



3R-84

**JUNE, SEPTEMBER, AND DECEMBER 2011  
QUARTERLY GROUNDWATER MONITORING  
REPORT**

**CONOCOPHILLIPS FARMINGTON B COM No. 1E  
SAN JUAN COUNTY, NEW MEXICO  
API# 30-045-24774  
NMOCD# 3R0084**

**Prepared For:**

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## 1.0 INTRODUCTION

This report presents the results of the June 20, September 30, and December 15, 2011 quarterly groundwater monitoring events completed by Conestoga-Rovers & Associates, Inc. (CRA) at the Farmington B Com No. 1E remediation site in Farmington, New Mexico (Site). The Site is located on private property in southeast Farmington, New Mexico, near the corner of East Murray Drive and South Carlton Avenue. Geographical coordinates for the Site are 36.721137° North and 108.190501° West. The Site consists of a natural gas well and associated equipment and installations. The location and general features of the Site are presented as Figures 1 and 2, respectively. A generalized geological cross section of the Site is included as Figure 3.

### 1.1 BACKGROUND

Conoco Inc., predecessor to ConocoPhillips Company (ConocoPhillips), owned the property and operated the gas well between July 1991 and January 1997. Merrion Oil & Gas Company is the current property owner and well operator. A Phase II Environmental Site Assessment associated with the property transfer was conducted by On Site Technologies, Limited (On Site) in March 1997. Soil hydrocarbon impacts were confirmed north of a production storage tank and west of a separator/dehydrator pit (Figure 2). Impacts were described by On Site as limited to a former unlined pit area with hydrocarbon migration primarily occurring vertically through the soil profile due to the porous and permeable subsurface soils; lateral migration was considered minimal (On Site, 1997). Soil excavation of the two impacted areas occurred in September 1997. A total of 906 cubic yards of impacted soil were removed from the two excavation areas. Of the 906 cubic yards, 328 were transported offsite and 578 were screened and placed back into the excavated areas along with clean fill. During backfill activities, approximately 10 gallons of liquid fertilizer was sprayed into both excavations to enhance in situ degradation of residual hydrocarbons (On Site, 1997).

Groundwater Monitor Wells MW-1, MW-2, MW-3, MW-4, MW-5, and MW-6 were installed at the Site in February and August 1998 under the supervision of On Site. During 1998 and 1999, results from groundwater samples collected from MW-2 through MW-6 did not have benzene, toluene, ethylbenzene, and xylenes (BTEX) concentrations in excess of New Mexico Water Quality Control Commission (NMWQCC) groundwater quality standards. On Site then requested that groundwater quality monitoring in Monitor Wells MW-2 through MW-6 be discontinued. The request was approved by the New Mexico Energy, Minerals, and Natural Resources Department (NMEMNRD) in a letter to Ms. Shirley Ebert of Conoco Inc. (NMEMNRD, 2000).

Although Monitor Wells MW-2 through MW-6 showed no hydrocarbon impacts during 1998 and 1999, light non-aqueous phase liquid (LNAPL) has been present in MW-1 since its installation and recovery has been ongoing. Souder Miller and Associates (SMA) placed active and passive skimmers in MW-1 in May 2004. The passive skimmer collected a small amount of LNAPL; the active skimmer did not collect any LNAPL. SMA determined that an active skimmer was not a viable method of LNAPL recovery in MW-1 and proposed passive skimming or periodic hand bailing.

Tetra Tech, Inc. (Tetra Tech) began groundwater quality monitoring at the Site in May 2005. Tetra Tech monitored MW-1 and MW-6, which is located downgradient of MW-1. Quarterly groundwater pumping events were conducted at MW-1 from October 2004 to March 2008.

On June 15, 2011, Site consulting responsibilities were transferred from Tetra Tech to CRA of Albuquerque, NM. Quarterly groundwater sampling of MW-1 and MW-6 was continued by CRA. A summary of the Farmington B Com No. 1E Site history can be seen in **Table 1**.

## 2.0 GROUNDWATER MONITORING METHODOLOGY AND ANALYTICAL RESULTS

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### 2.1 GROUNDWATER MONITORING SUMMARY

Quarterly groundwater sampling events were conducted by CRA on June 20, September 30, and December 15, 2011. Groundwater elevation measurements were collected from all Site monitor wells. An LNAPL sheen was present in the purged water from MW-1 prior to sampling. As a result, no field groundwater quality parameters were collected for MW-1. Groundwater samples were collected from Monitor Wells MW-1 and MW-6 during all three sampling events. During the December 15, 2011 sampling event, MW-3, the upgradient monitor well, was sampled for dissolved iron and dissolved manganese in order to determine background concentrations.

### 2.2 GROUNDWATER MONITORING METHODOLOGY

#### Groundwater Elevation Measurements

During each sampling event groundwater elevation measurements were recorded for Monitor Wells MW-1 through MW-6 using an oil/water interface probe. Groundwater elevations are detailed in Table 2. Groundwater potentiometric surface maps are presented as Figures 4, 5 and 6. Based on monitoring data, groundwater flow remains to the west and is consistent with recent and historic records at this Site. The Animas River is approximately ¾ miles from the site and flows west.

