

**1R – 255**

**2008 AGWMR**

**10/12/2009**

# **2008 ANNUAL GROUNDWATER MONITORING REPORT**

**J.R. PHILLIPS TANK BATTERY NO. 2  
OGRID NO. 4323/CASE NO. 1R255  
SE/4, NW/4, SECTION 6, T-20-S, R-37-E  
LATITUDE: N 32° 36' 22.3" LONGITUDE: W 103° 17' 41.5"  
LEA COUNTY, NEW MEXICO**

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LATITUDE: N 32° 36' 22.3" LONGITUDE: W 103° 17' 41.5"  
LEA COUNTY, NEW MEXICO**

**Prepared For:**

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**Prepared by:  
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## **1.0 INTRODUCTION**

This Annual Groundwater Monitoring Report presents groundwater monitoring data collected at the J.R. Phillips Tank Battery No. 2 (hereafter referred to as the "Site") by Conestoga-Rovers & Associates (CRA) on behalf of Chevron Environmental Management Company (CEMC). Annual groundwater monitoring activities were performed on May 12 and 13, 2008.

The Site is located approximately three miles southwest of Monument, New Mexico and situated in Unit Letter F in the southeast quarter (SE/4) of the northwest quarter (NW/4) of Section 6, Township 20 South, Range 37 East, Lea County, New Mexico. The Site is a former emergency pit used for temporary containment of produced fluids associated with the tank battery. Land use in the vicinity of the Site is undeveloped rangeland vegetated with indigenous grass, livestock ranching and oil and gas production. A Site Location Map is presented as FIGURE 1.

Site assessment activities were initiated in 1999 when Environmental Plus, Inc. (EPI) of Eunice, New Mexico performed a subsurface assessment of the emergency produced water overflow pit located east of the tank battery and a small burn pit located south-southeast of the emergency pit. The investigation revealed the presence of hydrocarbon affected soil. Approximately 33,500 cubic yards of hydrocarbon-affected material were excavated at the Site between December 1999 and October 2000. The soil was transported to the Texaco Exploration and Production, Inc. (Texaco) centralized treatment facility located northwest of Jal, New Mexico. The emergency pit was excavated to approximately 25 to 30 feet below ground surface (bgs) and the burn pit was excavated to approximately 12 to 15 bgs. The remedial excavations were subsequently backfilled and closed during December 2000 and January 2001. Site assessment and remediation activities were presented in the *Comprehensive Report and Proposed Investigation Plan* (Larson & Associates, Inc. [LA], November 28, 2000).

In March 2000, EPI installed two monitor wells (MW-1 and MW-2) to evaluate background chloride concentrations in groundwater at the Site. In April 2001, LA supervised the installation of six monitor (MW-3 through MW-8) to assess groundwater quality upgradient, downgradient and crossgradient of the Site. Details of that investigation were submitted to the New Mexico Oil Conservation Division (NMOCD) in a *Groundwater Assessment Report* (LA, May 24, 2001). In that report, semi-annual groundwater monitoring was proposed for two years, with groundwater samples to be analyzed for major cations, anions and total dissolved solids (TDS).

The proposed activities were approved by the NMOCD in a letter dated December 27, 2001, with the condition that groundwater also be analyzed for benzene, toluene, ethylbenzene and xylene (BTEX). The NMOCD agreed to allow Texaco to monitor groundwater at the Site due to a regional groundwater impact from chloride that has affected groundwater at the Site, as well as upgradient, crossgradient and downgradient of the Site. An *Annual Groundwater Monitoring Report* (LA, May 10, 2004) presented the results of activities performed in 2003, which fulfilled the two-year monitoring schedule approved by the NMOCD. CEMC proposed a modification to the groundwater monitoring schedule from semi-annual to annual, analyzing groundwater samples only

for major cations, anions and TDS. The groundwater monitoring modifications were approved by the NMOCD in a letter dated October 1, 2004. NMOCD correspondence and approval letters are included in APPENDIX A. Annual groundwater monitoring results for activities performed in May 2004 and May 2005 were presented in the *Annual Groundwater Monitoring Report* (LA, August 15, 2005). CRA has performed groundwater monitoring and reporting activities since 2006.

## **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 present the Human Health Standards for Groundwater. The constituent of concern in affected groundwater at the Site is chloride. In this report, groundwater analytical results for chloride and four additional analytes are compared to the NMWQCC standards as shown in the following table:

Analyte	NMWQCC Standard for Groundwater (mg/L)
Chloride	250
Fluoride	1.6
Nitrate ( $\text{NO}_3$ as N)	10
Sulfate ( $\text{SO}_4$ )	600
Total Dissolved Solids (TDS)	1,000

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

Groundwater at the Site is monitored annually with a network of eight monitor wells and one water well (FIGURE 2). CRA performed groundwater sampling activities on May 12 and 13, 2008.

Prior to purging the wells, static fluid levels were measured with an electric interface probe to the nearest hundredth of a foot. After recording fluid levels, the wells were purged of a minimum of three casing volumes of groundwater. 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.

Groundwater samples were placed on ice in insulated coolers 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 (TestAmerica Laboratories, Inc. located in Houston, Texas) for analysis of major cations, anions and TDS by Environmental Protection Agency (EPA) Methods 6010B, 3005A, 2320B, 300.0 and 2540C. The fluids recovered and generated during the sampling event were containerized in sealed, 55-gallon drums located onsite and subsequently managed at an NMOCD-permitted and Chevron-approved salt water disposal (SWD) facility operated by Nabors Well Services LTD. (Nabors).

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

Groundwater elevation data are presented in TABLE I. A groundwater gradient map for May 2008 is presented as FIGURE 3. Depth to groundwater ranged from 30.50 feet to 36.46 feet below top of casing on May 12, 2008. Groundwater flow at the Site is to the southeast at a gradient of approximately 0.004 feet/foot.

#### **3.2 ANALYTICAL RESULTS**

Analytical results are summarized in TABLE II. Isopleths of the chloride, sulfate and TDS concentrations for the May 2008 groundwater monitoring event are presented as FIGURES 4, 5 and 6, respectively.

The analytical results generally fall within historical ranges. During the May 2008 sampling event, all nine wells sampled exceeded the NMWQCC groundwater standards for chloride, sulfate and TDS. In addition, eight monitor wells (MW-1 through MW-8) exceeded the NMWQCC groundwater standard for fluoride. Copies of the certified analytical reports and chain-of-custody documentation are attached in APPENDIX B.

#### **4.0 PLANNED ACTIVITIES**

Annual groundwater monitoring will continue at the Site in 2009, with submission of an annual report to the NMOCD, detailing the results of activities.

## **5.0 SUMMARY**

Based on historical data review and groundwater monitoring activities performed at the Site, CRA presents the following summary:

- Groundwater at the Site is monitored annually with a network of eight monitor wells and one water well;
- Depth to groundwater ranged from 30.50 feet to 36.46 feet below top of casing on May 12, 2008. Groundwater flow at the Site is to the southeast at a gradient of approximately 0.004 feet/foot;
- The analytical results generally fall within historical ranges. During the May 2008 sampling event, all nine wells sampled exceeded the NMWQCC groundwater standards for chloride, sulfate and TDS. In addition, eight monitor wells (MW-1 through MW-8) exceeded the NMWQCC groundwater standard for fluoride. Nitrate concentrations were below NMWQCC standards during the 2008 sampling event;
- The 2009 groundwater monitoring event is scheduled for May 2009.

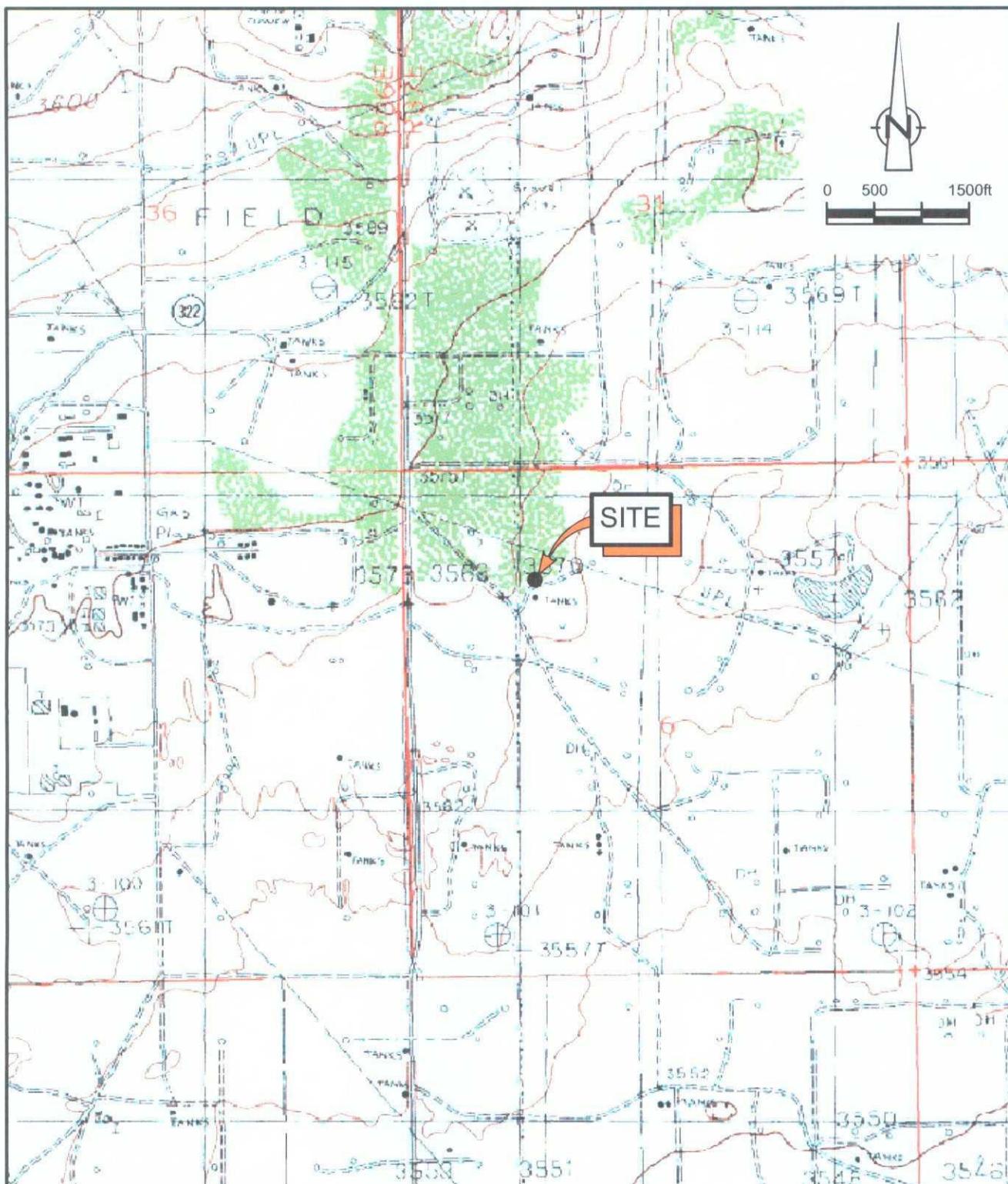
All of Which is Respectfully Submitted,  
**CONESTOGA-ROVERS & ASSOCIATES**

*- Todd Wells*

Todd Wells  
Project Manager

*Thomas C. Larson*

Thomas C. Larson  
Operations Manager



SOURCE: USGS QUADRANGLE MAP;  
MONUMENT SOUTH, NEW MEXICO (1985)

32° 36' 22.3" N. 103° 17' 41.5" W

figure 1

SITE LOCATION MAP  
J. R. PHILLIPS NO. 2 TANK BATTERY  
LEA COUNTY, NEW MEXICO  
*Chevron Environmental Management Company*



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NOTE:

MAP BASED ON APRIL 15, 2008 SURVEY PERFORMED BY  
WEST COMPANY OF MIDLAND, INC.

