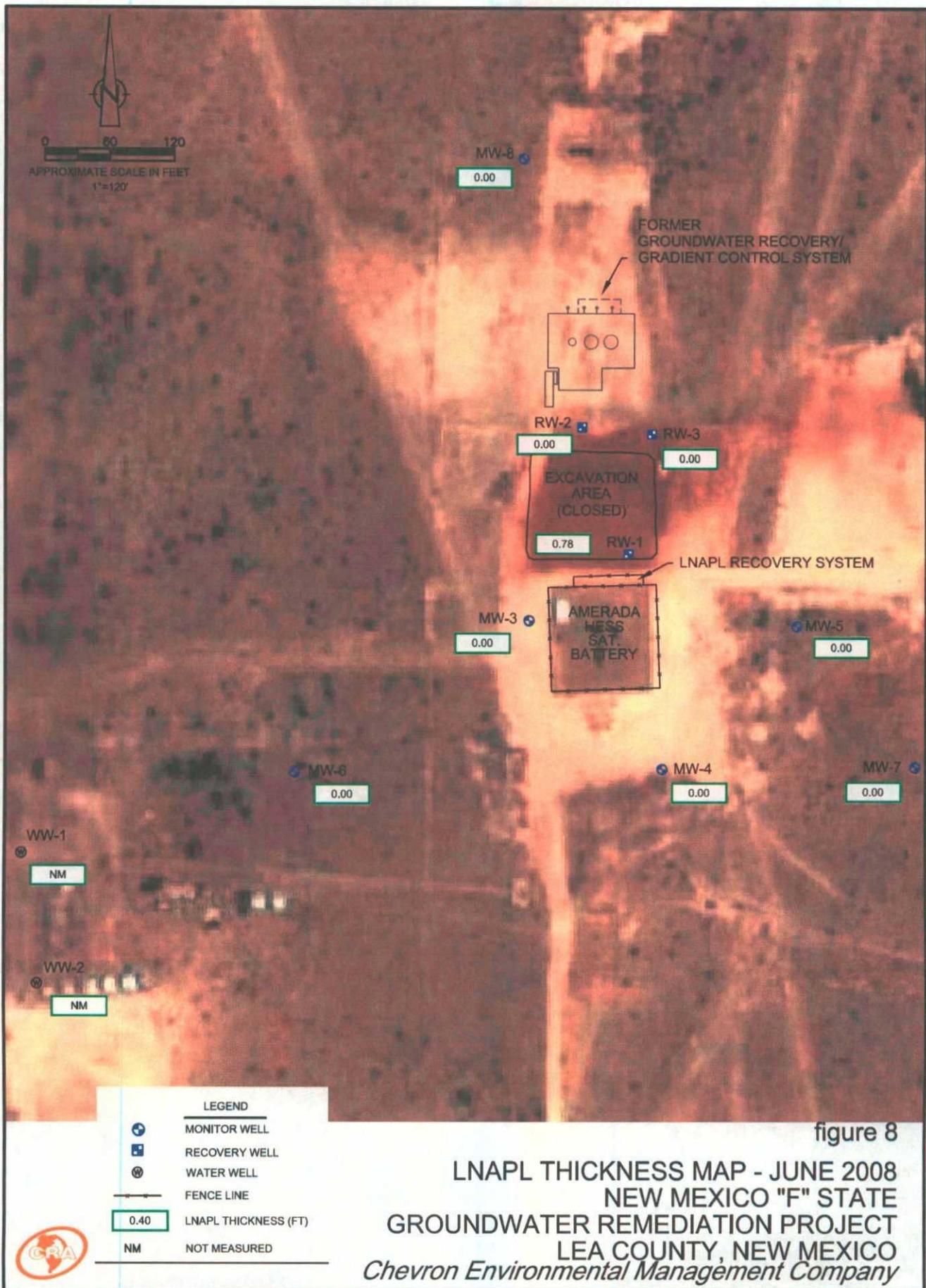
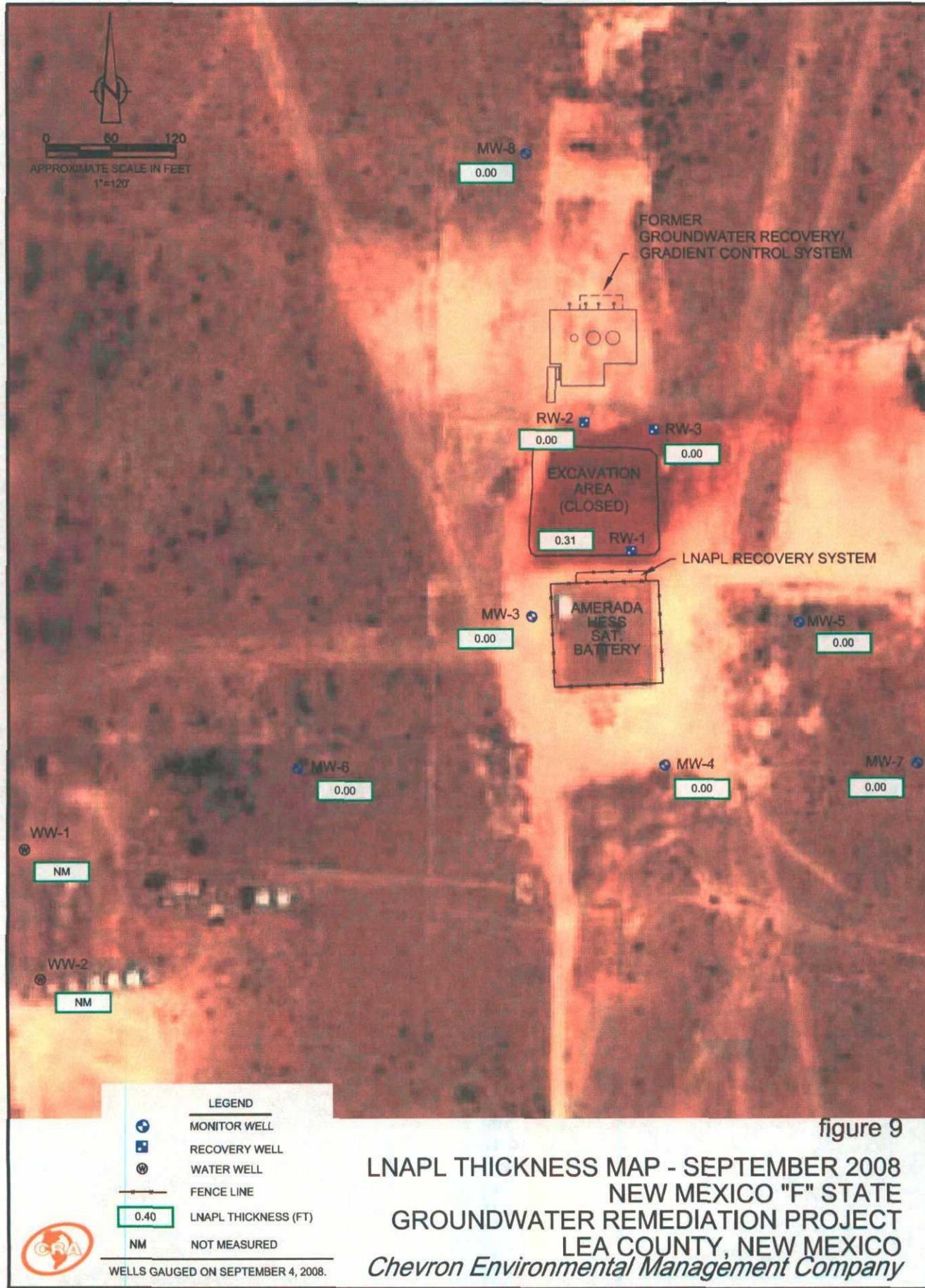


figure 8

**LNAPL THICKNESS MAP - JUNE 2008**  
**NEW MEXICO "F" STATE**  
**GROUNDWATER REMEDIATION PROJECT**  
**LEA COUNTY, NEW MEXICO**  
*Chevron Environmental Management Company*



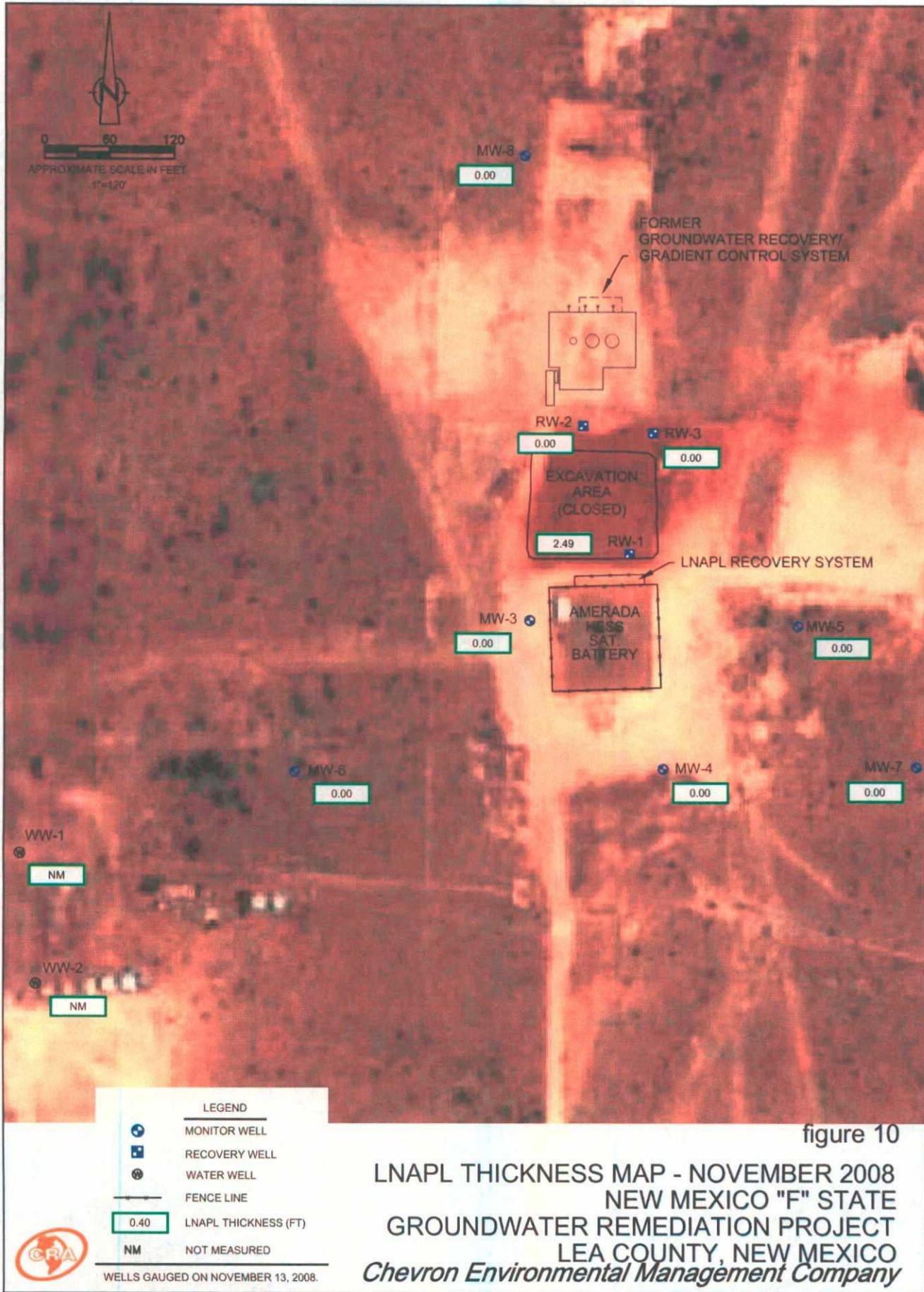


figure 10

LNAPL THICKNESS MAP - NOVEMBER 2008  
NEW MEXICO "F" STATE  
GROUNDWATER REMEDIATION PROJECT  
LEA COUNTY, NEW MEXICO  
*Chevron Environmental Management Company*

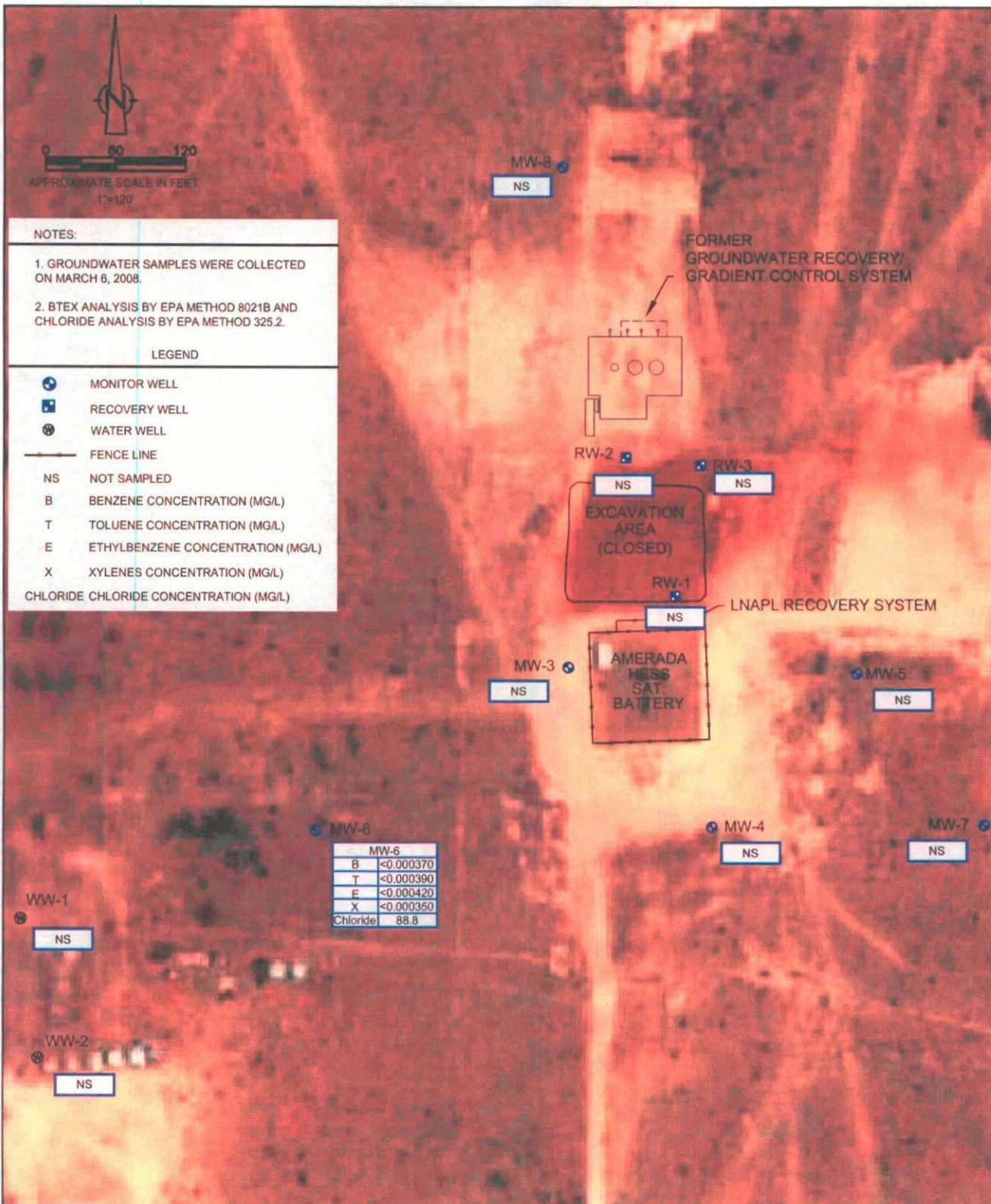


figure 11

GROUNDWATER BTEX AND CHLORIDE CONCENTRATIONS MAP -  
MARCH 2008  
NEW MEXICO "F" STATE GROUNDWATER REMEDIATION PROJECT  
LEA COUNTY, NEW MEXICO  
*Chevron Environmental Management Company*



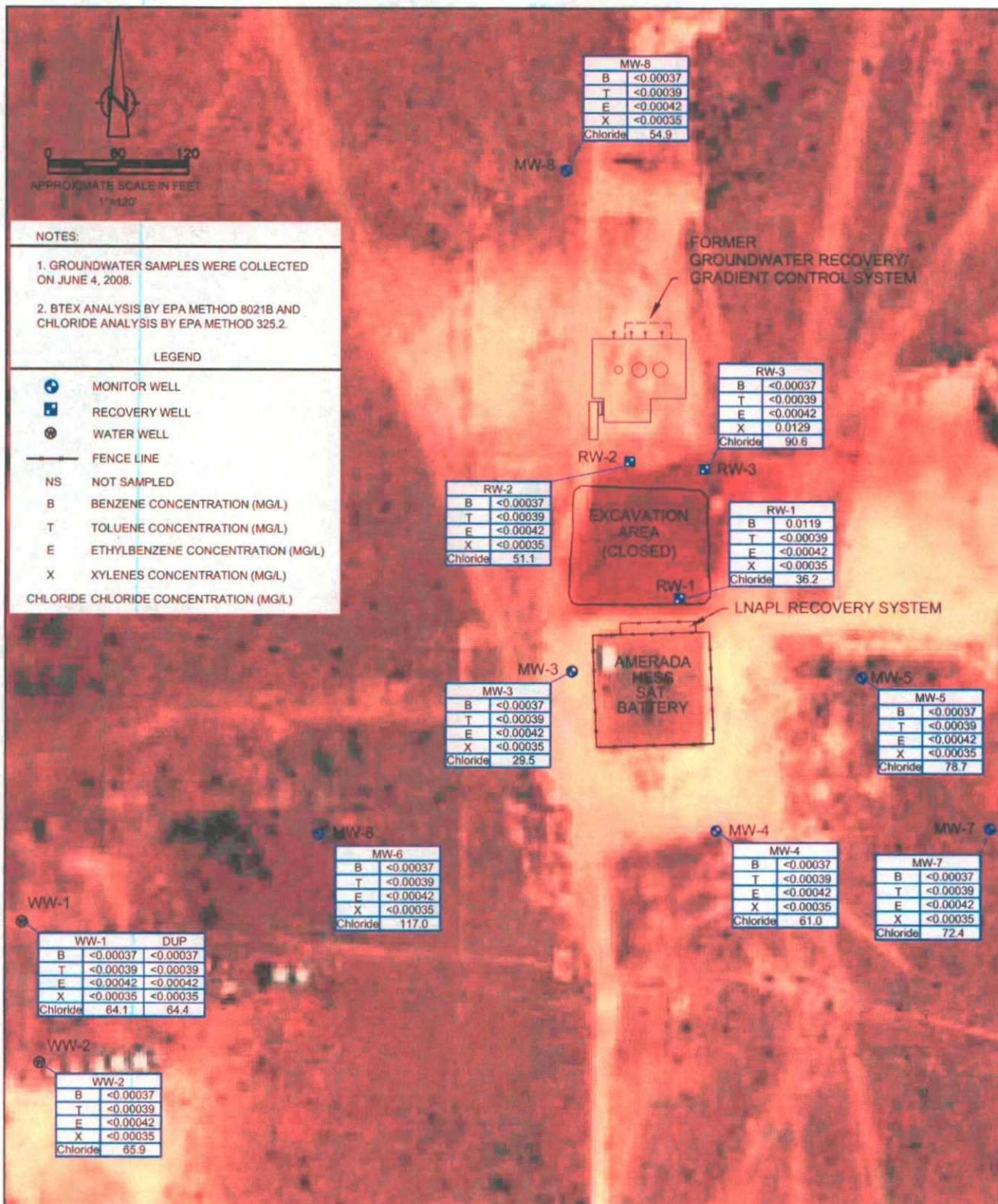


figure 12

GROUNDWATER BTEX AND CHLORIDE CONCENTRATIONS MAP - JUNE 2008

NEW MEXICO "F" STATE GROUNDWATER REMEDIATION PROJECT  
LEA COUNTY, NEW MEXICO  
Chevron Environmental Management Company



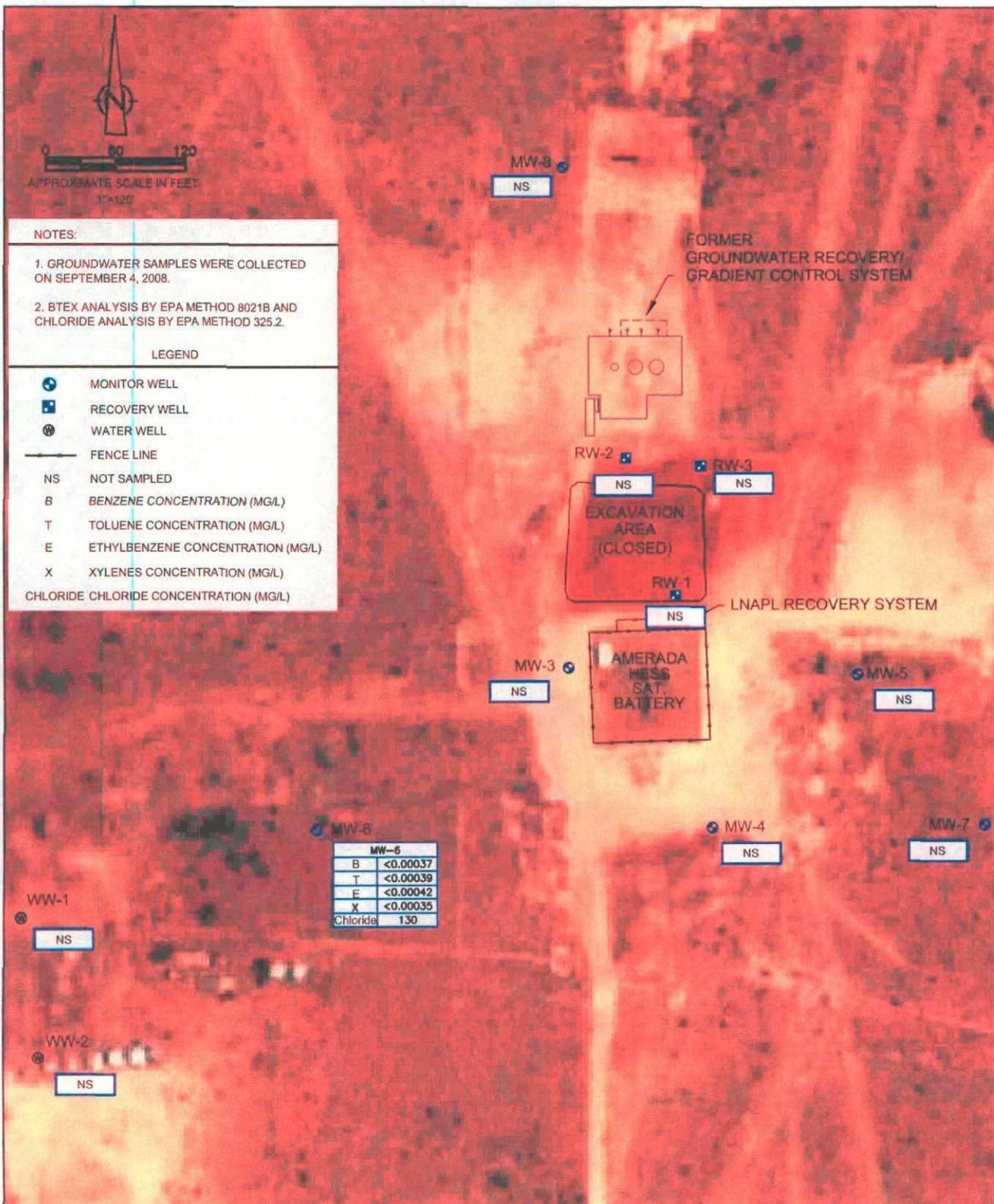


figure 13

GROUNDWATER BTEX AND CHLORIDE CONCENTRATIONS MAP -  
SEPTEMBER 2008  
NEW MEXICO "F" STATE GROUNDWATER REMEDIATION PROJECT  
LEA COUNTY, NEW MEXICO  
*Chevron Environmental Management Company*



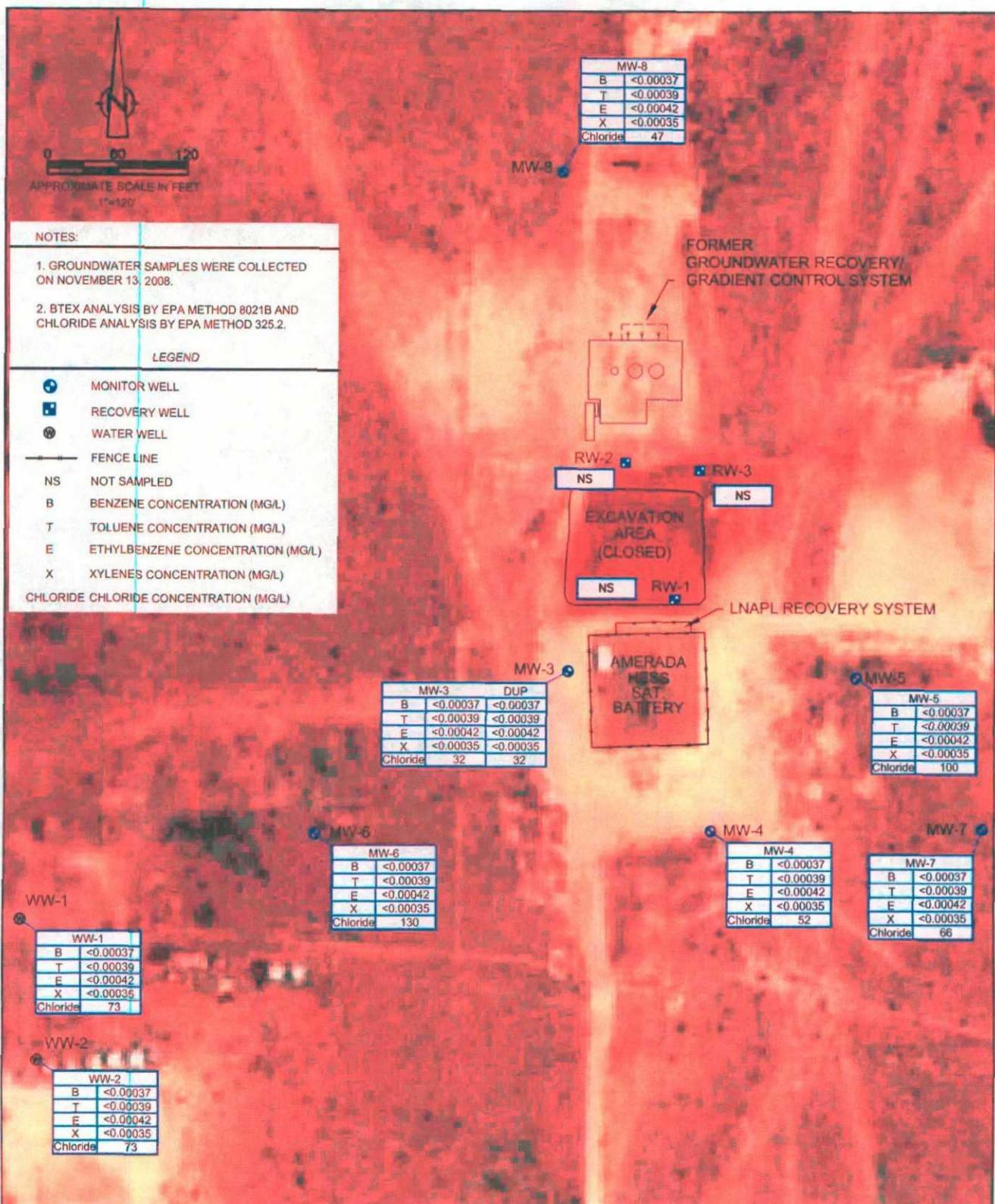


figure 14

GROUNDWATER BTEX AND CHLORIDE CONCENTRATIONS MAP -  
NOVEMBER 2008  
NEW MEXICO "F" STATE GROUNDWATER REMEDIATION PROJECT  
LEA COUNTY, NEW MEXICO  
*Chevron Environmental Management Company*



**TABLE I**  
**GROUNDWATER GAUGING SUMMARY**  
**CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY**  
**FORMER NEW MEXICO "F" STATE TANK BATTERY**  
**LEA COUNTY, NEW MEXICO**

Well ID TOC <i>Elevation</i>	Collection Date	Depth to Groundwater (ft TOC)	Depth to LNAPL (ft TOC)	LNAPL Thickness (ft)	Corrected Groundwater Elevation (ft above MSL)	Well Depth (ft TOC)	Well Screen Interval (ft bgs)
MW-3 3696.85	7/28/98	59.53	---	---	3637.32	70.15	55 - 75
	6/25/99	59.06	---	---	3637.79	---	---
	2/16/01	59.53	---	---	3637.32	---	---
	6/11/02	59.18	---	---	3637.67	---	---
	11/26/02	59.54	---	---	3637.31	---	---
	6/5/03	59.45	---	---	3637.40	---	---
	12/3/03	59.47	---	---	3637.38	---	---
	7/1/04	59.24	---	---	3637.61	---	---
	12/20/04	58.83	---	---	3638.02	---	---
	6/6/05	58.53	---	---	3638.32	---	---
	12/12/05	57.83	---	---	3639.02	---	---
	1/25/06	57.85	---	---	3639.00	---	---
	5/1/06	57.59	---	---	3639.26	---	---
	6/26/06	57.66	---	---	3639.19	---	---
	12/18/06	57.54	---	---	3639.31	---	---
	3/16/07	57.43	---	---	3639.42	---	---
	6/26/07	57.31	---	---	3639.54	---	---
	9/27/07	57.89	---	---	3638.96	---	---
	12/13/07	57.61	---	---	3639.24	---	---
MW-4 3699.50	3/6/08	57.70	—	—	3639.15	—	—
	6/4/08	57.33	—	—	3639.52	—	—
	9/4/08	57.45	—	—	3639.40	—	—
	11/13/08	57.26	—	—	3639.59	—	—
	7/28/98	69.72	---	---	3629.78	68.74	55 - 75
	6/25/99	62.31	---	---	3637.19	---	---
	2/16/01	62.52	---	---	3636.98	---	---
	6/11/02	62.39	---	---	3637.11	---	---
	11/26/02	62.76	---	---	3636.74	---	---
	6/5/03	62.71	---	---	3636.79	---	---
	12/3/03	62.67	---	---	3636.83	---	---
	7/1/04	62.43	---	---	3637.07	---	---
	12/20/04	62.02	---	---	3637.48	---	---
	6/6/05	61.67	---	---	3637.83	---	---
	12/12/05	61.11	---	---	3638.39	---	---
	1/25/06	61.11	---	---	3638.39	---	---
	5/1/06	60.89	---	---	3638.61	---	---
	6/26/06	60.93	---	---	3638.57	---	---
	12/18/06	60.79	---	---	3638.71	---	---
	3/16/07	60.72	---	---	3638.78	---	---
	6/26/07	60.60	---	---	3638.90	---	---
	9/27/07	61.02	---	---	3638.48	---	---
	12/13/07	60.88	---	---	3638.62	---	---
	3/6/08	60.96	—	—	3638.54	—	—
	6/4/08	60.65	—	—	3638.85	—	—
	9/4/08	60.75	—	—	3638.75	—	—
	11/13/08	60.61	—	—	3638.89	—	—

**TABLE I**  
**GROUNDWATER GAUGING SUMMARY**  
**CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY**  
**FORMER NEW MEXICO "F" STATE TANK BATTERY**  
**LEA COUNTY, NEW MEXICO**