#### Groundwater sampling

The December sampling event represents the 12th round of consecutive quarterly groundwater sampling of Monitor Wells MW-1 and MW-6 at the Site. Approximately three well volumes were purged from each monitor well with a dedicated polyethylene 1.5-inch disposable bailer. Groundwater samples were placed in laboratory prepared bottles, packed on ice, and shipped under chain-of-custody documentation to Pace Analytical Services, Inc. of Lenexa, Kansas. The samples were analyzed for the presence of BTEX in accordance with Environmental Protection Agency (EPA) Method 8260, and dissolved iron and dissolved manganese according to EPA Method 6010. Groundwater sampling field forms are included as Appendix A.

## 2.3 GROUNDWATER MONITORING ANALYTICAL RESULTS

The New Mexico Water Quality Control Commission (NMWQCC) mandates that groundwater quality in New Mexico be protected, and has issued groundwater quality standards in Title 20, Chapter 6, Part 2, Section 3103 of the New Mexico Administrative Code (20.6.2.3103 NMAC). Groundwater quality standards have been set for the protection of human health, domestic water supply, and irrigation use. Exceedences of NMWQCC groundwater quality standards in Site monitor wells are discussed below.

### June 2011

- **Volatiles (BTEX)**
  - Monitor Well MW-1 contained an LNAPL sheen during the June 2011 sampling event. Groundwater sampling results did not indicate BTEX concentrations to be above NMWQCC groundwater quality standards in either sampled monitor well.
  
- **Dissolved Manganese**
  - The groundwater quality standard for dissolved manganese is 0.2 mg/L. Groundwater collected from monitor wells MW-1 and MW-6 were found to contain manganese at concentrations of 0.424 mg/L and 0.43 mg/L, respectively.

### September 2011

- **Volatiles (BTEX)**
  - Monitor Well MW-1 contained an LNAPL sheen during the September 2011 sampling event. Groundwater sampling results did not indicate BTEX concentrations to be above NMWQCC groundwater quality standards in either sampled monitor well.
  
- **Dissolved Manganese**
  - The groundwater quality standard for dissolved manganese is 0.2 mg/L. Groundwater sample collected from Monitor Well MW-1 during the September 2011 sampling event was found to contain dissolved manganese at a concentration of 0.268 mg/L.
  
- **Dissolved Iron**
  - The groundwater quality standard for dissolved iron is 1.0 mg/L. Groundwater analysis of the sample collected from Monitor Well MW-1

during the September 2011 sampling event indicated a dissolved iron concentration of 4.10 mg/L.

### December 2011

- **Volatiles (BTEX)**
  - Monitor Well MW-1 contained an LNAPL sheen during the December 2011 sampling event. Groundwater sampling results did not indicate BTEX concentrations to be above NMWQCC groundwater quality standards in either sampled monitor well.
  
- **Dissolved Manganese**
  - The groundwater quality standard for dissolved manganese is 0.2 mg/L. Groundwater samples collected from Monitor Wells MW-1 and MW-6 during the December 2011 sampling event were found to contain dissolved manganese at concentrations of 0.35 mg/L and 1.06 mg/L, respectively. The groundwater sample collected from MW-3, the upgradient monitor well, was found to contain dissolved manganese at a concentration of 0.112 mg/L.
  
- **Dissolved Iron**
  - The groundwater quality standard for dissolved iron is 1.0 mg/L. Groundwater analysis of the sample collected from Monitor Well MW-1 during the December 2011 sampling event indicated a dissolved iron concentration of 1.91 mg/L. The groundwater sample collected from MW-3, the upgradient monitor well, was found to contain dissolved iron at a concentration of 0.246 mg/L.

Laboratory analytical results are summarized in Table 3. The laboratory analytical reports are included in Appendix B. The SMA historical analytical data is attached as Appendix C.

### 3.0 CONCLUSIONS AND RECOMMENDATIONS

Although an LNAPL sheen is regularly observed in Monitor Well MW-1 during monitoring events, benzene, and toluene remain below laboratory reporting limits and ethylbenzene and total xylene levels remain below NMWQCC groundwater quality standards. The December 2011 sampling event represents the 12th consecutive quarter with BTEX below NMWQCC standards.

Groundwater samples collected from MW-1 have consistently exceeded the groundwater quality standard for dissolved manganese and have intermittently exceeded the standard for dissolved iron. Groundwater samples from MW-6 have intermittently exceeded the groundwater quality standard for dissolved manganese.

Analysis of groundwater sampled from the upgradient Monitor Well MW-3 during December 2011 indicated background levels of dissolved iron and dissolved manganese below NMWQCC standards.

Since twelve consecutive quarters of data have been collected with BTEX concentrations below NMWQCC standards, CRA recommends discontinuation of analysis for BTEX at the Site. Sampling for dissolved iron and dissolved manganese will continue on an annual basis until concentrations approach standards, at which time quarterly sampling will resume in order to provide sufficient data for remediation Site closure. During each monitoring event, all monitor wells will be gauged and LNAPL thickness will be monitored and recorded if present.