LEGEND

MW-1	MONITOR WELL LOCATION
WATER WELL LOCATION	
— X —	FENCE LINE

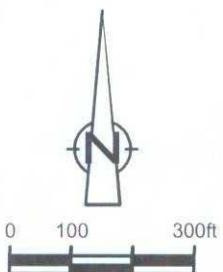


figure 2  
SITE DETAILS MAP  
J. R. PHILLIPS NO. 2 TANK BATTERY  
LEA COUNTY, NEW MEXICO  
*Chevron Environmental Management Company*



**NOTES:**

1. MAP BASED ON APRIL 15, 2008 SURVEY PERFORMED BY WEST COMPANY OF MIDLAND, INC.

2. GROUNDWATER ELEVATIONS COLLECTED ON MAY 12, 2008.

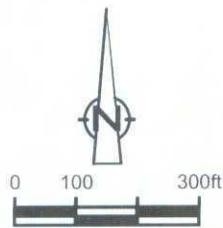


figure 3

GROUNDWATER GRADIENT MAP - MAY 2008  
J. R. PHILLIPS NO. 2 TANK BATTERY  
LEA COUNTY, NEW MEXICO

*Chevron Environmental Management Company*



**NOTES:**

1. MAP BASED ON APRIL 15, 2008 SURVEY PERFORMED BY WEST COMPANY OF MIDLAND, INC.

2. GROUNDWATER SAMPLES COLLECTED ON MAY 13, 2008.

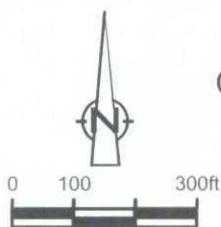


figure 4

CHLORIDE ISOCONCENTRATION MAP - MAY 2008  
J. R. PHILLIPS NO. 2 TANK BATTERY  
LEA COUNTY, NEW MEXICO

*Chevron Environmental Management Company*



**NOTES:**

1. MAP BASED ON APRIL 15, 2008 SURVEY PERFORMED BY WEST COMPANY OF MIDLAND, INC.

2. GROUNDWATER SAMPLES COLLECTED ON MAY 13, 2008.

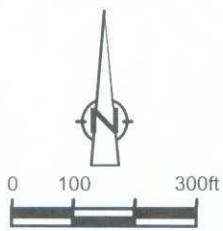


figure 5

SULFATE ISOCONCENTRATION MAP - MAY 2008  
J. R. PHILLIPS NO. 2 TANK BATTERY  
LEA COUNTY, NEW MEXICO

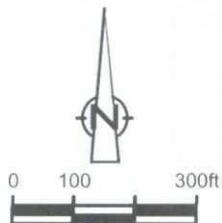
*Chevron Environmental Management Company*



**NOTES:**

1. MAP BASED ON APRIL 15, 2008 SURVEY PERFORMED BY WEST COMPANY OF MIDLAND, INC.

2. GROUNDWATER SAMPLES COLLECTED ON MAY 13, 2008.



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figure 6

TDS ISOCONCENTRATION MAP - MAY 2008  
J. R. PHILLIPS NO. 2 TANK BATTERY  
LEA COUNTY, NEW MEXICO  
*Chevron Environmental Management Company*

**TABLE I**  
**GROUNDWATER GAUGING SUMMARY**  
**CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY**  
**J.R. PHILLIPS TANK BATTERY #2**  
**LEA COUNTY, NEW MEXICO**

Well ID TOC <i>Elevation</i>	Collection Date	Depth to Groundwater (ft TOC)	Casing Diameter (in)	Groundwater Elevation (ft)	Well Depth (ft TOC)	Well Screen Interval (ft bgs)
MW-1 3571.61	5/2/01	39.33	2	3532.28	45.10	27-42
	05/21/02	40.37	---	3531.24	---	---
	11/12/02	40.92	---	3530.69	---	---
	05/15/03	41.11	---	3530.50	---	---
	09/03/03	41.54	---	3530.07	---	---
	11/20/03	41.65	---	3529.96	---	---
	05/03/04	41.40	---	3530.21	---	---
	05/10/05	38.86	---	3532.75	---	---
	05/15/06	34.70	---	3536.91	---	---
	05/30/07	34.12	---	3537.49	---	---
	05/12/08	35.28	---	3536.33	---	---
MW-2 3571.12	5/2/01	39.15	2	3531.97	45.12	27-42
	05/21/02	40.14	---	3530.98	---	---
	11/12/02	40.69	---	3530.43	---	---
	05/15/03	40.89	---	3530.23	---	---
	09/03/03	41.33	---	3529.79	---	---
	11/20/03	41.42	---	3529.70	---	---
	05/03/04	41.11	---	3530.01	---	---
	05/10/05	35.78	---	3535.34	---	---
	05/15/06	34.63	---	3536.49	---	---
	05/30/07	33.96	---	3537.16	---	---
	05/12/08	35.08	---	3536.04	45.25	---
MW-3 3570.70	5/2/01	39.30	2	3531.40	56.50	34-54
	05/21/02	40.57	---	3530.13	---	---
	11/12/02	41.09	---	3529.61	---	---
	05/15/03	41.26	---	3529.44	---	---
	09/03/03	41.61	---	3529.09	---	---
	11/20/03	41.73	---	3528.97	---	---
	05/03/04	41.60	---	3529.10	---	---
	05/10/05	36.89	---	3533.81	---	---
	05/15/06	35.70	---	3535.00	---	---
	05/30/07	35.11	---	3535.59	---	---
	05/12/08	36.03	---	3534.67	56.60	---
MW-4 3571.07	5/2/01	40.24	2	3530.83	57.12	34-54
	05/21/02	41.09	---	3529.98	---	---
	11/12/02	41.59	---	3529.48	---	---
	05/15/03	41.77	---	3529.30	---	---
	09/03/03	42.19	---	3528.88	---	---
	11/20/03	42.27	---	3528.80	---	---
	05/03/04	42.03	---	3529.04	---	---
	05/10/05	37.15	---	3533.92	---	---
	05/15/06	36.15	---	3534.92	---	---
	05/30/07	35.50	---	3535.57	---	---
	05/12/08	36.46	---	3534.61	56.90	---

**TABLE I**  
**GROUNDWATER GAUGING SUMMARY**  
**CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY**  
**J.R. PHILLIPS TANK BATTERY #2**  
**LEA COUNTY, NEW MEXICO**

Well ID TOC <i>Elevation</i>	Collection Date	Depth to Groundwater (ft TOC)	Casing Diameter (in)	Groundwater Elevation (ft)	Well Depth (ft TOC)	Well Screen Interval (ft bgs)
MW-5 3569.31	5/2/01	38.37	2	3530.94	57.75	34-54
	05/21/02	39.53	---	3529.78	---	---
	11/12/02	40.02	---	3529.29	---	---
	05/15/03	40.21	---	3529.10	---	---
	09/03/03	42.21	---	3527.10	---	---
	11/20/03	40.71	---	3528.60	---	---
	05/03/04	40.39	---	3528.92	---	---
	05/10/05	35.48	---	3533.83	---	---
	05/15/06	34.65	---	3534.66	---	---
	05/30/07	33.94	---	3535.37	---	---
	05/12/08	34.93	---	3534.38	57.90	---
MW-6 3569.53	5/2/01	39.40	2	3530.13	57.30	34-54
	05/21/02	40.22	---	3529.31	---	---
	11/12/02	40.72	---	3528.81	---	---
	05/15/03	40.88	---	3528.65	---	---
	09/03/03	41.92	---	3527.61	---	---
	11/20/03	41.33	---	3528.20	---	---
	05/03/04	41.12	---	3528.41	---	---
	05/10/05	36.56	---	3532.97	---	---
	05/15/06	35.65	---	3533.88	---	---
	05/30/07	34.93	---	3534.60	---	---
	05/12/08	35.79	---	3533.74	57.90	---
MW-7 3572.46	5/2/01	39.76	2	3532.70	57.85	36-56
	05/21/02	40.85	---	3531.61	---	---
	11/12/02	41.47	---	3530.99	---	---
	05/15/03	41.65	---	3530.81	---	---
	09/03/03	42.13	---	3530.33	---	---
	11/20/03	42.25	---	3530.21	---	---
	05/03/04	41.92	---	3530.54	---	---
	05/10/05	36.43	---	3536.03	---	---
	05/15/06	35.08	---	3537.38	---	---
	05/30/07	34.37	---	3538.09	---	---
	05/12/08	35.56	---	3536.90	57.85	---
MW-8 3577.66	5/2/01	40.35	2	3537.31	65.20	47-62
	05/21/02	49.27	---	3528.39	---	---
	11/12/02	43.15	---	3534.51	---	---
	05/15/03	43.30	---	3534.36	---	---
	09/03/03	43.52	---	3534.14	---	---
	11/20/03	43.87	---	3533.79	---	---
	05/03/04	44.07	---	3533.59	---	---
	05/10/05	32.30	---	3545.36	---	---
	05/15/06	33.45	---	3544.21	---	---
	05/30/07	33.17	---	3544.49	---	---
	05/12/08	35.66	---	3542.00	65.35	---

**TABLE I**  
**GROUNDWATER GAUGING SUMMARY**  
**CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY**  
**J.R. PHILLIPS TANK BATTERY #2**  
**LEA COUNTY, NEW MEXICO**

Well ID TOC <i>Elevation</i>	Collection Date	Depth to Groundwater (ft TOC)	Casing Diameter (in)	Groundwater Elevation (ft)	Well Depth (ft TOC)	Well Screen Interval (ft bgs)
WW-1 3562.54	5/2/01	33.93	5	3528.61	69.35	Unknown
	05/21/02	34.60	---	3527.94	---	---
	11/12/02	35.03	---	3527.51	---	---
	09/03/03	35.51	---	3527.03	---	---
	11/20/03	35.56	---	3526.98	---	---
	05/03/04	35.49	---	3527.05	---	---
	05/10/05	30.58	---	3531.96	---	---
	05/15/06	30.05	---	3532.49	---	---
	05/30/07	29.47	---	3533.07	---	---
	05/12/08	30.50	---	3532.04	69.65	---

Notes:

1. TOC - Top of Casing.
2. bgs - below ground surface.

TABLE II  
GROUNDWATER ANALYTICAL SUMMARY  
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY  
J.R. PHILLIPS TANK BATTERY #2  
LEA COUNTY, NEW MEXICO

Sample ID	Sample Date	Carbonate Alkalinity	Bicarbonate Alkalinity	Total Alkalinity	Chloride	Fluoride	Nitrate - N	Sulfate	Calcium	Magnesium	Potassium	Sodium	TDS
		250	1,60	10	600								1,000
<b>New Mexico Water Quality Control Commission Groundwater Standard</b>													
MW-1	4/10/01	0.00	556	556	7,300	--	--	2,061	445	175	44.00	5,058	15,816
	5/3/01	<2.00	500	500	6,913	--	--	2,020	323.4	172.5	52.11	3,756	14,501
	5/23/02	<1.00	494	494	6,060	--	--	1,850	361	154	66.40	3,750	13,300
	11/12/02	<0.10	456	456	6,030	--	--	1,400	235	143	67.40	3,060	12,800
	5/15/03	<1.00	430	430	5,150	--	--	1,710	312	121	42.80	3,970	5,990
	9/9/03	--	--	--	5,320	--	--	--	--	--	--	--	--
	11/21/03	<1.00	460	460	4,910	--	--	1,730	302	121	54.6	3,360	11,540
	5/4/04	<1.00	438	438	5,280	<4.00	<4.00	1,620	272	115	49.10	3,030	11,260
	5/10/05	<1.00	412	412	7,000	<2.00	<2.00	2,360	453	211	94.50	3,780	16,250
	5/16/06	<10	410	410	6,700	1.3	<0.40	1,700	403,000 D2	182,000 D2	38,400 D2	4,080,000 D1	16,600
	5/31/07	<10	378	378	7,000	<50	<0.100	1,900	461	200	<50	4,150	15,600
	5/13/08	<1.53	534	534	6,670	2.13	<0.95	1,960	427	192	53.6	3,520	14,700
MW-2	4/10/01	0.00	566	566	8,704	--	--	2,611	569	296	31.00	5,871	19,312
	5/3/01	<2.00	516	516	7,799	--	--	2,670	412.4	221.7	30.31	4,424	16,857
	5/22/02	<1.00	530	530	7,320	--	--	2,150	471	204	42.20	4,200	15,700
	11/12/02	<0.10	482	482	6,740	--	--	1,780	352	187	48.70	3,640	14,300
	5/15/03	<1.00	498	498	5,850	--	--	1,990	312	150	31.30	4,670	14,000
	9/9/03	--	--	--	6,470	--	--	--	--	--	--	--	--
	11/21/03	<1.00	510	510	5,790	--	--	2,100	378	158	52.1	3,770	14,080
	5/4/04	<1.00	530	530	6,040	<4.00	<4.00	1,950	326	136	43.80	3,300	12,520
	5/10/05	<1.00	502	502	8,080	5.57	<2.00	2,090	385	171	52.90	4,310	17,050
	5/16/06	<10	890	890	6,300	2.1	<0.40	1,600	375,000 D2	168,000 D2	9,330 D2	4,330,000 D1	14,200
	5/31/07	<10	1370	1370	6,700	<50	<0.100	1,700	417	183	<50	4,000	14,900
	5/13/08	<1.53	736	736	6,440	6.93	<0.95	1,690	410	184	29.1	3,530	14,000
MW-3	5/3/01	<2.00	458	458	11,078	--	--	3,525	984	431.9	38.89	6,114	24,135
	5/23/02	<1.00	512	512	10,800	--	--	3,920	999	350	56.50	6,210	24,200
	11/13/02	<0.10	456	456	11,400	--	--	3,670	863	371	59.30	5,680	23,600
	5/15/03	<1.00	462	462	10,700	--	--	4,220	921	315	341.0	5,870	24,200
	9/9/03	--	--	--	10,300	--	--	--	--	--	--	--	--
	11/21/03	<1.00	464	464	10,500	--	--	4,480	972	333	47.50	7,540	23,100
	5/4/04	<1.00	478	478	11,400	<8.00	<8.00	4,750	808	291	541.0	5,290	22,500
	5/10/05	<1.00	472	472	11,900	<2.00	<2.00	4,190	965	356	86.70	7,320	26,50
	5/16/06	<10	550	550	8,600	0.76	<0.40	3,100	642,000 D2	243,000 D2	24,100 D2	6,040,000 D1	23,200
	5/31/07	<10	520	520	7,700	<50	<0.100	2,900	591	213	<50	4,760	14,100
	5/13/08	<1.53	491	491	7,500	7.19	<0.95	2,590	578	202	25.5	4,440	17,200

TABLE II  
GROUNDWATER ANALYTICAL SUMMARY  
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY  
J.R. PHILLIPS TANK BATTERY #2  
LEA COUNTY, NEW MEXICO