Well ID TOC <i>Elevation</i>	Collection Date	Depth to Groundwater (ft TOC)	Depth to LNAPL (ft TOC)	LNAPL Thickness (ft)	Corrected Groundwater Elevation (ft above MSL)	Well Depth (ft TOC)	Well Screen Interval (ft bgs)
MW-5 3693.52	7/28/98	56.53	---	---	3636.99	66.80	48 - 68
	3/23/99	56.30	---	---	3637.22	---	---
	6/25/99	56.21	---	---	3637.31	---	---
	2/16/01	56.31	---	---	3637.21	---	---
	6/11/02	56.29	---	---	3637.23	---	---
	11/26/02	56.13	---	---	3637.39	---	---
	6/5/03	56.53	---	---	3636.99	---	---
	12/3/03	56.57	---	---	3636.95	---	---
	7/1/04	54.34	---	---	3639.18	---	---
	12/20/04	55.86	---	---	3637.66	---	---
	6/6/05	55.60	---	---	3637.92	---	---
	12/12/05	55.04	---	---	3638.48	---	---
	1/25/06	55.07	---	---	3638.45	---	---
	5/1/06	54.87	---	---	3638.65	---	---
	6/26/06	54.86	---	---	3638.66	---	---
	12/18/06	54.61	---	---	3638.91	---	---
	3/16/07	54.51	---	---	3639.01	---	---
	6/26/07	54.49	---	---	3639.03	---	---
	9/27/07	54.84	---	---	3638.68	---	---
MW-6 3704.81	12/13/07	54.74	---	---	3638.78	---	---
	3/6/08	54.77	—	—	3638.75	—	—
	6/4/08	54.58	—	—	3638.94	—	—
	9/4/08	54.68	—	—	3638.84	—	—
	11/13/08	54.57	—	—	3638.95	—	—
	7/28/98	67.86	---	---	3636.95	78.25	56 - 76
	6/25/99	67.25	---	---	3637.56	---	---
	2/16/01	67.45	---	---	3637.36	---	---
	6/11/02	67.19	---	---	3637.62	---	---
	11/26/02	67.09	---	---	3637.72	---	---
	6/5/03	67.57	---	---	3637.24	---	---
	12/3/03	67.61	---	---	3637.20	---	---
	7/1/04	67.43	---	---	3637.38	---	---
	12/20/04	67.55	---	---	3637.26	---	---
	6/6/05	66.41	---	---	3638.40	---	---
	12/12/05	65.80	---	---	3639.01	---	---
	1/25/06	65.88	---	---	3638.93	---	---
	5/1/06	65.57	---	---	3639.24	---	---
	6/26/06	65.82	---	---	3638.99	---	---
	12/18/06	65.67	---	---	3639.14	---	---
	3/16/07	65.69	---	---	3639.12	---	---
	6/26/07	65.41	---	---	3639.40	---	---
	9/27/07	66.46	---	---	3638.35	---	---
	12/13/07	65.85	---	---	3638.96	---	---
	3/6/08	65.68	—	—	3639.13	—	—
	6/4/08	65.39	—	—	3639.42	—	—
	9/4/08	65.56	—	—	3639.25	—	—
	11/13/08	65.32	—	—	3639.49	—	—

**TABLE I**  
**GROUNDWATER GAUGING SUMMARY**  
**CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY**  
**FORMER NEW MEXICO "F" STATE TANK BATTERY**  
**LEA COUNTY, NEW MEXICO**

Well ID TOC <i>Elevation</i>	Collection Date	Depth to Groundwater (ft TOC)	Depth to LNAPL (ft TOC)	LNAPL Thickness (ft)	Corrected Groundwater Elevation (ft above MSL)	Well Depth (ft TOC)	Well Screen Interval (ft bgs)
MW-7 3694.58	7/28/98	58.08	---	---	3636.50	68.88	49 - 69
	6/25/99	57.96	---	---	3636.62	---	---
	2/16/01	58.09	---	---	3636.49	---	---
	6/11/02	58.07	---	---	3636.51	---	---
	11/26/02	57.92	---	---	3636.66	---	---
	6/5/03	58.29	---	---	3636.29	---	---
	12/3/03	58.33	---	---	3636.25	---	---
	7/1/04	58.11	---	---	3636.47	---	---
	12/20/04	57.62	---	---	3636.96	---	---
	6/6/05	57.28	---	---	3637.30	---	---
	12/12/05	56.84	---	---	3637.74	---	---
	1/25/06	56.86	---	---	3637.72	---	---
	5/1/06	56.69	---	---	3637.89	---	---
	6/26/06	56.66	---	---	3637.92	---	---
	12/18/06	56.40	---	---	3638.18	---	---
	3/16/07	56.28	---	---	3638.30	---	---
	6/26/07	56.29	---	---	3638.29	---	---
	9/27/07	56.59	---	---	3637.99	---	---
	12/13/07	56.51	---	---	3638.07	---	---
MW-8 3695.61	3/6/08	56.56	—	—	3638.02	—	—
	6/4/08	56.38	—	—	3638.20	—	—
	9/4/08	56.49	—	—	3638.09	—	—
	11/13/08	56.40	—	—	3638.18	—	—
	7/28/98	56.84	---	---	3638.77	66.91	46 - 66
	6/25/99	56.56	---	---	3639.05	---	---
	2/16/01	56.49	---	---	3639.12	---	---
	6/11/02	56.56	---	---	3639.05	---	---
	11/26/02	56.88	---	---	3638.73	---	---
	6/5/03	56.89	---	---	3638.72	---	---
	12/3/03	56.91	---	---	3638.70	---	---
	7/1/04	56.70	---	---	3638.91	---	---
	12/20/04	56.23	---	---	3639.38	---	---
	6/6/05	55.86	---	---	3639.75	---	---
	12/12/05	55.29	---	---	3640.32	---	---
	1/25/06	55.30	---	---	3640.31	---	---
	5/1/06	55.03	---	---	3640.58	---	---
	6/26/06	54.96	---	---	3640.65	---	---
	12/18/06	54.80	---	---	3640.81	---	---
	3/16/07	54.68	---	---	3640.93	---	---
	6/26/07	54.67	---	---	3640.94	---	---
	9/27/07	54.95	---	---	3640.66	---	---
	12/13/07	54.82	---	---	3640.79	---	---
	3/6/08	54.82	—	—	3640.79	—	—
	6/4/08	54.70	—	—	3640.91	—	—
	9/4/08	54.77	—	—	3640.84	—	—
	11/13/08	54.73	—	—	3640.88	—	—

**TABLE I**  
**GROUNDWATER GAUGING SUMMARY**  
**CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY**  
**FORMER NEW MEXICO "F" STATE TANK BATTERY**  
**LEA COUNTY, NEW MEXICO**

Well ID TOC <i>Elevation</i>	Collection Date	Depth to Groundwater (ft TOC)	Depth to LNAPL (ft TOC)	LNAPL Thickness (ft)	Corrected Groundwater Elevation (ft above MSL)	Well Depth (ft TOC)	Well Screen Interval (ft bgs)
RW-1	11/3/99	62.17	---	---	3637.75	71.60	55 - 75
3699.92	2/16/01	62.37	62.33	0.04	3637.59	---	---
	6/11/02	62.26	61.86	0.40	3638.01	---	---
	11/26/02	62.60	62.07	0.53	3637.79	---	---
	6/5/03	63.00	62.84	0.16	3637.06	---	---
	12/3/03	63.26	62.61	0.65	3637.23	---	---
	7/1/04	63.10	62.33	0.77	3637.50	---	---
	12/20/04	61.80	60.96	0.84	3638.86	---	---
	3/1/05	Start-up groundwater extraction system				---	---
	1/25/06	61.44	58.67	2.77	3640.92	---	---
	5/1/06	61.56	58.38	3.18	3641.16	---	---
	6/26/06	61.59	58.43	3.16	3641.11	---	---
	11/21/06	59.87	58.72	1.15	3641.06	---	---
	11/28/06	Installed skimmer pump system				---	---
	11/28/06	60.96	58.32	2.64	3641.28	---	---
	12/4/06	60.35	58.30	2.05	3641.37	---	---
	12/15/06	58.75	58.48	0.27	3641.41	---	---
	12/18/06	58.78	58.55	0.23	3641.34	---	---
	1/5/07	60.54	58.19	2.35	3641.49	---	---
	2/2/07	59.00	58.51	0.49	3641.36	---	---
	2/9/07	58.52	58.36	0.16	3641.54	---	---
	2/23/07	58.62	58.25	0.37	3641.63	---	---
	3/2/07	59.78	58.18	1.60	3641.58	---	---
	3/8/07	58.55	58.23	0.32	3641.66	---	---
	3/16/07	58.74	58.30	0.44	3641.57	---	---
	3/23/07	58.81	58.31	0.50	3641.56	---	---
	3/28/07	58.48	58.24	0.24	3641.66	---	---
	4/4/07	58.69	58.48	0.21	3641.42	---	---
	5/23/07	58.95	58.48	0.47	3641.39	---	---
	6/20/07	59.09	58.50	0.59	3641.36	---	---
	6/26/07	58.52	58.37	0.15	3641.53	---	---
	7/2/07	58.69	58.29	0.40	3641.59	---	---
	9/13/07	60.18	58.66	1.52	3641.10	---	---
	9/17/07	59.18	58.65	0.53	3641.22	---	---
	9/27/07	59.40	58.72	0.68	3641.13	---	---
	11/16/07	58.52	58.35	0.17	3641.55	---	---
	12/13/07	60.90	58.44	2.46	3641.23	---	---
	3/6/08	59.24	58.76	0.48	3641.11	---	---
	4/1/08	59.27	58.70	0.57	3641.16	---	---
	5/6/08	59.31	58.73	0.58	3641.13	---	---
	6/4/08	59.37	58.59	0.78	3641.25	---	---
	6/25/08	58.51	58.40	0.11	3641.51	---	---
	7/15/08	58.92	58.46	0.46	3641.41	---	---
	8/19/08	58.80	58.52	0.28	3641.37	---	---
	9/4/08	58.82	58.51	0.31	3641.38	---	---
	9/15/08	60.56	58.43	2.13	3641.27	---	---
	10/1/08	60.38	58.45	1.93	3641.27	---	---
	10/16/08	60.80	58.41	2.39	3641.26	---	---
	11/13/08	60.59	58.10	2.49	3641.56	---	---
	12/17/08	60.48	58.47	2.01	3641.24	---	---

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**GROUNDWATER GAUGING SUMMARY**  
**CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY**  
**FORMER NEW MEXICO "F" STATE TANK BATTERY**  
**LEA COUNTY, NEW MEXICO**

Well ID <i>TOC</i> <i>Elevation</i>	Collection Date	Depth to Groundwater (ft TOC)	Depth to LNAPL (ft TOC)	LNAPL Thickness (ft)	Corrected Groundwater Elevation (ft above MSL)	Well Depth (ft TOC)	Well Screen Interval (ft bgs)
RW-2	10/14/99	53.28	---	---	3638.84	67.55	47 - 67
3692.12	11/3/99	53.95	---	---	3638.17	---	---
	2/16/01	54.01	---	---	3638.11	---	---
	6/11/02	54.01	53.98	0.03	3638.14	---	---
	11/26/02	54.28	54.07	0.21	3638.02	---	---
	6/5/03	53.24	53.23	0.01	3638.89	---	---
	12/3/03	54.51	54.38	0.13	3637.72	---	---
	7/1/04	54.51	54.12	0.39	3637.95	---	---
	12/20/04	53.69	53.52	0.17	3638.58	---	---
	3/1/05	Start-up groundwater extraction system				---	---
	1/25/06	51.55	51.14	0.41	3640.93	---	---
	5/1/06	51.34	50.91	0.43	3641.16	---	---
	6/26/06	51.02	50.94	0.08	3641.17	---	---
	11/28/06	Absorbant sock installed in well				---	---
	12/18/06	51.15	50.75	0.40	3641.32	---	---
	1/12/07	50.89	50.63	0.26	3641.46	---	---
	1/15/07	50.20	---	---	3641.92	---	---
	2/2/07	50.72	---	---	3641.40	---	---
	2/9/07	50.60	---	---	3641.52	---	---
	2/23/07	50.54	---	---	3641.58	---	---
	3/2/07	50.60	---	---	3641.52	---	---
	3/8/07	50.61	---	---	3641.51	---	---
	3/16/07	50.69	---	---	3641.43	---	---
	3/23/07	50.67	---	---	3641.45	---	---
	3/28/07	50.54	---	---	3641.58	---	---
	4/4/07	50.66	---	---	3641.46	---	---
	4/12/07	50.62	---	---	3641.50	---	---
	4/19/07	50.61	---	---	3641.51	---	---
	4/25/07	50.80	---	---	3641.32	---	---
	5/1/07	50.80	---	---	3641.32	---	---
	5/8/07	50.73	---	---	3641.39	---	---
	5/23/07	50.74	---	---	3641.38	---	---
	5/29/07	50.70	---	---	3641.42	---	---
	6/5/07	50.68	---	---	3641.44	---	---
	6/14/07	50.66	---	---	3641.46	---	---
	6/20/07	50.72	---	---	3641.40	---	---
	6/26/07	50.63	---	---	3641.49	---	---
	7/2/07	50.59	---	---	3641.53	---	---
	7/13/07	50.60	---	---	3641.52	---	---
	7/20/07	50.61	---	---	3641.51	---	---
	7/27/07	50.65	---	---	3641.47	---	---
	8/14/07	50.83	---	---	3641.29	---	---
	8/22/07	50.96	---	---	3641.16	---	---
	9/4/07	50.88	---	---	3641.24	---	---
	9/13/07	50.49	---	---	3641.63	---	---
	9/17/07	50.92	---	---	3641.20	---	---
	9/27/07	51.00	---	---	3641.12	---	---
	10/4/07	50.92	---	---	3641.20	---	---
	10/11/07	50.87	---	---	3641.25	---	---
	11/2/07	50.79	---	---	3641.33	---	---
	11/16/07	50.65	---	---	3641.47	---	---

**TABLE I**  
**GROUNDWATER GAUGING SUMMARY**  
**CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY**  
**FORMER NEW MEXICO "F" STATE TANK BATTERY**  
**LEA COUNTY, NEW MEXICO**

Well ID TOC <i>Elevation</i>	Collection Date	Depth to Groundwater (ft TOC)	Depth to LNAPL (ft TOC)	LNAPL Thickness (ft)	Corrected Groundwater Elevation (ft above MSL)	Well Depth (ft TOC)	Well Screen Interval (ft bgs)
RW-2	11/20/07	50.73	---	---	3641.39	---	---
3692.12	12/13/07	50.92	---	---	3641.20	---	---
	1/2/08	50.91	---	---	3641.21	---	---
	3/6/08	50.90	—	—	3641.22	—	—
	3/11/08	50.77	—	—	3641.35	—	—
	3/17/08	50.83	—	—	3641.29	—	—
	3/25/08	50.75	—	—	3641.37	—	—
	4/1/08	50.74	—	—	3641.38	—	—
	4/9/08	50.70	—	—	3641.42	—	—
	4/15/08	50.68	—	—	3641.44	—	—
	4/23/08	50.69	—	—	3641.43	—	—
	4/28/08	50.67	—	—	3641.45	—	—
	5/6/08	50.72	—	—	3641.40	—	—
	5/23/08	50.75	—	—	3641.37	—	—
	5/29/08	50.68	—	—	3641.44	—	—
	6/4/08	50.65	—	—	3641.47	—	—
	6/12/08	50.68	—	—	3641.44	—	—
	6/18/08	50.64	—	—	3641.48	—	—
	6/25/08	50.60	—	—	3641.52	—	—
	6/30/08	50.61	—	—	3641.51	—	—
	7/7/08	50.66	—	—	3641.46	—	—
	7/15/08	50.63	—	—	3641.49	—	—
	7/21/08	50.59	—	—	3641.53	—	—
	7/31/08	50.63	—	—	3641.49	—	—
	8/4/08	50.59	—	—	3641.53	—	—
	8/10/08	50.53	—	—	3641.59	—	—
	8/19/08	50.70	—	—	3641.42	—	—
	8/26/08	50.71	—	—	3641.41	—	—
	9/4/08	50.73	—	—	3641.39	—	—
	9/10/08	50.72	—	—	3641.40	—	—
	9/15/08	50.84	—	—	3641.28	—	—
	9/23/08	50.84	—	—	3641.28	—	—
	10/1/08	50.85	—	—	3641.27	—	—
	10/6/08	50.85	—	—	3641.27	—	—
	10/16/08	50.85	—	—	3641.27	—	—
	10/21/08	50.75	—	—	3641.37	—	—
	10/28/08	50.75	—	—	3641.37	—	—
	11/13/08	50.67	—	—	3641.45	—	—
	11/19/08	50.69	—	—	3641.43	—	—
	11/25/08	50.76	—	—	3641.36	—	—
	12/3/08	50.85	—	—	3641.27	—	—
	12/9/08	50.98	—	—	3641.14	—	—
	12/17/08	50.93	—	—	3641.19	—	—

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**CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY**  
**FORMER NEW MEXICO "F" STATE TANK BATTERY**  
**LEA COUNTY, NEW MEXICO**

Well ID TOC <i>Elevation</i>	Collection Date	Depth to Groundwater (ft TOC)	Depth to LNAPL (ft TOC)	LNAPL Thickness (ft)	Corrected Groundwater Elevation (ft above MSL)	Well Depth (ft TOC)	Well Screen Interval (ft bgs)
RW-3	10/14/99	45.82	---	---	3645.04	68.65	47 - 67
3690.86	11/3/99	52.82	---	---	3638.04	---	---
	2/16/01	52.88	---	---	3637.98	---	---
	6/11/02	52.91	---	---	3637.95	---	---
	11/26/02	53.22	53.15	0.07	3637.70	---	---
	6/5/03	54.56	54.40	0.16	3636.44	---	---
	12/3/03	53.23	---	---	3637.63	---	---
	7/1/04	53.19	52.98	0.21	3637.85	---	---
	12/20/04	52.50	52.09	0.41	3638.72	---	---
	3/1/05	Start-up groundwater extraction system				---	---
	1/25/06	50.71	---	---	3640.15	---	---
	5/1/06	50.49	---	---	3640.37	---	---
	6/26/06	50.50	---	---	3640.36	---	---
	11/28/06	Absorbant sock installed in well				---	---
	12/18/06	50.31	---	---	3640.55	---	---
	1/12/07	50.17	---	---	3640.69	---	---
	1/15/07	50.21	50.20	0.01	3640.66	---	---
	2/2/07	50.23	---	---	3640.63	---	---
	2/9/07	50.13	---	---	3640.73	---	---
	2/23/07	50.03	---	---	3640.83	---	---
	3/2/07	50.12	---	---	3640.74	---	---
	3/8/07	50.14	---	---	3640.72	---	---
	3/16/07	50.22	---	---	3640.64	---	---
	3/23/07	50.20	---	---	3640.66	---	---
	3/28/07	50.08	---	---	3640.78	---	---
	4/4/07	50.18	---	---	3640.68	---	---
	4/12/07	50.14	---	---	3640.72	---	---
	4/19/07	50.13	---	---	3640.73	---	---
	4/25/07	50.28	---	---	3640.58	---	---
	5/1/07	50.29	---	---	3640.57	---	---
	5/8/07	50.24	---	---	3640.62	---	---
	5/23/07	50.23	---	---	3640.63	---	---
	5/29/07	50.21	---	---	3640.65	---	---
	6/5/07	50.19	---	---	3640.67	---	---
	6/14/07	50.18	---	---	3640.68	---	---
	6/20/07	50.26	---	---	3640.60	---	---
	6/26/07	50.15	---	---	3640.71	---	---
	7/2/07	50.11	---	---	3640.75	---	---
	7/13/07	50.14	---	---	3640.72	---	---
	7/20/07	50.11	---	---	3640.75	---	---
	7/27/07	50.17	---	---	3640.69	---	---
	8/14/07	50.37	---	---	3640.49	---	---
	8/22/07	50.45	---	---	3640.41	---	---
	9/4/07	50.36	---	---	3640.50	---	---
	9/13/07	50.44	---	---	3640.42	---	---
	9/17/07	50.44	---	---	3640.42	---	---
	9/27/07	50.49	---	---	3640.37	---	---
	10/4/07	50.42	---	---	3640.44	---	---
	10/11/07	50.39	---	---	3640.47	---	---
	11/2/07	50.31	---	---	3640.55	---	---
	11/16/07	50.19	---	---	3640.67	---	---

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**CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY**  
**FORMER NEW MEXICO "F" STATE TANK BATTERY**  
**LEA COUNTY, NEW MEXICO**

Well ID <i>TOC</i> <i>Elevation</i>	Collection Date	Depth to Groundwater (ft TOC)	Depth to LNAPL (ft TOC)	LNAPL Thickness (ft)	Corrected Groundwater Elevation (ft above MSL)	Well Depth (ft TOC)	Well Screen Interval (ft bgs)
RW-3	11/20/07	50.27	---	---	3640.59	---	---
3690.86	12/13/07	52.38	---	---	3638.48	---	---
	1/2/08	52.35	---	---	3638.51	---	---
	3/6/08	50.42	—	—	3640.44	—	—
	3/11/08	50.32	—	—	3640.54	—	—
	3/17/08	50.39	—	—	3640.47	—	—
	3/25/08	50.27	—	—	3640.59	—	—
	4/1/08	50.25	—	—	3640.61	—	—
	4/9/08	50.22	—	—	3640.64	—	—
	4/15/08	50.22	—	—	3640.64	—	—
	4/23/08	50.24	—	—	3640.62	—	—
	4/28/08	50.25	—	—	3640.61	—	—
	5/6/08	50.22	—	—	3640.64	—	—
	5/23/08	50.29	—	—	3640.57	—	—
	5/29/08	50.36	—	—	3640.50	—	—
	6/4/08	50.32	—	—	3640.54	—	—
	6/12/08	50.23	—	—	3640.63	—	—
	6/18/08	50.19	—	—	3640.67	—	—
	6/25/08	50.18	—	—	3640.68	—	—
	6/30/08	50.17	—	—	3640.69	—	—
	7/7/08	50.21	—	—	3640.65	—	—
	7/15/08	50.19	—	—	3640.67	—	—
	7/21/08	50.05	—	—	3640.81	—	—
	7/31/08	50.20	—	—	3640.66	—	—
	8/4/08	50.21	—	—	3640.65	—	—
	8/10/08	50.19	—	—	3640.67	—	—
	8/19/08	50.23	—	—	3640.63	—	—
	8/26/08	50.24	—	—	3640.62	—	—
	9/4/08	50.90	—	—	3639.96	—	—
	9/10/08	50.20	—	—	3640.66	—	—
	9/15/08	50.38	—	—	3640.48	—	—
	9/23/08	50.32	—	—	3640.54	—	—
	10/1/08	50.34	—	—	3640.52	—	—
	10/6/08	50.41	—	—	3640.45	—	—
	10/16/08	50.39	—	—	3640.47	—	—
	10/21/08	50.29	—	—	3640.57	—	—
	10/28/08	50.33	—	—	3640.53	—	—
	11/13/08	50.15	—	—	3640.71	—	—
	11/19/08	50.17	—	—	3640.69	—	—
	11/25/08	50.33	—	—	3640.53	—	—
	12/3/08	50.40	—	—	3640.46	—	—
	12/9/08	50.50	—	—	3640.36	—	—
	12/17/08	50.48	—	—	3640.38	—	—

**TABLE I**  
**GROUNDWATER GAUGING SUMMARY**  
**CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY**  
**FORMER NEW MEXICO "F" STATE TANK BATTERY**  
**LEA COUNTY, NEW MEXICO**

Well ID <i>TOC Elevation</i>	Collection Date	Depth to Groundwater (ft TOC)	Depth to LNAPL (ft TOC)	LNAPL Thickness (ft)	Corrected Groundwater Elevation (ft above MSL)	Well Depth (ft TOC)	Well Screen Interval (ft bgs)
WW-1 3704.17	6/11/02	66.35	---	---	3637.82	Unknown	Unknown
	6/5/03	68.25	---	---	3635.92	---	---
WW-2 3703.84	6/11/02	66.18	---	---	3637.66	Unknown	Unknown
	11/26/02	66.18	---	---	3637.66	---	---
	6/5/03	68.54	---	---	3635.30	---	---

**Notes:**

1. Data through June 6, 2005 provided by Larson & Associates, Inc.
2. TOC - Top of Casing.
3. MSL - Mean Sea Level.
4. bgs - Below ground surface.
5. Corrected groundwater elevations from July 1998 to December 2006 were calculated using LNAPL specific gravity of 0.88.
6. Corrected groundwater elevations from January 2007 to December 2007 were calculated using LNAPL specific gravity of 0.897.
7. MW-1, MW-2 and MW-9 were plugged and abandoned and replaced with RW-1, RW-2 and RW-3 in November 1999.
8. Monitor wells (MWs) are 2-inch in diameter; Recovery wells (RWs) are 4-inch in diameter.

**TABLE II**  
**GROUNDWATER ANALYTICAL SUMMARY**  
**CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY**  
**FORMER NEW MEXICO "F" STATE TANK BATTERY**  
**LEA COUNTY, NEW MEXICO**

Sample ID	Sample Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Chloride
New Mexico Water Quality Control Commission Groundwater Standard						
		0.01	0.75	0.75	0.62	250
MW-3	7/28/98	0.003	<0.001	<0.001	0.002	36.0
	2/16/01	<0.005	<0.005	<0.005	<0.005	31
	6/12/02	<0.005	<0.005	<0.005	<0.005	27.1
	11/26/03	<0.001	<0.001	<0.001	<0.001	31.9
	6/6/03	<0.001	<0.001	<0.001	<0.001	27.5
	12/4/03	<0.001	<0.001	<0.001	<b>0.0017</b>	26.1
	7/2/04	<0.005	<0.005	<0.005	<0.005	28.0
	12/21/04	<0.005	<0.005	<0.005	<0.005	32.3
	6/6/05	<0.00100	<0.00100	<0.00100	<0.00100	34.3
	12/13/05	<0.005	<0.005	<0.005	<0.010	29.3
	6/27/06	<0.000500	<0.000500	<0.000500	<0.001	31.1
	12/19/06	<0.005	<0.005	<0.005	<0.001	28.0
	6/27/07	<0.000500	<0.000500	<0.000500	<0.00100	31
	12/14/07	<0.000500	<0.000500	<0.000500	<0.00100	30.9
DUP	6/5/08	<0.00037	<0.00039	<0.00042	<0.00035	29.5
	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	32
	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	32
MW-4	7/28/98	<0.001	<0.001	<0.001	<0.001	94.0
	2/16/01	<0.005	<0.005	<0.005	<b>0.008</b>	170
	6/12/02	<0.005	<0.005	<0.005	<0.005	85.6
	11/26/03	<b>0.002</b>	<0.001	<0.001	<0.005	160.0
	6/6/03	<0.001	<0.001	<0.001	<b>0.0026</b>	111.0
	12/4/03	<b>0.0015</b>	<0.001	<0.001	<0.001	104.0
	7/2/04	<0.001	<0.001	<0.001	<0.001	72.4
	12/21/04	<0.005	<0.005	<0.005	<0.005	59.7
	6/6/05	<0.00100	<0.00100	<0.00100	<0.00100	58.4
	12/13/05	<0.005	<0.005	<0.005	<0.010	55.3
	6/27/06	<b>0.000597</b>	<0.000500	<0.000500	<0.001	48.8
	12/19/06	<0.005	<0.005	<0.005	<0.001	34.0
	6/27/07	<0.000500	<0.000500	<0.000500	<0.00100	39
	12/13/07	0.000968	<0.000500	<0.000500	0.00254	63.1
	6/5/08	<0.00037	<0.00039	<0.00042	<0.00035	61.0
	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	52
MW-5	7/28/98	<0.001	<0.001	<0.001	<0.001	360.0
	2/16/01	<0.005	<0.005	<0.005	<0.005	120
	6/12/02	<0.005	<0.005	<0.005	<0.005	90.2
	11/26/03	<b>0.002</b>	<0.001	<b>0.003</b>	<0.002	59.1
	6/6/03	<0.001	<0.001	<0.001	<0.001	48.6
	12/4/03	<0.001	<0.001	<0.001	<0.001	36.5
	7/2/04	<0.005	<0.005	<0.005	<0.005	32.9
	12/21/04	<0.005	<0.005	<0.005	<0.005	39.8
	6/6/05	<0.00100	<0.00100	<0.00100	<0.00100	41.1
	12/13/05	<0.005	<0.005	<0.005	<0.010	39.7
	6/27/06	<0.000500	<0.000500	<0.000500	<0.001	43.2
	12/19/06	<0.005	<0.005	<0.005	<0.001	51.0
	6/27/07	<0.000500	<0.000500	<0.000500	<0.00100	67
	12/14/07	<0.000500	<0.000500	<0.000500	<0.00100	101
	6/4/08	<0.00037	<0.00039	<0.00042	<0.00035	78.7
	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	100

**TABLE II**  
**GROUNDWATER ANALYTICAL SUMMARY**  
**CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY**  
**FORMER NEW MEXICO "F" STATE TANK BATTERY**  
**LEA COUNTY, NEW MEXICO**

Sample ID	Sample Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Chloride
New Mexico Water Quality Control Commission Groundwater Standard						
		0.01	0.75	0.75	0.62	250
MW-6	7/28/98	<0.001	<0.001	<0.001	<0.001	43.0
	2/16/01	<0.005	<0.005	<b>0.006</b>	<b>0.006</b>	52
	6/12/02	<0.001	<0.001	<0.001	<0.001	<b>54.1</b>
	11/26/03	<0.001	<0.001	<0.001	<0.002	<b>65.0</b>
	6/6/03	<0.001	<0.001	<0.001	<0.001	43.7
	12/4/03	<0.001	<0.001	<0.001	<0.001	45.3
	7/2/04	<0.001	<0.001	<0.001	<0.001	57.5
	12/21/04	<0.005	<0.005	<0.005	<0.005	61.3
	6/6/05	<0.00100	<0.00100	<0.00100	<0.00100	66.7
	12/13/05	<0.005	<0.005	<0.005	<0.010	80.9
	6/27/06	<0.000500	<0.000500	<0.000500	<0.001	<b>86.4</b>
	12/19/06	<0.005	<0.005	<0.005	<0.001	88.0
	3/16/07	<0.000500	<0.000500	<0.000500	<0.001	<b>92.2</b>
	6/27/07	<0.000500	<0.000500	<0.000500	<0.00100	110
	9/27/07	<0.000500	<0.000500	<0.000500	<0.00100	<b>99.5</b>
	12/14/07	<0.000500	<0.000500	<0.000500	<0.00100	<b>99.2</b>
	3/6/08	<0.000370	<0.000390	<0.000420	<0.000350	<b>88.8</b>
	6/4/08	<0.00037	<0.00039	<0.00042	<0.00035	117
	9/4/08	<0.00037	<0.00039	<0.00042	<0.00035	130
	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	130
MW-7	7/28/98	<0.001	<0.001	<0.001	<0.001	<b>82.0</b>
	2/16/01	<0.005	<0.005	<0.005	<0.005	150
	6/12/02	<0.005	<0.005	<0.005	<0.005	<b>96.7</b>
	11/26/03	<0.001	<0.001	<0.001	<0.002	<b>133.0</b>
	6/6/03	<0.001	<0.001	<0.001	<0.001	<b>199.0</b>
	12/4/03	<0.001	<0.001	<0.001	<0.001	230.0
	7/2/04	<0.001	<0.001	<0.001	<0.001	215.0
	12/21/04	<0.005	<0.005	<0.005	<0.005	<b>274.0</b>
	6/6/05	<0.00100	<0.00100	<0.00100	<0.00100	<b>221.0</b>
	12/13/05	<0.005	<0.005	<0.005	<0.010	<b>204.0</b>
	6/27/06	<0.000500	<0.000500	<0.000500	<0.001	<b>158.0</b>
	12/19/06	<0.005	<0.005	<0.005	<0.001	<b>130.0</b>
	6/27/07	<0.000500	<0.000500	<0.000500	<0.00100	110
	12/13/07	<0.000500	<0.000500	<0.000500	<0.00100	135
	6/5/08	<0.00037	<0.00039	<0.00042	<0.00035	<b>72.4</b>
	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	66
MW-8	7/28/98	<0.001	<0.001	<0.001	<0.001	<b>29.0</b>
	2/16/01	<0.005	<0.005	<0.005	<0.005	<b>94</b>
	6/12/02	<0.005	<0.005	<0.005	<0.005	<b>180.0</b>
	11/26/03	<0.001	<0.001	<0.001	<0.002	<b>239.0</b>
	6/6/03	<0.001	<0.001	<0.001	<0.001	<b>244.0</b>
	12/4/03	<0.001	<0.001	<0.001	<0.001	<b>251.0</b>
	7/2/04	<0.005	<0.005	<0.005	<0.005	<b>206.0</b>
	12/21/04	<0.005	<0.005	<0.005	<0.005	<b>244.0</b>
	6/6/05	<0.00100	<0.00100	<0.00100	<0.00100	227.0
	12/13/05	<0.005	<0.005	<0.005	<0.010	<b>144.0</b>
	6/27/06	<0.000500	<0.000500	<0.000500	<0.001	<b>92.6</b>
	12/19/06	<0.005	<0.005	<0.005	<0.001	83.0
	6/27/07	<0.000500	<0.000500	<0.000500	<0.00100	79
	12/13/07	<0.000500	<0.000500	<0.000500	<0.00100	<b>82.9</b>
	6/4/08	<0.00037	<0.00039	<0.00042	<0.00035	<b>54.9</b>
	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	47