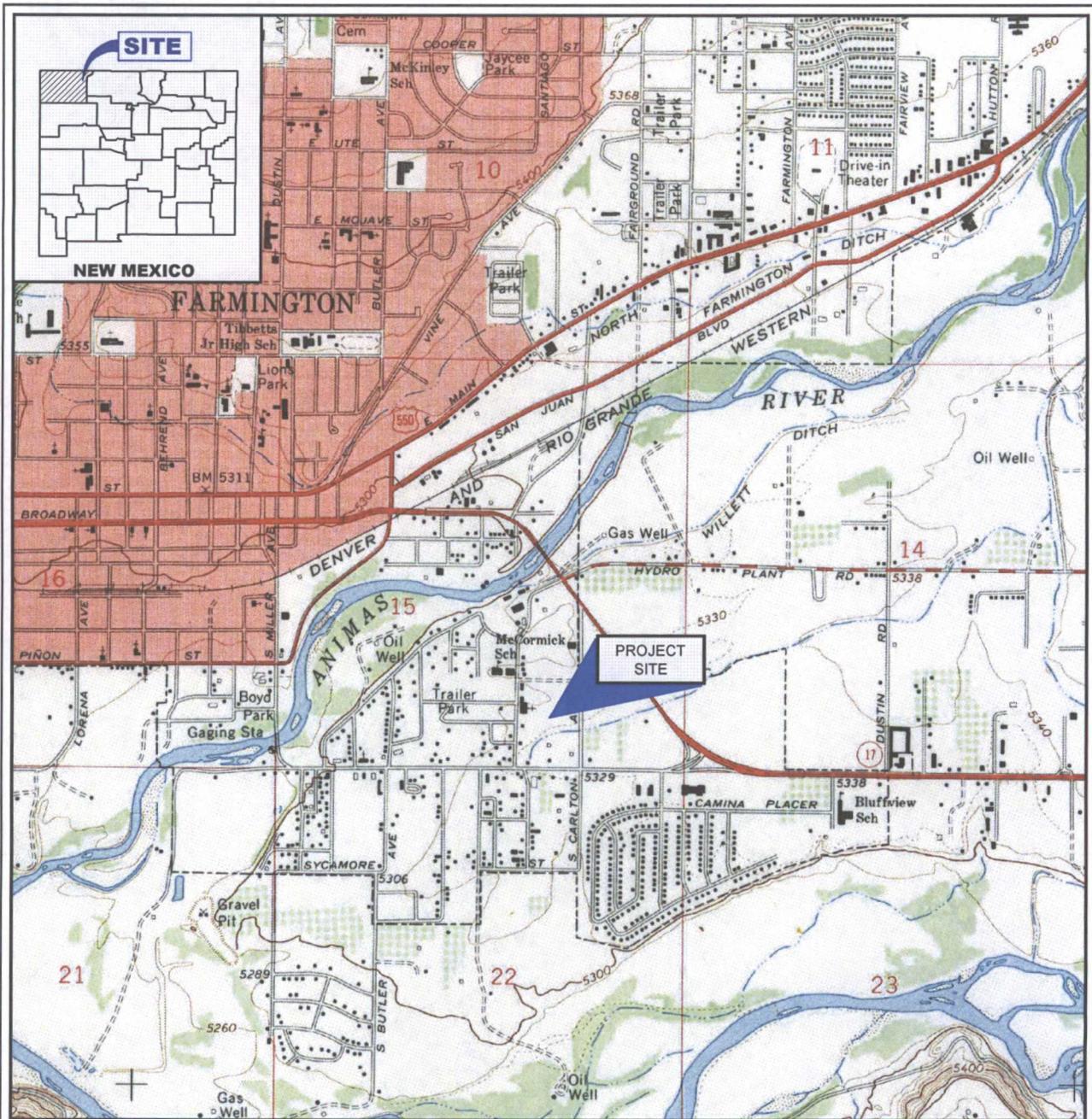
#### 4.0 REFERENCES

New Mexico Energy, Minerals, and Natural Resources Department. (2000). *Re: Farmington B Com #1E Well Site*. Letter to Ms. Shirley Ebert, Conoco, Inc. December 13, 2000.

On-Site Technologies, Ltd. (1997). *Annual Summary, Pit Closures and Groundwater Impact Updates, State of New Mexico, 1996*. Prepared for Conoco Inc., Midland Division. Report dated April 22, 1997. 21 pp.

On-Site Technologies, Ltd. (1997). *Re: Remediation Summary Farmington B Com #1E*. Letter Attn: Mr. Neal Goates, Senior Environmental Specialist, Conoco, Inc. November 26, 1997.