Sample ID	Sample Date	Carbonate Alkalinity	Bicarbonate Alkalinity	Total Alkalinity	Chloride	Fluoride	Nitrate - N	Sulfate	Calcium	Magnesium	Potassium	Sodium	TDS
		250	1,60	10	600								1,000
<b>New Mexico Water Quality Control Commission Groundwater Standard</b>													
MW-4	5/3/01	<2.00	61.8	61.8	9,572	---	2,755	467.7	299.8	49.25	5,435	20,118	
	5/22/02	<1.00	81.4	81.4	8,170	---	1,940	389	220	45.30	5,100	18,200	
11/13/02	<0.10	1020	1020	7,890	---	1,020	47.1	202	21.60	3,980	14,800		
5/15/03	<1.00	1050	1050	7,140	---	1,210	185	179	14.80	5,250	15,200		
9/9/03	---	---	---	7,890	---	---	---	---	---	---	---	---	
11/21/03	<1.00	770	770	7,500	---	2,720	334	198	39.70	4,760	17,350		
5/4/04	<1.00	900	900	8,740	<6.00	3,170	240	191	25.80	3,660	15,800		
5/10/05	<1.00	708	708	7,750	2.73	<2.00	2,010	330	186	50.40	4,400	26,700	
5/16/06	<10	750	750	6,400	0.81	<0.40	1,900	253,000 D2	146,000 D2	<5,000 D2	4,120,000 D1	11,100	
5/31/07	<10	624	624	5,500	<50	<0.100	1,500	272	126	<50	3,550	13,700	
5/13/08	<1.53	627	627	5,550	6.64	<0.95	1,430	280	129	31.6	3,270	12,400	
MW-5	5/3/01	<2.00	416	416	8,685	---	3,045	430.9	237.1	44.36	4,651	18,846	
	5/23/02	<1.00	496	496	6,970	---	2,510	394	200	44.00	4,680	16,900	
11/13/02	<0.10	640	640	7,270	---	1,790	266	172	43.80	3,880	14,900		
5/15/03	<1.00	562	562	6,800	---	2,320	383	167	30.90	5,300	16,000		
9/9/03	---	---	7,090	---	---	---	---	---	---	---	---	---	
11/21/03	<1.00	522	522	7,010	---	3,170	434	178	54.90	4,300	16,850		
5/4/04	<1.00	534	534	6,630	<4.00	2,310	365	152	47.80	3,850	16,800		
5/10/05	<1.00	536	536	23,300	<2.00	2,380	362	151	68.30	4,400	17,400		
5/16/06	<10	530	530	5,800	1.4	<0.40	1,600	335,000 D2	143,000 D2	23,900 D2	4,110,000 D1	14,100	
5/31/07	<10	426	426	6,400	<50	<0.100	1,500	372	154	<50	3,910	14,400	
5/13/08	<1.53	410	410	6,720	6.87	<0.95	1,590	413	180	32.2	3,580	14,700	
MW-6	5/3/01	<2.00	460	460	11,876	---	4,380	1,004	429.9	52.27	6,281	25,288	
	5/23/02	<1.00	474	474	11,000	---	4,300	1,130	483	53.00	6,060	25,500	
11/13/02	<0.10	416	416	10,800	---	3,660	936	486	57.60	5,470	23,400		
5/15/03	<1.00	470	470	10,700	---	4,310	1,000	388	34.10	5,760	23,800		
9/9/03	---	---	10,300	---	---	---	---	---	---	---	---	---	
11/20/03	<1.00	480	480	10,000	---	4,410	904	399	42.50	5,610	23,500		
5/4/04	<1.00	466	466	11,400	<8.00	4,310	869	350	49.00	5,590	23,850		
5/10/05	<1.00	476	476	11,000	3.48	<2.00	4,050	801	331	52.20	6,090	24,200	
5/16/06	<10	750	750	8,700	1.0	<0.40	3,200	620,000 D2	268,000 D2	24,200 D2	5,980,000 D1	18,900	
5/31/07	<10	776	776	7,800	<50	<0.100	3,100	600	226	<50	5,200	18,700	
5/13/08	<1.53	672	672	7,230	7.3	<0.95	2,870	425	179	24.7	4,470	16,900	

TABLE II  
GROUNDWATER ANALYTICAL SUMMARY  
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY  
J.R. PHILLIPS TANK BATTERY #2  
LEA COUNTY, NEW MEXICO

Sample ID	Sample Date	Carbonate Alkalinity	Bicarbonate Alkalinity	Total Alkalinity	Chloride	Fluoride	Nitrate - N	Sulfate	Calcium	Magnesium	Potassium	Sodium	TDS
		250	1,60	10	600								1,000
<b>New Mexico Water Quality Control Commission Groundwater Standard</b>													
MW-7	5/2/01	<2.00	436	436	8,154	--	--	2,430	599.5	289.8	34.57	4,578	18,578
	5/22/02	<1.00	440	440	7,420	--	--	2,280	630	264	48.50	4,390	16,900
	11/12/02	<0.10	412	412	7,530	--	--	1,800	512	244	55.00	3,950	15,700
	5/15/03	<1.00	438	438	7,180	--	--	2,350	583	220	33.30	4,970	16,800
	9/9/03	--	--	6,910	--	--	--	--	--	--	--	--	--
	11/20/03	<1.00	434	434	6,360	--	--	2,110	532	204	52.70	3,770	14,500
	5/4/04	<1.00	418	418	6,610	<4.00	<4.00	1,930	527	188	47.10	3,460	16,600
	5/10/05	<1.00	450	450	8,210	2.14	<2.00	1,810	506	188	62.80	3,860	14,600
	5/16/06	<10	480	480	6,500	1.1	<0.40	1,700	530,000 D2	200,000 D2	15,600 D2	4,020,000 D1	18,100
	5/31/07	<10	397	397	6,890	<50	<0.100	1,800	496	187	<50	3,730	14,900
	5/13/08	<1.53	417	417	6,070	6.80	<0.95	1,920	484	194	31.7	3,430	14,200
MW-8	5/2/01	<2.00	426	426	7,445	--	--	1,213	766.7	295.7	52.68	2,999	16,325
	5/23/02	<1.00	430	430	6,680	--	--	1,260	701	237	75.90	3,420	13,300
	11/12/02	<0.10	444	444	7,270	--	--	1,220	591	254	88.00	3,150	14,000
	5/15/03	<1.00	468	468	7,300	--	--	1,690	777	265	55.10	4,580	15,700
	9/9/03	--	--	7,270	--	--	--	2,570	881	280	64.5	3,560	14,040
	11/20/03	<1.00	438	438	8,190	--	--	1,370	912	321	60.10	2,970	12,550
	5/4/04	<1.00	380	380	7,960	<6.00	<6.00	936	228	84.40	46.30	1,740	5,635
	5/10/05	<1.00	446	446	2,590	4.12	<1.00	960	327,000 D2	117,000 D2	21,000 D2	1,680,000 D1	6,620
	5/16/06	<10	480	480	2,600	3.1	<0.40	960	394	133	<50	1,830	8,080
	5/31/07	<10	378	378	3,200	<50	<0.100	762	354	132	28.9	1,770	7,280
WW-1	--	--	--	--	13,152	--	--	--	--	--	--	--	--
	5/3/01	<2.00	<2.00	<2.00	12,053	--	--	629	1,419	387.3	38.95	1,486	22,571
	11/12/02	<0.10	<2.0	<2.0	<5.0	--	--	998	1,120	361	38.30	2,260	15,800
	5/15/03	<1.00	<4.00	<4.00	11,800	--	--	1,780	1,490	403	28.90	3,360	21,400
	9/9/03	--	--	<5.00	--	--	--	--	--	--	--	--	--
	11/21/03	<1.00	<4.00	<4.00	10,000	--	--	2,180	1,650	461	52.7	3,630	18,900
	5/4/04	<1.00	<4.00	<4.00	12,500	<8.00	<8.00	1,880	1,540	450	47.00	3,470	23,400
	5/10/05	<1.00	<4.00	<4.00	121	<1.00	<1.00	63.40	39.8	12.2	3.05	10.20	336
	5/16/06	<10	67	67	1,300	<0.50	1.9	110	155,000 D2	34,500 D2	<5,000 D2	186,000 D1	4,180
	5/31/07	<10	<10	<10	2,400	<25	<0.100	300	645	167	<50	1,830	5,340
	5/13/08	<1.53	<1.53	<1.53	10,200	<1.0	<1.9	1,770	1,400	364	<8.121	3,320	22,700

**Notes:**

1. Shaded cells indicate New Mexico Water Quality Control Commission (NMWQCC) exceedance.

2. Results shown in mg/L.

3. Analytical data prior to 2006 was provided to CRA by Larson & Associates.

4. D1. The analysis was performed at a dilution due to the high analyte concentration.

5. D2. The analysis was performed at a dilution due to the presence of matrix interferences.

APPENDIX A  
NMOCD CORRESPONDENCE



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON

Governor

Jennifer A. Salisbury

Cabinet Secretary

Lori Wrotenbery

Director

Oil Conservation Division

December 27, 2001

**CERTIFIED MAIL**

**RETURN RECEIPT NO. 7000-1670-0012-5357-8116**

Mr. Rodney Bailey  
Texaco Exploration & Production, Inc.  
500 N. Lorraine  
Midland, Texas 79701

**RE: CASE #1R0255  
J.R. PHILLIPS #2 TANK BATTERY SITE  
MONUMENT, NEW MEXICO**

Dear Mr. Bailey:

The New Mexico Oil Conservation Division (OCD) has reviewed Texaco Exploration & Production, Inc.'s (Texaco) May 24, 2001 "GROUNDWATER ASSESSMENT REPORT, TEXACO EXPLORATION AND PRODUCTION INC., J.R. PHILLIPS TANK BATTERY #2, SE/4, NW/4, SECTION 6, TOWNSHIP 20 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO, MAY 24, 2001" which was submitted on behalf of Texaco by their consultant Larson & Associates, Inc. This document contains the results of Texaco's investigation of the extent of ground water contamination related to a former emergency pit at the J.R. Phillips #2 Tank Battery south of Monument, New Mexico. The document also contains a proposal for further ground water monitoring at the site.

The above referenced monitoring proposal is approved with the following conditions:

1. Ground water from the monitoring wells shall also be analyzed for concentrations of benzene, toluene, ethylbenzene and xylene (BTEX).
2. Texaco shall notify the OCD at least 48 hours in advance of scheduled activities such that the OCD has the opportunity to witness the events and split samples.

Please be advised that OCD approval does not relieve Texaco of responsibility if the work plan fails to adequately monitor contamination related to Texaco's activities, or if contamination exists which is outside the scope of the work plan. In addition, OCD approval does not relieve Texaco of responsibility for compliance with any other federal, state or local laws and regulations.

If you have any questions, please contact me at (505) 476-3491.

Sincerely,



William C. Olson  
Hydrologist  
Environmental Bureau

xc: Chris Williams, OCD Hobbs District Office  
Mark Larson, Larson & Associates, Inc.



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON**

Governor

**Joanna Prukop**

Cabinet Secretary

**Mark E. Fesmire, P.E.**

Director

**Oil Conservation Division**

October 1, 2004

Mr. Rodney Bailey  
ChevronTexaco  
15 Smith Road  
Midland, Texas 79705

**RE: CASE #1R0255  
J.R. PHILLIPS #2 TANK BATTERY SITE  
MONUMENT, NEW MEXICO**

Dear Mr. Bailey:

The New Mexico Oil Conservation Division (OCD) has reviewed ChevronTexaco's May 10, 2004 "ANNUAL GROUNDWATER MONITORING REPORT, CHEVRONTEXACO EXPLORATION AND PRODUCTION COMPANY, J.R.PHILLIPS TANK BATTERY NO. 2, NW/4 SE/4, SECTION 30, TOWNSHIP 18 SOUTH, RANGE 38 EAST, LEA COUNTY, NEW MEXICO" which was submitted on behalf of ChevronTexaco by their consultant Larson & Associates, Inc. This document contains the results of ChevronTexaco's 2003 remediation and monitoring of contaminated ground water at the J.R. Phillips #2 Tank Battery south of Monument, New Mexico. The document also proposes to change the sampling schedule of ground water monitoring wells from semi-annual to annual sampling.

The above-referenced monitoring proposal is approved. Please be advised that OCD approval does not limit ChevronTexaco to the proposed work plan should the plan fail to adequately remediate or monitor contamination related to ChevronTexaco's activities, or if contamination exists which is outside the scope of the work plan. In addition, OCD approval does not relieve ChevronTexaco of responsibility for compliance with any other federal, state or local laws and regulations. If you have any questions, please contact me at (505) 476-3491.

Sincerely,

William C. Olson  
Hydrologist  
Environmental Bureau

cc: Chris Williams, OCD Hobbs District Office  
Cindy K. Crain, Larson & Associates, Inc.