**TABLE II**  
**GROUNDWATER ANALYTICAL SUMMARY**  
**CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY**  
**FORMER NEW MEXICO "F" STATE TANK BATTERY**  
**LEA COUNTY, NEW MEXICO**

Sample ID	Sample Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Chloride
New Mexico Water Quality Control Commission Groundwater Standard						
		0.01	0.75	0.75	0.62	250
WW-1	7/28/98	<0.001	<0.001	<0.001	<0.001	100.0
	6/12/02	<0.001	<0.001	<0.001	<0.001	43.6
	11/26/02	<0.001	<0.001	<0.001	<0.002	80.0
	6/6/03	<0.001	<0.001	<0.001	<0.001	73.4
	12/4/03	<0.001	<0.001	<0.001	<0.001	65.3
	7/2/04	<0.001	<0.001	<0.001	<0.001	66.5
	12/21/04	<0.005	<0.005	<0.005	<0.005	74.3
	6/6/05	<0.00100	<0.00100	<0.00100	<0.00100	63.4
	12/13/05	<0.005	<0.005	<0.005	<0.010	41.1
	6/27/06	<0.000500	<0.000500	<0.000500	<0.001	50.0
	12/19/06	<0.005	<0.005	<0.005	<0.001	80.0
	6/27/07	<0.000500	<0.000500	<0.000500	<0.00100	52
	12/14/07	<0.000500	<0.000500	<0.000500	<0.00100	59.8
DUP	6/4/08	<0.00037	<0.00039	<0.00042	<0.00035	64.1
	6/4/08	<0.00037	<0.00039	<0.00042	<0.00035	64.4
	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	73
WW-2	6/12/02	<0.001	<0.001	<0.001	<0.001	53.7
	11/26/02	<0.001	<0.001	<0.001	<0.002	70.9
	6/6/03	<0.001	<0.001	<0.001	<0.001	71.1
	12/4/03	<0.001	<0.001	<0.001	<0.001	52.4
	7/2/04	<0.001	<0.001	<0.001	<0.001	51.0
	12/21/04	<0.005	<0.005	<0.005	<0.005	55.6
	6/6/05	<0.00100	<0.00100	<0.00100	<0.00100	55.3
	12/13/05	<0.005	<0.005	<0.005	<0.010	75.3
	6/27/06	<0.000500	<0.000500	<0.000500	<0.001	69.7
	12/19/06	<0.005	<0.005	<0.005	<0.001	57.0
	6/27/07	<0.000500	<0.000500	<0.000500	<0.00100	46
	12/14/07	<0.000500	<0.000500	<0.000500	<0.00100	83.1
	6/4/08	<0.00037	<0.00039	<0.00042	<0.00035	65.9
	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	73
RW-1	6/5/08	<b>0.0119</b>	<0.0039	<0.0042	<0.0035	36.2
RW-2	6/27/07	<b>0.00287</b>	<0.0025	<0.00250	<b>0.0303</b>	60
	6/5/08	<0.0037	<0.0039	<0.0042	<0.0035	51.1
RW-3	6/11/02	<0.005	<0.005	<0.005	<0.005	25.9
	12/3/04	<0.001	<0.001	<0.001	<0.001	36.6
	6/27/07	<b>0.00855</b>	<0.00250	<b>0.0122</b>	<b>0.0270</b>	130
	6/5/08	<0.0037	<0.0039	<0.0042	<b>0.0129</b>	90.6

**Notes:**

1. Result shown in mg/L.
2. Data through June 6, 2005 provided by Larson & Associates, Inc.
3. Bold indicates detection above method detection limit.
4. Shaded cells indicate New Mexico Water Quality Control Commission (NMWQCC) exceedance.

TestAmerica

TESTING • ANALYSIS • CERTIFICATION • CONSULTING

**ANALYTICAL REPORT**

JOB NUMBER: 351184  
Project ID: NM F STATE

Prepared For:

Conestoga-Rovers and Associates  
2135 S. Loop 250 West  
Midland, TX 79703

Attention: Todd Wells

Date: 03/18/2008



Signature

03/18/08

Date

Name: Sachin G. Kudchadkar

TestAmerica Laboratories, Inc  
6310 Rothway Drive  
Houston, TX 77040

Title: Project Manager III

PHONE: 713-690-4444

E-Mail: sachin.kudchadkar@testamericainc.com

TOTAL NO. OF PAGES 18

S A M P L E   I N F O R M A T I O N  
Date: 03/18/2008

Job Number.: 351184  
Customer...: Conestoga-Rovers and Associates  
Attn.....: Todd Wells

Project Number.....: 99007835  
Customer Project ID....: NM F STATE  
Project Description....: NM F State

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
351184-1	MW-6	Water	03/06/2008	12:30	03/12/2008	09:12

L A B O R A T O R Y      T E S T      R E S U L T S		Date:03/18/2008
CUSTOMER:	PROJECT: NM F STATE	ATTN: Todd Wells
Customer Sample ID: MW-6 Date Sampled.....: 03/06/2008 Time Sampled.....: 12:30 Sample Matrix.....: Water	Laboratory Sample ID: 351184-1 Date Received.....: 03/12/2008 Time Received.....: 09:12	
TEST METHOD	PARAMETER/TEST DESCRIPTION	
SM-846 8021B	GC Volatile Organics Benzene, Water Toluene, Water Ethylbenzene, Water Xylenes (total), Water	SAMPLE RESULT Q FLAGS MDL RL DILUTION UNITS BATCH DT DATE/TIME TECH
EPA 300.0	Ion Chromatography Analysis Chloride, Water	0.37 U 0.37 ug/L 1.00 1.0000 ug/L 195872 03/13/08 1654 mht 0.39 U 0.39 ug/L 1.00 1.0000 ug/L 195872 03/13/08 1654 mht 0.42 U 0.42 ug/L 1.00 1.0000 ug/L 195872 03/13/08 1654 mht 0.35 U 0.35 ug/L 3.00 1.0000 ug/L 195872 03/13/08 1654 mht  88.8 1.5 5.0 10 ng/L 195625 03/12/08 1925 sur

\* In Description = Dry Wgt.

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## QUALITY CONTROL RESULTS

Job Number.: 351184

Report Date.: 03/18/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: NM F STATE

ATTN: Todd Wells

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Test Method.....: SW-846 8021B

Method Description.: GC Volatile Organics

Units.....: ug/L

Batch(s)....: 195872

Analyst...: mht

LCS	Laboratory Control Sample	BXS030308B	195872-1			03/13/2008	1100	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Methyl tert-Butyl ether, Water	56.7396		50.000000		113.5		76-123	
Benzene, Water	50.8372		50.000000		101.7		72-134	
Toluene, Water	50.0202		50.000000		100.0		76-131	
Ethylbenzene, Water	48.7265		50.000000		97.5		75-131	
m,p-Xylene, Water	99.6225		100.000000		99.6		75-130	
o-Xylene, Water	49.3907		50.000000		98.8		74-129	
Xylenes (total), Water	152.5062		150.000000		101.7		70-130	
Total BTEX, Water	304.4532		300.000000		101.5		70-130	
Tert-Butyl Methyl Ether Column B, Water	47.4685		50.000000		94.9		76-123	
Benzene Column B, Water	49.7640		50.000000		99.5		72-134	
Toluene Column B, Water	51.1140		50.000000		102.2		76-131	
Ethylbenzene Column B, Water	49.9958		50.000000		100.0		75-131	
m,p-Xylene Column B, Water	101.213		100.000000		101.2		75-130	
o-Xylene Column B, Water	51.2932		50.000000		102.6		74-129	

LCS	Laboratory Control Sample	BXS030308B	195872-2			03/13/2008	2356	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Methyl tert-Butyl ether, Water	57.6808		50.000000		115.4		76-123	
Benzene, Water	47.6197		50.000000		95.2		72-134	
Toluene, Water	45.7468		50.000000		91.5		76-131	
Ethylbenzene, Water	41.7313		50.000000		83.5		75-131	
m,p-Xylene, Water	93.3938		100.000000		93.4		75-130	
o-Xylene, Water	45.5969		50.000000		91.2		74-129	
Xylenes (total), Water	138.9907		150.000000		92.7		70-130	
Total BTEX, Water	276.4859		300.000000		92.2		70-130	
Tert-Butyl Methyl Ether Column B, Water	52.0968		50.000000		104.2		76-123	
Benzene Column B, Water	46.7335		50.000000		93.5		72-134	
Toluene Column B, Water	45.2406		50.000000		90.5		76-131	
Ethylbenzene Column B, Water	44.1287		50.000000		88.3		75-131	
m,p-Xylene Column B, Water	90.3578		100.000000		90.4		75-130	
o-Xylene Column B, Water	45.0187		50.000000		90.0		74-129	

MB	Method Blank		195872-1			03/13/2008	1221	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Methyl tert-Butyl ether, Water	ND							
Benzene, Water	ND							
Toluene, Water	ND							
Ethylbenzene, Water	ND							
m,p-Xylene, Water	ND							
o-Xylene, Water	ND							
Xylenes (total), Water	0.0000							
Total BTEX, Water	0.0000							
Tert-Butyl Methyl Ether Column B, Water	ND							
Benzene Column B, Water	ND							

## QUALITY CONTROL RESULTS

Job Number.: 351184

Report Date.: 03/18/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: NM F STATE

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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MB	Method Blank		195872-1		03/13/2008	1221
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Toluene Column B, Water	ND					
Ethylbenzene Column B, Water	ND					
m,p-Xylene Column B, Water	ND					
o-Xylene Column B, Water	ND					

MB	Method Blank		195872-2		03/14/2008	0016
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Methyl tert-Butyl ether, Water	ND					
Benzene, Water	ND					
Toluene, Water	ND					
Ethylbenzene, Water	ND					
m,p-Xylene, Water	ND					
o-Xylene, Water	ND					
Xylenes (total), Water	0.0000					
Total BTEX, Water	0.0000					
Tert-Butyl Methyl Ether Column B, Water	ND					
Benzene Column B, Water	ND					
Toluene Column B, Water	ND					
Ethylbenzene Column B, Water	ND					
m,p-Xylene Column B, Water	ND					
o-Xylene Column B, Water	ND					

MS	Matrix Spike	BXS030308A	351057-1		03/13/2008	1734
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Methyl tert-Butyl ether, Water	40.2705		50.000000	ND	81	70-130
Benzene, Water	45.0368		50.000000	ND	90	70-130
Toluene, Water	44.0402		50.000000	ND	88	70-130
Ethylbenzene, Water	42.5602		50.000000	ND	85	70-130
m,p-Xylene, Water	87.9579		100.000000	ND	88	70-130
o-Xylene, Water	44.4874		50.000000	ND	89	70-130
Xylenes (total), Water	132.4453		150.000000	0.0000	88	70-130
Total BTEX, Water	264.2206		300.000000	0.0000	88	70-130
Tert-Butyl Methyl Ether Column B, Water	47.1122		50.000000	ND	94	70-130
Benzene Column B, Water	44.0428		50.000000	ND	88	70-130
Toluene Column B, Water	43.5263		50.000000	ND	87	70-130
Ethylbenzene Column B, Water	42.6983		50.000000	ND	85	70-130
m,p-Xylene Column B, Water	85.7569		100.000000	ND	86	70-130
o-Xylene Column B, Water	43.5141		50.000000	ND	87	70-130

MS	Matrix Spike	BXS030308A	351245-15		03/14/2008	0036
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Methyl tert-Butyl ether, Water	54.5705		50.000000	ND	109	70-130
Benzene, Water	48.8334		50.000000	ND	98	70-130
Toluene, Water	47.3701		50.000000	ND	95	70-130
Ethylbenzene, Water	44.5036		50.000000	ND	89	70-130

## QUALITY CONTROL RESULTS

Job Number.: 351184

Report Date.: 03/18/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: NM F STATE

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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MS	Matrix Spike	BXS030308A	351245-15			03/14/2008	0036		
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
m,p-Xylene, Water	95.9658			100.000000	ND	96		70-130	
o-Xylene, Water	46.4686			50.000000	ND	93		70-130	
Xylenes (total), Water	142.9494			150.000000	0.0000	95		70-130	
Total BTEX, Water	285.4081			300.000000	0.0000	95		70-130	
Tert-Butyl Methyl Ether Column B, Water	49.5712			50.000000	ND	99		70-130	
Benzene Column B, Water	47.5684			50.000000	ND	95		70-130	
Toluene Column B, Water	46.8849			50.000000	ND	94		70-130	
Ethylbenzene Column B, Water	46.2552			50.000000	ND	93		70-130	
m,p-Xylene Column B, Water	94.1498			100.000000	ND	94		70-130	
o-Xylene Column B, Water	46.9836			50.000000	ND	94		70-130	

MSD	Matrix Spike Duplicate	BXS030308A	351057-1			03/13/2008	1754		
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Methyl tert-Butyl ether, Water	53.2442	40.2705	50.000000	ND	106	27.7	20.0	70-130	r
Benzene, Water	48.1240	45.0368	50.000000	ND	96	6.6	20.0	70-130	
Toluene, Water	47.4418	44.0402	50.000000	ND	95	7.4	20.0	70-130	
Ethylbenzene, Water	46.2261	42.5602	50.000000	ND	92	8.3	20.0	70-130	
m,p-Xylene, Water	94.9128	87.9579	100.000000	ND	95	7.6	20.0	70-130	
o-Xylene, Water	47.3225	44.4874	50.000000	ND	95	6.2	20.0	70-130	
Xylenes (total), Water	143.8032	132.4453	150.000000	0.0000	96	8.2	20.0	70-130	
Total BTEX, Water	287.5778	264.2206	300.000000	0.0000	96	8.5	20.0	70-130	
Tert-Butyl Methyl Ether Column B, Water	50.2009	47.1122	50.000000	ND	100	6.3	20.0	70-130	
Benzene Column B, Water	47.8029	44.0428	50.000000	ND	96	8.2	20.0	70-130	
Toluene Column B, Water	47.8924	43.5263	50.000000	ND	96	9.6	20.0	70-130	
Ethylbenzene Column B, Water	47.7582	42.6983	50.000000	ND	96	11.2	20.0	70-130	
m,p-Xylene Column B, Water	95.5917	85.7569	100.000000	ND	96	10.8	20.0	70-130	
o-Xylene Column B, Water	48.2115	43.5141	50.000000	ND	96	10.2	20.0	70-130	

MSD	Matrix Spike Duplicate	BXS030308A	351245-16			03/14/2008	0056		
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Methyl tert-Butyl ether, Water	57.6311	54.5705	50.000000	ND	115	5.5	20.0	70-130	
Benzene, Water	49.3972	48.8334	50.000000	ND	99	1.1	20.0	70-130	

## QUALITY CONTROL RESULTS

Job Number.: 351184

Report Date.: 03/18/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: NM F STATE

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MSD	Matrix Spike Duplicate	BXS030308A	351245-16		03/14/2008	0056
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Toluene, Water	47.9773	47.3701	50.000000	ND	96 1.3	70-130 20.0
Ethylbenzene, Water	44.6060	44.5036	50.000000	ND	89 0.2	70-130 20.0
m,p-Xylene, Water	98.6693	95.9658	100.000000	ND	99 2.8	70-130 20.0
o-Xylene, Water	48.4614	46.4686	50.000000	ND	97 4.2	70-130 20.0
Xylenes (total), Water	147.1307	142.9494	150.000000	0.0000	98 2.9	70-130 20.0
Total BTEX, Water	291.2918	285.4081	300.000000	0.0000	97 2.0	70-130 20.0
Tert-Butyl Methyl Ether Column B, Water	50.1092	49.5712	50.000000	ND	100 1.1	70-130 20.0
Benzene Column B, Water	48.0618	47.5684	50.000000	ND	96 1.0	70-130 20.0
Toluene Column B, Water	47.4435	46.8849	50.000000	ND	95 1.2	70-130 20.0
Ethylbenzene Column B, Water	46.7866	46.2552	50.000000	ND	94 1.1	70-130 20.0
m,p-Xylene Column B, Water	95.3712	94.1498	100.000000	ND	95 1.3	70-130 20.0
o-Xylene Column B, Water	47.5931	46.9836	50.000000	ND	95 1.3	70-130 20.0

Test Method.....: EPA 300.0

Method Description.: Ion Chromatography Analysis

Units.....: mg/L

Batch(s)....: 195625

Analyst...: sur

CCB	Continuing Calibration Blank					03/12/2008	1956
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Bromide (Br)	0						
Chloride	0						
Fluoride (F)	0						
Nitrogen, Nitrate as N (NO3-N)	0						
Sulfate (SO4)	0						
Nitrogen, Nitrite as N (NO2-N)	0						
Nitrate + Nitrite as N	0.000						

CCB	Continuing Calibration Blank					03/12/2008	2304
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Bromide (Br)	0						
Chloride	0						
Fluoride (F)	0.2081						
Nitrogen, Nitrate as N (NO3-N)	0						
Sulfate (SO4)	0						
Nitrogen, Nitrite as N (NO2-N)	0						
Nitrate + Nitrite as N	0.000						

## QUALITY CONTROL RESULTS

Job Number.: 351184

Report Date.: 03/18/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: NM F STATE

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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CCB	Continuing Calibration Blank				03/13/2008	0108
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	0							
Chloride	0							
Fluoride (F)	0.1919							
Nitrogen, Nitrate as N (NO3-N)	0							
Sulfate (SO4)	0							
Nitrogen, Nitrite as N (NO2-N)	0							
Nitrate + Nitrite as N	0.000							

CCV	Continuing Calibration Verification	WCS48345			03/12/2008	1941
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	20.357		20.00		101.8		90.0-110.0	
Chloride	20.466		20.00		102.3		90.0-110.0	
Fluoride (F)	9.8895		10.00		98.9		90.0-110.0	
Nitrogen, Nitrate as N (NO3-N)	10.585		10.0		105.8		90.0-110.0	
Sulfate (SO4)	20.416		20.00		102.1		90.0-110.0	
Nitrogen, Nitrite as N (NO2-N)	9.7826		10.0		97.8		90.0-110.0	

CCV	Continuing Calibration Verification	WCS48345			03/12/2008	2248
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	20.480		20.00		102.4		90.0-110.0	
Chloride	20.515		20.00		102.6		90.0-110.0	
Fluoride (F)	9.8956		10.00		99.0		90.0-110.0	
Nitrogen, Nitrate as N (NO3-N)	10.703		10.0		107.0		90.0-110.0	
Sulfate (SO4)	20.667		20.00		103.3		90.0-110.0	
Nitrogen, Nitrite as N (NO2-N)	9.7977		10.0		98.0		90.0-110.0	

CCV	Continuing Calibration Verification	WCS48345			03/13/2008	0053
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	20.593		20.00		103.0		90.0-110.0	
Chloride	20.600		20.00		103.0		90.0-110.0	
Fluoride (F)	10.403		10.00		104.0		90.0-110.0	
Nitrogen, Nitrate as N (NO3-N)	10.658		10.0		106.6		90.0-110.0	
Sulfate (SO4)	20.318		20.00		101.6		90.0-110.0	
Nitrogen, Nitrite as N (NO2-N)	9.8252		10.0		98.3		90.0-110.0	

DU	Method Duplicate		351226-1	10	03/12/2008	2217
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br), Water	0			0	0		1	
Chloride, Water	20.737			20.946	1.0		20	
Fluoride (F), Water	0.2206			0.1912	0.0294		0.3000	
Nitrogen, Nitrate as N (NO3-N), Water	0			0	0		0	
Sulfate (SO4), Water	28.329			28.510	0.6		20	

## QUALITY CONTROL RESULTS

Job Number.: 351184

Report Date.: 03/18/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: NM F STATE

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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DU	Method Duplicate		351226-1	10	03/12/2008	2217
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Nitrogen, Nitrite as N (NO2-N), Water	0			0	0	0
Nitrate + Nitrite as N, Water	0.000			0.000	0.000	0.400

DU	Method Duplicate		351229-1	10	03/12/2008	2350
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Bromide (Br), Water	0.0805			0.0653	0.0152	0.6000
Chloride, Water	21.118			21.130	0.1	20
Fluoride (F), Water	0.2007			0.2000	0.0007	0.3000
Nitrogen, Nitrate as N (NO3-N), Water	0			0	0	0
Sulfate (SO4), Water	28.815			28.938	0.4	20
Nitrogen, Nitrite as N (NO2-N), Water	0			0	0	0
Nitrate + Nitrite as N, Water	0.000			0.000	0.000	0.400

ICB	Initial Calibration Blank				03/12/2008	1649
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Bromide (Br)	0					
Chloride	0					
Fluoride (F)	0					
Nitrogen, Nitrate as N (NO3-N)	0					
Sulfate (SO4)	0					
Nitrogen, Nitrite as N (NO2-N)	0					
Nitrate + Nitrite as N	0.000					

ICV	Initial Calibration Verification	WCS48345			03/12/2008	1634
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Bromide (Br)	19.745		20.00		98.7	90.0-110.0
Chloride	19.843		20.00		99.2	90.0-110.0
Fluoride (F)	9.2220		10.00		92.2	90.0-110.0
Nitrogen, Nitrate as N (NO3-N)	10.288		10.0		102.9	90.0-110.0
Sulfate (SO4)	19.740		20.00		98.7	90.0-110.0
Nitrogen, Nitrite as N (NO2-N)	9.4498		10.0		94.5	90.0-110.0

LCS	Laboratory Control Sample	WCS48345			03/12/2008	1720
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Bromide (Br)	20.412		20.00		102.1	90.0-110.0
Chloride	20.481		20.00		102.4	90.0-110.0
Fluoride (F)	9.5418		10.00		95.4	90.0-110.0
Nitrogen, Nitrate as N (NO3-N)	10.662		10.0		106.6	90.0-110.0
Sulfate (SO4)	20.771		20.00		103.9	90.0-110.0
Nitrogen, Nitrite as N (NO2-N)	9.8204		10.0		98.2	90.0-110.0

## QUALITY CONTROL RESULTS

Job Number.: 351184

Report Date.: 03/18/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: NM F STATE

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank				03/12/2008	1705

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	0							
Chloride	0							
Fluoride (F)	0							
Nitrogen, Nitrate as N (NO3-N)	0							
Sulfate (SO4)	0							
Nitrogen, Nitrite as N (NO2-N)	0							
Nitrate + Nitrite as N	0.000							

MS	Matrix Spike	WCS47724	351226-1	10	03/12/2008	2233		
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br), Water	9.7280		10.000000	0	97.3		90-110	
Chloride, Water	30.586		10.000000	20.946	96.4		90-110	
Fluoride (F), Water	1.6201		2.000000	0.1912	71.4		90-110	A
Nitrogen, Nitrate as N (NO3-N), Water	1.9815		2.000000	0	99.1		90-110	
Sulfate (SO4), Water	37.103		10.000000	28.510	85.9		90-110	A
Nitrogen, Nitrite as N (NO2-N), Water	1.8747		2.000000	0	93.7		90-110	
Nitrate + Nitrite as N, Water	3.856		0.000000	0.000				

MS	Matrix Spike	WCS47724	351229-1	10	03/13/2008	0006		
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br), Water	9.7507		10.000000	0.0653	96.9		90-110	
Chloride, Water	30.454		10.000000	21.130	93.2		90-110	
Fluoride (F), Water	1.6713		2.000000	0.2000	73.6		90-110	A
Nitrogen, Nitrate as N (NO3-N), Water	1.9507		2.000000	0	97.5		90-110	
Sulfate (SO4), Water	36.978		10.000000	28.938	80.4		90-110	A
Nitrogen, Nitrite as N (NO2-N), Water	1.8292		2.000000	0	91.5		90-110	
Nitrate + Nitrite as N, Water	3.780		0.000000	0.000				

## S U R R O G A T E   R E C O V E R I E S   R E P O R T

Job Number.: 351184

Report Date.: 03/18/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: NM F STATE

ATTN: Todd Wells

Method.....: GC Volatile Organics  
Batch(s).....: 195872Method Code....: 8021  
Test Matrix...: WaterPrep Batch....:  
Equipment Code: BTEX02

Lab ID	DT	Sample ID	Date	ATFT	ATFTB	BFB	BFBB	
195872-	1	LCS	03/13/2008	101.2	100.0	103.5	106.3	
195872-	1	MB	03/13/2008	105.8	106.3	113.6	110.8	
195872-	2	LCS	03/13/2008	89.1	88.2	92.1	87.6	
195872-	2	MB	03/14/2008	92.8	92.7	94.4	91.0	
351057-	1	MS	CUTFALL 001	03/13/2008	88.9	89.0	91.5	86.3
351057-	1	MSD	CUTFALL 001	03/13/2008	89.3	89.7	89.5	88.3
351184-	1	MW-6		03/13/2008	92.0	92.3	92.6	90.5
351245-	15	MS	CW-5 MS	03/14/2008	89.1	88.0	87.6	87.6
351245-	16	MSD	CW-5 MSD	03/14/2008	87.2	86.6	90.3	85.7

Test	Test Description	Limits
ATFT	a,a,a-Trifluorotoluene	70 - 135
ATFTB	a,a,a-Trifluorotoluene Column B	70 - 135
BFB	BFB (Surrogate)	64 - 136
BFBB	BFB (Surrogate) Column B	64 - 136

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## QUALITY ASSURANCE METHODS

### REFERENCES AND NOTES

Report Date: 03/18/2008

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#### REPORT COMMENTS

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

#### General Information:

- Cresylic Acid is the combination of o,m and p-Cresol. The combination is reported as the final result.
- m-Cresol (3-Methylphenol) and p-Cresol (4-methylphenol) co-elute. The result of the two is reported as either m&p-cresol or as 4-methylphenol (p-cresol).
- m-Xylene and p-Xylene co-elute. The result of the two is reported as m,p-Xylene.
- N-Nitrosodiphenylamine decomposes in the gas chromatograph inlet forming diphenylamine and, consequently, may be detected as diphenylamine.
- Methylene Chloride and Acetone are recognized potential laboratory contaminants. Its presence in the sample up to five times the amount reported in the blank may be attributed to laboratory contamination.
- Trimethylsilyl(Diazomethane) is used to esterify acid herbicides in Method SW-846 8151A.
- For Inorganic analyses, duplicate QC limits are determined as follows: If the sample result is less than or equal to 5 times the reporting limit, the RPD limit is equal to the reporting limit. If the sample result is greater than 5 times the reporting limit, the RPD limit is the method defined RPD.
- For TRRP reports, the header on the column RL is equivalent to a MQL/PQL.
- Results for LCS and MS/MSD recoveries listed in the report are reported as ug/L on-column values which are not corrected for variables such as sample volumes or weights extracted, final volume of extracts and dilutions. To correct QC on-column recoveries to reflect actual spiking volumes for soils, multiply the values reported for Diesel Range Organics and Semivolatiles by 33.3 and Gasoline Range Organics by 20. The 8260 and 1006 results will not require correction. The only correction required for water analysis is for method 1006 where the reported concentration must be multiplied by 0.1.
- Due to limitation of the reporting software, results for the Method blank in the Semivolatile fraction are reported as "0". Which indicates there was no compound detected at the reporting limit for the compound reviewed.
- The dilution factor listed on the report represents only the analytical dilutions necessary for the target compounds to be within the calibration range of the instrument. It does not include any preparation factors, dry weight or any other adjustment.

#### Explanation of Qualifiers:

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

#### Explanation of General QC Outliers:

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

### REFERENCES AND NOTES

Report Date: 03/18/2008

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

#### Explanation of Organic QC Outliers:

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

#### Explanation of Inorganic QC Outliers:

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

#### Abbreviations:

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

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QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 03/18/2008

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DLFac	- Detection Limit Factor
DU	- Duplicate
EB	- Extraction Blank (TCLP, SPLP, etc.)
ICAL	- Initial Calibration
ICB	- Initial Calibration Blank
ICV	- Initial Calibration Verification
ISA	- Interference Check Sample A - ICP
ISB	- Interference Check Sample B - ICP
LCD	- Laboratory Control Duplicate
LCS	- Laboratory Control Sample
MB	- Method Blank
MD	- Method Duplicate
MDL	- Method Detection Limit
MQL	- Method Quantitation Limit (TRRP)
MS	- Matrix Spike
MSD	- Matrix Spike Duplicate
ND	- Not Detected
PB	- Preparation Blank
PREPF	- Preparation Factor
RL	- Reporting Limit
RPD	- Relative Percent Difference
RRF	- Relative Response Factor
RT	- Retention Time
SQL	- Sample Quantitation Limit (TRRP)
TIC	- Tentatively Identified Compound

Method References:

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

## L A B O R A T O R Y C H R O N I C L E

Job Number: 351184

Date: 03/18/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: NM F STATE

ATTN: Todd Wells

Lab ID: 351184-1 Client ID: MN-6  
METHOD DESCRIPTION  
SW-846 8021B GC Volatile Organics  
EPA 300.0 Ion Chromatography Analysis

Date Recvd: 03/12/2008 Sample Date: 03/06/2008  
RUN# BATCH# PREP BT #(S) DATE/TIME ANALYZED DILUTION  
1 195872 03/13/2008 1654 1.0000  
1 195625 03/12/2008 1925 10

# Test America

ANALYTICAL TESTING CORPORATION

Nashville Division  
2950 Foster Creighton  
Nashville, TN 37204

Phone: 615-726-0177  
Fax: 615-726-3404

To assist us in using the proper analytical methods,  
is this work being conducted for regulatory purposes?  
Compliance Monitoring

Client Name: CHF Client #: \_\_\_\_\_

Address: 2135 S. Log 250 West

City/State/Zip Code: Midland TX 79703

Project Manager: Todd Wells

Telephone Number: (432) 686 - 0086 Fax: (432) 686 - 0186

Sampler Name: (Print Name) Todd Wells

Sampler Signature: Todd Wells

Project Name: 1/11 F State  
Project #: 039122

Site/Location ID: Lee County State: TX  
Report To: Todd Wells

Invoice To: Art Greely  
Quote #: 4011413  
PO#: 4011413

Matrix	Preservation & # of Containers	Analyze For:										
		Chloride	Chloride 300	Bile	Bile 8021B	None	NaOH	HCl	HNO3	NaOH	H2SO4	Methanol

Time Sampled: 1/10/08 12:30  
G = Grab, C = Composite  
Time Sampled: 1/10/08 16:00  
G = Grab, C = Composite

Special Instructions:

LABORATORY COMMENTS:

Relinquished By:	Date:	Time:	Received By:	Relinquished By:	Date:	Time:	Received By:	Relinquished By:	Date:	Time:	Received By:
<u>Todd Wells</u>	<u>1/12/08</u>	<u>11:45</u>	<u>Todd Wells</u>								

Init Lab Temp:  
Rec Lab Temp:

Custody Seals: Y N N/A  
Bottles Supplied by Test America: Y N

Method of Shipment:

#351184

# TestAmerica

1000 Lakeway Boulevard, Suite 100 • Austin, TX 78752

## ANALYTICAL REPORT

JOB NUMBER: 355324

Project ID: F STATE NM 039122

Prepared For:

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

Attention: Todd Wells

Date: 06/18/2008

Signature

06/18/08

Date

Name: Sachin G. Kudchadkar

TestAmerica Laboratories, Inc  
6310 Rothway Drive  
Houston, TX 77040

Title: Project Manager III

PHONE: 713-690-4444

E-Mail: sachin.kudchadkar@testamericainc.com

TOTAL NO. OF PAGES 18

S A M P L E   I N F O R M A T I O N  
Date: 06/18/2008

Job Number.: 355324  
Customer....: Conestoga-Rovers and Associates  
Attn.....: Todd Wells

Project Number.....: 99007835  
Customer Project ID....: F STATE NM 039122  
Project Description....: Analytical

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
355324-1	RW-1 6508	Water	06/05/2008	15:40	06/10/2008	09:35

L A B O R A T O R Y      T E S T      R E S U L T S							Date: 06/18/2008					
C U S T O M E R :		P R O J E C T :		A T T N :								
Customer Sample ID:	RW-1	6508	Laboratory Sample ID:	355324-1								
Date Sampled.....:	06/05/2008		Date Received.....:	06/10/2008								
Time Sampled.....:	15:40		Time Received.....:	09:35								
Sample Matrix.....:	Water											
T E S T   M E T H O D	P A R A M E T E R / T E S T   D E S C R I P T I O N		S A M P L E   R E S U L T	Q   F L A G S	M D L	R L	D I L U T I O N	U N I T S	B A T C H	D T	D A T E / T I M E	T E C H
SN-846 8021B	GC Volatile Organics		11.9		3.7	10.0	10.000	ug/L	400272	06/11/08	0842	mht
	Benzene, Water		3.9	U	3.9	10.0	10.000	ug/L	400272	06/11/08	0842	mht
	Toluene, Water		4.2	U	4.2	10.0	10.000	ug/L	400272	06/11/08	0842	mht
	Ethylbenzene, Water		3.5	U	3.5	30.0	10.000	ug/L	400272	06/11/08	0842	mht
	Xylenes (total), Water											
EPA 300.0	Ion Chromatography Analysis		36.2		1.5	5.0	10		200312	06/10/08	2245	sur
	Chloride, Water											

\* In Description = Dry Wgt.