FIGURES



SOURCE: USGS 7.5 MINUTE QUAD  
 "FARMINGTON, NEW MEXICO"

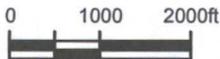


Figure 1  
 SITE VICINITY MAP  
 FARMINGTON B-COM NO. 1E  
 FARMINGTON, NEW MEXICO  
 ConocoPhillips Company



ConocoPhillips High Resolution Aerial Imagery

**LEGEND**

-  WELLHEAD
-  MONITORING WELL

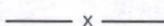
-  FENCE
-  EXISTING MERRION OIL EQUIPMENT



Figure 2  
 SITE PLAN  
 FARMINGTON B-COM NO. 1E  
 FARMINGTON, NEW MEXICO  
*ConocoPhillips Company*

B Com No. 1E - Cross-Section A-A'

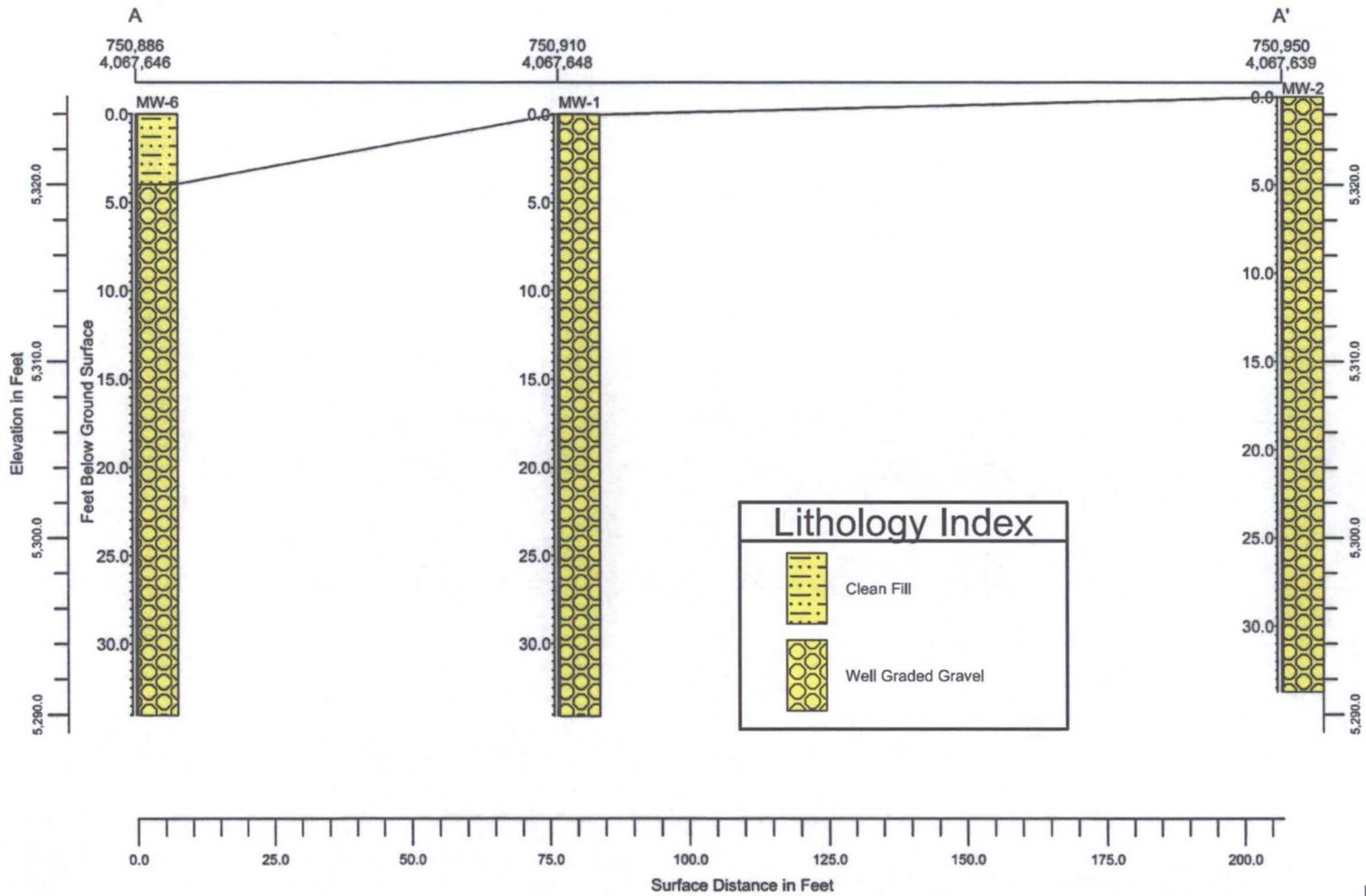


Figure 3

GENERALIZED GEOLOGIC CROSS SECTION  
 FARMINGTON B-COM No. 1E  
 FARMINGTON, NEW MEXICO  
*ConocoPhillips Company*





ConocoPhillips High Resolution Aerial Imagery

**LEGEND**

-  NATURAL GAS WELLHEAD
-  MONITORING WELL
-  FENCE
-  EXISTING MERRION OIL EQUIPMENT
-  (75.27) MONITORING WELL
-  - 74.0 - GROUNDWATER ELEVATION CONTOUR
-  GROUNDWATER FLOW DIRECTION