APPENDIX B  
CERTIFIED LABORATORY REPORTS AND CHAIN-OF-CUSTODIES

# TestAmerica

1000 Rothway Drive • Houston, TX 77040 • (281) 449-4444 • Fax: (281) 449-4445 • [www.testamerica.com](http://www.testamerica.com)

## ANALYTICAL REPORT

JOB NUMBER: 354100  
Project ID: J.R PHILLIPS

Prepared For:

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

Attention: Todd Wells

Date: 05/29/2008



Signature

05/29/08

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](mailto:sachin.kudchadkar@testamericainc.com)

TOTAL NO. OF PAGES 30

**S A M P L E   I N F O R M A T I O N**  
Date: 05/29/2008

Job Number.: 354100  
 Customer...: Conestoga-Rovers and Associates  
 Attn.....: Todd Wells

Project Number.....: 99007835  
 Customer Project ID....: J.R PHILLIPS  
 Project Description....: Chevron

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
354100-1	MW-1	Water	05/13/2030	12:10	05/14/2008	09:41
354100-2	MW-2	Water	05/13/2030	12:30	05/14/2008	09:41
354100-3	MW-3	Water	05/13/2030	13:50	05/14/2008	09:41
354100-4	MW-4	Water	05/13/2030	13:15	05/14/2008	09:41
354100-5	MW-5	Water	05/13/2030	13:25	05/14/2008	09:41
354100-6	MW-6	Water	05/13/2030	14:00	05/14/2008	09:41
354100-7	MW-7	Water	05/13/2030	12:55	05/14/2008	09:41
354100-8	MW-8	Water	05/13/2030	11:20	05/14/2008	09:41
354100-9	WATER WELL	Water	05/13/2030	11:45	05/14/2008	09:41
354100-10	DUPE	Water	05/13/2030	00:00	05/14/2008	09:41

L A B O R A T O R Y      T E S T      R E S U L T S						Date: 05/29/2008					
C U S T O M E R : Conestoga-Rovers and Associates			P R O J E C T : J.R PHILLIPS			ATTN: Todd Wells					
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SM-846 3005A	Acid Digestion, Diss.	Complete				1		199563	05/27/08 1535	rim	
SM-846 6010B	Metals Analysis (ICAP Trace)										
	Calcium (Ca), Diss.	427		0.02185	2.000	1	ng/L	199638	05/28/08 1029	STP	
	Magnesium (Mg), Diss.	192		0.01604	2.000	1	ng/L	199638	05/28/08 1029	STP	
	Potassium (K), Diss.	53.6		0.8121	20.00	10	ng/L	199638	05/28/08 1304	STP	
	Potassium (Na), Diss.	3520		2.000	200.0	100	ng/L	199638	05/28/08 1415	STP	
SM 2320 B	Alkalinity, Total as CaCO <sub>3</sub> , Water	534		1.53	5.0	1	mg/L	199280	05/21/08 1425	sng	
SM 2320 B	Bicarbonate (HCO <sub>3</sub> ), Water	534		1.53	5.0	1	mg/L	199280	05/21/08 1425	sng	
SM 2320 B	Carbonate (CO <sub>3</sub> ), Water	1.53	U	1.53	5.0	1	mg/L	199280	05/21/08 1425	sng	
SM 2540C	Solids, Total Dissolved (TDS), Water	14700		1.533	100	1	mg/L	199020	05/15/08 1640	daw	
EPA 300.0	Ion Chromatography Analysis										
	Chloride, Water	6670		150	500	1000	ng/L	198924	05/14/08 1418	sur	
	Fluoride (F), Water	2.13		0.50	1.5	5	ng/L	198924	05/14/08 1346	sur	
	Sulfate (SO <sub>4</sub> ), Water	1960		34	50	100	ng/L	198924	05/14/08 1402	sur	
EPA 300.0 Rev2.	Ion Chromatography Analysis - Short Hold										
	Nitrogen, Nitrate as N (NO <sub>3</sub> -N), Water	0.95	U	0.95	1.0	5	ng/L	198924	05/14/08 1346	sur	
	Nitrogen, Nitrite as N (NO <sub>2</sub> -N), Water	0.32	U	0.32	1.0	5	ng/L	198924	05/14/08 1346	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: 05/29/2008					
C U S T O M E R : Conestoga-Rovers and Associates			P R O J E C T : J.R PHILLIPS			ATTN: Todd Wells					
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SM-846 3005A	Acid Digestion, Diss.	Complete				1		199563	05/27/08 1535	rim	
SM-846 6010B	Metals Analysis (ICAP Trace)										
	Calcium (Ca), Diss.	410		0.02185	2.000	1	ng/L	199638	05/28/08 1045	STP	
	Magnesium (Mg), Diss.	184		0.01604	2.000	1	ng/L	199638	05/28/08 1045	STP	
	Potassium (K), Diss.	29.1		0.8121	20.00	10	ng/L	199638	05/28/08 1320	STP	
	Potassium (Na), Diss.	3530		2.000	200.0	100	ng/L	199638	05/28/08 1431	STP	
SM 2320 B	Alkalinity, Total as CaCO <sub>3</sub> , Water	736		1.53	5.0	1	mg/L	199280	05/21/08 1425	sng	
SM 2320 B	Bicarbonate (HCO <sub>3</sub> ), Water	736		1.53	5.0	1	mg/L	199280	05/21/08 1425	sng	
SM 2320 B	Carbonate (CO <sub>3</sub> ), Water	1.53	U	1.53	5.0	1	mg/L	199280	05/21/08 1425	sng	
SM 2540C	Solids, Total Dissolved (TDS), Water	14000		1.533	100	1	mg/L	199020	05/15/08 1640	daw	
EPA 300.0	Ion Chromatography Analysis										
	Chloride, Water	6440		150	500	1000	ng/L	198924	05/14/08 1505	sur	
	Fluoride (F), Water	6.93		0.50	1.5	5	ng/L	198924	05/14/08 1433	sur	
	Sulfate (SO <sub>4</sub> ), Water	1690		34	50	100	ng/L	198924	05/14/08 1449	sur	
EPA 300.0 Rev2.	Ion Chromatography Analysis - Short Hold										
	Nitrogen, Nitrate as N (NO <sub>3</sub> -N), Water	0.95	U	0.95	1.0	5	ng/L	198924	05/14/08 1433	sur	
	Nitrogen, Nitrite as N (NO <sub>2</sub> -N), Water	0.32	U	0.32	1.0	5	ng/L	198924	05/14/08 1433	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: 05/29/2008					
C U S T O M E R : Conestoga-Rovers and Associates			P R O J E C T : J.R PHILLIPS			ATTN: Todd Wells					
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAG	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SM-846 3005A	Acid Digestion, Diss.	Complete				1		199563	05/27/08 1535	rim	
SM-846 6010B	Metals Analysis (ICAP Trace)										
	Calcium (Ca), Diss.	578		0.2185	20.00	10	ng/L	199638	05/28/08 1324	STP	
	Magnesium (Mg), Diss.	202		0.01604	2.000	1	ng/L	199638	05/28/08 1048	STP	
	Potassium (K), Diss.	25.5		0.8121	20.00	10	ng/L	199638	05/28/08 1324	STP	
	Potassium (Na), Diss.	4440		4.0000	400.0	200	ng/L	199638	05/28/08 1558	STP	
SM 2320 B	Alkalinity, Total as CaCO <sub>3</sub> , Water	491		1.53	5.0	1	mg/L	199280	05/21/08 1425	sng	
SM 2320 B	Bicarbonate (HCO <sub>3</sub> ), Water	491		1.53	5.0	1	mg/L	199280	05/21/08 1425	sng	
SM 2320 B	Carbonate (CO <sub>3</sub> ), Water	1.53	U	1.53	5.0	1	mg/L	199280	05/21/08 1425	sng	
SM 2540C	Solids, Total Dissolved (TDS), Water	17200		1.533	100	1	mg/L	199020	05/15/08 1640	daw	
EPA 300.0	Ion Chromatography Analysis										
	Chloride, Water	7500		150	500	1000	ng/L	198924	05/14/08 1623	sur	
	Fluoride (F), Water	7.19		0.50	1.5	5	ng/L	198924	05/14/08 1520	sur	
	Sulfate (SO <sub>4</sub> ), Water	2590		34	50	100	ng/L	198924	05/14/08 1536	sur	
EPA300.0 Rev2.	Ion Chromatography Analysis - Short Hold										
	Nitrogen, Nitrate as N (NO <sub>3</sub> -N), Water	0.95	U	0.95	1.0	5	ng/L	198924	05/14/08 1520	sur	
	Nitrogen, Nitrite as N (NO <sub>2</sub> -N), Water	0.32	U	0.32	1.0	5	ng/L	198924	05/14/08 1520	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: 05/29/2008					
C U S T O M E R : Conestoga-Rovers and Associates			P R O J E C T : J.R PHILLIPS			ATTN: Todd Wells					
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAG	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SM-846 3005A	Acid Digestion, Diss.	Complete				1		199563	05/27/08 1535	rim	
SM-846 6010B	Metals Analysis (ICAP Trace)										
	Calcium (Ca), Diss.	280		0.02185	2.000	1	ng/L	199638	05/28/08 1052	STP	
	Magnesium (Mg), Diss.	129		0.01604	2.000	1	ng/L	199638	05/28/08 1052	STP	
	Potassium (K), Diss.	31.6		0.08121	2.000	1	ng/L	199638	05/28/08 1052	STP	
	Sodium (Na), Diss.	3270		2.000	200.0	100	ng/L	199638	05/28/08 1446	STP	
SM 2320 B	Alkalinity, Total as CaCO <sub>3</sub> , Water	627		1.53	5.0	1	mg/L	199280	05/21/08 1425	sng	
SM 2320 B	Bicarbonate (HCO <sub>3</sub> ), Water	627		1.53	5.0	1	mg/L	199280	05/21/08 1425	sng	
SM 2320 B	Carbonate (CO <sub>3</sub> ), Water	1.53	U	1.53	5.0	1	mg/L	199280	05/21/08 1425	sng	
SM 2540C	Solids, Total Dissolved (TDS), Water	12400		1.533	100	1	mg/L	199020	05/15/08 1640	daw	
EPA 300.0	Ion Chromatography Analysis										
	Chloride, Water	5550		150	500	1000	ng/L	198924	05/14/08 1710	sur	
	Fluoride (F), Water	6.64		0.50	1.5	5	ng/L	198924	05/14/08 1638	sur	
	Sulfate (SO <sub>4</sub> ), Water	1430		34	50	100	ng/L	198924	05/14/08 1654	sur	
EPA300.0 Rev2.	Ion Chromatography Analysis - Short Hold										
	Nitrogen, Nitrate as N (NO <sub>3</sub> -N), Water	0.95	U	0.95	1.0	5	ng/L	198924	05/14/08 1638	sur	
	Nitrogen, Nitrite as N (NO <sub>2</sub> -N), Water	0.32	U	0.32	1.0	5	ng/L	198924	05/14/08 1638	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: 05/29/2008					
C U S T O M E R : Conestoga-Rovers and Associates			P R O J E C T : J.R PHILLIPS			ATTN: Todd Wells					
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SM-846 3005A	Acid Digestion, Diss.	Complete				1		199563	05/27/08 1535	rim	
SM-846 6010B	Metals Analysis (ICAP Trace)										
	Calcium (Ca), Diss.	413		0.02185	2.000	1	ng/L	199638	05/28/08 1104	STP	
	Magnesium (Mg), Diss.	180		0.01604	2.000	1	ng/L	199638	05/28/08 1104	STP	
	Potassium (K), Diss.	32.2		0.8121	20.00	10	ng/L	199638	05/28/08 1332	STP	
	Potassium (Na), Diss.	3580		2.000	200.0	100	ng/L	199638	05/28/08 1450	STP	
SM 2320 B	Alkalinity, Total as CaCO <sub>3</sub> , Water	410		1.53	5.0	1	mg/L	199280	05/21/08 1425	sng	
SM 2320 B	Bicarbonate (HCO <sub>3</sub> ), Water	410		1.53	5.0	1	mg/L	199280	05/21/08 1425	sng	
SM 2320 B	Carbonate (CO <sub>3</sub> ), Water	1.53	U	1.53	5.0	1	mg/L	199280	05/21/08 1425	sng	
SM 2540C	Solids, Total Dissolved (TDS), Water	14700		1.533	100	1	mg/L	199020	05/15/08 1640	daw	
EPA 300.0	Ion Chromatography Analysis										
	Chloride, Water	6720		150	500	1000	ng/L	198924	05/14/08 1756	sur	
	Fluoride (F), Water	6.87		0.50	1.5	5	ng/L	198924	05/14/08 1725	sur	
	Sulfate (SO <sub>4</sub> ), Water	1590		34	50	100	ng/L	198924	05/14/08 1741	sur	
EPA 300.0 Rev2.	Ion Chromatography Analysis - Short Hold										
	Nitrogen, Nitrate as N (NO <sub>3</sub> -N), Water	0.95	U	0.95	1.0	5	ng/L	198924	05/14/08 1725	sur	
	Nitrogen, Nitrite as N (NO <sub>2</sub> -N), Water	0.32	U	0.32	1.0	5	ng/L	198924	05/14/08 1725	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: 05/29/2008					
C U S T O M E R : Conestoga-Rovers and Associates			P R O J E C T : J.R PHILLIPS			ATTN: Todd Wells					
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAG	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SM-846 3005A	Acid Digestion, Diss.	Complete				1		199563	05/27/08 1535	rim	
SM-846 6010B	Metals Analysis (ICAP Trace)										
	Calcium (Ca), Diss.	425		0.02185	2.000	1	ng/L	199638	05/28/08 1108	STP	
	Magnesium (Mg), Diss.	179		0.01604	2.000	1	ng/L	199638	05/28/08 1108	STP	
	Potassium (K), Diss.	24.7		0.8121	20.00	10	ng/L	199638	05/28/08 1336	STP	
	Potassium (Na), Diss.	4470		4.0000	400.0	200	ng/L	199638	05/28/08 1602	STP	
SM 2320 B	Alkalinity, Total as CaCO <sub>3</sub> , Water	672		1.53	5.0	1	mg/L	199280	05/21/08 1425	sng	
SM 2320 B	Bicarbonate (HCO <sub>3</sub> ), Water	672		1.53	5.0	1	mg/L	199280	05/21/08 1425	sng	
SM 2320 B	Carbonate (CO <sub>3</sub> ), Water	1.53	U	1.53	5.0	1	mg/L	199280	05/21/08 1425	sng	
SM 2540C	Solids, Total Dissolved (TDS), Water	16900		1.533	100	1	mg/L	199020	05/15/08 1640	daw	
EPA 300.0	Ion Chromatography Analysis										
	Chloride, Water	7230		150	500	1000	ng/L	198924	05/14/08 1843	sur	
	Fluoride (F), Water		7.30	0.50	1.5	5	ng/L	198924	05/14/08 1812	sur	
	Sulfate (SO <sub>4</sub> ), Water	2870	34	34	50	100	ng/L	198924	05/14/08 1828	sur	
EPA300.0 Rev2.	Ion Chromatography Analysis - Short Hold										
	Nitrogen, Nitrate as N (NO <sub>3</sub> -N), Water	0.95	U	0.95	1.0	5	ng/L	198924	05/14/08 1812	sur	
	Nitrogen, Nitrite as N (NO <sub>2</sub> -N), Water	0.32	U	0.32	1.0	5	ng/L	198924	05/14/08 1812	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: 05/29/2008					
C U S T O M E R : Conestoga-Rovers and Associates			P R O J E C T : J.R PHILLIPS			ATTN: Todd Wells					
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAG	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SM-846 3005A	Acid Digestion, Diss.	Complete				1		199563	05/27/08 1535	rim	
SM-846 6010B	Metals Analysis (ICAP Trace)										
	Calcium (Ca), Diss.	484		0.02185	2.000	1	ng/L	199638	05/28/08 1112	STP	
	Magnesium (Mg), Diss.	194		0.01604	2.000	1	ng/L	199638	05/28/08 1112	STP	
	Potassium (K), Diss.	31.7		0.8121	20.00	10	ng/L	199638	05/28/08 1339	STP	
	Sodium (Na), Diss.	3430		2.000	200.0	100	ng/L	199638	05/28/08 1458	STP	
SM 2320 B	Alkalinity, Total as CaCO <sub>3</sub> , Water	417		1.53	5.0	1	mg/L	199280	05/21/08 1425	sng	
SM 2320 B	Bicarbonate (HCO <sub>3</sub> ), Water	417		1.53	5.0	1	mg/L	199280	05/21/08 1425	sng	
SM 2320 B	Carbonate (CO <sub>3</sub> ), Water	1.53	U	1.53	5.0	1	mg/L	199280	05/21/08 1425	sng	
SM 2540C	Solids, Total Dissolved (TDS), Water	14200		1.533	100	1	mg/L	199020	05/15/08 1640	daw	
EPA 300.0	Ion Chromatography Analysis										
	Chloride, Water	6070		150	500	1000	ng/L	198924	05/14/08 2001	sur	
	Fluoride (F), Water	6.80		0.50	1.5	5	ng/L	198924	05/14/08 1930	sur	
	Sulfate (SO <sub>4</sub> ), Water	1920		34	50	100	ng/L	198924	05/14/08 1946	sur	
EPA 300.0 Rev2.	Ion Chromatography Analysis - Short Hold										
	Nitrogen, Nitrate as N (NO <sub>3</sub> -N), Water	0.95	U	0.95	1.0	5	ng/L	198924	05/14/08 1930	sur	
	Nitrogen, Nitrite as N (NO <sub>2</sub> -N), Water	0.32	U	0.32	1.0	5	ng/L	198924	05/14/08 1930	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: 05/29/2008					
C U S T O M E R : Conestoga-Rovers and Associates			P R O J E C T : J.R PHILLIPS			ATTN: Todd Wells					
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAG	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SM-846 3005A	Acid Digestion, Diss.	Complete				1		199563	05/27/08 1535	rim	
SM-846 6010B	Metals Analysis (ICAP Trace)										
	Calcium (Ca), Diss.	354		0.02185	2.000	1	ng/L	199638	05/28/08 1120	STP	
	Magnesium (Mg), Diss.	132		0.01604	2.000	1	ng/L	199638	05/28/08 1120	STP	
	Potassium (K), Diss.	28.9		0.8121	20.00	10	ng/L	199638	05/28/08 1355	STP	
	Potassium (Na), Diss.	1770		2.000	200.0	100	ng/L	199638	05/28/08 1502	STP	
SM 2320 B	Alkalinity, Total as CaCO <sub>3</sub> , Water	472		1.53	5.0	1	mg/L	199280	05/21/08 1425	sng	
SM 2320 B	Bicarbonate (HCO <sub>3</sub> ), Water	472		1.53	5.0	1	mg/L	199280	05/21/08 1425	sng	
SM 2320 B	Carbonate (CO <sub>3</sub> ), Water	1.53	U	1.53	5.0	1	mg/L	199280	05/21/08 1425	sng	
SM 2540C	Solids, Total Dissolved (TDS), Water	7280		1.533	40	1	mg/L	199020	05/15/08 1640	daw	
EPA 300.0	Ion Chromatography Analysis										
	Chloride, Water	3160		15	50	100	ng/L	198924	05/14/08 2048	sur	
	Fluoride (F), Water	2.94		0.50	1.5	5	ng/L	198924	05/14/08 2017	sur	
	Sulfate (SO <sub>4</sub> ), Water	762		34	50	100	ng/L	198924	05/14/08 2048	sur	
EPA 300.0 Rev2.	Ion Chromatography Analysis - Short Hold										
	Nitrogen, Nitrate as N (NO <sub>3</sub> -N), Water	0.95	U	0.95	1.0	5	ng/L	198924	05/14/08 2017	sur	
	Nitrogen, Nitrite as N (NO <sub>2</sub> -N), Water	0.32	U	0.32	1.0	5	ng/L	198924	05/14/08 2017	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: 05/29/2008					
C U S T O M E R : Conestoga-Rovers and Associates			P R O J E C T : J.R PHILLIPS			ATTN: Todd Wells					
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAG	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SM-846 3005A	Acid Digestion, Diss.	Complete				1		199563	05/27/08 1535	rim	
SM-846 6010B	Metals Analysis (ICAP Trace)										
	Calcium (Ca), Diss.	1400		2.185	200.0		100				
	Magnesium (Mg), Diss.	364		1.604	200.0		100				
	Potassium (K), Diss.	8.121	U	8.121	200.0		100				
	Potassium (Na), Diss.	3320		2.000	200.0		100				
SM 2320 B	Alkalinity, Total as CaCO <sub>3</sub> , Water	1.53	U	1.53	5.0	1					
SM 2320 B	Bicarbonate (HCO <sub>3</sub> ), Water	1.53	U	1.53	5.0	1	ng/L	199280	05/21/08 1425	sng	
SM 2320 B	Carbonate (CO <sub>3</sub> ), Water	1.53	U	1.53	5.0	1	ng/L	199280	05/21/08 1425	sng	
SM 2540C	Solids, Total Dissolved (TDS), Water	22700		1.533	100	1	ng/L	199020	05/15/08 1640	daw	
EPA 300.0	Ion Chromatography Analysis										
	Chloride, Water	10200	U	150	500	1000	ng/L	198924	05/14/08 2238	sur	
	Fluoride (F), Water	1.0		1.0	3.0	10	ng/L	198924	05/14/08 2135	sur	
	Sulfate (SO <sub>4</sub> ), Water	1770	34	34	50	100	ng/L	198924	05/14/08 2151	sur	
EPA300.0 Rev2.	Ion Chromatography Analysis - Short Hold										
	Nitrogen, Nitrate as N (NO <sub>3</sub> -N), Water	1.9	U	1.9	2.0	10	ng/L	198924	05/14/08 2135	sur	
	Nitrogen, Nitrite as N (NO <sub>2</sub> -N), Water	0.65	U	0.65	2.0	10	ng/L	198924	05/14/08 2135	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: 05/29/2008					
C U S T O M E R : Conestoga-Rovers and Associates			P R O J E C T : J.R PHILLIPS			ATTN: Todd Wells					
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAG	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SM-846 3005A	Acid Digestion, Diss.	Complete				1		199563	05/27/08 1535	rim	
SM-846 6010B	Metals Analysis (ICAP Trace)										
	Calcium (Ca), Diss.	356		0.02185	2.000	1	ng/L	199638	05/28/08 1127	STP	
	Magnesium (Mg), Diss.	131		0.01604	2.000	1	ng/L	199638	05/28/08 1127	STP	
	Potassium (K), Diss.	28.7		0.8121	20.00	10	ng/L	199638	05/28/08 1403	STP	
	Potassium (Na), Diss.	1790		2.000	200.0	100	ng/L	199638	05/28/08 1506	STP	
SM 2320 B	Alkalinity, Total as CaCO <sub>3</sub> , Water										
	444	1.53		5.0	1	1	ng/L	199280	05/21/08 1425	sng	
SM 2320 B	Bicarbonate (HCO <sub>3</sub> ), Water	444		1.53	5.0	1	ng/L	199280	05/21/08 1425	sng	
SM 2320 B	Carbonate (CO <sub>3</sub> ), Water										
	U	1.53		5.0	1	1	ng/L	199280	05/21/08 1425	sng	
SM 2540C	Solids, Total Dissolved (TDS), Water	7220		1.533	40	1	ng/L	199020	05/15/08 1640	daw	
EPA 300.0	Ion Chromatography Analysis										
	Chloride, Water	3300		15	50	100	ng/L	198924	05/14/08 2325	sur	
	Fluoride (F), Water	2.97		0.50	5	50	ng/L	198924	05/14/08 2253	sur	
	Sulfate (SO <sub>4</sub> ), Water	829		34	50	100	ng/L	198924	05/14/08 2325	sur	
EPA 300.0 Rev2.	Ion Chromatography Analysis - Short Hold										
	Nitrogen, Nitrate as N (NO <sub>3</sub> -N), Water	0.95	U	0.95	1.0	5	ng/L	198924	05/14/08 2253	sur	
	Nitrogen, Nitrite as N (NO <sub>2</sub> -N), Water	0.32	U	0.32	1.0	5	ng/L	198924	05/14/08 2253	sur	