## QUALITY CONTROL RESULTS

Job Number.: 355324

Report Date.: 06/18/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN: Todd Wells

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Test Method.....: SW-846 8021B                          Units.....: ug/L                          Analyst...: mht  
 Method Description.: GC Volatile Organics              Batch(s)....: 400272

LCS	Laboratory Control Sample	BXS060308B				06/10/2008	1232		
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Water	52.9071			50.000000		105.8		72-134	
Toluene, Water	52.0171			50.000000		104.0		76-131	
Ethylbenzene, Water	56.1908			50.000000		112.4		75-131	
m,p-Xylene, Water	106.131			100.000000		106.1		75-130	
o-Xylene, Water	53.0635			50.000000		106.1		74-129	
Xylenes (total), Water	163.4023			150.000000		108.9		70-130	
Total BTEX, Water	327.2999			300.000000		109.1		70-130	
Tert-Butyl Methyl Ether Column B, Water	49.9440			50.000000		99.9		76-123	
Benzene Column B, Water	54.0116			50.000000		108.0		72-134	
Toluene Column B, Water	53.6952			50.000000		107.4		76-131	
Ethylbenzene Column B, Water	54.8998			50.000000		109.8		75-131	
m,p-Xylene Column B, Water	109.039			100.000000		109.0		75-130	
o-Xylene Column B, Water	54.3633			50.000000		108.7		74-129	

MB	Method Blank					06/10/2008	1252		
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Water	ND								
Toluene, Water	ND								
Ethylbenzene, Water	ND								
m,p-Xylene, Water	ND								
o-Xylene, Water	ND								
Xylenes (total), Water	0.0000								
Total BTEX, Water	0.0000								
Tert-Butyl Methyl Ether Column B, Water	ND								
Benzene Column B, Water	ND								
Toluene Column B, Water	ND								
Ethylbenzene Column B, Water	ND								
m,p-Xylene Column B, Water	ND								
o-Xylene Column B, Water	ND								

MS	Matrix Spike	BXS060308A	355325-1			06/10/2008	1611		
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Water	55.4717			50.000000	ND	111		70-130	
Toluene, Water	54.0173			50.000000	ND	108		70-130	
Ethylbenzene, Water	55.4617			50.000000	ND	111		70-130	
m,p-Xylene, Water	113.114			100.000000	ND	113		70-130	
o-Xylene, Water	54.8266			50.000000	ND	110		70-130	
Xylenes (total), Water	167.9406			150.000000	0.0000	112		70-130	
Total BTEX, Water	333.4209			300.000000	0.0000	111		70-130	
Tert-Butyl Methyl Ether Column B, Water	51.0632			50.000000	ND	102		70-130	
Benzene Column B, Water	54.9772			50.000000	ND	110		70-130	
Toluene Column B, Water	54.5469			50.000000	ND	109		70-130	
Ethylbenzene Column B, Water	54.3438			50.000000	ND	109		70-130	
m,p-Xylene Column B, Water	109.221			100.000000	ND	109		70-130	

## QUALITY CONTROL RESULTS

Job Number.: 355324

Report Date.: 06/18/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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MS	Matrix Spike	BXS060308A	355325-1		06/10/2008 1611			
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
o-Xylene Column B, Water		54.0067		50.000000	ND	108	70-130	

MSD	Matrix Spike Duplicate	BXS060308A	355325-1		06/10/2008 1631			
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Benzene, Water		59.0558	55.4717	50.000000	ND	118 6.3	70-130 20.0	
Toluene, Water		57.6884	54.0173	50.000000	ND	115 6.6	70-130 20.0	
Ethylbenzene, Water		60.4241	55.4617	50.000000	ND	121 8.6	70-130 20.0	
m,p-Xylene, Water		121.070	113.114	100.000000	ND	121 6.8	70-130 20.0	
o-Xylene, Water		58.9331	54.8266	50.000000	ND	118 7.2	70-130 20.0	
Xylenes (total), Water		180.0031	167.9406	150.000000	0.0000	120 6.9	70-130 20.0	
Total BTEX, Water		357.2998	333.4209	300.000000	0.0000	119 6.9	70-130 20.0	
Tert-Butyl Methyl Ether Column B, Water		52.2327	51.0632	50.000000	ND	104 2.3	70-130 20.0	
Benzene Column B, Water		57.8776	54.9772	50.000000	ND	116 5.1	70-130 20.0	
Toluene Column B, Water		57.8168	54.5469	50.000000	ND	116 5.8	70-130 20.0	
Ethylbenzene Column B, Water		57.9580	54.3438	50.000000	ND	116 6.4	70-130 20.0	
m,p-Xylene Column B, Water		115.181	109.221	100.000000	ND	115 5.3	70-130 20.0	
o-Xylene Column B, Water		56.9046	54.0067	50.000000	ND	114 5.2	70-130 20.0	

Test Method.....: EPA 300.0

Method Description.: Ion Chromatography Analysis

Units.....: mg/L

Batch(s)....: 200312

Analyst...: sur

CCB	Continuing Calibration Blank				06/10/2008 1716			
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Bromide (Br)		0						
Chloride		0						
Fluoride (F)		0						
Nitrogen, Nitrate as N (NO3-N)		0						
Sulfate (SO4)		0						
Nitrogen, Nitrite as N (NO2-N)		0						

## QUALITY CONTROL RESULTS

Job Number.: 355324

Report Date.: 06/18/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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CCB	Continuing Calibration Blank				06/10/2008	2009
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	0							
Chloride	0							
Fluoride (F)	0							
Nitrogen, Nitrate as N (NO3-N)	0							
Sulfate (SO4)	0							
Nitrogen, Nitrite as N (NO2-N)	0							

CCB	Continuing Calibration Blank				06/10/2008	2348
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	0							
Chloride	0.1956							
Fluoride (F)	0							
Nitrogen, Nitrate as N (NO3-N)	0							
Sulfate (SO4)	0							
Nitrogen, Nitrite as N (NO2-N)	0							

CCB	Continuing Calibration Blank				06/11/2008	0240
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	0							
Chloride	0							
Fluoride (F)	0							
Nitrogen, Nitrate as N (NO3-N)	0							
Sulfate (SO4)	0							
Nitrogen, Nitrite as N (NO2-N)	0							

CCB	Continuing Calibration Blank				06/11/2008	0516
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	0							
Chloride	0							
Fluoride (F)	0							
Nitrogen, Nitrate as N (NO3-N)	0							
Sulfate (SO4)	0							
Nitrogen, Nitrite as N (NO2-N)	0							

CCV	Continuing Calibration Verification	WCS49721			06/10/2008	1701
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	20.092		20.00		100.5		90.0-110.0	
Chloride	19.980		20.00		99.9		90.0-110.0	
Fluoride (F)	9.9939		10.00		99.9		90.0-110.0	
Nitrogen, Nitrate as N (NO3-N)	10.450		10.0		104.5		90.0-110.0	
Sulfate (SO4)	19.529		20.00		97.6		90.0-110.0	
Nitrogen, Nitrite as N (NO2-N)	9.8345		10.0		98.3		90.0-110.0	

## QUALITY CONTROL RESULTS

Job Number.: 355324

Report Date.: 06/18/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	WCS49721			06/10/2008	1953
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*
Bromide (Br)	19.943		20.00		99.7	90.0-110.0
Chloride	19.932		20.00		99.7	90.0-110.0
Fluoride (F)	10.044		10.00		100.4	90.0-110.0
Nitrogen, Nitrate as N (NO3-N)	10.453		10.0		104.5	90.0-110.0
Sulfate (SO4)	19.532		20.00		97.7	90.0-110.0
Nitrogen, Nitrite as N (NO2-N)	9.8251		10.0		98.3	90.0-110.0

CCV	Continuing Calibration Verification	WCS49721			06/10/2008	2332
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*
Bromide (Br)	19.964		20.00		99.8	90.0-110.0
Chloride	19.926		20.00		99.6	90.0-110.0
Fluoride (F)	9.9412		10.00		99.4	90.0-110.0
Nitrogen, Nitrate as N (NO3-N)	10.449		10.0		104.5	90.0-110.0
Sulfate (SO4)	19.398		20.00		97.0	90.0-110.0
Nitrogen, Nitrite as N (NO2-N)	9.8329		10.0		98.3	90.0-110.0

CCV	Continuing Calibration Verification	WCS49721			06/11/2008	0224
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*
Bromide (Br)	19.956		20.00		99.8	90.0-110.0
Chloride	19.811		20.00		99.1	90.0-110.0
Fluoride (F)	9.6585		10.00		96.6	90.0-110.0
Nitrogen, Nitrate as N (NO3-N)	10.406		10.0		104.1	90.0-110.0
Sulfate (SO4)	19.352		20.00		96.8	90.0-110.0
Nitrogen, Nitrite as N (NO2-N)	9.7945		10.0		97.9	90.0-110.0

CCV	Continuing Calibration Verification	WCS49721			06/11/2008	0501
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*
Bromide (Br)	19.889		20.00		99.4	90.0-110.0
Chloride	19.799		20.00		99.0	90.0-110.0
Fluoride (F)	9.6325		10.00		96.3	90.0-110.0
Nitrogen, Nitrate as N (NO3-N)	10.446		10.0		104.5	90.0-110.0
Sulfate (SO4)	19.524		20.00		97.6	90.0-110.0
Nitrogen, Nitrite as N (NO2-N)	9.7734		10.0		97.7	90.0-110.0

DU	Method Duplicate		355303-2	10	06/10/2008	2158
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*
Bromide (Br), Water	0			0	0	1
Chloride, Water	3.8915			3.9842	2.4	20
Fluoride (F), Water	0.9210			0.9245	0.0035	0.3000
Nitrogen, Nitrate as N (NO3-N), Water	0			0	0	0
Sulfate (SO4), Water	5.7625			5.8532	1.6	20
Nitrogen, Nitrite as N (NO2-N), Water	0			0	0	0

## QUALITY CONTROL RESULTS

Job Number.: 355324

Report Date.: 06/18/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
DU	Method Duplicate		355325-3	10	06/11/2008	0019

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br), Water	0			0.0435	0.0435		0.6000	
Chloride, Water	7.8773			7.8652	0.2	20		
Fluoride (F), Water	0.1402			0.1405	0.0003	0.3000		
Nitrogen, Nitrate as N (NO3-N), Water	0.3468			0.3431	0.0037	0.2500		
Sulfate (SO4), Water	6.2427			6.2340	0.1	20		
Nitrogen, Nitrite as N (NO2-N), Water	0			0	0	0		

DU	Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
DU	Method Duplicate			355328-1	10	06/11/2008	0342		
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F	
Bromide (Br), Water	0			0.0393	0.0393		0.6000		
Chloride, Water	9.0189			9.0594	0.4	20			
Fluoride (F), Water	0.1389			0.1331	0.0058	0.3000			
Nitrogen, Nitrate as N (NO3-N), Water	0.2800			0.2712	0.0088	0.2500			
Sulfate (SO4), Water	6.2792			6.3514	1.1	20			
Nitrogen, Nitrite as N (NO2-N), Water	0			0	0	0			

DU	Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
DU	Method Duplicate			355201-1			06/11/2008	0429	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F	
Bromide (Br), Soil	0			0.0657	0.0657		0.6000		
Chloride, Soil	7.8755			8.0272	1.9	20			
Fluoride (F), Soil	0.7060			0.7115	0.0055	0.3000			
Nitrogen, Nitrate as N (NO3-N), Soil	0.1244			0.1254	0.0010	0.2500			
Sulfate (SO4), Soil	21.627			22.038	1.9	20			
Nitrogen, Nitrite as N (NO2-N), Soil	0			0	0	0			

ICB	Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
ICB	Initial Calibration Blank						06/10/2008	1424	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F	
Bromide (Br)	0			0.0657	0.0657		0.6000		
Chloride	0			8.0272	1.9	20			
Fluoride (F)	0			0.7115	0.0055	0.3000			
Nitrogen, Nitrate as N (NO3-N)	0			0.1254	0.0010	0.2500			
Sulfate (SO4)	0			22.038	1.9	20			
Nitrogen, Nitrite as N (NO2-N)	0			0	0	0			

ICV	Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
ICV	Initial Calibration Verification	WCS49721					06/10/2008	1409	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F	
Bromide (Br)	19.547		20.00		97.7		90.0-110.0		
Chloride	19.512		20.00		97.6		90.0-110.0		
Fluoride (F)	10.166		10.00		101.7		90.0-110.0		
Nitrogen, Nitrate as N (NO3-N)	10.220		10.0		102.2		90.0-110.0		
Sulfate (SO4)	19.049		20.00		95.2		90.0-110.0		
Nitrogen, Nitrite as N (NO2-N)	9.6315		10.0		96.3		90.0-110.0		

## QUALITY CONTROL RESULTS

Job Number.: 355324

Report Date.: 06/18/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	WCS49721			06/10/2008	1456
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br)	19.943		20.00		99.7	90.0-110.0
Chloride	19.853		20.00		99.3	90.0-110.0
Fluoride (F)	9.8380		10.00		98.4	90.0-110.0
Nitrogen, Nitrate as N (NO3-N)	10.456		10.0		104.6	90.0-110.0
Sulfate (SO4)	19.743		20.00		98.7	90.0-110.0
Nitrogen, Nitrite as N (NO2-N)	9.7861		10.0		97.9	90.0-110.0

LCS	Laboratory Control Sample	WCS49721			06/10/2008	2040
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br)	20.029		20.00		100.1	90.0-110.0
Chloride	19.803		20.00		99.0	90.0-110.0
Fluoride (F)	9.7558		10.00		97.6	90.0-110.0
Nitrogen, Nitrate as N (NO3-N)	10.436		10.0		104.4	90.0-110.0
Sulfate (SO4)	19.550		20.00		97.8	90.0-110.0
Nitrogen, Nitrite as N (NO2-N)	9.7919		10.0		97.9	90.0-110.0

MB	Method Blank				06/10/2008	1440
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br)	0					
Chloride	0					
Fluoride (F)	0					
Nitrogen, Nitrate as N (NO3-N)	0					
Sulfate (SO4)	0					
Nitrogen, Nitrite as N (NO2-N)	0					

MB	Method Blank				06/10/2008	2024
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br)	0					
Chloride	0.2058					
Fluoride (F)	0					
Nitrogen, Nitrate as N (NO3-N)	0					
Sulfate (SO4)	0					
Nitrogen, Nitrite as N (NO2-N)	0					

MS	Matrix Spike	WCS49722	355303-2	10	06/10/2008	2214
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br), Water	9.9491		10.000000	0	99.5	90-110
Chloride, Water	13.894		10.000000	3.9842	99.1	90-110
Fluoride (F), Water	2.7438		2.000000	0.9245	91.0	90-110
Nitrogen, Nitrate as N (NO3-N), Water	1.9776		2.000000	0	98.9	90-110
Sulfate (SO4), Water	15.609		10.000000	5.8532	97.6	90-110
Nitrogen, Nitrite as N (NO2-N), Water	1.8590		2.000000	0	93.0	90-110

## QUALITY CONTROL RESULTS

Job Number.: 355324

Report Date.: 06/18/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MS	Matrix Spike	WCS49722	355325-3	10	06/11/2008	0035

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br), Water	9.8120		10.000000	0.0435	97.7		90-110	
Chloride, Water	17.605		10.000000	7.8652	97.4		90-110	
Fluoride (F), Water	1.6113		2.000000	0.1405	73.5		90-110	A
Nitrogen, Nitrate as N (NO3-N), Water	2.2013		2.000000	0.3431	92.9		90-110	
Sulfate (SO4), Water	15.527		10.000000	6.2340	92.9		90-110	
Nitrogen, Nitrite as N (NO2-N), Water	1.8462		2.000000	0	92.3		90-110	

MS	Matrix Spike	WCS49722	355328-1	10	06/11/2008	0358		
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br), Water	9.8510		10.000000	0.0393	98.1		90-110	
Chloride, Water	18.630		10.000000	9.0594	95.7		90-110	
Fluoride (F), Water	1.6153		2.000000	0.1331	74.1		90-110	A
Nitrogen, Nitrate as N (NO3-N), Water	2.1247		2.000000	0.2712	92.7		90-110	
Sulfate (SO4), Water	15.805		10.000000	6.3514	94.5		90-110	
Nitrogen, Nitrite as N (NO2-N), Water	1.8621		2.000000	0	93.1		90-110	

MS	Matrix Spike	WCS49722	355201-1		06/11/2008	0445		
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br), Soil	9.6739		10.000000	0.0657	96.1		90-110	
Chloride, Soil	17.373		10.000000	8.0272	93.5		90-110	
Fluoride (F), Soil	2.7736		2.000000	0.7115	103.1		90-110	
Nitrogen, Nitrate as N (NO3-N), Soil	1.9476		2.000000	0.1254	91.1		90-110	
Sulfate (SO4), Soil	30.073		10.000000	22.038	80.3		90-110	A
Nitrogen, Nitrite as N (NO2-N), Soil	1.8288		2.000000	0	91.4		90-110	

## S U R R O G A T E   R E C O V E R I E S   R E P O R T

Job Number.: 355324

Report Date.: 06/18/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN: Todd Wells

Method.....: GC Volatile Organics  
Batch(s).....: 400272Method Code....: 8021  
Test Matrix....: WaterPrep Batch....:  
Equipment Code: BTEX02

Lab ID	DT	Sample ID	Date	ATFT	ATFTB	BFB	BFBB
LCS			06/10/2008	97.5	99.7	96.5	99.7
MB			06/10/2008	100.8	101.2	100.9	99.1
355324-	1	RW-1 6508	06/11/2008	104.0	98.1	103.2	94.8
355325-	1 MS	MN-3 6508	06/10/2008	97.1	95.7	97.1	96.3
355325-	1 MSD	MN-3 6508	06/10/2008	96.5	95.5	99.0	95.9

Test	Test Description	Limits
ATFT	a,a,a-Trifluorotoluene	70 - 135
ATFTB	a,a,a-Trifluorotoluene Column B	70 - 135
BFB	BFB (Surrogate)	64 - 136
BFBB	BFB (Surrogate) Column B	64 - 136

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## QUALITY ASSURANCE METHODS

### REFERENCES AND NOTES

Report Date: 06/18/2008

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#### REPORT COMMENTS

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

#### General Information:

- Cresylic Acid is the combination of o,m and p-Cresol. The combination is reported as the final result.
- m-Cresol (3-Methylphenol) and p-Cresol (4-methylphenol) co-elute. The result of the two is reported as either m&p-cresol or as 4-methylphenol (p-cresol).
- m-Xylene and p-Xylene co-elute. The result of the two is reported as m,p-Xylene.
- N-Nitrosodiphenylamine decomposes in the gas chromatograph inlet forming diphenylamine and, consequently, may be detected as diphenylamine.
- Methylene Chloride and Acetone are recognized potential laboratory contaminants. Its presence in the sample up to five times the amount reported in the blank may be attributed to laboratory contamination.
- Trimethylsilyl(Diazomethane) is used to esterify acid herbicides in Method SW-846 8151A.
- For Inorganic analyses, duplicate QC limits are determined as follows: If the sample result is less than or equal to 5 times the reporting limit, the RPD limit is equal to the reporting limit. If the sample result is greater than 5 times the reporting limit, the RPD limit is the method defined RPD.
- For TRRP reports, the header on the column RL is equivalent to a MQL/PQL.
- Results for LCS and MS/MSD recoveries listed in the report are reported as ug/L on-column values which are not corrected for variables such as sample volumes or weights extracted, final volume of extracts and dilutions. To correct QC on-column recoveries to reflect actual spiking volumes for soils, multiply the values reported for Diesel Range Organics and Semivolatiles by 33.3 and Gasoline Range Organics by 20. The 8260 and 1006 results will not require correction. The only correction required for water analysis is for method 1006 where the reported concentration must be multiplied by 0.1.
- Due to limitation of the reporting software, results for the Method blank in the Semivolatile fraction are reported as "0". Which indicates there was no compound detected at the reporting limit for the compound reviewed.
- The dilution factor listed on the report represents only the analytical dilutions necessary for the target compounds to be within the calibration range of the instrument. It does not include any preparation factors, dry weight or any other adjustment.

#### Explanation of Qualifiers:

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

#### Explanation of General QC Outliers:

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

### REFERENCES AND NOTES

Report Date: 06/18/2008

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observed above the RL in the associated samples.

G - Marginal outlier within 1% of acceptance criteria.

r - RPD value is outside method acceptance criteria.

C - Poor RPD values observed due to the non-homogenous nature of the sample.

O - Sample required dilution due to matrix interference.

D - Sample reported from a dilution.

d - Spike and/or surrogate diluted.

E - The reported concentration exceeds the instrument calibration.

F - The analyte is outside QC limits and was not detected in any associated samples in the analytical batch.

H - Continuing Calibration Verification (CCV) standard is not associated with the samples reported.

q - See the subcontract final report for qualifier explanation.

W - The MS/MSD recoveries are outside QC acceptance criteria because the amount spiked is much less than the amount found in the sample.

K - High recovery will not affect the quality of reported results.

Z - See case narrative.

#### Explanation of Organic QC Outliers:

e - Method blank analysis yielded phthalate concentrations above the RL. Phthalates are recognized potential laboratory contaminants. Its presence in the sample up to five times the amount reported in the blank may be attributed to laboratory contamination.

S - Sample reanalyzed/reextracted due to poor surrogate recovery. Reanalysis confirmed original analysis indicating a possible matrix interference.

T - Sample analysis yielded poor surrogate recovery.

R - The RPD between the two GC columns is greater than 40% and no anomalies are present. The higher result is reported as per EPA Method 8000B.

I - The RPD between the two GC columns is greater than 40% and anomalies are present. The lower of the two results has been reported.

X - Gaseous compound. In-house QC limits are advisory.

Y - Ketone compounds have poor purge efficiency. In-house QC limits are advisory.

f - Surrogate not associated with reported analytes.

#### Explanation of Inorganic QC Outliers:

Q - Method blank analysis yielded target analytes above the RL. Associated sample results are greater than 10 times the concentrations observed in the method blank.

V - The RPD control limit for sample results less than 5 times the RL is +/- the RL value. Sample and duplicate results are within method acceptance criteria.

e - Serial dilution failed due to matrix interference.

g - Sample result quantitated by Method of Standard Additions (MSA) due to the analytical spike recovery being below 85 percent. The correlation coefficient for the MSA is greater than or equal to 0.995.

s - BOD/cBOD seed value is not within method acceptance criteria. Due to the nature of the test method, the sample cannot be reanalyzed.

l - BOD/cBOD LCS value is not within method acceptance criteria. Due to the nature of the test method, sample cannot be reanalyzed.

N - Spiked sample recovery is not within control limits.

n - Sample result quantitated by Method of Standard Additions (MSA) due to the analytical spike recovery being below 85 percent. The correlation coefficient for the MSA is less than 0.995.

\* - Duplicate analysis is not within control limits.

#### Abbreviations:

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

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QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 06/18/2008

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DLFac	- Detection Limit Factor
DU	- Duplicate
EB	- Extraction Blank (TCLP, SPLP, etc.)
ICAL	- Initial Calibration
ICB	- Initial Calibration Blank
ICV	- Initial Calibration Verification
ISA	- Interference Check Sample A - ICP
ISB	- Interference Check Sample B - ICP
LCD	- Laboratory Control Duplicate
LCS	- Laboratory Control Sample
MB	- Method Blank
MD	- Method Duplicate
MDL	- Method Detection Limit
MQL	- Method Quantitation Limit (TRRP)
MS	- Matrix Spike
MSD	- Matrix Spike Duplicate
ND	- Not Detected
PB	- Preparation Blank
PREPF	- Preparation Factor
RL	- Reporting Limit
RPD	- Relative Percent Difference
RRF	- Relative Response Factor
RT	- Retention Time
SQL	- Sample Quantitation Limit (TRRP)
TIC	- Tentatively Identified Compound

Method References:

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

## L A B O R A T O R Y C H R O N I C L E

Job Number: 355324

Date: 06/18/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN: Todd Wells

Lab ID: 355324-1 Client ID: RW-1 6508  
METHOD DESCRIPTION  
SW-846 8021B GC Volatile Organics  
EPA 300.0 Ion Chromatography Analysis

Date Recvd: 06/10/2008 Sample Date: 06/05/2008  
RUN# BATCH# PREP BT #(S) DATE/TIME ANALYZED DILUTION  
1 400272 06/11/2008 0842 10.000  
1 200312 06/10/2008 2245 10

**Chain of  
Custody Record**

**TestAmerica<sup>®</sup>**

**THE LEADER IN ENVIRONMENTAL TESTING**

Temperature on Receipt \_\_\_\_\_

Drinking Water? Yes  No

TAL-4124 (1007)

Client

CRA

Address

2135 S. Loop 250 West

City

Midland

State

TX

Zip Code

79703

Site Contact

Todd Wells

Lab Contact

Sachin Kubodhar

Carrier/Waybill Number

RW-1

Contract/Purchase Order/Quote No.

4011413

Sample I.D. No. and Description

(Containers for each sample may be combined on one line)

RW-1 6508

Date

6/5/08

Time

1540

Matrix

Groundwater

Aquiferous

Aerobic

Air

Sed.

Soil

Unknown

NaOH

Acid

HCl

Alkaline

HNO3

Organic

H2SO4

Uptakes

Uptakes

Pres.

Containers &

Preservat.

Sample Disposal

Non-Hazard

Flammable

Skin Irritant

Poison B

Unknown

Return To Client

Disposal By Lab

Archive For

Months \_\_\_\_\_

(A fee may be assessed if samples are retained longer than 1 month)

QC Requirements (Specify)

1. Received By Date 6/9/08 Time 1630  
2. Received By Date 6/10/08 Time 0935

3. Received By

Comments

Possible Hazard Identification  
 Non-Hazard       Flammable       Skin Irritant       Poison B       Unknown       Return To Client       Disposal By Lab       Archive For \_\_\_\_\_ Months \_\_\_\_\_ (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

24 Hours

48 Hours

7 Days

14 Days

21 Days

Other \_\_\_\_\_

1. Relinquished By	Date	Time	2. Received By	Date	Time	3. Received By	Date	Time
Todd Wells	6/9/08	1630	Chad	6/10/08	0935			

TestAmerica

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## ANALYTICAL REPORT

JOB NUMBER: 355325  
Project ID: F STATE NM 039122

Prepared For:

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

Attention: Todd Wells

Date: 06/18/2008

Sachin G. Kudchadkar

Signature

06/18/08

Date

Name: Sachin G. Kudchadkar

TestAmerica Laboratories, Inc  
6310 Rothway Drive  
Houston, TX 77040

Title: Project Manager III

E-Mail: sachin.kudchadkar@testamericainc.com

PHONE: 713-690-4444

TOTAL NO. OF PAGES 26

**S A M P L E   I N F O R M A T I O N**  
Date: 06/24/2008

Job Number.: 355325  
 Customer...: Conestoga-Rovers and Associates  
 Attn.....: Todd Wells

Project Number.....: 99007835  
 Customer Project ID....: F STATE NM 039122  
 Project Description....: Analytical

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
355325-1	MW-3 6508	Water	06/05/2008	13:27	06/10/2008	09:35
355325-2	MW-4 6508	Water	06/05/2008	12:05	06/10/2008	09:35
355325-3	MW-5 6508	Water	06/04/2008	15:10	06/10/2008	09:35
355325-4	MW-6 6508	Water	06/04/2008	14:45	06/10/2008	09:35
355325-5	MW-7 6508	Water	06/05/2008	12:45	06/10/2008	09:35
355325-6	MW-8 6508	Water	06/04/2008	15:30	06/10/2008	09:35
355325-7	WW-1 6508	Water	06/04/2008	13:45	06/10/2008	09:35
355325-8	WW-2 6508	Water	06/04/2008	14:00	06/10/2008	09:35
355325-9	DUP	Water	06/04/2008	00:00	06/10/2008	09:35

L A B O R A T O R Y      T E S T      R E S U L T S							Date: 06/24/2008					
C U S T O M E R :		P R O J E C T : F S T A T E N M 0 3 9 1 2 2					A T T N : Todd Wells					
Customer Sample ID: MW-3 6508 Date Sampled.....: 06/05/2008 Time Sampled.....: 13:27 Sample Matrix.....: Water							Laboratory Sample ID: 355325-1 Date Received.....: 06/10/2008 Time Received.....: 09:35					
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH	
SN-846 8021B	GC Volatile Organics	0.37	U	0.37	1.00	1.0000	ug/L	400272		06/10/08 1430	mbt	
	Benzene, Water	0.39	U	0.39	1.00	1.0000	ug/L	400272		06/10/08 1430	mbt	
	Toluene, Water	0.42	U	0.42	1.00	1.0000	ug/L	400272		06/10/08 1430	mbt	
	Ethylbenzene, Water	0.35	U	0.35	3.00	1.0000	ug/L	400272		06/10/08 1430	mbt	
	Xylenes (total), Water											
EPA 300.0	Ion Chromatography Analysis	29.5		1.5	5.0	10	ng/L	200312		06/10/08 2301	sur	
	Chloride, Water											

\* In Description = Dry Wgt.