**JUNE 2011 GROUNDWATER POTENTIOMETRIC SURFACE MAP  
FARMINGTON B-COM NO. 1E  
FARMINGTON, NEW MEXICO**

Figure 4

*ConocoPhillips Company*



ConocoPhillips High Resolution Aerial Imagery

**LEGEND**

-  NATURAL GAS WELLHEAD
-  MONITORING WELL
-  FENCE
-  EXISTING MERRION OIL EQUIPMENT
-  (72.43) GROUNDWATER ELEVATION, Ft
-  - 72.0 - GROUNDWATER ELEVATION CONTOUR
-  GROUNDWATER FLOW DIRECTION



**SEPTEMBER 2011 GROUNDWATER POTENTIOMETRIC SURFACE MAP  
FARMINGTON B-COM NO. 1E  
FARMINGTON, NEW MEXICO**

Figure 5

*ConocoPhillips Company*



ConocoPhillips High Resolution Aerial Imagery

**LEGEND**

-  NATURAL GAS WELLHEAD
-  MONITORING WELL
-  FENCE
-  EXISTING MERRION OIL EQUIPMENT
-  (73.27) GROUNDWATER ELEVATION, FT
-  **73.5** GROUNDWATER ELEVATION CONTOUR
-  GROUNDWATER FLOW DIRECTION



**DECEMBER 2011 GROUNDWATER POTENTIOMETRIC SURFACE MAP  
FARMINGTON B-COM NO. 1E  
FARMINGTON, NEW MEXICO**

*ConocoPhillips Company*

Figure 6

TABLES

**TABLE 1**  
**SITE HISTORY TIMELINE**  
**CONOCOPHILLIPS COMPANY**  
**FARMINGTON B COM No. 1E**  
**SAN JUAN COUNTY, NEW MEXICO**

<i>DATE</i>	<i>Event/Action</i>	<i>ACTIVITY</i>
February 18, 1982	Well Completed	Pioneer Production Corp. completed the Farmington B-COM No. 1E gas production well.
July 1, 1991	Conoco Inc. well purchase	Conoco Inc. purchases wellsite from Mesa Operating Limited Partnership of Amarillo, Texas.
January 1, 1997	Change of ownership	Conoco Inc. sold the property and mineral lease to Merrion Oil & Gas Co.
March, 1997	Site Assessment	Phase II Environmental Site Assessment is conducted by On Site Technologies. Three test holes advanced with Auger refusal encountered at 7 feet below ground surface (bgs) due to gravel and cobbles. No samples collected. On Site Technologies later excavates four additional test holes ranging in depth from 14 to 19 feet bgs. Soil samples are collected from each excavation. TPH and BTEX contamination is found in the vicinity of a former unlined pit.
September, 1997	Soil Excavation	On Site Technologies oversees soil excavation of two pits. 906 cubic yards of impacted soil were removed; of which 328 were disposed of offsite and 578 cubic yards were placed back in the pits along with clean fill. Approximately 10 gallons of liquid fertilizer was sprayed into each pit during backfill.
February and August 1998	Monitor Well Installation	Six monitor wells (MW-1 through MW-6) installed at the site under the supervision of On Site.
October 29, 2004	Groundwater Removal from Monitor Well MW-1	First removal of groundwater - 160 gallons removed by vacuum truck operated by Riley Industrial Services of Farmington, NM.
November 1, 2004	Groundwater Removal from Monitor Well MW-1	40 gallons removed by vacuum truck operated by Riley Industrial Services of Farmington, NM.
December 3, 2004	Groundwater Removal from Monitor Well MW-1	150 gallons removed by vacuum truck operated by Riley Industrial Services of Farmington, NM.
May 9th and 10th, 2005	Monitor Well Sampling	Tetra Tech begins quarterly monitoring at the site. Groundwater samples collected from monitor wells MW-1 and MW-6. A sheen is noted in MW-1; an oil absorbant sock is placed in the well.
July 6, 2005	Groundwater Removal from Monitor Well MW-1	138 gallons removed by vacuum truck operated by Riley Industrial Services of Farmington, NM.
October 19, 2005	Groundwater Removal from Monitor Well MW-1 and Monitor Well Sampling	Groundwater samples collected from monitor wells MW-1 and MW-6. 186 gallons removed from MW-1; a sheen is observed in purge water and oil absorbant sock is replaced.
February 16, 2006	Groundwater Removal from Monitor Well MW-1	144 gallons removed by vacuum truck operated by Riley Industrial Services of Farmington, NM.
May 15, 2006		152 gallons removed by vacuum truck operated by Riley Industrial Services of Farmington, NM.
August 2, 2006		457 gallons removed by vacuum truck operated by Riley Industrial Services of Farmington, NM.
November 14, 2006		423 gallons removed by vacuum truck operated by Riley Industrial Services of Farmington, NM.
November 14, 2006	Monitor Well Sampling	Third sampling of monitor wells MW-1 and MW-6 conducted by Tetra Tech.
February 20, 2007	Groundwater Removal from Monitor Well MW-1	220 gallons removed by vacuum truck operated by Riley Industrial Services of Farmington, NM.
May 15, 2007		364 gallons removed by vacuum truck operated by Riley Industrial Services of Farmington, NM.
August 21, 2007		684 gallons removed by vacuum truck operated by Riley Industrial Services of Farmington, NM.
November 7, 2007		651 gallons removed by vacuum truck operated by Riley Industrial Services of Farmington, NM.
November 7, 2007	Monitor Well Sampling	Fourth sampling of monitor wells MW-1 and MW-6 conducted by Tetra Tech.
January 16, 2008	Groundwater Removal from Monitor Well MW-1	149 gallons removed by vacuum truck operated by Riley Industrial Services of Farmington, NM.