\* In Description = Dry Wgt.

## QUALITY CONTROL RESULTS

Job Number.: 354100

Report Date.: 05/29/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: J.R PHILLIPS

ATTN: Todd Wells

Test Method.....: SM 2320 B  
 Method Description.: Alkalinity  
 Parameter.....: Alkalinity, Total as CaCO<sub>3</sub>

Units.....: mg/L CaCO<sub>3</sub>  
 Batch(s)....: 199280

Analyst...: sng  
 Test Code.: ALK

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result *	Limits	F	Date	Time
DU	354242-5		179.29			177.40	1.1	20		05/21/2008	1425
MS	354238-12	WC4081A	6598.98		2500.000000	4112.41	99.5	75-125		05/21/2008	1425
DU	354238-12		4112.41			4112.41	0.0	20		05/21/2008	1425
MB	199280--21		1.89							05/21/2008	1425
MS	354438-6	WC4081A	396.32		250.000000	181.18	86.1	75-125		05/21/2008	1425
MS	354242-5	WC4081A	407.64		250.000000	177.40	92.1	75-125		05/21/2008	1425
LCS	199280--21	WC4050	943.62		1000.0		94.4	90.0-110.		05/21/2008	1425
DU	354100-1		535.98			534.09	0.4	20		05/21/2008	1425
MB	199280--21		1.89							05/21/2008	1425
DU	354438-6		181.18			181.18	0.0	20		05/21/2008	1425
MS	354100-1	WC4081A	764.33		250.000000	534.09	92.1	75-125		05/21/2008	1425
LCS	199280--21	WC4050	943.62		1000.0		94.4	90.0-110.		05/21/2008	1425

Test Method.....: SM 2320 B  
 Method Description.: Alkalinity  
 Parameter.....: Bicarbonate (HCO<sub>3</sub>)

Units.....: mg/L CaCO<sub>3</sub>  
 Batch(s)....: 199280

Analyst...: sng  
 Test Code.: HCO<sub>3</sub>

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result *	Limits	F	Date	Time
MB	199280--21		1.89							05/21/2008	1425
DU	354242-5		179.29			177.40	1.1	20		05/21/2008	1425
DU	354438-6		181.18			181.18	0.0	20		05/21/2008	1425
DU	354100-1		535.98			534.09	0.4	20		05/21/2008	1425
MB	199280--21		1.89							05/21/2008	1425

Test Method.....: SM 2320 B  
 Method Description.: Alkalinity  
 Parameter.....: Carbonate (CO<sub>3</sub>)

Units.....: mg/L CaCO<sub>3</sub>  
 Batch(s)....: 199280

Analyst...: sng  
 Test Code.: CO<sub>3</sub>

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result *	Limits	F	Date	Time
MB	199280--21		0							05/21/2008	1425
DU	354100-1		0			0	0	5		05/21/2008	1425
DU	354242-5		0			0	0	5		05/21/2008	1425
DU	354438-6		0			0	0	5		05/21/2008	1425
MB	199280--21		0							05/21/2008	1425

Test Method.....: SM 2540C  
 Method Description.: Solids, Total Dissolved (TDS)  
 Parameter.....: Solids, Total Dissolved (TDS)