L A B O R A T O R Y      T E S T      R E S U L T S							Date: 06/24/2008				
C U S T O M E R :		P R O J E C T : F S T A T E N M 0 3 9 1 2 2					A T T N : Todd Wells				
Customer Sample ID:	MW-4 6508	Laboratory Sample ID:	355325-2								
Date Sampled.....:	06/05/2008	Date Received.....:	06/10/2008								
Time Sampled.....:	12:05	Time Received.....:	09:35								
Sample Matrix.....:	Water										
T E S T   M E T H O D	P A R A M E T E R / T E S T   D E S C R I P T I O N	S A M P L E   R E S U L T	Q    F L A G S	M D L	R L	D I L U T I O N	U N I T S	B A T C H	D T	D A T E / T I M E	T E C H
SN-846 8021B	GC Volatile Organics	0.37	U	0.37	1.00	1.0000	ug/L	400272		06/10/08 1451	mht
	Benzene, Water	0.39	U	0.39	1.00	1.0000	ug/L	400272		06/10/08 1451	mht
	Toluene, Water	0.42	U	0.42	1.00	1.0000	ug/L	400272		06/10/08 1451	mht
	Ethylbenzene, Water	0.35	U	0.35	3.00	1.0000	ug/L	400272		06/10/08 1451	mht
	Xylenes (total), Water										
EPA 300.0	Ion Chromatography Analysis	61.0		1.5	5.0	10	ng/L	200312		06/10/08 2316	sur
	Chloride, Water										

\* In Description = Dry Wgt.

L A B O R A T O R Y      T E S T      R E S U L T S							Date: 06/24/2008				
C U S T O M E R :		P R O J E C T : F S T A T E N M 0 3 9 1 2 2					A T T N : Todd Wells				
Customer Sample ID:	MM-5 6508	Laboratory Sample ID:	355325-3								
Date Sampled.....:	06/04/2008	Date Received.....:	06/10/2008								
Time Sampled.....:	15:10	Time Received.....:	09:35								
Sample Matrix.....:	Water										
T E S T   M E T H O D	P A R A M E T E R / T E S T   D E S C R I P T I O N	S A M P L E   R E S U L T	Q    F L A G S	M D L	R L	D I L U T I O N	U N I T S	B A T C H	D T	D A T E / T I M E	T E C H
SN-846 8021B	GC Volatile Organics	0.37	U	0.37	1.00	1.0000	ug/L	400272		06/10/08 1511	mbt
	Benzene, Water	0.39	U	0.39	1.00	1.0000	ug/L	400272		06/10/08 1511	mbt
	Toluene, Water	0.42	U	0.42	1.00	1.0000	ug/L	400272		06/10/08 1511	mbt
	Ethylbenzene, Water	0.35	U	0.35	3.00	1.0000	ug/L	400272		06/10/08 1511	mbt
	Xylenes (total), Water										
EPA 300.0	Ion Chromatography Analysis	78.7		1.5							
	Chloride, Water			5.0	10		ng/L	200312		06/11/08 0003	sur

\* In Description = Dry Wgt.

L A B O R A T O R Y      T E S T      R E S U L T S											
				Date: 06/24/2008							
C U S T O M E R :		Customer Sample ID: MW-6 6508 Date Sampled.....: 06/04/2008 Time Sampled.....: 14:45 Sample Matrix.....: Water		PROJECT: F STATE NM 039122		ATTN: Todd Wells					
		Laboratory Sample ID: 355325-4 Date Received.....: 06/10/2008 Time Received.....: 09:35									
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SN-846 8021B	GC Volatile Organics	0.37	U	0.37	1.00	1.0000	ug/L	400272		06/10/08 1531	mbt
	Benzene, Water	0.39	U	0.39	1.00	1.0000	ug/L	400272		06/10/08 1531	mbt
	Toluene, Water	0.42	U	0.42	1.00	1.0000	ug/L	400272		06/10/08 1531	mbt
	Ethylbenzene, Water	0.35	U	0.35	3.00	1.0000	ug/L	400272		06/10/08 1531	mbt
	Xylenes (total), Water										
EPA 300.0	Ion Chromatography Analysis	117		1.5	5.0	10	ng/L	200312		06/11/08 0050	sur
	Chloride, Water										

\* In Description = Dry Wgt.

L A B O R A T O R Y      T E S T      R E S U L T S							Date: 06/24/2008				
C U S T O M E R :		P R O J E C T : F S T A T E N M 0 3 9 1 2 2					A T T N : Todd Wells				
Customer Sample ID: MM-7 6508 Date Sampled.....: 06/05/2008 Time Sampled.....: 12:45 Sample Matrix.....: Water							Laboratory Sample ID: 355325-5 Date Received.....: 06/10/2008 Time Received.....: 09:35				
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SN-846 8021B	GC Volatile Organics	0.37	U	0.37	1.00	1.0000	ug/L	400272		06/10/08	1551 mht
	Benzene, Water	0.39	U	0.39	1.00	1.0000	ug/L	400272		06/10/08	1551 mht
	Toluene, Water	0.42	U	0.42	1.00	1.0000	ug/L	400272		06/10/08	1551 mht
	Ethylbenzene, Water	0.35	U	0.35	3.00	1.0000	ug/L	400272		06/10/08	1551 mht
	Xylenes (total), Water										
EPA 300.0	Ion Chromatography Analysis	72.4		1.5	5.0	10	ng/L	200312		06/11/08	0106 sur
	Chloride, Water										

\* In Description = Dry Wgt.

L A B O R A T O R Y      T E S T      R E S U L T S							Date: 06/24/2008					
C U S T O M E R :		P R O J E C T : F S T A T E N M 0 3 9 1 2 2					A T T N : Todd Wells					
Customer Sample ID: MM-8 6508 Date Sampled.....: 06/04/2008 Time Sampled.....: 15:30 Sample Matrix.....: Water							Laboratory Sample ID: 355325-6 Date Received.....: 06/10/2008 Time Received.....: 09:35					
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH	
SN-846 8021B	GC Volatile Organics	0.37	U	0.37	1.00	1.0000	ug/L	400272		06/10/08	1711 mht	
	Benzene, Water	0.39	U	0.39	1.00	1.0000	ug/L	400272		06/10/08	1711 mht	
	Toluene, Water	0.42	U	0.42	1.00	1.0000	ug/L	400272		06/10/08	1711 mht	
	Ethylbenzene, Water	0.35	U	0.35	3.00	1.0000	ug/L	400272		06/10/08	1711 mht	
	Xylenes (total), Water											
EPA 300.0	Ion Chromatography Analysis	54.9		1.5	5.0	10	ng/L	200312		06/11/08	0122 sur	
	Chloride, Water											

\* In Description = Dry Wgt.

L A B O R A T O R Y      T E S T      R E S U L T S						Date: 06/24/2008					
C U S T O M E R :		P R O J E C T :		A T T N :		Todd Wells					
Customer Sample ID: WM-1	6508	Laboratory Sample ID: 355325-7									
Date Sampled.....:	06/04/2008	Date Received.....:	06/10/2008								
Time Sampled.....:	13:45	Time Received.....:	09:35								
Sample Matrix.....:	Water										
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SN-846 8021B	GC Volatile Organics	0.37	U	0.37	1.00	1.0000	ug/L	400272		06/10/08	1731
	Benzene, Water	0.39	U	0.39	1.00	1.0000	ug/L	400272		06/10/08	1731
	Toluene, Water	0.42	U	0.42	1.00	1.0000	ug/L	400272		06/10/08	1731
	Ethylbenzene, Water	0.35	U	0.35	3.00	1.0000	ug/L	400272		06/10/08	1731
	Xylenes (total), Water										
EPA 300.0	Ion Chromatography Analysis	64.1		1.5	5.0	10	ng/L	200312		06/11/08	0137
	Chloride, Water										

\* In Description = Dry Wgt.

L A B O R A T O R Y      T E S T      R E S U L T S							Date: 06/24/2008				
C U S T O M E R :		P R O J E C T :		A T T N :							
Customer Sample ID:	WM-2 6508	Laboratory Sample ID:	355325-8								
Date Sampled.....:	06/04/2008	Date Received.....:	06/10/2008								
Time Sampled.....:	14:00	Time Received.....:	09:35								
Sample Matrix.....:	Water										
T E S T   M E T H O D	P A R A M E T E R / T E S T   D E S C R I P T I O N	S A M P L E   R E S U L T	Q   F L A G S	M D L	R L	D I L U T I O N	U N I T S	B A T C H	D T	D A T E / T I M E	T E C H
SN-846 8021B	GC Volatile Organics	0.37	U	0.37	1.00	1.0000	ug/L	400272		06/10/08	1751
	Benzene, Water	0.39	U	0.39	1.00	1.0000	ug/L	400272		06/10/08	1751
	Toluene, Water	0.42	U	0.42	1.00	1.0000	ug/L	400272		06/10/08	1751
	Ethylbenzene, Water	0.35	U	0.35	3.00	1.0000	ug/L	400272		06/10/08	1751
	Xylenes (total), Water										
EPA 300.0	Ion Chromatography Analysis	65.9		1.5							
	Chloride, Water			5.0	10		ng/L	200312		06/11/08	0153
	sur										

\* In Description = Dry Wgt.

L A B O R A T O R Y      T E S T      R E S U L T S						Date: 06/24/2008					
C U S T O M E R :		P R O J E C T :		A T T N :							
Customer Sample ID: DUP		Laboratory Sample ID: 355325-9		ATTN: Todd Wells							
Date Sampled.....:	06/04/2008	Date Received.....:	06/10/2008								
Time Sampled.....:	00:00	Time Received.....:	09:35								
Sample Matrix.....:	Water										
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SN-846 8021B	GC Volatile Organics	0.37	U	0.37	1.00	1.0000	ug/L	400272		06/10/08	1811 mht
	Benzene, Water	0.39	U	0.39	1.00	1.0000	ug/L	400272		06/10/08	1811 mht
	Toluene, Water	0.42	U	0.42	1.00	1.0000	ug/L	400272		06/10/08	1811 mht
	Ethylbenzene, Water	0.35	U	0.35	3.00	1.0000	ug/L	400272		06/10/08	1811 mht
	Xylenes (total), Water										
EPA 300.0	Ion Chromatography Analysis	64.4		1.5	5.0	10	ng/L	200312		06/11/08	0209 sur
	Chloride, Water										

\* In Description = Dry Wgt.

## QUALITY CONTROL RESULTS

Job Number.: 355325

Report Date.: 06/24/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN: Todd Wells

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Test Method.....: SW-846 8021B

Method Description.: GC Volatile Organics

Units.....: ug/L

Batch(s)....: 400272

Analyst...: mht

LCS	Laboratory Control Sample	BXS060308B				06/10/2008	1232		
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Water	52.9071			50.000000		105.8		72-134	
Toluene, Water	52.0171			50.000000		104.0		76-131	
Ethylbenzene, Water	56.1908			50.000000		112.4		75-131	
m,p-Xylene, Water	106.131			100.000000		106.1		75-130	
o-Xylene, Water	53.0635			50.000000		106.1		74-129	
Xylenes (total), Water	163.4023			150.000000		108.9		70-130	
Total BTEX, Water	327.2999			300.000000		109.1		70-130	
Tert-Butyl Methyl Ether Column B, Water	49.9440			50.000000		99.9		76-123	
Benzene Column B, Water	54.0116			50.000000		108.0		72-134	
Toluene Column B, Water	53.6952			50.000000		107.4		76-131	
Ethylbenzene Column B, Water	54.8998			50.000000		109.8		75-131	
m,p-Xylene Column B, Water	109.039			100.000000		109.0		75-130	
o-Xylene Column B, Water	54.3633			50.000000		108.7		74-129	

MB	Method Blank					06/10/2008	1252		
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Water	ND								
Toluene, Water	ND								
Ethylbenzene, Water	ND								
m,p-Xylene, Water	ND								
o-Xylene, Water	ND								
Xylenes (total), Water	0.0000								
Total BTEX, Water	0.0000								
Tert-Butyl Methyl Ether Column B, Water	ND								
Benzene Column B, Water	ND								
Toluene Column B, Water	ND								
Ethylbenzene Column B, Water	ND								
m,p-Xylene Column B, Water	ND								
o-Xylene Column B, Water	ND								

MS	Matrix Spike	BXS060308A	355325-1			06/10/2008	1611		
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Water	55.4717			50.000000	ND	111		70-130	
Toluene, Water	54.0173			50.000000	ND	108		70-130	
Ethylbenzene, Water	55.4617			50.000000	ND	111		70-130	
m,p-Xylene, Water	113.114			100.000000	ND	113		70-130	
o-Xylene, Water	54.8266			50.000000	ND	110		70-130	
Xylenes (total), Water	167.9406			150.000000	0.0000	112		70-130	
Total BTEX, Water	333.4209			300.000000	0.0000	111		70-130	
Tert-Butyl Methyl Ether Column B, Water	51.0632			50.000000	ND	102		70-130	
Benzene Column B, Water	54.9772			50.000000	ND	110		70-130	
Toluene Column B, Water	54.5469			50.000000	ND	109		70-130	
Ethylbenzene Column B, Water	54.3438			50.000000	ND	109		70-130	
m,p-Xylene Column B, Water	109.221			100.000000	ND	109		70-130	

## QUALITY CONTROL RESULTS

Job Number.: 355325

Report Date.: 06/24/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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MS	Matrix Spike	BXS060308A	355325-1		06/10/2008 1611			
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
o-Xylene Column B, Water		54.0067		50.000000	ND	108	70-130	

MSD	Matrix Spike Duplicate	BXS060308A	355325-1		06/10/2008 1631			
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Benzene, Water		59.0558	55.4717	50.000000	ND	118 6.3	70-130 20.0	
Toluene, Water		57.6884	54.0173	50.000000	ND	115 6.6	70-130 20.0	
Ethylbenzene, Water		60.4241	55.4617	50.000000	ND	121 8.6	70-130 20.0	
m,p-Xylene, Water		121.070	113.114	100.000000	ND	121 6.8	70-130 20.0	
o-Xylene, Water		58.9331	54.8266	50.000000	ND	118 7.2	70-130 20.0	
Xylenes (total), Water		180.0031	167.9406	150.000000	0.0000	120 6.9	70-130 20.0	
Total BTEX, Water		357.2998	333.4209	300.000000	0.0000	119 6.9	70-130 20.0	
Tert-Butyl Methyl Ether Column B, Water		52.2327	51.0632	50.000000	ND	104 2.3	70-130 20.0	
Benzene Column B, Water		57.8776	54.9772	50.000000	ND	116 5.1	70-130 20.0	
Toluene Column B, Water		57.8168	54.5469	50.000000	ND	116 5.8	70-130 20.0	
Ethylbenzene Column B, Water		57.9580	54.3438	50.000000	ND	116 6.4	70-130 20.0	
m,p-Xylene Column B, Water		115.181	109.221	100.000000	ND	115 5.3	70-130 20.0	
o-Xylene Column B, Water		56.9046	54.0067	50.000000	ND	114 5.2	70-130 20.0	

Test Method.....: EPA 300.0

Method Description.: Ion Chromatography Analysis

Units.....: mg/L

Batch(s)....: 200312

Analyst...: sur

CCB	Continuing Calibration Blank				06/10/2008 1716			
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Bromide (Br)		0						
Chloride		0						
Fluoride (F)		0						
Nitrogen, Nitrate as N (NO3-N)		0						
Sulfate (SO4)		0						
Nitrogen, Nitrite as N (NO2-N)		0						

## QUALITY CONTROL RESULTS

Job Number.: 355325

Report Date.: 06/24/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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CCB	Continuing Calibration Blank				06/10/2008	2009
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	0							
Chloride	0							
Fluoride (F)	0							
Nitrogen, Nitrate as N (NO3-N)	0							
Sulfate (SO4)	0							
Nitrogen, Nitrite as N (NO2-N)	0							

CCB	Continuing Calibration Blank				06/10/2008	2348
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	0							
Chloride	0.1956							
Fluoride (F)	0							
Nitrogen, Nitrate as N (NO3-N)	0							
Sulfate (SO4)	0							
Nitrogen, Nitrite as N (NO2-N)	0							

CCB	Continuing Calibration Blank				06/11/2008	0240
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	0							
Chloride	0							
Fluoride (F)	0							
Nitrogen, Nitrate as N (NO3-N)	0							
Sulfate (SO4)	0							
Nitrogen, Nitrite as N (NO2-N)	0							

CCB	Continuing Calibration Blank				06/11/2008	0516
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	0							
Chloride	0							
Fluoride (F)	0							
Nitrogen, Nitrate as N (NO3-N)	0							
Sulfate (SO4)	0							
Nitrogen, Nitrite as N (NO2-N)	0							

CCV	Continuing Calibration Verification	WCS49721			06/10/2008	1701
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	20.092		20.00		100.5		90.0-110.0	
Chloride	19.980		20.00		99.9		90.0-110.0	
Fluoride (F)	9.9939		10.00		99.9		90.0-110.0	
Nitrogen, Nitrate as N (NO3-N)	10.450		10.0		104.5		90.0-110.0	
Sulfate (SO4)	19.529		20.00		97.6		90.0-110.0	
Nitrogen, Nitrite as N (NO2-N)	9.8345		10.0		98.3		90.0-110.0	

## QUALITY CONTROL RESULTS

Job Number.: 355325

Report Date.: 06/24/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	WCS49721			06/10/2008	1953
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*
Bromide (Br)	19.943		20.00		99.7	90.0-110.0
Chloride	19.932		20.00		99.7	90.0-110.0
Fluoride (F)	10.044		10.00		100.4	90.0-110.0
Nitrogen, Nitrate as N (NO3-N)	10.453		10.0		104.5	90.0-110.0
Sulfate (SO4)	19.532		20.00		97.7	90.0-110.0
Nitrogen, Nitrite as N (NO2-N)	9.8251		10.0		98.3	90.0-110.0

CCV	Continuing Calibration Verification	WCS49721			06/10/2008	2332
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*
Bromide (Br)	19.964		20.00		99.8	90.0-110.0
Chloride	19.926		20.00		99.6	90.0-110.0
Fluoride (F)	9.9412		10.00		99.4	90.0-110.0
Nitrogen, Nitrate as N (NO3-N)	10.449		10.0		104.5	90.0-110.0
Sulfate (SO4)	19.398		20.00		97.0	90.0-110.0
Nitrogen, Nitrite as N (NO2-N)	9.8329		10.0		98.3	90.0-110.0

CCV	Continuing Calibration Verification	WCS49721			06/11/2008	0224
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*
Bromide (Br)	19.956		20.00		99.8	90.0-110.0
Chloride	19.811		20.00		99.1	90.0-110.0
Fluoride (F)	9.6585		10.00		96.6	90.0-110.0
Nitrogen, Nitrate as N (NO3-N)	10.406		10.0		104.1	90.0-110.0
Sulfate (SO4)	19.352		20.00		96.8	90.0-110.0
Nitrogen, Nitrite as N (NO2-N)	9.7945		10.0		97.9	90.0-110.0

CCV	Continuing Calibration Verification	WCS49721			06/11/2008	0501
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*
Bromide (Br)	19.889		20.00		99.4	90.0-110.0
Chloride	19.799		20.00		99.0	90.0-110.0
Fluoride (F)	9.6325		10.00		96.3	90.0-110.0
Nitrogen, Nitrate as N (NO3-N)	10.446		10.0		104.5	90.0-110.0
Sulfate (SO4)	19.524		20.00		97.6	90.0-110.0
Nitrogen, Nitrite as N (NO2-N)	9.7734		10.0		97.7	90.0-110.0

DU	Method Duplicate		355303-2	10	06/10/2008	2158
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*
Bromide (Br), Water	0			0	0	1
Chloride, Water	3.8915			3.9842	2.4	20
Fluoride (F), Water	0.9210			0.9245	0.0035	0.3000
Nitrogen, Nitrate as N (NO3-N), Water	0			0	0	0
Sulfate (SO4), Water	5.7625			5.8532	1.6	20
Nitrogen, Nitrite as N (NO2-N), Water	0			0	0	0

## QUALITY CONTROL RESULTS

Job Number.: 355325

Report Date.: 06/24/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
DU	Method Duplicate		355325-3	10	06/11/2008	0019
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br), Water	0				0.0435	0.0435
Chloride, Water	7.8773				7.8652	0.2
Fluoride (F), Water	0.1402				0.1405	0.0003
Nitrogen, Nitrate as N (NO3-N), Water	0.3468				0.3431	0.0037
Sulfate (SO4), Water	6.2427				6.2340	0.1
Nitrogen, Nitrite as N (NO2-N), Water	0				0	0

DU	Method Duplicate		355328-1	10	06/11/2008	0342
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br), Water	0				0.0393	0.0393
Chloride, Water	9.0189				9.0594	0.4
Fluoride (F), Water	0.1389				0.1331	0.0058
Nitrogen, Nitrate as N (NO3-N), Water	0.2800				0.2712	0.0088
Sulfate (SO4), Water	6.2792				6.3514	1.1
Nitrogen, Nitrite as N (NO2-N), Water	0				0	0

DU	Method Duplicate		355201-1		06/11/2008	0429
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br), Soil	0				0.0657	0.0657
Chloride, Soil	7.8755				8.0272	1.9
Fluoride (F), Soil	0.7060				0.7115	0.0055
Nitrogen, Nitrate as N (NO3-N), Soil	0.1244				0.1254	0.0010
Sulfate (SO4), Soil	21.627				22.038	1.9
Nitrogen, Nitrite as N (NO2-N), Soil	0				0	0

ICB	Initial Calibration Blank				06/10/2008	1424
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br)	0				0.0657	0.0657
Chloride	0				8.0272	1.9
Fluoride (F)	0				0.7115	0.0055
Nitrogen, Nitrate as N (NO3-N)	0				0.1254	0.0010
Sulfate (SO4)	0				22.038	1.9
Nitrogen, Nitrite as N (NO2-N)	0				0	0

ICV	Initial Calibration Verification	WCS49721			06/10/2008	1409
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br)	19.547			20.00	97.7	90.0-110.0
Chloride	19.512			20.00	97.6	90.0-110.0
Fluoride (F)	10.166			10.00	101.7	90.0-110.0
Nitrogen, Nitrate as N (NO3-N)	10.220			10.0	102.2	90.0-110.0
Sulfate (SO4)	19.049			20.00	95.2	90.0-110.0
Nitrogen, Nitrite as N (NO2-N)	9.6315			10.0	96.3	90.0-110.0

## QUALITY CONTROL RESULTS

Job Number.: 355325

Report Date.: 06/24/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	WCS49721			06/10/2008	1456
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br)	19.943		20.00		99.7	90.0-110.0
Chloride	19.853		20.00		99.3	90.0-110.0
Fluoride (F)	9.8380		10.00		98.4	90.0-110.0
Nitrogen, Nitrate as N (NO3-N)	10.456		10.0		104.6	90.0-110.0
Sulfate (SO4)	19.743		20.00		98.7	90.0-110.0
Nitrogen, Nitrite as N (NO2-N)	9.7861		10.0		97.9	90.0-110.0

LCS	Laboratory Control Sample	WCS49721			06/10/2008	2040
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br)	20.029		20.00		100.1	90.0-110.0
Chloride	19.803		20.00		99.0	90.0-110.0
Fluoride (F)	9.7558		10.00		97.6	90.0-110.0
Nitrogen, Nitrate as N (NO3-N)	10.436		10.0		104.4	90.0-110.0
Sulfate (SO4)	19.550		20.00		97.8	90.0-110.0
Nitrogen, Nitrite as N (NO2-N)	9.7919		10.0		97.9	90.0-110.0

MB	Method Blank				06/10/2008	1440
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br)	0					
Chloride	0					
Fluoride (F)	0					
Nitrogen, Nitrate as N (NO3-N)	0					
Sulfate (SO4)	0					
Nitrogen, Nitrite as N (NO2-N)	0					

MB	Method Blank				06/10/2008	2024
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br)	0					
Chloride	0.2058					
Fluoride (F)	0					
Nitrogen, Nitrate as N (NO3-N)	0					
Sulfate (SO4)	0					
Nitrogen, Nitrite as N (NO2-N)	0					

MS	Matrix Spike	WCS49722	355303-2	10	06/10/2008	2214
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br), Water	9.9491		10.000000	0	99.5	90-110
Chloride, Water	13.894		10.000000	3.9842	99.1	90-110
Fluoride (F), Water	2.7438		2.000000	0.9245	91.0	90-110
Nitrogen, Nitrate as N (NO3-N), Water	1.9776		2.000000	0	98.9	90-110
Sulfate (SO4), Water	15.609		10.000000	5.8532	97.6	90-110
Nitrogen, Nitrite as N (NO2-N), Water	1.8590		2.000000	0	93.0	90-110

## QUALITY CONTROL RESULTS

Job Number.: 355325

Report Date.: 06/24/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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MS	Matrix Spike	WCS49722	355325-3	10	06/11/2008	0035			
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br), Water	9.8120			10.000000	0.0435	97.7		90-110	
Chloride, Water	17.605			10.000000	7.8652	97.4		90-110	
Fluoride (F), Water	1.6113			2.000000	0.1405	73.5		90-110	A
Nitrogen, Nitrate as N (NO3-N), Water	2.2013			2.000000	0.3431	92.9		90-110	
Sulfate (SO4), Water	15.527			10.000000	6.2340	92.9		90-110	
Nitrogen, Nitrite as N (NO2-N), Water	1.8462			2.000000	0	92.3		90-110	

MS	Matrix Spike	WCS49722	355328-1	10	06/11/2008	0358			
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br), Water	9.8510			10.000000	0.0393	98.1		90-110	
Chloride, Water	18.630			10.000000	9.0594	95.7		90-110	
Fluoride (F), Water	1.6153			2.000000	0.1331	74.1		90-110	A
Nitrogen, Nitrate as N (NO3-N), Water	2.1247			2.000000	0.2712	92.7		90-110	
Sulfate (SO4), Water	15.805			10.000000	6.3514	94.5		90-110	
Nitrogen, Nitrite as N (NO2-N), Water	1.8621			2.000000	0	93.1		90-110	

MS	Matrix Spike	WCS49722	355201-1		06/11/2008	0445			
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br), Soil	9.6739			10.000000	0.0657	96.1		90-110	
Chloride, Soil	17.373			10.000000	8.0272	93.5		90-110	
Fluoride (F), Soil	2.7736			2.000000	0.7115	103.1		90-110	
Nitrogen, Nitrate as N (NO3-N), Soil	1.9476			2.000000	0.1254	91.1		90-110	
Sulfate (SO4), Soil	30.073			10.000000	22.038	80.3		90-110	A
Nitrogen, Nitrite as N (NO2-N), Soil	1.8288			2.000000	0	91.4		90-110	

## S U R R O G A T E   R E C O V E R I E S   R E P O R T

Job Number.: 355325

Report Date.: 06/24/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN: Todd Wells

Method.....: GC Volatile Organics  
 Batch(s)....: 400272

Method Code...: 8021  
 Test Matrix...: Water

Prep Batch....:  
 Equipment Code: BTEX02

Lab ID	DT	Sample ID	Date	ATFT	ATFTB	BFB	BFBB
LCS			06/10/2008	97.5	99.7	96.5	99.7
MB			06/10/2008	100.8	101.2	100.9	99.1
355325- 1		MW-3 6508	06/10/2008	101.5	101.5	99.9	100.4
355325- 1 MS		MW-3 6508	06/10/2008	97.1	95.7	97.1	96.3
355325- 1 MSD		MW-3 6508	06/10/2008	96.5	95.5	99.0	95.9
355325- 2		MW-4 6508	06/10/2008	100.1	100.0	98.6	97.9
355325- 3		MW-5 6508	06/10/2008	100.6	100.2	101.9	100.4
355325- 4		MW-6 6508	06/10/2008	100.4	100.2	100.7	99.1
355325- 5		MW-7 6508	06/10/2008	100.2	99.9	99.9	98.8
355325- 6		MW-8 6508	06/10/2008	97.5	98.5	100.4	100.3
355325- 7		WW-1 6508	06/10/2008	99.8	100.8	100.8	100.3
355325- 8		WW-2 6508	06/10/2008	98.7	99.9	99.6	99.3
355325- 9		DUP	06/10/2008	100.3	101.2	101.2	100.7

Test	Test Description	Limits
ATFT	a,a,a-Trifluorotoluene	70 - 135
ATFTB	a,a,a-Trifluorotoluene Column B	70 - 135
BFB	BFB (Surrogate)	64 - 136
BFBB	BFB (Surrogate) Column B	64 - 136

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## QUALITY ASSURANCE METHODS

### REFERENCES AND NOTES

Report Date: 06/24/2008

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#### REPORT COMMENTS

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

#### General Information:

- Cresylic Acid is the combination of o,m and p-Cresol. The combination is reported as the final result.
- m-Cresol (3-Methylphenol) and p-Cresol (4-methylphenol) co-elute. The result of the two is reported as either m&p-cresol or as 4-methylphenol (p-cresol).
- m-Xylene and p-Xylene co-elute. The result of the two is reported as m,p-Xylene.
- N-Nitrosodiphenylamine decomposes in the gas chromatograph inlet forming diphenylamine and, consequently, may be detected as diphenylamine.
- Methylene Chloride and Acetone are recognized potential laboratory contaminants. Its presence in the sample up to five times the amount reported in the blank may be attributed to laboratory contamination.
- Trimethylsilyl(Diazomethane) is used to esterify acid herbicides in Method SW-846 8151A.
- For Inorganic analyses, duplicate QC limits are determined as follows: If the sample result is less than or equal to 5 times the reporting limit, the RPD limit is equal to the reporting limit. If the sample result is greater than 5 times the reporting limit, the RPD limit is the method defined RPD.
- For TRRP reports, the header on the column RL is equivalent to a MQL/PQL.
- Results for LCS and MS/MSD recoveries listed in the report are reported as ug/L on-column values which are not corrected for variables such as sample volumes or weights extracted, final volume of extracts and dilutions. To correct QC on-column recoveries to reflect actual spiking volumes for soils, multiply the values reported for Diesel Range Organics and Semivolatiles by 33.3 and Gasoline Range Organics by 20. The 8260 and 1006 results will not require correction. The only correction required for water analysis is for method 1006 where the reported concentration must be multiplied by 0.1.
- Due to limitation of the reporting software, results for the Method blank in the Semivolatile fraction are reported as "0". Which indicates there was no compound detected at the reporting limit for the compound reviewed.
- The dilution factor listed on the report represents only the analytical dilutions necessary for the target compounds to be within the calibration range of the instrument. It does not include any preparation factors, dry weight or any other adjustment.