TABLE 1

SITE HISTORY TIMELINE  
 CONOCOPHILLIPS COMPANY  
 FARMINGTON B COM No. 1E  
 SAN JUAN COUNTY, NEW MEXICO

DATE	Event/Action	ACTIVITY
March 18, 2008	Groundwater Removal from Monitor Well MW-1	93 gallons removed by vacuum truck operated by Riley Industrial Services of Farmington, NM.
July 24, 2008	Monitor Well Sampling	Initiation of quarterly sampling for monitor wells MW-1 and MW-6.
October 22, 2008	Monitor Well Sampling	Continuation of quarterly sampling for monitor wells MW-1 and MW-6.
January 21, 2009	Monitor Well Sampling	Continuation of quarterly sampling for monitor wells MW-1 and MW-6. MW-1 not sampled due to presence of free product. Oil absorbent sock placed in the well.
April 1, 2009	Monitor Well Sampling	Continuation of quarterly sampling for monitor wells MW-1 and MW-6. No free product detected in MW-1. First quarter of compliance for all BTEX constituents.
June 10, 2009	Monitor Well Sampling	Continuation of quarterly sampling for monitor wells MW-1 and MW-6. No free product detected in MW-1. Second quarter of compliance for all BTEX constituents.
October 1, 2009	Monitor Well Sampling	Continuation of quarterly sampling for monitor wells MW-1 and MW-6. No free product detected in MW-1. Third quarter of compliance for all BTEX constituents.
December 17, 2009	Monitor Well Sampling	Continuation of quarterly sampling for monitor wells MW-1 and MW-6. No free product detected in MW-1. Fourth quarter of compliance for all BTEX constituents.
March 29, 2010	Monitor Well Sampling	Continuation of quarterly sampling for monitor wells MW-1 and MW-6. A thin hydrocarbon sheen is detected in MW-1. Fifth quarter of compliance for all BTEX constituents.
June 11, 2010	Monitor Well Sampling	Continuation of quarterly sampling for monitor wells MW-1 and MW-6. A thin hydrocarbon sheen is detected in MW-1. Sixth quarter of compliance for all BTEX constituents.
September 24, 2010	Monitor Well Sampling	Continuation of quarterly sampling for monitor wells MW-1 and MW-6. A thin hydrocarbon sheen is detected in MW-1. Seventh quarter of compliance for all BTEX constituents.
February 7, 2011	Monitor Well Sampling	Continuation of quarterly sampling for monitor wells MW-1 and MW-6. A thin hydrocarbon sheen is detected in MW-1. Eighth quarter of compliance with NMWQCC standards for BTEX; however, dissolved manganese concentrations in MW-1 and MW-6 were above standards.
March 18, 2011	Monitor Well Sampling	Continuation of quarterly groundwater sampling for monitor wells MW-1 and MW-6. Ninth quarter of compliance with NMWQCC standards for BTEX; however, dissolved manganese concentration in MW-1 was above standard.
June 15, 2011	Transfer of Site Consulting Responsibilities	Site consulting responsibilities were transferred from Tetra Tech of Albuquerque, NM to Conestoga-Rovers & Associates of Albuquerque, NM.
June 20, 2011	Monitor Well Sampling	Continuation of quarterly groundwater sampling for monitor wells MW-1 and MW-6. Tenth quarter of compliance with NMWQCC standards for BTEX; however, dissolved manganese concentration in both MW-1 and MW-6 were above standard. LNAPL sheen present in MW-1.
September 30, 2011	Monitor Well Sampling	Continuation of quarterly groundwater sampling for monitor wells MW-1 and MW-6. 11th quarter of compliance with NMWQCC standards for BTEX; however, dissolved manganese and dissolved iron concentrations were above standards in MW-1. LNAPL sheen present in MW-1.
December 15, 2011	Monitor Well Sampling	Continuation of quarterly groundwater sampling for monitor wells MW-1 and MW-6. 12th quarter of compliance with NMWQCC standards for BTEX; however, dissolved manganese and dissolved iron concentrations were above standards in MW-1 and dissolved manganese concentration was above standard in MW-6. LNAPL sheen present in MW-1.