Units.....: mg/L  
 Batch(s)....: 199020

Analyst...: daw  
 Test Code.: TDS

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result *	Limits	F	Date	Time
DU	354227-2		637.00			624.00	2.1	10.0		05/15/2008	1640
DU	354100-1		14580.00			14720.00	1.0	10.0		05/15/2008	1640
LCS	199020--21	WCS49472	1821.00		1800		101.2	90.0-110.		05/15/2008	1640
MB	199020--21		1.00							05/15/2008	1640

## QUALITY CONTROL RESULTS

Job Number.: 354100

Report Date.: 05/29/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: J.R PHILLIPS

ATTN: Todd Wells

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Test Method.....: EPA300.0 Rev2.1

Method Description.: Ion Chromatography Analysis - Short Hold Batch(s)....: 198924

Units.....: mg/L

Analyst...: sur

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

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

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

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

## QUALITY CONTROL RESULTS

Job Number.: 354100

Report Date.: 05/29/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: J.R PHILLIPS

ATTN: Todd Wells

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank				05/15/2008	0437

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

CCB	Continuing Calibration Blank					05/15/2008	0540	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Fluoride (F)	0							
Chloride	0							
Bromide (Br)	0							
Sulfate (SO4)	0							
Nitrogen, Nitrate as N (NO3-N)	0							
Nitrogen, Nitrite as N (NO2-N)	0							
Nitrate + Nitrite as N	0.000							

CCV	Continuing Calibration Verification	WCS49460				05/14/2008	1551	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Fluoride (F)	10.152		10.00		101.5		90.0-110.0	
Bromide (Br)	20.044		20.00		100.2		90.0-110.0	
Sulfate (SO4)	19.538		20.00		97.7		90.0-110.0	
Chloride	19.993		20.00		100.0		90.0-110.0	
Nitrogen, Nitrate as N (NO3-N)	10.517		10.0		105.2		90.0-110.0	
Nitrogen, Nitrite as N (NO2-N)	9.8297		10.0		98.3		90.0-110.0	

CCV	Continuing Calibration Verification	WCS49460				05/14/2008	1859	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	19.993		20.00		100.0		90.0-110.0	
Fluoride (F)	10.131		10.00		101.3		90.0-110.0	
Sulfate (SO4)	19.612		20.00		98.1		90.0-110.0	
Chloride	19.935		20.00		99.7		90.0-110.0	
Nitrogen, Nitrate as N (NO3-N)	10.418		10.0		104.2		90.0-110.0	
Nitrogen, Nitrite as N (NO2-N)	9.7858		10.0		97.9		90.0-110.0	

CCV	Continuing Calibration Verification	WCS49460				05/14/2008	2206	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Bromide (Br)	19.994		20.00		100.0		90.0-110.0	
Chloride	19.904		20.00		99.5		90.0-110.0	
Sulfate (SO4)	19.607		20.00		98.0		90.0-110.0	
Fluoride (F)	10.303		10.00		103.0		90.0-110.0	

## QUALITY CONTROL RESULTS

Job Number.: 354100

Report Date.: 05/29/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: J.R PHILLIPS

ATTN: Todd Wells

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	WCS49460			05/14/2008	2206
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Nitrogen, Nitrate as N (NO3-N)	10.440		10.0		104.4	90.0-110.0
Nitrogen, Nitrite as N (NO2-N)	9.7987		10.0		98.0	90.0-110.0
CCV	Continuing Calibration Verification	WCS49460			05/15/2008	0114
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Fluoride (F)	10.716		10.00		107.2	90.0-110.0
Chloride	20.057		20.00		100.3	90.0-110.0
Bromide (Br)	20.090		20.00		100.5	90.0-110.0
Sulfate (SO4)	20.056		20.00		100.3	90.0-110.0
Nitrogen, Nitrate as N (NO3-N)	10.490		10.0		104.9	90.0-110.0
Nitrogen, Nitrite as N (NO2-N)	9.8364		10.0		98.4	90.0-110.0
CCV	Continuing Calibration Verification	WCS49460			05/15/2008	0422
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Sulfate (SO4)	19.516		20.00		97.6	90.0-110.0
Fluoride (F)	10.456		10.00		104.6	90.0-110.0
Bromide (Br)	19.936		20.00		99.7	90.0-110.0
Chloride	19.916		20.00		99.6	90.0-110.0
Nitrogen, Nitrate as N (NO3-N)	10.429		10.0		104.3	90.0-110.0
Nitrogen, Nitrite as N (NO2-N)	9.7617		10.0		97.6	90.0-110.0
DU	Method Duplicate		354100-8	100	05/14/2008	2104
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Bromide (Br), Water	0			0	0	1
Chloride, Water	32.163			31.563	1.9	20
Fluoride (F), Water	0.1132			0.1066	0.0066	0.3000
Sulfate (SO4), Water	7.7680			7.6231	1.9	20
Nitrogen, Nitrate as N (NO3-N), Water	0			0	0	0
Nitrogen, Nitrite as N (NO2-N), Water	0			0	0	0
Nitrate + Nitrite as N, Water	0.000			0.000	0.000	0.400

## QUALITY CONTROL RESULTS

Job Number.: 354100

Report Date.: 05/29/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: J.R PHILLIPS

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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DU	Method Duplicate		354014-1	10	05/15/2008	0217
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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	5.0166			4.9731	0.9		20	
Sulfate (SO4), Water	6.9222			7.1134	2.7		20	
Fluoride (F), Water	12.567			13.514	7.3		20	
Nitrogen, Nitrate as N (NO3-N), Water	0.1291			0.1298	0.0007		0.2500	
Nitrogen, Nitrite as N (NO2-N), Water	0			0	0		0	
Nitrate + Nitrite as N, Water	0.129			0.130	0.001		0.400	

DU	Method Duplicate		354155-1	10	05/15/2008	0350
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Sulfate (SO4), Water	0.4126			0.3449	0.0677		0.5000	
Chloride, Water	6.3501			6.4127	1.0		20	
Bromide (Br), Water	0			0	0		1	
Fluoride (F), Water	0			0.1090	0.1090		0.3000	
Nitrogen, Nitrate as N (NO3-N), Water	0			0	0		0	
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					05/14/2008	1300
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Chloride	0							
Bromide (Br)	0							
Sulfate (SO4)	0							
Fluoride (F)	0							
Nitrogen, Nitrate as N (NO3-N)	0							
Nitrogen, Nitrite as N (NO2-N)	0							
Nitrate + Nitrite as N	0.000							

ICV	Initial Calibration Verification	WCS49460				05/14/2008	1244
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Sulfate (SO4)	18.884		20.00		94.4		90.0-110.0	
Fluoride (F)	9.6032		10.00		96.0		90.0-110.0	
Chloride	19.502		20.00		97.5		90.0-110.0	
Bromide (Br)	19.604		20.00		98.0		90.0-110.0	
Nitrogen, Nitrate as N (NO3-N)	10.214		10.0		102.1		90.0-110.0	
Nitrogen, Nitrite as N (NO2-N)	9.5765		10.0		95.8		90.0-110.0	

## QUALITY CONTROL RESULTS

Job Number.: 354100

Report Date.: 05/29/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: J.R PHILLIPS

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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LCS	Laboratory Control Sample	WCS49460			05/14/2008	1331
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Chloride	19.905		20.00		99.5	90.0-110.0
Fluoride (F)	9.7307		10.00		97.3	90.0-110.0
Bromide (Br)	19.976		20.00		99.9	90.0-110.0
Sulfate (SO4)	19.426		20.00		97.1	90.0-110.0
Nitrogen, Nitrate as N (NO3-N)	10.469		10.0		104.7	90.0-110.0
Nitrogen, Nitrite as N (NO2-N)	9.7750		10.0		97.8	90.0-110.0

LCS	Laboratory Control Sample	WCS49460			05/15/2008	0201
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Chloride	19.859		20.00		99.3	90.0-110.0
Fluoride (F)	10.223		10.00		102.2	90.0-110.0
Sulfate (SO4)	19.547		20.00		97.7	90.0-110.0
Bromide (Br)	20.057		20.00		100.3	90.0-110.0
Nitrogen, Nitrate as N (NO3-N)	10.464		10.0		104.6	90.0-110.0
Nitrogen, Nitrite as N (NO2-N)	9.7436		10.0		97.4	90.0-110.0

MB	Method Blank				05/14/2008	1315
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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					
Sulfate (SO4)	0					
Nitrogen, Nitrate as N (NO3-N)	0					
Nitrogen, Nitrite as N (NO2-N)	0					
Nitrate + Nitrite as N	0.000					

MB	Method Blank				05/15/2008	0145
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Bromide (Br)	0					
Chloride	0.2013					
Sulfate (SO4)	0					
Fluoride (F)	0					
Nitrogen, Nitrate as N (NO3-N)	0					
Nitrogen, Nitrite as N (NO2-N)	0					
Nitrate + Nitrite as N	0.000					

MS	Matrix Spike	WCS48935	354100-8	100	05/14/2008	2120
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Bromide (Br), Water	9.7759		10.000000	0	97.8	90-110
Fluoride (F), Water	1.6978		2.000000	0.1066	79.6	90-110 A
Sulfate (SO4), Water	17.270		10.000000	7.6231	96.5	90-110
Chloride, Water	40.202		10.000000	31.563	86.4	90-110 A

## QUALITY CONTROL RESULTS

Job Number.: 354100

Report Date.: 05/29/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: J.R PHILLIPS

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MS	Matrix Spike	WCS48935	354100-8	100	05/14/2008	2120
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Nitrogen, Nitrate as N (NO3-N), Water	2.0670			2.000000	0	103.3
Nitrogen, Nitrite as N (NO2-N), Water	1.8789			2.000000	0	93.9
Nitrate + Nitrite as N, Water	3.946			0.000000	0.000	

MS	Matrix Spike	WCS48935	354014-1	10	05/15/2008	0232
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Bromide (Br), Water	10.969			10.000000	0	109.7
Sulfate (SO4), Water	16.471			10.000000	7.1134	93.6
Fluoride (F), Water	14.495			2.000000	13.514	49.0
Chloride, Water	15.169			10.000000	4.9731	102.0
Nitrogen, Nitrate as N (NO3-N), Water	2.1918			2.000000	0.1298	103.1
Nitrogen, Nitrite as N (NO2-N), Water	2.1680			2.000000	0	108.4
Nitrate + Nitrite as N, Water	4.360			0.000000	0.130	

MS	Matrix Spike	WCS48935	354155-1	10	05/15/2008	0406
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Sulfate (SO4), Water	9.8439			10.000000	0.3449	95.0
Bromide (Br), Water	9.7521			10.000000	0	97.5
Chloride, Water	16.067			10.000000	6.4127	96.5
Fluoride (F), Water	1.6542			2.000000	0.1090	77.3
Nitrogen, Nitrate as N (NO3-N), Water	2.0820			2.000000	0	104.1
Nitrogen, Nitrite as N (NO2-N), Water	1.6999			2.000000	0	85.0
Nitrate + Nitrite as N, Water	3.782			0.000000	0.000	

Test Method.....: SW-846 6010B  
Method Description.: Metals Analysis (ICAP Trace)Units.....: mg/L  
Batch(s)....: 199638

Analyst...: srp

CCB	Continuing Calibration Blank				05/28/2008	0921
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Calcium (Ca)	-0.00748					
Magnesium (Mg)	-0.03122					
Potassium (K)	-0.14658					
Sodium (Na)	0.00266					

CCB	Continuing Calibration Blank				05/28/2008	1100
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Calcium (Ca)	-0.01857					
Magnesium (Mg)	-0.06967					
Potassium (K)	-0.23081					
Sodium (Na)	0.48257					

## QUALITY CONTROL RESULTS

Job Number.: 354100

Report Date.: 05/29/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: J.R PHILLIPS

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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CCB	Continuing Calibration Blank				05/28/2008	1151
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Calcium (Ca)	-0.02259							
Magnesium (Mg)	-0.08284							
Potassium (K)	-0.30311							
Sodium (Na)	0.44142							

CCB	Continuing Calibration Blank				05/28/2008	1230
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Calcium (Ca)	-0.02783							
Magnesium (Mg)	-0.08707							
Potassium (K)	-0.34446							
Sodium (Na)	0.47204							

CCB	Continuing Calibration Blank				05/28/2008	1351
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Calcium (Ca)	-0.02064							
Magnesium (Mg)	-0.07633							
Potassium (K)	-0.27441							
Sodium (Na)	0.18798							

CCB	Continuing Calibration Blank				05/28/2008	1438
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Calcium (Ca)	-0.01323							
Magnesium (Mg)	-0.06434							
Potassium (K)	-0.16907							
Sodium (Na)	0.15811							

CCB	Continuing Calibration Blank				05/28/2008	1514
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Calcium (Ca)	-0.01213							
Magnesium (Mg)	-0.04769							
Potassium (K)	-0.14623							
Sodium (Na)	0.13391							

CCB	Continuing Calibration Blank				05/28/2008	1610
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Calcium (Ca)	-0.00079							
Magnesium (Mg)	-0.03337							
Potassium (K)	-0.05595							
Sodium (Na)	0.09800							

## QUALITY CONTROL RESULTS

Job Number.: 354100

Report Date.: 05/29/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: J.R PHILLIPS

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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CCB	Continuing Calibration Blank				05/28/2008	1631
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Calcium (Ca)	0.00072							
Magnesium (Mg)	-0.03834							
Potassium (K)	-0.09200							
Sodium (Na)	0.07915							