#### Explanation of Qualifiers:

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

#### Explanation of General QC Outliers:

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

### REFERENCES AND NOTES

Report Date: 06/24/2008

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

#### Explanation of Organic QC Outliers:

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

#### Explanation of Inorganic QC Outliers:

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

#### Abbreviations:

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

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QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 06/24/2008

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DLFac	- Detection Limit Factor
DU	- Duplicate
EB	- Extraction Blank (TCLP, SPLP, etc.)
ICAL	- Initial Calibration
ICB	- Initial Calibration Blank
ICV	- Initial Calibration Verification
ISA	- Interference Check Sample A - ICP
ISB	- Interference Check Sample B - ICP
LCD	- Laboratory Control Duplicate
LCS	- Laboratory Control Sample
MB	- Method Blank
MD	- Method Duplicate
MDL	- Method Detection Limit
MQL	- Method Quantitation Limit (TRRP)
MS	- Matrix Spike
MSD	- Matrix Spike Duplicate
ND	- Not Detected
PB	- Preparation Blank
PREPF	- Preparation Factor
RL	- Reporting Limit
RPD	- Relative Percent Difference
RRF	- Relative Response Factor
RT	- Retention Time
SQL	- Sample Quantitation Limit (TRRP)
TIC	- Tentatively Identified Compound

Method References:

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

## L A B O R A T O R Y C H R O N I C L E

Job Number: 355325

Date: 06/24/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN: Todd Wells

Lab ID: 355325-1	Client ID: MW-3 6508	Date Recvd:	06/10/2008	Sample Date:	06/05/2008	
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 8021B	GC Volatile Organics	1	400272		06/10/2008 1430	1.0000
EPA 300.0	Ion Chromatography Analysis	1	200312		06/10/2008 2301	10
Lab ID: 355325-2	Client ID: MW-4 6508	Date Recvd:	06/10/2008	Sample Date:	06/05/2008	
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 8021B	GC Volatile Organics	1	400272		06/10/2008 1451	1.0000
EPA 300.0	Ion Chromatography Analysis	1	200312		06/10/2008 2316	10
Lab ID: 355325-3	Client ID: MW-5 6508	Date Recvd:	06/10/2008	Sample Date:	06/04/2008	
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 8021B	GC Volatile Organics	1	400272		06/10/2008 1511	1.0000
EPA 300.0	Ion Chromatography Analysis	1	200312		06/11/2008 0003	10
Lab ID: 355325-4	Client ID: MW-6 6508	Date Recvd:	06/10/2008	Sample Date:	06/04/2008	
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 8021B	GC Volatile Organics	1	400272		06/10/2008 1531	1.0000
EPA 300.0	Ion Chromatography Analysis	1	200312		06/11/2008 0050	10
Lab ID: 355325-5	Client ID: MW-7 6508	Date Recvd:	06/10/2008	Sample Date:	06/05/2008	
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 8021B	GC Volatile Organics	1	400272		06/10/2008 1551	1.0000
EPA 300.0	Ion Chromatography Analysis	1	200312		06/11/2008 0106	10
Lab ID: 355325-6	Client ID: MW-8 6508	Date Recvd:	06/10/2008	Sample Date:	06/04/2008	
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 8021B	GC Volatile Organics	1	400272		06/10/2008 1711	1.0000
EPA 300.0	Ion Chromatography Analysis	1	200312		06/11/2008 0122	10
Lab ID: 355325-7	Client ID: WW-1 6508	Date Recvd:	06/10/2008	Sample Date:	06/04/2008	
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 8021B	GC Volatile Organics	1	400272		06/10/2008 1731	1.0000
EPA 300.0	Ion Chromatography Analysis	1	200312		06/11/2008 0137	10
Lab ID: 355325-8	Client ID: WW-2 6508	Date Recvd:	06/10/2008	Sample Date:	06/04/2008	
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 8021B	GC Volatile Organics	1	400272		06/10/2008 1751	1.0000
EPA 300.0	Ion Chromatography Analysis	1	200312		06/11/2008 0153	10
Lab ID: 355325-9	Client ID: DUP	Date Recvd:	06/10/2008	Sample Date:	06/04/2008	
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
SW-846 8021B	GC Volatile Organics	1	400272		06/10/2008 1811	1.0000
EPA 300.0	Ion Chromatography Analysis	1	200312		06/11/2008 0209	10

# Chain of Custody Record

# TestAmerica

Temperature on Receipt \_\_\_\_\_

Drinking Water? Yes  No

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

Client **CJH**

Address **2135 S. Loop 250 West**  
 City **Midland** State **TX** Zip Code **79703**  
 Project Name and Location (State) **#039132 E-State**  
 Contract/Purchase Order/Quote No. **4011413**

Project Manager **Todd Hells**  
 Telephone Number (Area Code)/Fax Number **(432) 686-0086**  
 Site Contact **T. Hells** Lab Contact **Sidna Kishchadar**  
 Carrier/Waybill Number **BTEX 80216**

Lab Number **Houston**

Page **1** of **1**

Special Instructions/  
Conditions of Receipt

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix	Containers & Preservatives
- MN-3 6508	6/5/08	1327	Air	X
- MN-4 6508	6/5/08	1205	Air	X
MN-5 6408	6/4/08	1510	Air	X
MN-6 6408	6/4/08	1445	Air	X
- MN-7 6508	6/5/08	1245	Air	X
MN-8 6408	6/4/08	1530	Air	X
MN-9 6408	6/4/08	1345	Air	X
MN-2 6408	6/4/08	1400	Air	X
Dup	6/4/08	—	Air	X

Possible Hazard Identification  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Poison A  Other \_\_\_\_\_

Turn Around Time Required  
 24 Hours  48 Hours  7 Days  14 Days  21 Days  Other \_\_\_\_\_

QC Requirements (Specify)  
 Sample Disposal  Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

1. Relinquished By **Todd Hells** Date **6/9/08** Time **1630** 1. Received By **\_\_\_\_\_** Date **6/10/08** Time **8:30**

2. Relinquished By **\_\_\_\_\_** Date **\_\_\_\_\_** Time **\_\_\_\_\_** 2. Received By **\_\_\_\_\_** Date **\_\_\_\_\_** Time **\_\_\_\_\_**

3. Relinquished By **\_\_\_\_\_** Date **\_\_\_\_\_** Time **\_\_\_\_\_** 3. Received By **\_\_\_\_\_** Date **\_\_\_\_\_** Time **\_\_\_\_\_**

Comments

# TestAmerica

TestAmerica Laboratories, Inc.

## ANALYTICAL REPORT

JOB NUMBER: 355326  
Project ID: F STATE NM 039122

Prepared For:

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

Attention: Todd Wells

Date: 06/18/2008

Signature

06/18/08

Date

Name: Sachin G. Kudchadkar

TestAmerica Laboratories, Inc  
6310 Rothway Drive  
Houston, TX 77040

Title: Project Manager III

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TOTAL NO. OF PAGES 18

S A M P L E   I N F O R M A T I O N  
Date: 06/18/2008

Job Number.: 355326  
Customer....: Conestoga-Rovers and Associates  
Attn.....: Todd Wells

Project Number.....: 99007835  
Customer Project ID....: F STATE NM 039122  
Project Description....: Analytical

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
355326-1	RW-2 6508	Water	06/05/2008	14:15	06/10/2008	09:35

L A B O R A T O R Y      T E S T      R E S U L T S							Date: 06/18/2008				
C U S T O M E R :		P R O J E C T :		A T T N :							
Customer Sample ID:	RW-2	Laboratory Sample ID:	355326-1								
Date Sampled.....:	06/05/2008	Date Received.....:	06/10/2008								
Time Sampled.....:	14:15	Time Received.....:	09:35								
Sample Matrix.....:	Water										
T E S T   M E T H O D	P A R A M E T E R / T E S T   D E S C R I P T I O N	S A M P L E   R E S U L T	Q   F L A G S	M D L	R L	D I L U T I O N	U N I T S	B A T C H	D T	D A T E / T I M E	T E C H
SN-846 8021B	GC Volatile Organics	3.7	U	3.7	10.0	10.000	ug/L	400272		06/11/08	0902
	Benzene, Water	3.9	U	3.9	10.0	10.000	ug/L	400272		06/11/08	0902
	Toluene, Water	4.2	U	4.2	10.0	10.000	ug/L	400272		06/11/08	0902
	Ethylbenzene, Water	3.5	U	3.5	30.0	10.000	ug/L	400272		06/11/08	0902
	Xylenes (total), Water										
EPA 300.0	Ion Chromatography Analysis	51.1		1.5	5.0	10	ng/L	200312		06/11/08	0255
	Chloride, Water										

\* In Description = Dry Wgt.

## QUALITY CONTROL RESULTS

Job Number.: 355326

Report Date.: 06/18/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN: Todd Wells

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Test Method.....: SW-846 8021B                          Units.....: ug/L                          Analyst...: mht  
 Method Description.: GC Volatile Organics              Batch(s)....: 400272

LCS	Laboratory Control Sample	BXS060308B				06/10/2008	1232		
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Water	52.9071			50.000000		105.8		72-134	
Toluene, Water	52.0171			50.000000		104.0		76-131	
Ethylbenzene, Water	56.1908			50.000000		112.4		75-131	
m,p-Xylene, Water	106.131			100.000000		106.1		75-130	
o-Xylene, Water	53.0635			50.000000		106.1		74-129	
Xylenes (total), Water	163.4023			150.000000		108.9		70-130	
Total BTEX, Water	327.2999			300.000000		109.1		70-130	
Tert-Butyl Methyl Ether Column B, Water	49.9440			50.000000		99.9		76-123	
Benzene Column B, Water	54.0116			50.000000		108.0		72-134	
Toluene Column B, Water	53.6952			50.000000		107.4		76-131	
Ethylbenzene Column B, Water	54.8998			50.000000		109.8		75-131	
m,p-Xylene Column B, Water	109.039			100.000000		109.0		75-130	
o-Xylene Column B, Water	54.3633			50.000000		108.7		74-129	

MB	Method Blank					06/10/2008	1252		
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Water	ND								
Toluene, Water	ND								
Ethylbenzene, Water	ND								
m,p-Xylene, Water	ND								
o-Xylene, Water	ND								
Xylenes (total), Water	0.0000								
Total BTEX, Water	0.0000								
Tert-Butyl Methyl Ether Column B, Water	ND								
Benzene Column B, Water	ND								
Toluene Column B, Water	ND								
Ethylbenzene Column B, Water	ND								
m,p-Xylene Column B, Water	ND								
o-Xylene Column B, Water	ND								

MS	Matrix Spike	BXS060308A	355325-1			06/10/2008	1611		
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Benzene, Water	55.4717			50.000000	ND	111		70-130	
Toluene, Water	54.0173			50.000000	ND	108		70-130	
Ethylbenzene, Water	55.4617			50.000000	ND	111		70-130	
m,p-Xylene, Water	113.114			100.000000	ND	113		70-130	
o-Xylene, Water	54.8266			50.000000	ND	110		70-130	
Xylenes (total), Water	167.9406			150.000000	0.0000	112		70-130	
Total BTEX, Water	333.4209			300.000000	0.0000	111		70-130	
Tert-Butyl Methyl Ether Column B, Water	51.0632			50.000000	ND	102		70-130	
Benzene Column B, Water	54.9772			50.000000	ND	110		70-130	
Toluene Column B, Water	54.5469			50.000000	ND	109		70-130	
Ethylbenzene Column B, Water	54.3438			50.000000	ND	109		70-130	
m,p-Xylene Column B, Water	109.221			100.000000	ND	109		70-130	

## QUALITY CONTROL RESULTS

Job Number.: 355326

Report Date.: 06/18/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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MS	Matrix Spike	BXS060308A	355325-1		06/10/2008 1611			
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
o-Xylene Column B, Water		54.0067		50.000000	ND	108	70-130	

MSD	Matrix Spike Duplicate	BXS060308A	355325-1		06/10/2008 1631			
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Benzene, Water		59.0558	55.4717	50.000000	ND	118 6.3	70-130 20.0	
Toluene, Water		57.6884	54.0173	50.000000	ND	115 6.6	70-130 20.0	
Ethylbenzene, Water		60.4241	55.4617	50.000000	ND	121 8.6	70-130 20.0	
m,p-Xylene, Water		121.070	113.114	100.000000	ND	121 6.8	70-130 20.0	
o-Xylene, Water		58.9331	54.8266	50.000000	ND	118 7.2	70-130 20.0	
Xylenes (total), Water		180.0031	167.9406	150.000000	0.0000	120 6.9	70-130 20.0	
Total BTEX, Water		357.2998	333.4209	300.000000	0.0000	119 6.9	70-130 20.0	
Tert-Butyl Methyl Ether Column B, Water		52.2327	51.0632	50.000000	ND	104 2.3	70-130 20.0	
Benzene Column B, Water		57.8776	54.9772	50.000000	ND	116 5.1	70-130 20.0	
Toluene Column B, Water		57.8168	54.5469	50.000000	ND	116 5.8	70-130 20.0	
Ethylbenzene Column B, Water		57.9580	54.3438	50.000000	ND	116 6.4	70-130 20.0	
m,p-Xylene Column B, Water		115.181	109.221	100.000000	ND	115 5.3	70-130 20.0	
o-Xylene Column B, Water		56.9046	54.0067	50.000000	ND	114 5.2	70-130 20.0	

Test Method.....: EPA 300.0

Method Description.: Ion Chromatography Analysis

Units.....: mg/L

Batch(s)....: 200312

Analyst...: sur

CCB	Continuing Calibration Blank				06/10/2008 1716			
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Bromide (Br)		0						
Chloride		0						
Fluoride (F)		0						
Nitrogen, Nitrate as N (NO3-N)		0						
Sulfate (SO4)		0						
Nitrogen, Nitrite as N (NO2-N)		0						

## QUALITY CONTROL RESULTS

Job Number.: 355326

Report Date.: 06/18/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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CCB	Continuing Calibration Blank				06/10/2008	2009
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	0							
Chloride	0							
Fluoride (F)	0							
Nitrogen, Nitrate as N (NO3-N)	0							
Sulfate (SO4)	0							
Nitrogen, Nitrite as N (NO2-N)	0							

CCB	Continuing Calibration Blank				06/10/2008	2348
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	0							
Chloride	0.1956							
Fluoride (F)	0							
Nitrogen, Nitrate as N (NO3-N)	0							
Sulfate (SO4)	0							
Nitrogen, Nitrite as N (NO2-N)	0							

CCB	Continuing Calibration Blank				06/11/2008	0240
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	0							
Chloride	0							
Fluoride (F)	0							
Nitrogen, Nitrate as N (NO3-N)	0							
Sulfate (SO4)	0							
Nitrogen, Nitrite as N (NO2-N)	0							

CCB	Continuing Calibration Blank				06/11/2008	0516
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	0							
Chloride	0							
Fluoride (F)	0							
Nitrogen, Nitrate as N (NO3-N)	0							
Sulfate (SO4)	0							
Nitrogen, Nitrite as N (NO2-N)	0							

CCV	Continuing Calibration Verification	WCS49721			06/10/2008	1701
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	20.092		20.00		100.5		90.0-110.0	
Chloride	19.980		20.00		99.9		90.0-110.0	
Fluoride (F)	9.9939		10.00		99.9		90.0-110.0	
Nitrogen, Nitrate as N (NO3-N)	10.450		10.0		104.5		90.0-110.0	
Sulfate (SO4)	19.529		20.00		97.6		90.0-110.0	
Nitrogen, Nitrite as N (NO2-N)	9.8345		10.0		98.3		90.0-110.0	

## QUALITY CONTROL RESULTS

Job Number.: 355326

Report Date.: 06/18/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	WCS49721			06/10/2008	1953
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*
Bromide (Br)	19.943		20.00		99.7	90.0-110.0
Chloride	19.932		20.00		99.7	90.0-110.0
Fluoride (F)	10.044		10.00		100.4	90.0-110.0
Nitrogen, Nitrate as N (NO3-N)	10.453		10.0		104.5	90.0-110.0
Sulfate (SO4)	19.532		20.00		97.7	90.0-110.0
Nitrogen, Nitrite as N (NO2-N)	9.8251		10.0		98.3	90.0-110.0

CCV	Continuing Calibration Verification	WCS49721			06/10/2008	2332
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*
Bromide (Br)	19.964		20.00		99.8	90.0-110.0
Chloride	19.926		20.00		99.6	90.0-110.0
Fluoride (F)	9.9412		10.00		99.4	90.0-110.0
Nitrogen, Nitrate as N (NO3-N)	10.449		10.0		104.5	90.0-110.0
Sulfate (SO4)	19.398		20.00		97.0	90.0-110.0
Nitrogen, Nitrite as N (NO2-N)	9.8329		10.0		98.3	90.0-110.0

CCV	Continuing Calibration Verification	WCS49721			06/11/2008	0224
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*
Bromide (Br)	19.956		20.00		99.8	90.0-110.0
Chloride	19.811		20.00		99.1	90.0-110.0
Fluoride (F)	9.6585		10.00		96.6	90.0-110.0
Nitrogen, Nitrate as N (NO3-N)	10.406		10.0		104.1	90.0-110.0
Sulfate (SO4)	19.352		20.00		96.8	90.0-110.0
Nitrogen, Nitrite as N (NO2-N)	9.7945		10.0		97.9	90.0-110.0

CCV	Continuing Calibration Verification	WCS49721			06/11/2008	0501
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*
Bromide (Br)	19.889		20.00		99.4	90.0-110.0
Chloride	19.799		20.00		99.0	90.0-110.0
Fluoride (F)	9.6325		10.00		96.3	90.0-110.0
Nitrogen, Nitrate as N (NO3-N)	10.446		10.0		104.5	90.0-110.0
Sulfate (SO4)	19.524		20.00		97.6	90.0-110.0
Nitrogen, Nitrite as N (NO2-N)	9.7734		10.0		97.7	90.0-110.0

DU	Method Duplicate		355303-2	10	06/10/2008	2158
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*
Bromide (Br), Water	0			0	0	1
Chloride, Water	3.8915			3.9842	2.4	20
Fluoride (F), Water	0.9210			0.9245	0.0035	0.3000
Nitrogen, Nitrate as N (NO3-N), Water	0			0	0	0
Sulfate (SO4), Water	5.7625			5.8532	1.6	20
Nitrogen, Nitrite as N (NO2-N), Water	0			0	0	0

## QUALITY CONTROL RESULTS

Job Number.: 355326

Report Date.: 06/18/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
DU	Method Duplicate		355325-3	10	06/11/2008	0019
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br), Water	0				0.0435	0.0435
Chloride, Water	7.8773				7.8652	0.2
Fluoride (F), Water	0.1402				0.1405	0.0003
Nitrogen, Nitrate as N (NO3-N), Water	0.3468				0.3431	0.0037
Sulfate (SO4), Water	6.2427				6.2340	0.1
Nitrogen, Nitrite as N (NO2-N), Water	0				0	0

DU	Method Duplicate		355328-1	10	06/11/2008	0342
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br), Water	0				0.0393	0.0393
Chloride, Water	9.0189				9.0594	0.4
Fluoride (F), Water	0.1389				0.1331	0.0058
Nitrogen, Nitrate as N (NO3-N), Water	0.2800				0.2712	0.0088
Sulfate (SO4), Water	6.2792				6.3514	1.1
Nitrogen, Nitrite as N (NO2-N), Water	0				0	0

DU	Method Duplicate		355201-1		06/11/2008	0429
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br), Soil	0				0.0657	0.0657
Chloride, Soil	7.8755				8.0272	1.9
Fluoride (F), Soil	0.7060				0.7115	0.0055
Nitrogen, Nitrate as N (NO3-N), Soil	0.1244				0.1254	0.0010
Sulfate (SO4), Soil	21.627				22.038	1.9
Nitrogen, Nitrite as N (NO2-N), Soil	0				0	0

ICB	Initial Calibration Blank				06/10/2008	1424
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br)	0				0.0657	0.0657
Chloride	0				8.0272	1.9
Fluoride (F)	0				0.7115	0.0055
Nitrogen, Nitrate as N (NO3-N)	0				0.1254	0.0010
Sulfate (SO4)	0				22.038	1.9
Nitrogen, Nitrite as N (NO2-N)	0				0	0

ICV	Initial Calibration Verification	WCS49721			06/10/2008	1409
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br)	19.547			20.00	97.7	90.0-110.0
Chloride	19.512			20.00	97.6	90.0-110.0
Fluoride (F)	10.166			10.00	101.7	90.0-110.0
Nitrogen, Nitrate as N (NO3-N)	10.220			10.0	102.2	90.0-110.0
Sulfate (SO4)	19.049			20.00	95.2	90.0-110.0
Nitrogen, Nitrite as N (NO2-N)	9.6315			10.0	96.3	90.0-110.0

## QUALITY CONTROL RESULTS

Job Number.: 355326

Report Date.: 06/18/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	WCS49721			06/10/2008	1456
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br)	19.943		20.00		99.7	90.0-110.0
Chloride	19.853		20.00		99.3	90.0-110.0
Fluoride (F)	9.8380		10.00		98.4	90.0-110.0
Nitrogen, Nitrate as N (NO3-N)	10.456		10.0		104.6	90.0-110.0
Sulfate (SO4)	19.743		20.00		98.7	90.0-110.0
Nitrogen, Nitrite as N (NO2-N)	9.7861		10.0		97.9	90.0-110.0

LCS	Laboratory Control Sample	WCS49721			06/10/2008	2040
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br)	20.029		20.00		100.1	90.0-110.0
Chloride	19.803		20.00		99.0	90.0-110.0
Fluoride (F)	9.7558		10.00		97.6	90.0-110.0
Nitrogen, Nitrate as N (NO3-N)	10.436		10.0		104.4	90.0-110.0
Sulfate (SO4)	19.550		20.00		97.8	90.0-110.0
Nitrogen, Nitrite as N (NO2-N)	9.7919		10.0		97.9	90.0-110.0

MB	Method Blank				06/10/2008	1440
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br)	0					
Chloride	0					
Fluoride (F)	0					
Nitrogen, Nitrate as N (NO3-N)	0					
Sulfate (SO4)	0					
Nitrogen, Nitrite as N (NO2-N)	0					

MB	Method Blank				06/10/2008	2024
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br)	0					
Chloride	0.2058					
Fluoride (F)	0					
Nitrogen, Nitrate as N (NO3-N)	0					
Sulfate (SO4)	0					
Nitrogen, Nitrite as N (NO2-N)	0					

MS	Matrix Spike	WCS49722	355303-2	10	06/10/2008	2214
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br), Water	9.9491		10.000000	0	99.5	90-110
Chloride, Water	13.894		10.000000	3.9842	99.1	90-110
Fluoride (F), Water	2.7438		2.000000	0.9245	91.0	90-110
Nitrogen, Nitrate as N (NO3-N), Water	1.9776		2.000000	0	98.9	90-110
Sulfate (SO4), Water	15.609		10.000000	5.8532	97.6	90-110
Nitrogen, Nitrite as N (NO2-N), Water	1.8590		2.000000	0	93.0	90-110

## QUALITY CONTROL RESULTS

Job Number.: 355326

Report Date.: 06/18/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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MS	Matrix Spike	WCS49722	355325-3	10	06/11/2008	0035			
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br), Water	9.8120			10.000000	0.0435	97.7		90-110	
Chloride, Water	17.605			10.000000	7.8652	97.4		90-110	
Fluoride (F), Water	1.6113			2.000000	0.1405	73.5		90-110	A
Nitrogen, Nitrate as N (NO3-N), Water	2.2013			2.000000	0.3431	92.9		90-110	
Sulfate (SO4), Water	15.527			10.000000	6.2340	92.9		90-110	
Nitrogen, Nitrite as N (NO2-N), Water	1.8462			2.000000	0	92.3		90-110	

MS	Matrix Spike	WCS49722	355328-1	10	06/11/2008	0358			
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br), Water	9.8510			10.000000	0.0393	98.1		90-110	
Chloride, Water	18.630			10.000000	9.0594	95.7		90-110	
Fluoride (F), Water	1.6153			2.000000	0.1331	74.1		90-110	A
Nitrogen, Nitrate as N (NO3-N), Water	2.1247			2.000000	0.2712	92.7		90-110	
Sulfate (SO4), Water	15.805			10.000000	6.3514	94.5		90-110	
Nitrogen, Nitrite as N (NO2-N), Water	1.8621			2.000000	0	93.1		90-110	

MS	Matrix Spike	WCS49722	355201-1		06/11/2008	0445			
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br), Soil	9.6739			10.000000	0.0657	96.1		90-110	
Chloride, Soil	17.373			10.000000	8.0272	93.5		90-110	
Fluoride (F), Soil	2.7736			2.000000	0.7115	103.1		90-110	
Nitrogen, Nitrate as N (NO3-N), Soil	1.9476			2.000000	0.1254	91.1		90-110	
Sulfate (SO4), Soil	30.073			10.000000	22.038	80.3		90-110	A
Nitrogen, Nitrite as N (NO2-N), Soil	1.8288			2.000000	0	91.4		90-110	

## S U R R O G A T E   R E C O V E R I E S   R E P O R T

Job Number.: 355326

Report Date.: 06/18/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN: Todd Wells

Method.....: GC Volatile Organics  
Batch(s)....: 400272Method Code...: 8021  
Test Matrix...: WaterPrep Batch....:  
Equipment Code: BTEX02

Lab ID	DT	Sample ID	Date	ATFT	ATFTB	BFB	BFBB
LCS			06/10/2008	97.5	99.7	96.5	99.7
MB			06/10/2008	100.8	101.2	100.9	99.1
355325-	1	MS MN-3 6508	06/10/2008	97.1	95.7	97.1	96.3
355325-	1	MSD MN-3 6508	06/10/2008	96.5	95.5	99.0	95.9
355326-	1	RW-2 6508	06/11/2008	111.1	97.1	103.9	95.6

Test	Test Description	Limits
ATFT	a,a,a-Trifluorotoluene	70 - 135
ATFTB	a,a,a-Trifluorotoluene Column B	70 - 135
BFB	BFB (Surrogate)	64 - 136
BFBB	BFB (Surrogate) Column B	64 - 136

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## QUALITY ASSURANCE METHODS

### REFERENCES AND NOTES

Report Date: 06/18/2008

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#### REPORT COMMENTS

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

#### General Information:

- Cresylic Acid is the combination of o,m and p-Cresol. The combination is reported as the final result.
- m-Cresol (3-Methylphenol) and p-Cresol (4-methylphenol) co-elute. The result of the two is reported as either m&p-cresol or as 4-methylphenol (p-cresol).
- m-Xylene and p-Xylene co-elute. The result of the two is reported as m,p-Xylene.
- N-Nitrosodiphenylamine decomposes in the gas chromatograph inlet forming diphenylamine and, consequently, may be detected as diphenylamine.
- Methylene Chloride and Acetone are recognized potential laboratory contaminants. Its presence in the sample up to five times the amount reported in the blank may be attributed to laboratory contamination.
- Trimethylsilyl(Diazomethane) is used to esterify acid herbicides in Method SW-846 8151A.
- For Inorganic analyses, duplicate QC limits are determined as follows: If the sample result is less than or equal to 5 times the reporting limit, the RPD limit is equal to the reporting limit. If the sample result is greater than 5 times the reporting limit, the RPD limit is the method defined RPD.
- For TRRP reports, the header on the column RL is equivalent to a MQL/PQL.
- Results for LCS and MS/MSD recoveries listed in the report are reported as ug/L on-column values which are not corrected for variables such as sample volumes or weights extracted, final volume of extracts and dilutions. To correct QC on-column recoveries to reflect actual spiking volumes for soils, multiply the values reported for Diesel Range Organics and Semivolatiles by 33.3 and Gasoline Range Organics by 20. The 8260 and 1006 results will not require correction. The only correction required for water analysis is for method 1006 where the reported concentration must be multiplied by 0.1.
- Due to limitation of the reporting software, results for the Method blank in the Semivolatile fraction are reported as "0". Which indicates there was no compound detected at the reporting limit for the compound reviewed.
- The dilution factor listed on the report represents only the analytical dilutions necessary for the target compounds to be within the calibration range of the instrument. It does not include any preparation factors, dry weight or any other adjustment.

#### Explanation of Qualifiers:

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

#### Explanation of General QC Outliers:

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

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## QUALITY ASSURANCE METHODS

### REFERENCES AND NOTES

Report Date: 06/18/2008

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

#### Explanation of Organic QC Outliers:

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

#### Explanation of Inorganic QC Outliers:

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

#### Abbreviations:

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

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QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 06/18/2008

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DLFac	- Detection Limit Factor
DU	- Duplicate
EB	- Extraction Blank (TCLP, SPLP, etc.)
ICAL	- Initial Calibration
ICB	- Initial Calibration Blank
ICV	- Initial Calibration Verification
ISA	- Interference Check Sample A - ICP
ISB	- Interference Check Sample B - ICP
LCD	- Laboratory Control Duplicate
LCS	- Laboratory Control Sample
MB	- Method Blank
MD	- Method Duplicate
MDL	- Method Detection Limit
MQL	- Method Quantitation Limit (TRRP)
MS	- Matrix Spike
MSD	- Matrix Spike Duplicate
ND	- Not Detected
PB	- Preparation Blank
PREPF	- Preparation Factor
RL	- Reporting Limit
RPD	- Relative Percent Difference
RRF	- Relative Response Factor
RT	- Retention Time
SQL	- Sample Quantitation Limit (TRRP)
TIC	- Tentatively Identified Compound

Method References:

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

## L A B O R A T O R Y C H R O N I C L E

Job Number: 355326

Date: 06/18/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN: Todd Wells

Lab ID: 355326-1 Client ID: RW-2 6508  
METHOD DESCRIPTION  
SW-846 8021B GC Volatile Organics  
EPA 300.0 Ion Chromatography Analysis

Date Recvd: 06/10/2008 Sample Date: 06/05/2008  
RUN# BATCH# PREP BT #(S) DATE/TIME ANALYZED DILUTION  
1 400272 06/11/2008 0902 10.000  
1 200312 06/11/2008 0255 10

# Chain of Custody Record

TAL-4124 (1007)

Client CRHAddress 2135 S. Loop 250 WestCity MidlandState TXZip Code 79703Project Name and Location (State) #039122 E-State NMContract/Purchase Order/Quote No. 4011413

(Containers for each sample may be combined on one line)

Sample I.D. No. and Description RW-2 6508Date 6/5/08Time 1415Matrix AirAdditives Soil Samples Unknown Poison B Unknown Skin Irritant Flammable Non-Hazard Turn Around Time Required 14 Days 24 Hours 48 Hours 7 Days 21 Days OtherDate 6/9/08Time 16301. Received By T. Hells2. Received By 3. Received By Comments Sample Disposal  Return To Client  Disposal By Lab  Archive For Months (A fee may be assessed if samples are retained longer than 1 month)QC Requirements (Specify)  Non-Hazard Flammable Skin Irritant Poison B Unknown Return To Client Disposal By Lab Archive For Months(A fee may be assessed if samples are retained longer than 1 month)Turn Around Time Required 14 Days 24 Hours 48 Hours 7 Days 21 Days OtherDate 6/10/08Time 19:351. Relinquished By T. Hells2. Relinquished By 3. Relinquished By Comments 

# TestAmerica

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Temperature on Receipt \_\_\_\_\_

Drinking Water? Yes  No 

Project Manager <u>Todd Hells</u>	Date <u>6/9/08</u>	Chain of Custody Number <u>084214</u>																				
Telephone Number (Area Code)/Fax Number <u>(32) 686-0086</u>	Lab Number <u>Houston</u>	Page <u>1</u> of <u>1</u>																				
Site Contact <u>T. Hells</u>	Carrier/Waybill Number <u>Sachin Kudchadkar</u>	Analysis (Attach list if more space is needed)																				
State <u>TX</u>	Zip Code <u>79703</u>	Special Instructions/ Conditions of Receipt																				
<p><u>X</u> Chloride 300</p> <p><u>X</u> BTEX Soluble</p>																						
<table border="1"> <thead> <tr> <th colspan="2">Containers &amp; Preservatives</th> </tr> <tr> <th>Sample</th> <th>Container</th> </tr> </thead> <tbody> <tr> <td><u>1</u></td> <td><u>ZNAOH</u></td> </tr> <tr> <td><u>2</u></td> <td><u>NaOH</u></td> </tr> <tr> <td><u>3</u></td> <td><u>HNO3</u></td> </tr> <tr> <td><u>4</u></td> <td><u>H2SO4</u></td> </tr> <tr> <td><u>5</u></td> <td><u>Uptakes</u></td> </tr> <tr> <td><u>6</u></td> <td><u>Seal</u></td> </tr> <tr> <td><u>7</u></td> <td><u>Aqueous</u></td> </tr> <tr> <td><u>8</u></td> <td><u>Air</u></td> </tr> </tbody> </table>			Containers & Preservatives		Sample	Container	<u>1</u>	<u>ZNAOH</u>	<u>2</u>	<u>NaOH</u>	<u>3</u>	<u>HNO3</u>	<u>4</u>	<u>H2SO4</u>	<u>5</u>	<u>Uptakes</u>	<u>6</u>	<u>Seal</u>	<u>7</u>	<u>Aqueous</u>	<u>8</u>	<u>Air</u>
Containers & Preservatives																						
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<table border="1"> <thead> <tr> <th>Sample I.D. No. and Description</th> <th>Date</th> <th>Time</th> </tr> </thead> <tbody> <tr> <td><u>RW-2 6508</u></td> <td><u>6/5/08</u></td> <td><u>1415</u></td> </tr> </tbody> </table>			Sample I.D. No. and Description	Date	Time	<u>RW-2 6508</u>	<u>6/5/08</u>	<u>1415</u>														
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<u>RW-2 6508</u>	<u>6/5/08</u>	<u>1415</u>																				
<p>(Containers for each sample may be combined on one line)</p>																						
<p>Comments</p>																						

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

#35534

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#039122  
CEMC  
F-State

Lea County, NM

## ANALYTICAL REPORT

JOB NUMBER: 355328  
Project ID: F STATE NM 039122

Prepared For:

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

Attention: Todd Wells

Date: 06/25/2008



Signature

06/25/08

Date

Name: Sachin G. Kudchadkar  
Title: Project Manager III  
E-Mail: sachin.kudchadkar@testamericainc.com

TestAmerica Laboratories, Inc  
6310 Rothway Drive  
Houston, TX 77040

PHONE: 713-690-4444

TOTAL NO. OF PAGES 11

S A M P L E   I N F O R M A T I O N  
Date: 06/25/2008

Job Number.: 355328  
Customer....: Conestoga-Rovers and Associates  
Attn.....: Todd Wells

Project Number.....: 99007835  
Customer Project ID....: F STATE NM 039122  
Project Description....: Analytical

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
355328-1	RW-3 6508	Water	06/05/2008	15:05	06/10/2008	09:35

L A B O R A T O R Y      T E S T      R E S U L T S							Date: 06/25/2008				
C U S T O M E R :		P R O J E C T :		A T T N :							
Customer Sample ID:	RW-3	Laboratory Sample ID:	355328-1								
Date Sampled.....:	06/05/2008	Date Received.....:	06/10/2008								
Time Sampled.....:	15:05	Time Received.....:	09:35								
Sample Matrix.....:	Water										
T E S T   M E T H O D	P A R A M E T E R / T E S T   D E S C R I P T I O N	S A M P L E   R E S U L T	Q   F L A G S	M D L	R L	D I L U T I O N	U N I T S	B A T C H	D T	D A T E / T I M E	T E C H
SN-846 8021B	GC Volatile Organics	3.7	U	3.7	10.0	10.000	ug/L	400275		06/11/08	1656
	Benzene, Water	3.9	U	3.9	10.0	10.000	ug/L	400275		06/11/08	1656
	Toluene, Water	4.2	U	4.2	10.0	10.000	ug/L	400275		06/11/08	1656
	Ethylbenzene, Water	12.9	U	3.5	30.0	10.000	ug/L	400275		06/11/08	1656
	Xylenes (total), Water										
EPA 300.0	Ion Chromatography Analysis	90.6		1.5	5.0	10	ng/L	200312		06/11/08	0327
	Chloride, Water										

\* In Description = Dry Wgt.