**TABLE 2**  
**MONITOR WELL SPECIFICATIONS AND GROUNDWATER ELEVATIONS**  
**MAY 2005 - DECEMBER 2011**  
**CONOCOPHILLIPS COMPANY**  
**FARMINGTON B COM No. 1E**  
**SAN JUAN COUNTY, NEW MEXICO**

Well ID	Total Depth (ft)	Surface Elevation*	Screen Interval (ft bgs)	Date Measured	Depth to Product (ft below TOC)	Depth to Groundwater (ft below TOC)	Relative Water Level*
MW-1	34.09	101.37	19.09 - 34.09	5/9/2005	Sheen	28.30	73.07
				7/6/2005	-	26.50	74.87
				10/19/2005	Sheen	25.12	76.25
				2/16/2006	-	28.23	73.14
				5/15/2006	-	27.02	74.35
				8/2/2006	-	24.37	77.00
				11/14/2006	Sheen	26.48	74.89
				2/20/2007	Sheen	29.03	72.34
				5/15/2007	-	26.97	74.40
				8/21/2007	Sheen	25.20	76.17
				11/7/2007	26.1	26.30	75.07
				1/16/2008	27.88	29.24	72.13
				3/18/2008	29.27	29.27	72.10
				7/24/2008	Sheen	25.73	75.64
				10/22/2008	Sheen	25.35	76.02
				1/21/2009	27.9	28.25	73.12
				4/1/2009	-	29.47	71.90
				6/10/2009	-	26.75	74.62
				10/1/2009	-	23.14	78.23
				12/17/2009	-	26.31	75.06
				3/29/2010	28.68	28.71	72.66
				6/11/2010	Sheen	25.98	75.39
				9/24/2010	Sheen	25.26	76.11
2/7/2011	Sheen	28.83	72.54				
3/18/2011	29.71	29.73	71.64				
6/20/2011	Sheen	27.00	74.37				
9/30/2011	Sheen	24.32	77.05				
12/15/2011	Sheen	26.90	74.47				
MW-2	33.72	101.57	18.72 - 33.72	5/9/2005	-	27.28	74.29
				7/6/2005	-	25.52	76.05
				10/19/2005	-	24.30	77.27
				2/16/2006	-	27.38	74.19
				5/15/2006	-	25.62	75.95
				8/2/2006	-	23.51	78.06
				11/14/2006	-	26.08	75.49
				2/20/2007	-	28.13	73.44
				5/15/2007	-	25.86	75.71
				8/21/2007	-	24.45	77.12
				11/7/2007	-	25.31	76.26
				1/16/2008	-	27.27	74.30
				3/18/2008	-	28.68	72.89
				7/24/2008	-	24.77	76.80
				10/22/2008	-	24.55	77.02
				1/21/2009	-	27.23	74.34
				4/1/2009	-	28.76	72.81
				6/10/2009	-	25.76	75.81
				10/1/2009	-	22.22	79.35
				12/17/2009	-	25.62	75.95
				3/29/2010	-	27.96	73.61
				6/11/2010	-	24.99	76.58
				9/24/2010	-	24.54	77.03
2/7/2011	-	28.22	73.35				
3/18/2011	-	29.14	72.43				
6/20/2011	-	26.20	75.37				
9/30/2011	-	23.51	78.06				
12/15/2011	-	26.22	75.35				

**TABLE 2**  
**MONITOR WELL SPECIFICATIONS AND GROUNDWATER ELEVATIONS**  
**MAY 2005 - DECEMBER 2011**  
**CONOCOPHILLIPS COMPANY**  
**FARMINGTON B COM No. 1E**  
**SAN JUAN COUNTY, NEW MEXICO**

Well ID	Total Depth (ft)	Surface Elevation*	Screen Interval (ft bgs)	Date Measured	Depth to Product (ft below TOC)	Depth to Groundwater (ft below TOC)	Relative Water Level*
MW-3	32.44	102.1	17.44 - 32.44	5/9/2005	-	27.81	74.29
				7/6/2005	-	26.03	76.07
				10/19/2005	-	25.06	77.04
				2/16/2006	-	28.57	73.53
				5/15/2006	-	26.15	75.95
				8/2/2006	-	23.83	78.27
				11/14/2006	-	26.75	75.35
				2/20/2007	-	29.31	72.79
				5/15/2007	-	26.23	75.87
				8/21/2007	-	25.00	77.10
				11/7/2007	-	26.12	75.98
				1/16/2008	-	28.46	73.64
				3/18/2008	-	29.97	72.13
				7/24/2008	-	25.27	76.83
				10/22/2008	-	25.35	76.75
				1/21/2009	-	28.56	73.54
				4/1/2009	-	30.20	71.90
				6/10/2009	-	26.55	75.55
				10/1/2009	-	23.00	79.10
				12/17/2009	-	26.86	75.24
				3/29/2010	-	29.41	72.69
				6/11/2010	-	25.62	76.48
				9/24/2010	-	25.23	76.87
				2/7/2011	-	29.47	72.63
3/18/2011	-	30.40	71.70				
6/20/2011	-	26.83	75.27				
9/30/2011	-	23.95	78.15				
12/15/2011	-	27.41	74.69				
MW-4	32.72	101.4	17.72 - 32.72	5/9/2005	-	28.73	72.67
				7/6/2005	-	26.66	74.74
				10/19/2005	-	25.62	75.78
				2/16/2006	-	28.91	72.49
				5/15/2006	-	26.86	74.54
				8/2/2006	-	24.59	76.81
				11/14/2006	-	27.02	74.38
				2/20/2007	-	29.61	71.79
				5/15/2007	-	27.25	74.15
				8/21/2007	-	25.56	75.84
				11/7/2007	-	26.50	74.90
				1/16/2008	-	28.55	72.85
				3/18/2008	-	29.99	71.41
				7/24/2008	-	26.02	75.38
				10/22/2008	-	25.84	75.56
				1/21/2009	-	28.69	72.71
				4/1/2009	-	30.22	71.18
				6/10/2009	-	27.31	74.09
				10/1/2009	-	23.80	77.60
				12/17/2009	-	27.07	74.33
				3/29/2010	-	29.51	71.89
				6/11/2010	-	26.43	74.97
				9/24/2010	-	25.70	75.70
				2/7/2011	-	29.49	71.91
3/18/2011	-	30.38	71.02				
6/20/2011	-	27.34	74.06				
9/30/2011	-	24.68	76.72				
12/15/2011	-	27.58	73.82				