CCV	Continuing Calibration Verification	MS052008CC				05/28/2008	0917
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Calcium (Ca)	12.28749		12.50		98.3		90.0-110.0	
Magnesium (Mg)	4.70279		5.000		94.1		90.0-110.0	
Potassium (K)	12.19663		12.50		97.6		90.0-110.0	
Sodium (Na)	12.62000		12.50		101.0		90.0-110.0	

CCV	Continuing Calibration Verification	MS052008CC				05/28/2008	1056
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Calcium (Ca)	12.22039		12.50		97.8		90.0-110.0	
Magnesium (Mg)	4.63964		5.000		92.8		90.0-110.0	
Potassium (K)	12.52725		12.50		100.2		90.0-110.0	
Sodium (Na)	12.13835		12.50		97.1		90.0-110.0	

CCV	Continuing Calibration Verification	MS052008CC				05/28/2008	1147
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Calcium (Ca)	12.02738		12.50		96.2		90.0-110.0	
Magnesium (Mg)	4.58826		5.000		91.8		90.0-110.0	
Potassium (K)	12.63315		12.50		101.1		90.0-110.0	
Sodium (Na)	12.57669		12.50		100.6		90.0-110.0	

CCV	Continuing Calibration Verification	MS052008CC				05/28/2008	1226
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Calcium (Ca)	11.90952		12.50		95.3		90.0-110.0	
Magnesium (Mg)	4.63590		5.000		92.7		90.0-110.0	
Potassium (K)	12.61691		12.50		100.9		90.0-110.0	
Sodium (Na)	12.84091		12.50		102.7		90.0-110.0	

CCV	Continuing Calibration Verification	MS052008CC				05/28/2008	1343
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Calcium (Ca)	12.18228		12.50		97.5		90.0-110.0	
Magnesium (Mg)	4.65999		5.000		93.2		90.0-110.0	
Potassium (K)	12.30685		12.50		98.5		90.0-110.0	
Sodium (Na)	12.55244		12.50		100.4		90.0-110.0	

## QUALITY CONTROL RESULTS

Job Number.: 354100

Report Date.: 05/29/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: J.R PHILLIPS

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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CCV	Continuing Calibration Verification	MS052008CC			05/28/2008	1435
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Calcium (Ca)	12.26347		12.50		98.1	90.0-110.0
Magnesium (Mg)	4.71293		5.000		94.3	90.0-110.0
Potassium (K)	12.32393		12.50		98.6	90.0-110.0
Sodium (Na)	12.73418		12.50		101.9	90.0-110.0

CCV	Continuing Calibration Verification	MS052008CC			05/28/2008	1510
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Calcium (Ca)	12.28077		12.50		98.2	90.0-110.0
Magnesium (Mg)	4.74388		5.000		94.9	90.0-110.0
Potassium (K)	12.17980		12.50		97.4	90.0-110.0
Sodium (Na)	12.66389		12.50		101.3	90.0-110.0

CCV	Continuing Calibration Verification	MS052008CC			05/28/2008	1606
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Calcium (Ca)	12.49933		12.50		100.0	90.0-110.0
Magnesium (Mg)	4.82107		5.000		96.4	90.0-110.0
Potassium (K)	12.04128		12.50		96.3	90.0-110.0
Sodium (Na)	12.45924		12.50		99.7	90.0-110.0

CCV	Continuing Calibration Verification	MS052008CC			05/28/2008	1627
<hr/>						
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Calcium (Ca)	12.56621		12.50		100.5	90.0-110.0
Magnesium (Mg)	4.78596		5.000		95.7	90.0-110.0
Potassium (K)	12.06625		12.50		96.5	90.0-110.0
Sodium (Na)	12.32103		12.50		98.6	90.0-110.0

CH1	Calibration check standard 1	MS050708T1			05/28/2008	0906
<hr/>						
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Calcium (Ca)	0.09815		0.1000		98.2	80.0-120.0
Magnesium (Mg)	0.08216		0.1000		82.2	80.0-120.0
Potassium (K)	0.48911		0.60000		81.5	80.0-120.0
Sodium (Na)	0.65639		0.60000		109.4	80.0-120.0

CH1	Calibration check standard 1	MS050708T1			05/28/2008	1615
<hr/>						
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Calcium (Ca)	0.09246		0.1000		92.5	80.0-120.0
Potassium (K)	0.50216		0.60000		83.7	80.0-120.0

## QUALITY CONTROL RESULTS

Job Number.: 354100

Report Date.: 05/29/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: J.R PHILLIPS

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
CH3	Standard check for ICAP	MS041408T3			05/28/2008	0854
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result * Limits F
Calcium (Ca)	19.82477		20.00		99.1	95.0-105.0
Magnesium (Mg)	19.78650		20.00		98.9	95.0-105.0
Potassium (K)	20.20104		20.00		101.0	95.0-105.0
Sodium (Na)	20.13417		20.00		100.7	95.0-105.0
EB	Extraction Blank		199563			05/28/2008 1025
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result * Limits F
Calcium (Ca), Diss.	0.01623					
Magnesium (Mg), Diss.	-0.01307					
Potassium (K), Diss.	0.01731					
Sodium (Na), Diss.	0.10671					
EB	Extraction Blank		199563			05/28/2008 1131
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result * Limits F
Calcium (Ca), TCLP	-0.02886					
Magnesium (Mg), TCLP	-0.10152					
Potassium (K), TCLP	-0.32805					
ICB	Initial Calibration Blank					05/28/2008 0902
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result * Limits F
Calcium (Ca)	-0.00121					
Magnesium (Mg)	-0.01660					
Potassium (K)	-0.11092					
Sodium (Na)	0.00358					
ICV	Initial Calibration Verification	MS052008CC				05/28/2008 0858
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result * Limits F
Calcium (Ca)	12.39515		12.50		99.2	90.0-110.0
Magnesium (Mg)	4.82661		5.000		96.5	90.0-110.0
Potassium (K)	12.08872		12.50		96.7	90.0-110.0
Sodium (Na)	12.49906		12.50		100.0	90.0-110.0
ISA	Interference Check Sample A	MS040808IA				05/28/2008 0909
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result * Limits F
Calcium (Ca)	483.33859		500.0		96.7	80-120
Magnesium (Mg)	531.87048		500.0		106.4	80-120
Potassium (K)	0.07422		0.0			
Sodium (Na)	0.03567		0.0			

## QUALITY CONTROL RESULTS

Job Number.: 354100

Report Date.: 05/29/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: J.R PHILLIPS

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QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
ISA	Interference Check Sample A	MS040808IA			05/28/2008	1619

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Calcium (Ca)	487.40963		500.0		97.5		80-120	
Magnesium (Mg)	534.24530		500.0		106.8		80-120	
Potassium (K)	0.06197		0.0					
Sodium (Na)	0.13605		0.0					

ISB	Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
ISB	Interference Check Sample B	MS040808IB					05/28/2008	0913	
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F

Calcium (Ca)	496.99871		510.0		97.5		80.0-120.0	
Magnesium (Mg)	541.32458		510.0		106.1		80.0-120.0	

ISB	Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
ISB	Interference Check Sample B	MS040808IB					05/28/2008	1623	
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F

Calcium (Ca)	500.33496		510.0		98.1		80.0-120.0	
Magnesium (Mg)	545.70373		510.0		107.0		80.0-120.0	

LCS	Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
LCS	Laboratory Control Sample	MSPIKEW		199563			05/28/2008	1021	
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F

Calcium (Ca), Water	10.30901		10.00		103.1		80.0-120.0	
Magnesium (Mg), Water	9.69738		10.00		97.0		80.0-120.0	
Potassium (K), Water	10.13922		10.00		101.4		80.0-120.0	
Sodium (Na), Water	10.36908		10.00		103.7		80.0-120.0	

MB	Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
MB	Method Blank			199563			05/28/2008	1017	
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F

Calcium (Ca), Water	-0.00931								
Magnesium (Mg), Water	-0.01705								
Potassium (K), Water	0.00325								
Sodium (Na), Water	0.00211								

MD	Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
MD	Method Duplicate			354100-1			05/28/2008	1033	
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F

Calcium (Ca), Diss.	422.68109		427.10284		427.10284		1.0		
Magnesium (Mg), Diss.	190.88548		191.59106		191.59106		0.4		

## QUALITY CONTROL RESULTS

Job Number.: 354100

Report Date.: 05/29/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: J.R PHILLIPS

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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MD	Method Duplicate		354541-1		05/28/2008	1159
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Calcium (Ca), TCLP	323.10516	322.43228		322.43228	0.2		20	
Magnesium (Mg), TCLP	15.98331	15.88644		15.88644	0.6		20	
Potassium (K), TCLP	2.34694	2.29576		2.29576	0.05118		2.00000	

MD	Method Duplicate		354100-1	10	05/28/2008	1308
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Potassium (K), Diss.	5.35010	5.35591		5.35591	0.00581		2.00000	

MD	Method Duplicate		354100-1	100	05/28/2008	1419
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Sodium (Na), Diss.	36.51709	35.23717		35.23717	3.6		20	

MS	Matrix Spike	MSPIKEW	354100-1		05/28/2008	1037
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Calcium (Ca), Diss.	427.53030		10.00	427.10284	4.3		75-125	
Magnesium (Mg), Diss.	198.59024		10.00	191.59106	70.0		75-125	

MS	Matrix Spike	MSPIKEW	354541-1		05/28/2008	1203
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Calcium (Ca), TCLP	335.19650		10.00	322.43228	127.6		75-125	
Magnesium (Mg), TCLP	25.84531		10.00	15.88644	99.6		75-125	
Potassium (K), TCLP	23.45923		10.00	2.29576	211.6		75-125	a

MS	Matrix Spike	MSPIKEW	354100-1	10	05/28/2008	1312
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Potassium (K), Diss.	6.92254		1.000000	5.35591	156.7		75-125	

MS	Matrix Spike	MSPIKEW	354100-1	100	05/28/2008	1423
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Sodium (Na), Diss.	36.20420		0.100000	35.23717	967.0		75-125	

## QUALITY CONTROL RESULTS

Job Number.: 354100

Report Date.: 05/29/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: J.R PHILLIPS

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MSD	Matrix Spike Duplicate	MSPIKEW	354100-1		05/28/2008	1041
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result
Calcium (Ca), Diss.		419.64294	427.53030	10.00	427.10284	-74.6
Magnesium (Mg), Diss.		196.69259	198.59024	10.00	191.59106	224.5
					51.0	20
					31.4	75-125
						C
						20
						C

MSD	Matrix Spike Duplicate	MSPIKEW	354541-1			05/28/2008	1207		
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Calcium (Ca), TCLP		335.11251	335.19650	10.00	322.43228	126.8		75-125	
Magnesium (Mg), TCLP		25.78034	25.84531	10.00	15.88644	98.9		75-125	
Potassium (K), TCLP		23.34678	23.45923	10.00	2.29576	210.5		75-125	a
					0.5			20	

MSD	Matrix Spike Duplicate	MSPIKEW	354100-1			05/28/2008	1316		
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Potassium (K), Diss.		6.95149	6.92254	1.000000	5.35591	159.6		75-125	
					1.8			20	

MSD	Matrix Spike Duplicate	MSPIKEW	354100-1			05/28/2008	1427		
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Sodium (Na), Diss.		36.56295	36.20420	0.100000	35.23717	1325.8		75-125	
					31.3			20	
									C

PDS	Post Digestion Spike	MSPIKE3	354100-1			05/28/2008	1218		
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Calcium (Ca), Diss.		415.33190		10.00	427.10284	-117.7		75-125	
Magnesium (Mg), Diss.		198.47653		10.00	191.59106	68.9		75-125	

PDS	Post Digestion Spike	MSPIKE3	354100-1			05/28/2008	1407		
	Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Potassium (K), Diss.		19.77471		10.00	5.35591	144.2		75-125	A

## QUALITY CONTROL RESULTS

Job Number.: 354100

Report Date.: 05/29/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: J.R PHILLIPS

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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S0	Calibration Blank				05/28/2008	0846
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Calcium (Ca)	0.00294							
Magnesium (Mg)	0.01077							
Potassium (K)	0.27960							
Sodium (Na)	0.01834							

SD	Serial Dilution		354100-1	5	05/28/2008	1222
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Calcium (Ca), Diss.	89.62976			427.10284	4.9	10.0		
Magnesium (Mg), Diss.	40.55711			191.59106	5.8	10.0		
Potassium (K), Diss.	12.91689			76.48688	15.6	10.0	e	

SD	Serial Dilution		354100-1	50	05/28/2008	1411
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Potassium (K), Diss.	0.64002			5.35591	40.3	10.0	e	

STD	Spiked Blank Duplicate					05/28/2008	0849
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Calcium (Ca)	0.29422							
Magnesium (Mg)	0.44686							
Potassium (K)	2.11538							
Sodium (Na)	5.44277							

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## QUALITY ASSURANCE METHODS

### REFERENCES AND NOTES

Report Date: 05/29/2008

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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: 05/29/2008

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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: 05/29/2008

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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.