## QUALITY CONTROL RESULTS

Job Number.: 355328

Report Date.: 06/25/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN: Todd Wells

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
---------	-------------	------------	--------	-----------------	------	------

Test Method.....: SW-846 8021B  
Method Description.: GC Volatile OrganicsUnits.....: ug/L  
Batch(s)....: 400275

Analyst...: mht

LCS	Laboratory Control Sample	BXS060308B				06/11/2008	1616
Parameter/Test Description QC Result QC Result True Value Orig. Value Calc. Result * Limits F							
Benzene, Water	51.8903		50.000000		103.8	72-134	
Toluene, Water	49.7478		50.000000		99.5	76-131	
Ethylbenzene, Water	46.5604		50.000000		93.1	75-131	
m,p-Xylene, Water	99.9842		100.000000		100.0	75-130	
o-Xylene, Water	49.3855		50.000000		98.8	74-129	
Xylenes (total), Water	149.370		150.000000		99.6	70-130	
Tert-Butyl Methyl Ether Column B, Water	43.1904		50.000000		86.4	76-123	
Benzene Column B, Water	49.5873		50.000000		99.2	72-134	
Toluene Column B, Water	49.2154		50.000000		98.4	76-131	
Ethylbenzene Column B, Water	48.1761		50.000000		96.4	75-131	
m,p-Xylene Column B, Water	99.1782		100.000000		99.2	75-130	
o-Xylene Column B, Water	49.0803		50.000000		98.2	74-129	

MB	Method Blank					06/11/2008	1636
Parameter/Test Description QC Result QC Result True Value Orig. Value Calc. Result * Limits F							
Benzene, Water	ND						
Toluene, Water	ND						
Ethylbenzene, Water	ND						
m,p-Xylene, Water	ND						
o-Xylene, Water	ND						
Xylenes (total), Water	ND						
Tert-Butyl Methyl Ether Column B, Water	ND						
Benzene Column B, Water	ND						
Toluene Column B, Water	ND						
Ethylbenzene Column B, Water	ND						
m,p-Xylene Column B, Water	ND						
o-Xylene Column B, Water	ND						

MS	Matrix Spike	BXS060308A	355328-1	10.000		06/11/2008	1857
Parameter/Test Description QC Result QC Result True Value Orig. Value Calc. Result * Limits F							
Benzene, Water	54.6798		50.000000	ND	109	70-130	
Toluene, Water	53.2574		50.000000	ND	107	70-130	
Ethylbenzene, Water	45.6111		50.000000	ND	91	70-130	
m,p-Xylene, Water	106.830		100.000000	1.29407	106	70-130	
o-Xylene, Water	51.0168		50.000000	ND	102	70-130	
Xylenes (total), Water	157.846		150.000000	1.29407	104	70-130	
Benzene Column B, Water	51.4058		50.000000	ND	103	70-130	
Toluene Column B, Water	51.0677		50.000000	ND	102	70-130	
Ethylbenzene Column B, Water	49.9320		50.000000	ND	100	70-130	
m,p-Xylene Column B, Water	98.9509		100.000000	0.68723	98	70-130	
o-Xylene Column B, Water	50.4224		50.000000	ND	101	70-130	

## QUALITY CONTROL RESULTS

Job Number.: 355328

Report Date.: 06/25/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MSD	Matrix Spike Duplicate	BXS060308A	355328-1	10.000	06/11/2008	1917
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*
Benzene, Water	51.2580	54.6798	50.000000	ND	103	70-130
Toluene, Water	49.0201	53.2574	50.000000	ND	98	20.0
Ethylbenzene, Water	45.7610	45.6111	50.000000	ND	92	70-130
m,p-Xylene, Water	98.9852	106.830	100.000000	1.29407	98	20.0
o-Xylene, Water	48.8750	51.0168	50.000000	ND	98	70-130
Xylenes (total), Water	147.860	157.846	150.000000	1.29407	98	20.0
Benzene Column B, Water	48.3778	51.4058	50.000000	ND	97	70-130
Toluene Column B, Water	47.6423	51.0677	50.000000	ND	95	20.0
Ethylbenzene Column B, Water	47.0909	49.9320	50.000000	ND	94	70-130
m,p-Xylene Column B, Water	93.3735	98.9509	100.000000	0.68723	93	20.0
o-Xylene Column B, Water	47.7621	50.4224	50.000000	ND	96	70-130
					5.4	20.0

Test Method.....: EPA 300.0

Method Description.: Ion Chromatography Analysis

Units.....: mg/L

Batch(s)....: 200312

Analyst...: sur

CCB	Continuing Calibration Blank					06/10/2008	1716	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	0							
Chloride	0							
Fluoride (F)	0							
Nitrogen, Nitrate as N (NO3-N)	0							
Sulfate (SO4)	0							
Nitrogen, Nitrite as N (NO2-N)	0							

CCB	Continuing Calibration Blank					06/10/2008	2009	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	0							
Chloride	0							
Fluoride (F)	0							
Nitrogen, Nitrate as N (NO3-N)	0							
Sulfate (SO4)	0							
Nitrogen, Nitrite as N (NO2-N)	0							

## QUALITY CONTROL RESULTS

Job Number.: 355328

Report Date.: 06/25/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
---------	-------------	------------	--------	-----------------	------	------

CCB	Continuing Calibration Blank				06/10/2008	2348
-----	------------------------------	--	--	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	0							
Chloride	0.1956							
Fluoride (F)	0							
Nitrogen, Nitrate as N (NO3-N)	0							
Sulfate (SO4)	0							
Nitrogen, Nitrite as N (NO2-N)	0							

CCB	Continuing Calibration Blank				06/11/2008	0240
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	0							
Chloride	0							
Fluoride (F)	0							
Nitrogen, Nitrate as N (NO3-N)	0							
Sulfate (SO4)	0							
Nitrogen, Nitrite as N (NO2-N)	0							

CCB	Continuing Calibration Blank				06/11/2008	0516
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	0							
Chloride	0							
Fluoride (F)	0							
Nitrogen, Nitrate as N (NO3-N)	0							
Sulfate (SO4)	0							
Nitrogen, Nitrite as N (NO2-N)	0							

CCV	Continuing Calibration Verification	WCS49721			06/10/2008	1701
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	20.092		20.00		100.5		90.0-110.0	
Chloride	19.980		20.00		99.9		90.0-110.0	
Fluoride (F)	9.9939		10.00		99.9		90.0-110.0	
Nitrogen, Nitrate as N (NO3-N)	10.450		10.0		104.5		90.0-110.0	
Sulfate (SO4)	19.529		20.00		97.6		90.0-110.0	
Nitrogen, Nitrite as N (NO2-N)	9.8345		10.0		98.3		90.0-110.0	

CCV	Continuing Calibration Verification	WCS49721			06/10/2008	1953
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	19.943		20.00		99.7		90.0-110.0	
Chloride	19.932		20.00		99.7		90.0-110.0	
Fluoride (F)	10.044		10.00		100.4		90.0-110.0	
Nitrogen, Nitrate as N (NO3-N)	10.453		10.0		104.5		90.0-110.0	
Sulfate (SO4)	19.532		20.00		97.7		90.0-110.0	
Nitrogen, Nitrite as N (NO2-N)	9.8251		10.0		98.3		90.0-110.0	

## QUALITY CONTROL RESULTS

Job Number.: 355328

Report Date.: 06/25/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	WCS49721			06/10/2008	2332
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*
Bromide (Br)	19.964		20.00		99.8	90.0-110.0
Chloride	19.926		20.00		99.6	90.0-110.0
Fluoride (F)	9.9412		10.00		99.4	90.0-110.0
Nitrogen, Nitrate as N (NO3-N)	10.449		10.0		104.5	90.0-110.0
Sulfate (SO4)	19.398		20.00		97.0	90.0-110.0
Nitrogen, Nitrite as N (NO2-N)	9.8329		10.0		98.3	90.0-110.0

CCV	Continuing Calibration Verification	WCS49721			06/11/2008	0224
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*
Bromide (Br)	19.956		20.00		99.8	90.0-110.0
Chloride	19.811		20.00		99.1	90.0-110.0
Fluoride (F)	9.6585		10.00		96.6	90.0-110.0
Nitrogen, Nitrate as N (NO3-N)	10.406		10.0		104.1	90.0-110.0
Sulfate (SO4)	19.352		20.00		96.8	90.0-110.0
Nitrogen, Nitrite as N (NO2-N)	9.7945		10.0		97.9	90.0-110.0

CCV	Continuing Calibration Verification	WCS49721			06/11/2008	0501
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*
Bromide (Br)	19.889		20.00		99.4	90.0-110.0
Chloride	19.799		20.00		99.0	90.0-110.0
Fluoride (F)	9.6325		10.00		96.3	90.0-110.0
Nitrogen, Nitrate as N (NO3-N)	10.446		10.0		104.5	90.0-110.0
Sulfate (SO4)	19.524		20.00		97.6	90.0-110.0
Nitrogen, Nitrite as N (NO2-N)	9.7734		10.0		97.7	90.0-110.0

DU	Method Duplicate		355303-2	10	06/10/2008	2158
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*
Bromide (Br), Water	0			0	0	1
Chloride, Water	3.8915			3.9842	2.4	20
Fluoride (F), Water	0.9210			0.9245	0.0035	0.3000
Nitrogen, Nitrate as N (NO3-N), Water	0			0	0	0
Sulfate (SO4), Water	5.7625			5.8532	1.6	20
Nitrogen, Nitrite as N (NO2-N), Water	0			0	0	0

DU	Method Duplicate		355325-3	10	06/11/2008	0019
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*
Bromide (Br), Water	0			0.0435	0.0435	0.6000
Chloride, Water	7.8773			7.8652	0.2	20
Fluoride (F), Water	0.1402			0.1405	0.0003	0.3000
Nitrogen, Nitrate as N (NO3-N), Water	0.3468			0.3431	0.0037	0.2500
Sulfate (SO4), Water	6.2427			6.2340	0.1	20
Nitrogen, Nitrite as N (NO2-N), Water	0			0	0	0

## QUALITY CONTROL RESULTS

Job Number.: 355328

Report Date.: 06/25/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
DU	Method Duplicate		355328-1	10	06/11/2008	0342
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br), Water	0				0.0393	0.0393
Chloride, Water	9.0189				9.0594	0.4
Fluoride (F), Water	0.1389				0.1331	0.0058
Nitrogen, Nitrate as N (NO3-N), Water	0.2800				0.2712	0.0088
Sulfate (SO4), Water	6.2792				6.3514	1.1
Nitrogen, Nitrite as N (NO2-N), Water	0				0	0

DU	Method Duplicate		355201-1		06/11/2008	0429
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br), Soil	0				0.0657	0.0657
Chloride, Soil	7.8755				8.0272	1.9
Fluoride (F), Soil	0.7060				0.7115	0.0055
Nitrogen, Nitrate as N (NO3-N), Soil	0.1244				0.1254	0.0010
Sulfate (SO4), Soil	21.627				22.038	1.9
Nitrogen, Nitrite as N (NO2-N), Soil	0				0	0

ICB	Initial Calibration Blank				06/10/2008	1424
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br)	0					
Chloride	0					
Fluoride (F)	0					
Nitrogen, Nitrate as N (NO3-N)	0					
Sulfate (SO4)	0					
Nitrogen, Nitrite as N (NO2-N)	0					

ICV	Initial Calibration Verification	WCS49721			06/10/2008	1409
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br)	19.547			20.00	97.7	90.0-110.0
Chloride	19.512			20.00	97.6	90.0-110.0
Fluoride (F)	10.166			10.00	101.7	90.0-110.0
Nitrogen, Nitrate as N (NO3-N)	10.220			10.0	102.2	90.0-110.0
Sulfate (SO4)	19.049			20.00	95.2	90.0-110.0
Nitrogen, Nitrite as N (NO2-N)	9.6315			10.0	96.3	90.0-110.0

ICS	Laboratory Control Sample	WCS49721			06/10/2008	1456
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br)	19.943			20.00	99.7	90.0-110.0
Chloride	19.853			20.00	99.3	90.0-110.0
Fluoride (F)	9.8380			10.00	98.4	90.0-110.0
Nitrogen, Nitrate as N (NO3-N)	10.456			10.0	104.6	90.0-110.0
Sulfate (SO4)	19.743			20.00	98.7	90.0-110.0
Nitrogen, Nitrite as N (NO2-N)	9.7861			10.0	97.9	90.0-110.0

## QUALITY CONTROL RESULTS

Job Number.: 355328

Report Date.: 06/25/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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LCS	Laboratory Control Sample	WCS49721			06/10/2008	2040
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	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br)	20.029			20.00		100.1
Chloride	19.803			20.00		99.0
Fluoride (F)	9.7558			10.00		97.6
Nitrogen, Nitrate as N (NO3-N)	10.436			10.0		104.4
Sulfate (SO4)	19.550			20.00		97.8
Nitrogen, Nitrite as N (NO2-N)	9.7919			10.0		97.9

MB	Method Blank				06/10/2008	1440
<hr/>						
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br)	0					
Chloride	0					
Fluoride (F)	0					
Nitrogen, Nitrate as N (NO3-N)	0					
Sulfate (SO4)	0					
Nitrogen, Nitrite as N (NO2-N)	0					

MB	Method Blank				06/10/2008	2024
<hr/>						
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br)	0					
Chloride	0.2058					
Fluoride (F)	0					
Nitrogen, Nitrate as N (NO3-N)	0					
Sulfate (SO4)	0					
Nitrogen, Nitrite as N (NO2-N)	0					

MS	Matrix Spike	WCS49722	355303-2	10	06/10/2008	2214
<hr/>						
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br), Water	9.9491			10.000000	0	99.5
Chloride, Water	13.894			10.000000	3.9842	99.1
Fluoride (F), Water	2.7438			2.000000	0.9245	91.0
Nitrogen, Nitrate as N (NO3-N), Water	1.9776			2.000000	0	98.9
Sulfate (SO4), Water	15.609			10.000000	5.8532	97.6
Nitrogen, Nitrite as N (NO2-N), Water	1.8590			2.000000	0	93.0

MS	Matrix Spike	WCS49722	355325-3	10	06/11/2008	0035
<hr/>						
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br), Water	9.8120			10.000000	0.0435	97.7
Chloride, Water	17.605			10.000000	7.8652	97.4
Fluoride (F), Water	1.6113			2.000000	0.1405	73.5
Nitrogen, Nitrate as N (NO3-N), Water	2.2013			2.000000	0.3431	92.9
Sulfate (SO4), Water	15.527			10.000000	6.2340	92.9
Nitrogen, Nitrite as N (NO2-N), Water	1.8462			2.000000	0	92.3

## QUALITY CONTROL RESULTS

Job Number.: 355328

Report Date.: 06/25/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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MS	Matrix Spike	WCS49722	355328-1	10	06/11/2008	0358			
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br), Water	9.8510			10.000000	0.0393	98.1		90-110	
Chloride, Water	18.630			10.000000	9.0594	95.7		90-110	
Fluoride (F), Water	1.6153			2.000000	0.1331	74.1		90-110	A
Nitrogen, Nitrate as N (NO3-N), Water	2.1247			2.000000	0.2712	92.7		90-110	
Sulfate (SO4), Water	15.805			10.000000	6.3514	94.5		90-110	
Nitrogen, Nitrite as N (NO2-N), Water	1.8621			2.000000	0	93.1		90-110	

MS	Matrix Spike	WCS49722	355201-1		06/11/2008	0445			
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br), Soil	9.6739			10.000000	0.0657	96.1		90-110	
Chloride, Soil	17.373			10.000000	8.0272	93.5		90-110	
Fluoride (F), Soil	2.7736			2.000000	0.7115	103.1		90-110	
Nitrogen, Nitrate as N (NO3-N), Soil	1.9476			2.000000	0.1254	91.1		90-110	
Sulfate (SO4), Soil	30.073			10.000000	22.038	80.3		90-110	A
Nitrogen, Nitrite as N (NO2-N), Soil	1.8288			2.000000	0	91.4		90-110	

## S U R R O G A T E   R E C O V E R I E S   R E P O R T

Job Number.: 355328

Report Date.: 06/25/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN: Todd Wells

Method.....: GC Volatile Organics  
Batch(s).....: 400275Method Code....: 8021  
Test Matrix....: WaterPrep Batch....:  
Equipment Code: BTEX02

Lab ID	DT	Sample ID	Date	ATFT	ATFTB	BFB	BFBB
LCS			06/11/2008	99.4	99.2	92.9	93.9
MB			06/11/2008	101.4	100.1	97.8	93.4
355328-	1	RW-3 6508	06/11/2008	105.8	98.5	96.8	97.7
355328-	1 MS	RW-3 6508	06/11/2008	100.0	95.0	95.7	94.4
355328-	1 MSD	RW-3 6508	06/11/2008	100.1	95.2	99.1	92.1

Test	Test Description	Limits
ATFT	a,a,a-Trifluorotoluene	70 - 135
ATFTB	a,a,a-Trifluorotoluene Column B	70 - 135
BFB	BFB (Surrogate)	64 - 136
BFBB	BFB (Surrogate) Column B	64 - 136

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## QUALITY ASSURANCE METHODS

### REFERENCES AND NOTES

Report Date: 06/25/2008

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#### REPORT COMMENTS

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

#### General Information:

- Cresylic Acid is the combination of o,m and p-Cresol. The combination is reported as the final result.
- m-Cresol (3-Methylphenol) and p-Cresol (4-methylphenol) co-elute. The result of the two is reported as either m&p-cresol or as 4-methylphenol (p-cresol).
- m-Xylene and p-Xylene co-elute. The result of the two is reported as m,p-Xylene.
- N-Nitrosodiphenylamine decomposes in the gas chromatograph inlet forming diphenylamine and, consequently, may be detected as diphenylamine.
- Methylene Chloride and Acetone are recognized potential laboratory contaminants. Its presence in the sample up to five times the amount reported in the blank may be attributed to laboratory contamination.
- Trimethylsilyl(Diazomethane) is used to esterify acid herbicides in Method SW-846 8151A.
- For Inorganic analyses, duplicate QC limits are determined as follows: If the sample result is less than or equal to 5 times the reporting limit, the RPD limit is equal to the reporting limit. If the sample result is greater than 5 times the reporting limit, the RPD limit is the method defined RPD.
- For TRRP reports, the header on the column RL is equivalent to a MQL/PQL.
- Results for LCS and MS/MSD recoveries listed in the report are reported as ug/L on-column values which are not corrected for variables such as sample volumes or weights extracted, final volume of extracts and dilutions. To correct QC on-column recoveries to reflect actual spiking volumes for soils, multiply the values reported for Diesel Range Organics and Semivolatiles by 33.3 and Gasoline Range Organics by 20. The 8260 and 1006 results will not require correction. The only correction required for water analysis is for method 1006 where the reported concentration must be multiplied by 0.1.
- Due to limitation of the reporting software, results for the Method blank in the Semivolatile fraction are reported as "0". Which indicates there was no compound detected at the reporting limit for the compound reviewed.
- The dilution factor listed on the report represents only the analytical dilutions necessary for the target compounds to be within the calibration range of the instrument. It does not include any preparation factors, dry weight or any other adjustment.

#### Explanation of Qualifiers:

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

#### Explanation of General QC Outliers:

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

### REFERENCES AND NOTES

Report Date: 06/25/2008

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

#### Explanation of Organic QC Outliers:

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

#### Explanation of Inorganic QC Outliers:

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

#### Abbreviations:

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

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QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 06/25/2008

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DLFac	- Detection Limit Factor
DU	- Duplicate
EB	- Extraction Blank (TCLP, SPLP, etc.)
ICAL	- Initial Calibration
ICB	- Initial Calibration Blank
ICV	- Initial Calibration Verification
ISA	- Interference Check Sample A - ICP
ISB	- Interference Check Sample B - ICP
LCD	- Laboratory Control Duplicate
LCS	- Laboratory Control Sample
MB	- Method Blank
MD	- Method Duplicate
MDL	- Method Detection Limit
MQL	- Method Quantitation Limit (TRRP)
MS	- Matrix Spike
MSD	- Matrix Spike Duplicate
ND	- Not Detected
PB	- Preparation Blank
PREPF	- Preparation Factor
RL	- Reporting Limit
RPD	- Relative Percent Difference
RRF	- Relative Response Factor
RT	- Retention Time
SQL	- Sample Quantitation Limit (TRRP)
TIC	- Tentatively Identified Compound

Method References:

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

## L A B O R A T O R Y C H R O N I C L E

Job Number: 355328

Date: 06/25/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: F STATE NM 039122

ATTN: Todd Wells

Lab ID: 355328-1 Client ID: RW-3 6508  
METHOD DESCRIPTION  
SW-846 8021B GC Volatile Organics  
EPA 300.0 Ion Chromatography Analysis

Date Recvd: 06/10/2008 Sample Date: 06/05/2008  
RUN# BATCH# PREP BT #(S) DATE/TIME ANALYZED DILUTION  
1 400275 06/11/2008 1656 10.000  
1 200312 06/11/2008 0327 10

# Chain of Custody Record

# TestAmerica

Temperature on Receipt \_\_\_\_\_

Drinking Water? Yes  No

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

Client	Project Manager		Date	6/9/08	Chain of Custody Number	084215
Address	Telephone Number (Area Code)/Fax Number		Lab Number	Houston	Page	1 of 1
City	State	Zip Code	Site Contact	Lab Contact	Analysis (Attach list if more space is needed)	
Midland	TX	79703	T. Wells	Sachin Kudchaker		
Project Name and Location (State)			Carrier/Waybill Number		Special Instructions/ Conditions of Receipt	
#039122 E-State MM						
Contract/Purchase Order/Quote No.			Matrix		Containers & Preservatives	
4011413			Date	Time	4 <sup>th</sup>	TCF
Sample I.D. No. and Description (Containers for each sample may be combined on one line)			4 <sup>th</sup>	Time	5 <sup>th</sup>	X
RH-3 6508			6/5/08	1505	6 <sup>th</sup>	X
(Containers for each sample may be combined on one line)			6 <sup>th</sup>	Time	7 <sup>th</sup>	
RH-3 6508			6/5/08	1505	8 <sup>th</sup>	
					9 <sup>th</sup>	
					10 <sup>th</sup>	
					11 <sup>th</sup>	
					12 <sup>th</sup>	
					13 <sup>th</sup>	
					14 <sup>th</sup>	
					15 <sup>th</sup>	
					16 <sup>th</sup>	
					17 <sup>th</sup>	
					18 <sup>th</sup>	
					19 <sup>th</sup>	
					20 <sup>th</sup>	
					21 <sup>st</sup>	
					22 <sup>nd</sup>	
					23 <sup>rd</sup>	
					24 <sup>th</sup>	
					25 <sup>th</sup>	
					26 <sup>th</sup>	
					27 <sup>th</sup>	
					28 <sup>th</sup>	
					29 <sup>th</sup>	
					30 <sup>th</sup>	
					31 <sup>st</sup>	
Possible Hazard Identification						
<input checked="" type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Poison B	<input type="checkbox"/> Unknown	<input type="checkbox"/> Return To Client	<input type="checkbox"/> Disposal By Lab
<input type="checkbox"/> 24 Hours	<input type="checkbox"/> 48 Hours	<input type="checkbox"/> 7 Days	<input checked="" type="checkbox"/> 14 Days	<input type="checkbox"/> 21 Days	<input type="checkbox"/> Other	<input type="checkbox"/> Archive For
Turn Around Time Required						
1. Relinquished By		Date	Time	1. Received By	Date	Time
<i>T. Wells</i>		6/9/08	1630	<i>J. J. C.</i>	6/10/08	9:35
2. Relinquished By		Date	Time	2. Received By	Date	Time
3. Relinquished By		Date	Time	3. Received By	Date	Time
Comments						

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

Job Number: 600-1097-1

Job Description: F State Lea County NM

For:  
Conestoga-Rovers & Associates, Inc.  
2135 South Loop 250 West  
Midland, TX 79703

Attention: Mr. Todd Weels



Approved for release.  
Sachin G Kudchadkar  
Project Manager II  
10/20/2008 3:19 PM

---

Sachin G Kudchadkar  
Project Manager II  
sachin.kudchadkar@testamericainc.com  
10/20/2008

The test results in this report meet all NELAP requirements unless specified within the case narrative. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Project Manager.

TestAmerica Houston Certifications and Approvals: TX NELAP T104704223-06-TX, ARDEQ 88-0759, LADEQ 01967, OKDEQ 9503, UT DOH GULF

TestAmerica Laboratories, Inc.

TestAmerica Houston 6310 Rothway Street, Houston, TX 77040  
Tel (713) 690-4444 Fax (713) 690-5646 [www.testamericainc.com](http://www.testamericainc.com)





## **EXECUTIVE SUMMARY - Detections**

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 600-1097-1

<b>Lab Sample ID Analyte</b>	<b>Client Sample ID</b>	<b>Result / Qualifier</b>	<b>Reporting Limit</b>	<b>Units</b>	<b>Method</b>
600-1097-1 Chloride	MW-6	130	4.0	mg/L	300.0

## METHOD SUMMARY

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 600-1097-1

Description	Lab Location	Method	Preparation Method
Matrix Water			
Volatile Organic Compounds (GC) Purge and Trap	TAL HOU	SW846 8021B	SW846 5030B
Anions, Ion Chromatography	TAL HOU	MCAWW 300.0	

### Lab References:

TAL HOU = TestAmerica Houston

### Method References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

## **METHOD / ANALYST SUMMARY**

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 600-1097-1

<b>Method</b>	<b>Analyst</b>	<b>Analyst ID</b>
SW846 8021B	Tobias, Merlin H	MHT
MCAWW 300.0	Puranik, Surendra U	SUP

## SAMPLE SUMMARY

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 600-1097-1

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Client Matrix</b>	<b>Date/Time Sampled</b>	<b>Date/Time Received</b>
600-1097-1	MW-6	Water	09/04/2008 1045	09/05/2008 0950

# **SAMPLE RESULTS**

Mr. Todd Weels  
Conestoga-Rovers & Associates, Inc.  
2135 South Loop 250 West  
Midland, TX 79703

Job Number: 600-1097-1

**Client Sample ID: MW-6**  
**Lab Sample ID: 600-1097-1**

Date Sampled: 09/04/2008 1045  
Date Received: 09/05/2008 0950  
Client Matrix: Water

Analyte	Result/Qualifier		Unit	MDL	RL	Dilution
<b>Method: 8021B</b>				Date Analyzed:	09/10/2008 1107	
<b>Prep Method: 5030B</b>				Date Prepared:	09/10/2008 1107	
Benzene	0.37	U	ug/L	0.37	1.0	1.0
Toluene	0.39	U	ug/L	0.39	1.0	1.0
Ethylbenzene	0.42	U	ug/L	0.42	1.0	1.0
Xylenes, Total	0.35	U	ug/L	0.35	1.0	1.0
Surrogate					Acceptance Limits	
4-Bromofluorobenzene	101		%		64 - 136	
a,a,a-Trifluorotoluene	107		%		70 - 135	
<b>Method: 300.0</b>				Date Analyzed:	09/08/2008 2302	
Chloride	130		mg/L	0.92	4.0	10

## **DATA REPORTING QUALIFIERS**

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 600-1097-1

<b>Lab Section</b>	<b>Qualifier</b>	<b>Description</b>
GC VOA	U	Indicates the analyte was analyzed for but not detected.
General Chemistry	U	Indicates the analyte was analyzed for but not detected.