## LABORATORY CHRONICLE

Job Number: 354100

Date: 05/29/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: J.R PHILLIPS

ATTN: Todd Wells

Lab ID: 354100-1 Client ID: MW-1		Date Recvd: 05/14/2008	Sample Date: 05/13/2030			
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #\$(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3005A	Acid Digest. for ICP - Total Recoverable	1	199563		05/27/2008 1535	
SM 2320 B	Alkalinity	1	199280		05/21/2008 1425	
EPA 300.0	Electronic Data Deliverables	1				
EPA 300.0	Ion Chromatography Analysis	1	198924		05/14/2008 1346	5
EPA 300.0	Ion Chromatography Analysis	1	198924		05/14/2008 1402	100
EPA 300.0	Ion Chromatography Analysis	1	198924		05/14/2008 1418	1000
EPA300.0 Rev2.	Ion Chromatography Analysis - Short Hold	1	198924		05/14/2008 1346	5
SW-846 6010B	Metals Analysis (ICAP Trace)	1	199638	199563	05/28/2008 1029	
SW-846 6010B	Metals Analysis (ICAP Trace)	1	199638	199563	05/28/2008 1304	10
SW-846 6010B	Metals Analysis (ICAP Trace)	1	199638	199563	05/28/2008 1415	100
N/A	Sample Filtration	1	199538		05/27/2008 1330	
SM 2540C	Solids, Total Dissolved (TDS)	1	199020		05/15/2008 1640	
Lab ID: 354100-2 Client ID: MW-2		Date Recvd: 05/14/2008	Sample Date: 05/13/2030			
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #\$(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3005A	Acid Digest. for ICP - Total Recoverable	1	199563		05/27/2008 1535	
SM 2320 B	Alkalinity	1	199280		05/21/2008 1425	
EPA 300.0	Ion Chromatography Analysis	1	198924		05/14/2008 1433	5
EPA 300.0	Ion Chromatography Analysis	1	198924		05/14/2008 1449	100
EPA 300.0	Ion Chromatography Analysis	1	198924		05/14/2008 1505	1000
EPA300.0 Rev2.	Ion Chromatography Analysis - Short Hold	1	198924		05/14/2008 1433	5
SW-846 6010B	Metals Analysis (ICAP Trace)	1	199638	199563	05/28/2008 1045	
SW-846 6010B	Metals Analysis (ICAP Trace)	1	199638	199563	05/28/2008 1320	10
SW-846 6010B	Metals Analysis (ICAP Trace)	1	199638	199563	05/28/2008 1431	100
N/A	Sample Filtration	1	199538		05/27/2008 1330	
SM 2540C	Solids, Total Dissolved (TDS)	1	199020		05/15/2008 1640	
Lab ID: 354100-3 Client ID: MW-3		Date Recvd: 05/14/2008	Sample Date: 05/13/2030			
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #\$(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3005A	Acid Digest. for ICP - Total Recoverable	1	199563		05/27/2008 1535	
SM 2320 B	Alkalinity	1	199280		05/21/2008 1425	
EPA 300.0	Ion Chromatography Analysis	1	198924		05/14/2008 1520	5
EPA 300.0	Ion Chromatography Analysis	1	198924		05/14/2008 1536	100
EPA 300.0	Ion Chromatography Analysis	1	198924		05/14/2008 1623	1000
EPA300.0 Rev2.	Ion Chromatography Analysis - Short Hold	1	198924		05/14/2008 1520	5
SW-846 6010B	Metals Analysis (ICAP Trace)	1	199638	199563	05/28/2008 1048	
SW-846 6010B	Metals Analysis (ICAP Trace)	1	199638	199563	05/28/2008 1324	10
SW-846 6010B	Metals Analysis (ICAP Trace)	1	199638	199563	05/28/2008 1558	200
N/A	Sample Filtration	1	199538		05/27/2008 1330	
SM 2540C	Solids, Total Dissolved (TDS)	1	199020		05/15/2008 1640	
Lab ID: 354100-4 Client ID: MW-4		Date Recvd: 05/14/2008	Sample Date: 05/13/2030			
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #\$(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3005A	Acid Digest. for ICP - Total Recoverable	1	199563		05/27/2008 1535	
SM 2320 B	Alkalinity	1	199280		05/21/2008 1425	
EPA 300.0	Ion Chromatography Analysis	1	198924		05/14/2008 1638	5
EPA 300.0	Ion Chromatography Analysis	1	198924		05/14/2008 1654	100
EPA 300.0	Ion Chromatography Analysis	1	198924		05/14/2008 1710	1000
EPA300.0 Rev2.	Ion Chromatography Analysis - Short Hold	1	198924		05/14/2008 1638	5
SW-846 6010B	Metals Analysis (ICAP Trace)	1	199638	199563	05/28/2008 1052	
SW-846 6010B	Metals Analysis (ICAP Trace)	1	199638	199563	05/28/2008 1446	100
N/A	Sample Filtration	1	199538		05/27/2008 1330	
SM 2540C	Solids, Total Dissolved (TDS)	1	199020		05/15/2008 1640	
Lab ID: 354100-5 Client ID: MW-5		Date Recvd: 05/14/2008	Sample Date: 05/13/2030			
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #\$(S)	DATE/TIME ANALYZED	DILUTION
SW-846 3005A	Acid Digest. for ICP - Total Recoverable	1	199563		05/27/2008 1535	

## LABORATORY CHRONICLE

Job Number: 354100

Date: 05/29/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: J.R PHILLIPS

ATTN: Todd Wells

Lab ID:	Client ID:	METHOD	DESCRIPTION	Date Recvd:	Sample #	Date:	DILUTION
		RUN#	BATCH#	PREP BT	#(S)	DATE/TIME ANALYZED	
Lab ID: 354100-5	Client ID: MW-5	SM 2320 B	Alkalinity	1	199280	05/21/2008	1425
		EPA 300.0	Ion Chromatography Analysis	1	198924	05/14/2008	1725
		EPA 300.0	Ion Chromatography Analysis	1	198924	05/14/2008	1741
		EPA 300.0	Ion Chromatography Analysis	1	198924	05/14/2008	1756
		EPA300.0 Rev2.	Ion Chromatography Analysis - Short Hold	1	198924	05/14/2008	1725
		SW-846 6010B	Metals Analysis (ICAP Trace)	1	199638	199563	5
		SW-846 6010B	Metals Analysis (ICAP Trace)	1	199638	199563	05/28/2008
		SW-846 6010B	Metals Analysis (ICAP Trace)	1	199638	199563	1332
		N/A	Sample Filtration	1	199538	05/27/2008	1330
		SM 2540C	Solids, Total Dissolved (TDS)	1	199020	05/15/2008	1640
Lab ID: 354100-6	Client ID: MW-6	SW-846 3005A	Acid Digest. for ICP - Total Recoverable	1	199563	05/27/2008	1535
		SM 2320 B	Alkalinity	1	199280	05/21/2008	1425
		EPA 300.0	Ion Chromatography Analysis	1	198924	05/14/2008	1812
		EPA 300.0	Ion Chromatography Analysis	1	198924	05/14/2008	1828
		EPA 300.0	Ion Chromatography Analysis	1	198924	05/14/2008	1843
		EPA300.0 Rev2.	Ion Chromatography Analysis - Short Hold	1	198924	05/14/2008	1812
		SW-846 6010B	Metals Analysis (ICAP Trace)	1	199638	199563	5
		SW-846 6010B	Metals Analysis (ICAP Trace)	1	199638	199563	05/28/2008
		SW-846 6010B	Metals Analysis (ICAP Trace)	1	199638	199563	1336
		N/A	Sample Filtration	1	199538	05/27/2008	1330
		SM 2540C	Solids, Total Dissolved (TDS)	1	199020	05/15/2008	1640
Lab ID: 354100-7	Client ID: MW-7	SW-846 3005A	Acid Digest. for ICP - Total Recoverable	1	199563	05/27/2008	1535
		SM 2320 B	Alkalinity	1	199280	05/21/2008	1425
		EPA 300.0	Ion Chromatography Analysis	1	198924	05/14/2008	1930
		EPA 300.0	Ion Chromatography Analysis	1	198924	05/14/2008	1946
		EPA 300.0	Ion Chromatography Analysis	1	198924	05/14/2008	2001
		EPA300.0 Rev2.	Ion Chromatography Analysis - Short Hold	1	198924	05/14/2008	1930
		SW-846 6010B	Metals Analysis (ICAP Trace)	1	199638	199563	5
		SW-846 6010B	Metals Analysis (ICAP Trace)	1	199638	199563	05/28/2008
		SW-846 6010B	Metals Analysis (ICAP Trace)	1	199638	199563	1339
		N/A	Sample Filtration	1	199538	05/27/2008	1330
		SM 2540C	Solids, Total Dissolved (TDS)	1	199020	05/15/2008	1640
Lab ID: 354100-8	Client ID: MW-8	SW-846 3005A	Acid Digest. for ICP - Total Recoverable	1	199563	05/27/2008	1535
		SM 2320 B	Alkalinity	1	199280	05/21/2008	1425
		EPA 300.0	Ion Chromatography Analysis	1	198924	05/14/2008	2017
		EPA 300.0	Ion Chromatography Analysis	1	198924	05/14/2008	2048
		EPA300.0 Rev2.	Ion Chromatography Analysis - Short Hold	1	198924	05/14/2008	2017
		SW-846 6010B	Metals Analysis (ICAP Trace)	1	199638	199563	5
		SW-846 6010B	Metals Analysis (ICAP Trace)	1	199638	199563	05/28/2008
		SW-846 6010B	Metals Analysis (ICAP Trace)	1	199638	199563	1355
		N/A	Sample Filtration	1	199538	05/27/2008	1330
		SM 2540C	Solids, Total Dissolved (TDS)	1	199020	05/15/2008	1640
Lab ID: 354100-9	Client ID: WATER WELL	SW-846 3005A	Acid Digest. for ICP - Total Recoverable	1	199563	05/27/2008	1535

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

Job Number: 354100

Date: 05/29/2008

CUSTOMER: Conestoga-Rovers and Associates

PROJECT: J.R PHILLIPS

ATTN: Todd Wells

Lab ID:	Client ID:	Method	Description	Date Recvd:	Sample #	Date:	Time Analyzed	Dilution
		RUN#	BATCH#	PREP BT	#(S)			
354100-9	WATER WELL	SM 2320 B	Alkalinity	1	199280	05/21/2008	1425	
		EPA 300.0	Ion Chromatography Analysis	1	198924	05/14/2008	2135	10
		EPA 300.0	Ion Chromatography Analysis	1	198924	05/14/2008	2151	100
		EPA 300.0	Ion Chromatography Analysis	1	198924	05/14/2008	2238	1000
		EPA300.0 Rev2.	Ion Chromatography Analysis - Short Hold	1	198924	05/14/2008	2135	10
		SW-846 6010B	Metals Analysis (ICAP Trace)	1	199638	199563	05/28/2008	1359
		N/A	Sample Filtration	1	199538		05/27/2008	1330
		SM 2540C	Solids, Total Dissolved (TDS)	1	199020		05/15/2008	1640
354100-10	DUPE	SW-846 3005A	Acid Digest. for ICP - Total Recoverable	Date Recvd:	Sample #	Date:	Time Analyzed	Dilution
		METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT	#(S)	
		SM 2320 B	Alkalinity	1	199280	05/21/2008	1425	
		EPA 300.0	Ion Chromatography Analysis	1	198924	05/14/2008	2253	5
		EPA 300.0	Ion Chromatography Analysis	1	198924	05/14/2008	2325	100
		EPA300.0 Rev2.	Ion Chromatography Analysis - Short Hold	1	198924	05/14/2008	2253	5
		SW-846 6010B	Metals Analysis (ICAP Trace)	1	199638	199563	05/28/2008	1127
		SW-846 6010B	Metals Analysis (ICAP Trace)	1	199638	199563	05/28/2008	1403
		SW-846 6010B	Metals Analysis (ICAP Trace)	1	199638	199563	05/28/2008	1506
		N/A	Sample Filtration	1	199538		05/27/2008	1330
		SM 2540C	Solids, Total Dissolved (TDS)	1	199020		05/15/2008	1640

# Chain of Custody Record

**TestAmerica**

Temperature on Receipt \_\_\_\_\_  
 Drinking Water? Yes  No

TAL-4124 (1007)

THE LEADER IN ENVIRONMENTAL TESTING

354100

Client	CRA	Project Manager	Todd Wells	Date	5-13-08	Chain of Custody Number	070823						
Address	2135 S Loop 250 W.	Telephone Number (Area Code)/Fax Number	(432) 686-0086/(432) 686-0186	Lab Number									
City	Mallard	Site Contact	Todd Wells	Page	1 of 1								
State	TX	Zip Code	79703										
Project Name and Location (State)	J.R. Phillips	Carrier/Waybill Number	Lea County, NM	Special Instructions/ Conditions of Receipt									
Contract/Purchase Order/Quote No.		Matrix		Containers & Preservatives									
Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	H2O									
MW-1	5-13-08	1210	X	X									
MW-2	5-13-08	1230	X	X									
MW-3	5-13-08	1350	X	X									
MW-4	5-13-08	1315	X	X									
MW-5	5-13-08	1325	X	X									
MW-6	5-13-08	1400	X	X									
MW-7	5-13-08	1255	X	X									
MW-8	5-13-08	1120	X	X									
Water Well	5-13-08	1145	X	X									
Dope	5-13-08	—	X	X									
				Sample Disposal									
				<input 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"/> Archive For	<input type="checkbox"/> Months	(A fee may be assessed if samples are retained longer than 1 month)
				QC Requirements (Specify)									
				<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	Date	Time	Date	Time
1. Relinquished By				5-13-08				1120		5-13-08	1120		
2. Relinquished By													
3. Relinquished By													
Comments													