# **QUALITY CONTROL RESULTS**

## Quality Control Results

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 600-1097-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
---------------	------------------	--------------	---------------	--------	------------

#### GC VOA

##### Analysis Batch:600-3100

LCS 600-3100/1	Lab Control Spike	T	Water	8021B
MB 600-3100/2	Method Blank	T	Water	8021B
600-1097-1	MW-6	T	Water	8021B

#### Report Basis

T = Total

### General Chemistry

##### Analysis Batch:600-2723

LCS 600-2723/4	Lab Control Spike	T	Water	300.0
MB 600-2723/3	Method Blank	T	Water	300.0
600-1097-1	MW-6	T	Water	300.0
600-1097-1DU	Duplicate	T	Water	300.0
600-1097-1MS	Matrix Spike	T	Water	300.0

#### Report Basis

T = Total

## **Quality Control Results**

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 600-1097-1

### **Surrogate Recovery Report**

#### **8021B Volatile Organic Compounds (GC)**

##### **Client Matrix: Water**

Lab Sample ID	Client Sample ID	BFB1 %Rec	TFT1 %Rec
600-1097-1	MW-6	101	107
MB 600-3100/2		101	106
LCS 600-3100/1		98	102

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene	64-136
TFT = a,a,a-Trifluorotoluene	70-135

## Quality Control Results

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 600-1097-1

### Method Blank - Batch: 600-3100

**Method: 8021B**  
**Preparation: 5030B**

Lab Sample ID: MB 600-3100/2  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 09/09/2008 2241  
Date Prepared: 09/09/2008 2241

Analysis Batch: 600-3100  
Prep Batch: N/A  
Units: ug/L

Instrument ID: GCVOA-02  
Lab File ID: A090808\_061.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL  
Injection Volume:  
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
Benzene	0.37	U	0.37	1.0
Benzene	0.37	U	0.37	1.0
Toluene	0.39	U	0.39	1.0
Toluene	0.39	U	0.39	1.0
Ethylbenzene	0.42	U	0.42	1.0
Ethylbenzene	0.42	U	0.42	1.0
Xylenes, Total	0.35	U	0.35	1.0
Xylenes, Total	0.35	U	0.35	1.0
Surrogate	% Rec		Acceptance Limits	
4-Bromofluorobenzene	101		64 - 136	
a,a,a-Trifluorotoluene	106		70 - 135	

### Lab Control Spike - Batch: 600-3100

**Method: 8021B**  
**Preparation: 5030B**

Lab Sample ID: LCS 600-3100/1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 09/09/2008 2220  
Date Prepared: 09/09/2008 2220

Analysis Batch: 600-3100  
Prep Batch: N/A  
Units: ug/L

Instrument ID: GCVOA-02  
Lab File ID: B090808\_060.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL  
Injection Volume:  
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	50.0	44.9	90	72 - 134	
Benzene	50.0	47.4	95	72 - 134	
Toluene	50.0	45.2	90	76 - 131	
Toluene	50.0	45.6	91	76 - 131	
Ethylbenzene	50.0	46.0	92	75 - 131	
Ethylbenzene	50.0	47.5	95	75 - 131	
Surrogate	% Rec		Acceptance Limits		
4-Bromofluorobenzene	98		64 - 136		
a,a,a-Trifluorotoluene	102		70 - 135		

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 600-1097-1

### Method Blank - Batch: 600-2723

**Method: 300.0**

**Preparation: N/A**

Lab Sample ID: MB 600-2723/3

Analysis Batch: 600-2723

Instrument ID: WC06 IC

Client Matrix: Water

Prep Batch: N/A

Lab File ID: C:\PEAKNET\DATA\09080

Dilution: 1.0

Units: mg/L

Initial Weight/Volume:

Date Analyzed: 09/08/2008 1308

Final Weight/Volume: 5 mL

Date Prepared: N/A

Analyte	Result	Qual	MDL	RL
Chloride	0.092	U	0.092	0.40

### Lab Control Spike - Batch: 600-2723

**Method: 300.0**

**Preparation: N/A**

Lab Sample ID: LCS 600-2723/4

Analysis Batch: 600-2723

Instrument ID: WC06 IC

Client Matrix: Water

Prep Batch: N/A

Lab File ID: C:\PEAKNET\DATA\09080

Dilution: 1.0

Units: mg/L

Initial Weight/Volume:

Date Analyzed: 09/08/2008 1324

Final Weight/Volume: 5 mL

Date Prepared: N/A

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	20.0	20.2	101	90 - 110	

### Matrix Spike - Batch: 600-2723

**Method: 300.0**

**Preparation: N/A**

Lab Sample ID: 600-1097-1

Analysis Batch: 600-2723

Instrument ID: WC06 IC

Client Matrix: Water

Prep Batch: N/A

Lab File ID: C:\PEAKNET\DATA\09080

Dilution: 10

Units: mg/L

Initial Weight/Volume:

Date Analyzed: 09/08/2008 2333

Final Weight/Volume: 5 mL

Date Prepared: N/A

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	130	100	229	98	90 - 110	

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 600-1097-1

### Duplicate - Batch: 600-2723

**Method: 300.0**

**Preparation: N/A**

Lab Sample ID: 600-1097-1

Analysis Batch: 600-2723

Instrument ID: WC06 IC

Client Matrix: Water

Prep Batch: N/A

Lab File ID: C:\PEAKNET\DATA\09080

Dilution: 10

Units: mg/L

Initial Weight/Volume:

Date Analyzed: 09/08/2008 2318

Final Weight/Volume: 5 mL

Date Prepared: N/A

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Chloride	130	127	3	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Login Sample Receipt Check List

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 600-1097-1

**Login Number: 1097**

**List Source: TestAmerica Houston**

**Creator: Trenery, Michael J**

**List Number: 1**

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

# Chain of Custody Record

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Temperature on Receipt \_\_\_\_\_

Drinking Water? Yes  No

TAL-4124 (1997)

Client <i>CRA</i>	Project Manager <i>Todd Wells</i>	Date 9-4-08	Chain of Custody Number <b>070841</b>
Address <i>2135 S Loop 250 West</i>	Telephone Number (Area Code)/Fax Number <i>432-696-0086 / 432-686-0186</i>	Lab Number <i>Houston</i>	Page <i>1</i> of <i>1</i>
City <i>Minden</i>	State <i>TX</i>	Zip Code <i>79703</i>	Site Contact <i>Todd Wells</i>
Carrier/Mail Number <i>#039122</i>			
Contract/Purchase Order/Quote No. <i>E-Starts/Lea County .000</i>			
Project Name and Location (State) <i>Sachin Kudchaker 300 Chloride 300 ETEX 8021B</i>			
Contract/Purchase Order/Quote No. <i>4011413</i>			
Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix
<i>MW-1</i>	<i>9-4-08</i>	<i>045</i>	<i>Aqueous</i>
			<i>Air</i>
			<i>Soil</i>
			<i>Upgras</i>
			<i>NaOH</i>
			<i>ZnAcOH</i>
			<i>NaOH</i>
			<i>HC1</i>
			<i>HNO3</i>
			<i>HSO4</i>
			<i>VANE</i>
Containers & Preservatives			
Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison A <input type="checkbox"/> Unknown <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)			
Turn Around Time Required <input type="checkbox"/> 24 Hours <input checked="" type="checkbox"/> 48 Hours <input type="checkbox"/> 7 Days <input checked="" type="checkbox"/> 14 Days <input type="checkbox"/> 21 Days <input type="checkbox"/> Other _____			
QC Requirements (Specify) 1. Received By <i>Mark Wells</i> Date <i>9-4-08</i> Time <i>13:15</i> 2. Received By <i>Mark Wells</i> Date <i>9-4-08</i> Time <i>13:15</i> 3. Received By <i>Mark Wells</i> Date <i>9-4-08</i> Time <i>13:15</i>			
Comments _____			

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

Job Number: 600-3921-1

Job Description: New Mexico F State /Lea County

For:  
Conestoga-Rovers & Associates, Inc.  
2135 South Loop 250 West  
Midland, TX 79703

Attention: Mr. Todd Wells



Approved for release.  
Sachin G Kudchadkar  
Project Manager II  
11/25/2008 10:51 AM

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Sachin G Kudchadkar  
Project Manager II  
[sachin.kudchadkar@testamericainc.com](mailto:sachin.kudchadkar@testamericainc.com)  
11/25/2008

The test results in this report meet all NELAP requirements unless specified within the case narrative. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Project Manager.

TestAmerica Houston Certifications and Approvals: TX NELAP T104704223-06-TX, ARDEQ 88-0759, LADEQ 01967, OKDEQ 9503, UT DOH GULF

TestAmerica Laboratories, Inc.

TestAmerica Houston 6310 Rothway Street, Houston, TX 77040  
Tel (713) 690-4444 Fax (713) 690-5646 [www.testamericainc.com](http://www.testamericainc.com)





## EXECUTIVE SUMMARY - Detections

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 600-3921-1

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
600-3921-1 Chloride	MW 3111408	32	0.40	mg/L	300.0
600-3921-2 Chloride	MW 4111408	52	4.0	mg/L	300.0
600-3921-3 Chloride	MW 5111408	100	4.0	mg/L	300.0
600-3921-4 Chloride	MW 6111408	130	4.0	mg/L	300.0
600-3921-5 Chloride	MW 7111408	66	4.0	mg/L	300.0
600-3921-6 Chloride	MW 8111408	47	0.40	mg/L	300.0
600-3921-7 Chloride	WW 1111408	73	4.0	mg/L	300.0
600-3921-8 Chloride	WW 2111408	73	4.0	mg/L	300.0
600-3921-9 Chloride	DUP 1111408	32	0.40	mg/L	300.0

## METHOD SUMMARY

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 600-3921-1

Description	Lab Location	Method	Preparation Method
Matrix Water			
Volatile Organic Compounds (GC)	TAL HOU	SW846 8021B	
Purge and Trap	TAL HOU		SW846 5030B
Anions, Ion Chromatography	TAL HOU		MCAWW 300.0

**Lab References:**

TAL HOU = TestAmerica Houston

**Method References:**

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

## METHOD / ANALYST SUMMARY

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 600-3921-1

Method	Analyst	Analyst ID
SW846 8021B	Tobias, Merlin H	MHT
MCAWW 300.0	Puranik, Surendra U	SUP

## SAMPLE SUMMARY

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 600-3921-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
600-3921-1	MW 3111408	Water	11/14/2008 1345	11/18/2008 0920
600-3921-2	MW 4111408	Water	11/14/2008 1305	11/18/2008 0920
600-3921-3	MW 5111408	Water	11/14/2008 1320	11/18/2008 0920
600-3921-4	MW 6111408	Water	11/14/2008 1400	11/18/2008 0920
600-3921-5	MW 7111408	Water	11/14/2008 1335	11/18/2008 0920
600-3921-6	MW 8111408	Water	11/14/2008 1245	11/18/2008 0920
600-3921-7	VW 1111408	Water	11/14/2008 1215	11/18/2008 0920
600-3921-8	VW 2111408	Water	11/14/2008 1225	11/18/2008 0920
600-3921-9	DUP 1111408	Water	11/14/2008 0000	11/18/2008 0920
600-3921-10TB	TRIP BLANK	Water	11/14/2008 0000	11/18/2008 0920

# **SAMPLE RESULTS**

Mr. Todd Wells  
Conestoga-Rovers & Associates, Inc.  
2135 South Loop 250 West  
Midland, TX 79703

Job Number: 600-3921-1

**Client Sample ID:** MW 3111408      **Date Sampled:** 11/14/2008 1345  
**Lab Sample ID:** 600-3921-1      **Date Received:** 11/18/2008 0920  
   **Client Matrix:** Water

Analyte	Result/Qualifier		Unit	MDL	RL	Dilution
<b>Method:</b> 8021B			<b>Date Analyzed:</b>	11/20/2008 0232		
<b>Prep Method:</b> 5030B			<b>Date Prepared:</b>	11/20/2008 0232		
Benzene	0.37	U	ug/L	0.37	1.0	1.0
Toluene	0.39	U	ug/L	0.39	1.0	1.0
Ethylbenzene	0.42	U	ug/L	0.42	1.0	1.0
Xylenes, Total	0.35	U	ug/L	0.35	1.0	1.0
Surrogate						Acceptance Limits
4-Bromofluorobenzene	94		%	64 - 136		
4-Bromofluorobenzene	90		%	64 - 136		
a,a,a-Trifluorotoluene	93		%	70 - 135		
a,a,a-Trifluorotoluene	96		%	70 - 135		
<b>Method:</b> 300.0			<b>Date Analyzed:</b>	11/20/2008 0119		
Chloride	32		mg/L	0.10	0.40	1.0

Mr. Todd Wells  
Conestoga-Rovers & Associates, Inc.  
2135 South Loop 250 West  
Midland, TX 79703

Job Number: 600-3921-1

**Client Sample ID:** MW 4111408      **Date Sampled:** 11/14/2008 1305  
**Lab Sample ID:** 600-3921-2      **Date Received:** 11/18/2008 0920  
   **Client Matrix:** Water

Analyte	Result/Qualifier		Unit	MDL	RL	Dilution
<b>Method:</b> 8021B			<b>Date Analyzed:</b>	11/20/2008 0252		
<b>Prep Method:</b> 5030B			<b>Date Prepared:</b>	11/20/2008 0252		
Benzene	0.37	U	ug/L	0.37	1.0	1.0
Toluene	0.39	U	ug/L	0.39	1.0	1.0
Ethylbenzene	0.42	U	ug/L	0.42	1.0	1.0
Xylenes, Total	0.35	U	ug/L	0.35	1.0	1.0
Surrogate						Acceptance Limits
4-Bromofluorobenzene	94		%		64 - 136	
4-Bromofluorobenzene	92		%		64 - 136	
a,a,a-Trifluorotoluene	95		%		70 - 135	
a,a,a-Trifluorotoluene	97		%		70 - 135	
<b>Method:</b> 300.0			<b>Date Analyzed:</b>	11/20/2008 0219		
Chloride	52		mg/L	1.0	4.0	10

Mr. Todd Wells  
Conestoga-Rovers & Associates, Inc.  
2135 South Loop 250 West  
Midland, TX 79703

Job Number: 600-3921-1

**Client Sample ID:** MW 5111408      **Date Sampled:** 11/14/2008 1320  
**Lab Sample ID:** 600-3921-3      **Date Received:** 11/18/2008 0920  
Client Matrix: Water

Analyte	Result/Qualifier	Unit	MDL	RL	Dilution
Method: 8021B			Date Analyzed:	11/20/2008 0312	
Prep Method: 5030B			Date Prepared:	11/20/2008 0312	
Benzene	0.37	U	ug/L	0.37	1.0
Toluene	0.39	U	ug/L	0.39	1.0
Ethylbenzene	0.42	U	ug/L	0.42	1.0
Xylenes, Total	0.35	U	ug/L	0.35	1.0
Surrogate				Acceptance Limits	
4-Bromofluorobenzene	104	%		64 - 136	
4-Bromofluorobenzene	104	%		64 - 136	
a,a,a-Trifluorotoluene	106	%		70 - 135	
a,a,a-Trifluorotoluene	109	%		70 - 135	
Method: 300.0			Date Analyzed:	11/20/2008 0339	
Chloride	100	mg/L	1.0	4.0	10

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2135 South Loop 250 West  
Midland, TX 79703

Job Number: 600-3921-1

**Client Sample ID:** MW 6111408      **Date Sampled:** 11/14/2008 1400  
**Lab Sample ID:** 600-3921-4      **Date Received:** 11/18/2008 0920  
                                        **Client Matrix:** Water

Analyte	Result/Qualifier		Unit	MDL	RL	Dilution
<b>Method:</b> 8021B			<b>Date Analyzed:</b>	11/20/2008 0332		
<b>Prep Method:</b> 5030B			<b>Date Prepared:</b>	11/20/2008 0332		
Benzene	0.37	U	ug/L	0.37	1.0	1.0
Toluene	0.39	U	ug/L	0.39	1.0	1.0
Ethylbenzene	0.42	U	ug/L	0.42	1.0	1.0
Xylenes, Total	0.35	U	ug/L	0.35	1.0	1.0
Surrogate						Acceptance Limits
4-Bromofluorobenzene	99		%		64 - 136	
4-Bromofluorobenzene	99		%		64 - 136	
a,a,a-Trifluorotoluene	103		%		70 - 135	
a,a,a-Trifluorotoluene	106		%		70 - 135	
<b>Method:</b> 300.0			<b>Date Analyzed:</b>	11/20/2008 0419		
Chloride	130		mg/L	1.0	4.0	10

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Job Number: 600-3921-1

**Client Sample ID:** MW 7111408      **Date Sampled:** 11/14/2008 1335  
**Lab Sample ID:** 600-3921-5      **Date Received:** 11/18/2008 0920  
   **Client Matrix:** Water

Analyte	Result/Qualifier		Unit	MDL	RL	Dilution
<b>Method:</b> 8021B			<b>Date Analyzed:</b>	11/20/2008 0452		
<b>Prep Method:</b> 5030B			<b>Date Prepared:</b>	11/20/2008 0452		
Benzene	0.37	U	ug/L	0.37	1.0	1.0
Toluene	0.39	U	ug/L	0.39	1.0	1.0
Ethylbenzene	0.42	U	ug/L	0.42	1.0	1.0
Xylenes, Total	0.35	U	ug/L	0.35	1.0	1.0
Surrogate						Acceptance Limits
4-Bromofluorobenzene	91		%		64 - 136	
4-Bromofluorobenzene	91		%		64 - 136	
a,a,a-Trifluorotoluene	93		%		70 - 135	
a,a,a-Trifluorotoluene	96		%		70 - 135	
<b>Method:</b> 300.0			<b>Date Analyzed:</b>	11/20/2008 0539		
Chloride	66		mg/L	1.0	4.0	10

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Job Number: 600-3921-1

**Client Sample ID:** MW 8111408      **Date Sampled:** 11/14/2008 1245  
**Lab Sample ID:** 600-3921-6      **Date Received:** 11/18/2008 0920  
Client Matrix: Water

Analyte	Result/Qualifier		Unit	MDL	RL	Dilution
<b>Method:</b> 8021B			<b>Date Analyzed:</b>	11/20/2008 0512		
<b>Prep Method:</b> 5030B			<b>Date Prepared:</b>	11/20/2008 0512		
Benzene	0.37	U	ug/L	0.37	1.0	1.0
Toluene	0.39	U	ug/L	0.39	1.0	1.0
Ethylbenzene	0.42	U	ug/L	0.42	1.0	1.0
Xylenes, Total	0.35	U	ug/L	0.35	1.0	1.0
Surrogate						Acceptance Limits
4-Bromofluorobenzene	90		%		64 - 136	
4-Bromofluorobenzene	90		%		64 - 136	
a,a,a-Trifluorotoluene	93		%		70 - 135	
a,a,a-Trifluorotoluene	96		%		70 - 135	
<b>Method:</b> 300.0			<b>Date Analyzed:</b>	11/20/2008 0559		
Chloride	47		mg/L	0.10	0.40	1.0

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Job Number: 600-3921-1

**Client Sample ID:** WW 111408      **Date Sampled:** 11/14/2008 1215  
**Lab Sample ID:** 600-3921-7      **Date Received:** 11/18/2008 0920  
                                        **Client Matrix:** Water

Analyte	Result/Qualifier		Unit	MDL	RL	Dilution
<b>Method:</b> 8021B			<b>Date Analyzed:</b>	11/20/2008 0532		
<b>Prep Method:</b> 5030B			<b>Date Prepared:</b>	11/20/2008 0532		
Benzene	0.37	U	ug/L	0.37	1.0	1.0
Toluene	0.39	U	ug/L	0.39	1.0	1.0
Ethylbenzene	0.42	U	ug/L	0.42	1.0	1.0
Xylenes, Total	0.35	U	ug/L	0.35	1.0	1.0
Surrogate						Acceptance Limits
4-Bromofluorobenzene	96		%		64 - 136	
4-Bromofluorobenzene	96		%		64 - 136	
a,a,a-Trifluorotoluene	99		%		70 - 135	
a,a,a-Trifluorotoluene	102		%		70 - 135	
<b>Method:</b> 300.0			<b>Date Analyzed:</b>	11/20/2008 0739		
Chloride	73		mg/L	1.0	4.0	10

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Job Number: 600-3921-1

**Client Sample ID:** WW 2111408      **Date Sampled:** 11/14/2008 1225  
**Lab Sample ID:** 600-3921-8      **Date Received:** 11/18/2008 0920  
Client Matrix: Water

Analyte	Result/Qualifier		Unit	MDL	RL	Dilution
<b>Method:</b> 8021B			<b>Date Analyzed:</b>	11/20/2008 0552		
<b>Prep Method:</b> 5030B			<b>Date Prepared:</b>	11/20/2008 0552		
Benzene	0.37	U	ug/L	0.37	1.0	1.0
Toluene	0.39	U	ug/L	0.39	1.0	1.0
Ethylbenzene	0.42	U	ug/L	0.42	1.0	1.0
Xylenes, Total	0.35	U	ug/L	0.35	1.0	1.0
Surrogate						Acceptance Limits
4-Bromofluorobenzene	91		%		64 - 136	
4-Bromofluorobenzene	91		%		64 - 136	
a,a,a-Trifluorotoluene	93		%		70 - 135	
a,a,a-Trifluorotoluene	95		%		70 - 135	
<b>Method:</b> 300.0			<b>Date Analyzed:</b>	11/20/2008 0819		
Chloride	73		mg/L	1.0	4.0	10

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Job Number: 600-3921-1

**Client Sample ID:** DUP 111408      **Date Sampled:** 11/14/2008 0000  
**Lab Sample ID:** 600-3921-9      **Date Received:** 11/18/2008 0920  
   **Client Matrix:** Water

Analyte	Result/Qualifier		Unit	MDL	RL	Dilution
<b>Method:</b> 8021B			<b>Date Analyzed:</b>	11/20/2008 0611		
<b>Prep Method:</b> 5030B			<b>Date Prepared:</b>	11/20/2008 0611		
Benzene	0.37	U	ug/L	0.37	1.0	1.0
Toluene	0.39	U	ug/L	0.39	1.0	1.0
Ethylbenzene	0.42	U	ug/L	0.42	1.0	1.0
Xylenes, Total	0.35	U	ug/L	0.35	1.0	1.0
Surrogate						Acceptance Limits
4-Bromofluorobenzene	95		%	64 - 136		
a,a,a-Trifluorotoluene	97		%	70 - 135		
<b>Method:</b> 300.0			<b>Date Analyzed:</b>	11/20/2008 0839		
Chloride	32		mg/L	0.10	0.40	1.0

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Job Number: 600-3921-1

**Client Sample ID:** TRIP BLANK      **Date Sampled:** 11/14/2008 0000  
**Lab Sample ID:** 600-3921-10      **Date Received:** 11/18/2008 0920  
    **Client Matrix:** Water

Analyte	Result/Qualifier		Unit	MDL	RL	Dilution
Method: 8021B				Date Analyzed:	11/20/2008 0632	
Prep Method: 5030B				Date Prepared:	11/20/2008 0632	
Benzene	0.37	U	ug/L	0.37	1.0	1.0
Toluene	0.39	U	ug/L	0.39	1.0	1.0
Ethylbenzene	0.42	U	ug/L	0.42	1.0	1.0
Xylenes, Total	0.35	U	ug/L	0.35	1.0	1.0
Surrogate						Acceptance Limits
4-Bromofluorobenzene	90		%	64 - 136		
4-Bromofluorobenzene	90		%	64 - 136		
a,a,a-Trifluorotoluene	93		%	70 - 135		
a,a,a-Trifluorotoluene	96		%	70 - 135		

## DATA REPORTING QUALIFIERS

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 600-3921-1

Lab Section	Qualifier	Description
GC VOA	U	Indicates the analyte was analyzed for but not detected.
	F	MS or MSD exceeds the control limits
General Chemistry	U	Indicates the analyte was analyzed for but not detected.

# **QUALITY CONTROL RESULTS**

## Quality Control Results

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 600-3921-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report				
		Basis	Client Matrix	Method	Prep Batch	
<b>GC VOA</b>						
<b>Analysis Batch:600-6121</b>						
LCS 600-6121/1	Lab Control Spike	T	Water	8021B		
MB 600-6121/2	Method Blank	T	Water	8021B		
600-3921-1	MW 3111408	T	Water	8021B		
600-3921-2	MW 4111408	T	Water	8021B		
600-3921-3	MW 5111408	T	Water	8021B		
600-3921-4	MW 6111408	T	Water	8021B		
600-3921-4MS	Matrix Spike	T	Water	8021B		
600-3921-4MSD	Matrix Spike Duplicate	T	Water	8021B		
600-3921-5	MW 7111408	T	Water	8021B		
600-3921-6	MW 8111408	T	Water	8021B		
600-3921-7	WW 111408	T	Water	8021B		
600-3921-8	WW 2111408	T	Water	8021B		
600-3921-9	DUP 111408	T	Water	8021B		
600-3921-10TB	TRIP BLANK	T	Water	8021B		

#### Report Basis

T = Total

### General Chemistry

<b>Analysis Batch:600-6091</b>					
LCS 600-6091/49	Lab Control Spike	T	Water	300.0	
MB 600-6091/50	Method Blank	T	Water	300.0	
600-3921-1	MW 3111408	T	Water	300.0	
600-3921-2	MW 4111408	T	Water	300.0	
600-3921-3	MW 5111408	T	Water	300.0	
600-3921-4	MW 6111408	T	Water	300.0	
600-3921-4DU	Duplicate	T	Water	300.0	
600-3921-4MS	Matrix Spike	T	Water	300.0	
600-3921-5	MW 7111408	T	Water	300.0	
600-3921-6	MW 8111408	T	Water	300.0	
600-3921-7	WW 111408	T	Water	300.0	
600-3921-8	WW 2111408	T	Water	300.0	
600-3921-9	DUP 111408	T	Water	300.0	

#### Report Basis

T = Total

## Quality Control Results

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 600-3921-1

### Surrogate Recovery Report

#### 8021B Volatile Organic Compounds (GC)

##### Client Matrix: Water

Lab Sample ID	Client Sample ID	BFB1 %Rec	BFB2 %Rec	TFT1 %Rec	TFT2 %Rec
600-3921-1	MW 3111408	94	90	93	96
600-3921-2	MW 4111408	94	92	95	97
600-3921-3	MW 5111408	104	104	106	109
600-3921-4	MW 6111408	99	99	103	106
600-3921-5	MW 7111408	91	91	93	96
600-3921-6	MW 8111408	90	90	93	96
600-3921-7	WW 111408	96	96	99	102
600-3921-8	WW 2111408	91	91	93	95
600-3921-9	DUP 111408	95		97	
600-3921-10	TRIP BLANK	90	90	93	96
MB 600-6121/2		89	89	91	94
LCS 600-6121/1		100	102	104	108
600-3921-4 MS	MW 6111408 MS		99		103
600-3921-4 MSD	MW 6111408 MSD		106		110

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene	64-136
TFT = a,a,a-Trifluorotoluene	70-135

## Quality Control Results

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 600-3921-1

### Method Blank - Batch: 600-6121

**Method: 8021B**

**Preparation: 5030B**

Lab Sample ID: MB 600-6121/2      Analysis Batch: 600-6121  
Client Matrix: Water      Prep Batch: N/A  
Dilution: 1.0      Units: ug/L  
Date Analyzed: 11/20/2008 0132  
Date Prepared: 11/20/2008 0132

Instrument ID: GCVOA-02  
Lab File ID: A111908\_033.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL  
Injection Volume:  
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
Benzene	0.37	U	0.37	1.0
Toluene	0.39	U	0.39	1.0
Ethylbenzene	0.42	U	0.42	1.0
Xylenes, Total	0.35	U	0.35	1.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	89	64 - 136
4-Bromofluorobenzene	89	64 - 136
a,a,a-Trifluorotoluene	91	70 - 135
a,a,a-Trifluorotoluene	94	70 - 135

### Lab Control Spike - Batch: 600-6121

**Method: 8021B**

**Preparation: 5030B**

Lab Sample ID: LCS 600-6121/1      Analysis Batch: 600-6121  
Client Matrix: Water      Prep Batch: N/A  
Dilution: 1.0      Units: ug/L  
Date Analyzed: 11/20/2008 0112  
Date Prepared: 11/20/2008 0112

Instrument ID: GCVOA-02  
Lab File ID: B111908\_032.d  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL  
Injection Volume:  
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Benzene	50.0	61.4	123	72 - 134	
Toluene	50.0	63.2	126	76 - 131	
Ethylbenzene	50.0	62.0	124	75 - 131	

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	100	64 - 136
4-Bromofluorobenzene	102	64 - 136
a,a,a-Trifluorotoluene	104	70 - 135
a,a,a-Trifluorotoluene	108	70 - 135

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 600-3921-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 600-6121**

**Method: 8021B  
Preparation: 5030B**

MS Lab Sample ID:	600-3921-4	Analysis Batch:	600-6121	Instrument ID:	GCVOA-02
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	B111908_040.d
Dilution:	1.0			Initial Weight/Volume:	5 mL
Date Analyzed:	11/20/2008 0352			Final Weight/Volume:	5 mL
Date Prepared:	11/20/2008 0352			Injection Volume:	
				Column ID:	PRIMARY

MSD Lab Sample ID:	600-3921-4	Analysis Batch:	600-6121	Instrument ID:	GCVOA-02
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	B111908_041.d
Dilution:	1.0			Initial Weight/Volume:	5 mL
Date Analyzed:	11/20/2008 0412			Final Weight/Volume:	5 mL
Date Prepared:	11/20/2008 0412			Injection Volume:	
				Column ID:	PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Benzene	120	126	39 - 150	5	20		
Toluene	124	129	46 - 148	4	20		
Ethylbenzene	120	128	32 - 160	6	20		
Surrogate		MS % Rec		MSD % Rec		Acceptance Limits	
4-Bromofluorobenzene	99		106			64 - 136	
a,a,a-Trifluorotoluene	103		110			70 - 135	

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 600-3921-1

### Method Blank - Batch: 600-6091

**Method: 300.0**

**Preparation: N/A**

Lab Sample ID:	MB 600-6091/50	Analysis Batch:	600-6091	Instrument ID:	ICS20000
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	5 mL
Date Analyzed:	11/19/2008 1618			Final Weight/Volume:	5 mL
Date Prepared:	N/A				

Analyte	Result	Qual	MDL	RL
Chloride	0.10	U	0.10	0.40

### Lab Control Spike - Batch: 600-6091

**Method: 300.0**

**Preparation: N/A**

Lab Sample ID:	LCS 600-6091/49	Analysis Batch:	600-6091	Instrument ID:	ICS20000
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	5 mL
Date Analyzed:	11/19/2008 1638			Final Weight/Volume:	5 mL
Date Prepared:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	20.0	19.3	96	90 - 110	

### Matrix Spike - Batch: 600-6091

**Method: 300.0**

**Preparation: N/A**

Lab Sample ID:	600-3921-4	Analysis Batch:	600-6091	Instrument ID:	ICS20000
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	10	Units:	mg/L	Initial Weight/Volume:	5 mL
Date Analyzed:	11/20/2008 0459			Final Weight/Volume:	5 mL
Date Prepared:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	130	100	217	91	90 - 110	

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 600-3921-1

**Duplicate - Batch: 600-6091**

**Method: 300.0**

**Preparation: N/A**

Lab Sample ID: 600-3921-4

Analysis Batch: 600-6091

Instrument ID: ICS20000

Client Matrix: Water

Prep Batch: N/A

Lab File ID: N/A

Dilution: 10

Units: mg/L

Initial Weight/Volume: 5 mL

Date Analyzed: 11/20/2008 0439

Final Weight/Volume: 5 mL

Date Prepared: N/A

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Chloride	130	127	1	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

# Chain of Custody Record

# TestAmerica

Loc: 600  
3921  
#10

TAL-4124 (1007)

Temperature on Receipt \_\_\_\_\_

Drinking Water? Yes  No

THE LEADER IN ENVIRONMENTAL TESTING

Client	C. R. A.		Project Manager	Todd Wells		Date	11-17-08	Chain or Customer number	090892
Address			Telephone Number (Area Code)/Fax Number			Lab Number		Page	1 of 1
City	Midland	State	Zip Code	432-686-0186	Lab Contact	Analysis (Attach list if more space is needed)			
Project Name and Location (State)	New Mexico "F" State/Le Comby, NM		Carrier/Voybill Number	M44-T Hudson		Special Instructions/ Conditions of Receipt			
Contract/Purchase Order/Quote No.	039132		Matrix	Containers & Preservatives					
Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Soil	Aqueous				
MW311408	11-14-08	1345	Y						
MW411408	11-14-08	1305	X						
MW511408	11-14-08	1320	X						
MW611408	11-14-08	1400	X						
MW711408	11-14-08	1335	Y						
MW811408	11-14-08	1245	X						
MW111408	11-14-08	1215	X						
MW211408	11-14-08	1225	X						
MW311408	11-14-08	—	X						
Trip	—	—	Y						
Leave	—	—	Y						
Possible Hazard Identification			Sample Disposal						
<input checked="" type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Poison B	<input type="checkbox"/> Unknown	<input type="checkbox"/> Return To Client	<input checked="" type="checkbox"/> Disposal By Lab	<input type="checkbox"/> Archive For	Months	(A fee may be assessed if samples are retained longer than 1 month)
Turn Around Time Required									
<input type="checkbox"/> 24 Hours	<input type="checkbox"/> 48 Hours	<input type="checkbox"/> 7 Days	<input type="checkbox"/> 14 Days	<input type="checkbox"/> 21 Days	<input type="checkbox"/> Other	QC Requirements (Specify)			
1. Received By						1. Received By	Joe Mireles	Date	11/18/08
2. Relinquished By						2. Received By		Date	Time
3. Relinquished By						3. Received By		Date	Time
Comments									

## Login Sample Receipt Check List

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 600-3921-1

Login Number: 3921

List Source: TestAmerica Houston

Creator: Claunch, Todd F

List Number: 1

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	