**TABLE 2**  
**MONITOR WELL SPECIFICATIONS AND GROUNDWATER ELEVATIONS**  
**MAY 2005 - DECEMBER 2011**  
**CONOCOPHILLIPS COMPANY**  
**FARMINGTON B COM No. 1E**  
**SAN JUAN COUNTY, NEW MEXICO**

Well ID	Total Depth (ft)	Surface Elevation*	Screen Interval (ft bgs)	Date Measured	Depth to Product (ft below TOC)	Depth to Groundwater (ft below TOC)	Relative Water Level*
MW-5	34.09	100.52	19.09 - 34.09	5/9/2005	-	28.50	72.02
				7/6/2005	-	26.32	74.20
				10/19/2005	-	25.30	75.22
				2/16/2006	-	28.62	71.90
				5/15/2006	-	26.55	73.97
				8/2/2006	-	24.23	76.29
				11/14/2006	-	27.67	72.85
				2/20/2007	-	29.34	71.18
				5/15/2007	-	27.04	73.48
				8/21/2007	-	25.21	75.31
				11/7/2007	-	26.13	74.39
				1/16/2008	-	28.18	72.34
				3/18/2008	-	29.65	70.87
				7/24/2008	-	25.73	74.79
				10/22/2008	-	25.49	75.03
				1/21/2009	-	28.38	72.14
				4/1/2009	-	29.92	70.60
				6/10/2009	-	27.09	73.43
				10/1/2009	-	23.50	77.02
				12/17/2009	-	26.77	73.75
				3/29/2010	-	29.21	71.31
				6/11/2010	-	26.16	74.36
				9/24/2010	-	25.31	75.21
2/7/2011	-	29.13	71.39				
3/18/2011	-	30.10	70.42				
6/20/2011	-	27.03	73.49				
9/30/2011	-	24.35	76.17				
12/15/2011	-	27.25	73.27				
MW-6	34.02	102.14	19.02 - 34.02	5/9/2005	-	29.94	72.20
				7/6/2005	-	27.89	74.25
				10/19/2005	-	26.70	75.44
				2/16/2006	-	29.85	72.29
				5/15/2006	-	28.11	74.03
				8/2/2006	-	25.83	76.31
				11/14/2006	-	27.91	74.23
				2/20/2007	-	30.52	71.62
				5/15/2007	-	28.61	73.53
				8/21/2007	-	26.67	75.47
				11/7/2007	-	27.52	74.62
				1/16/2008	-	29.43	72.71
				3/18/2008	-	30.85	71.29
				7/24/2008	-	27.26	74.88
				10/22/2008	-	26.85	75.29
				1/21/2009	-	29.52	72.62
				4/1/2009	-	31.00	71.14
				6/10/2009	-	28.44	73.70
				10/1/2009	-	24.75	77.39
				12/17/2009	-	27.90	74.24
				3/29/2010	-	30.29	71.85
				6/11/2010	-	27.58	74.56
				9/24/2010	-	26.74	75.40
2/7/2011	-	30.35	71.79				
3/18/2011	-	31.21	70.93				
6/20/2011	-	28.50	73.64				
9/30/2011	-	25.85	76.29				
12/15/2011	-	28.41	73.73				

**Notes:**

1. bgs = feet below ground surface
2. ft = Feet
3. TOC = Top of casing
4. \* Elevations relative to an arbitrary point set at 100 feet

TABLE 3

GROUNDWATER LABORATORY ANALYTICAL RESULTS SUMMARY  
 FEBRUARY 1998 - DECEMBER 2011  
 CONOCOPHILLIPS COMPANY  
 FARMINGTON B COM No. 1E  
 SAN JUAN COUNTY, NEW MEXICO

Well ID	Sample ID	Date	Sample Type	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (total) (mg/L)	Iron (dissolved) (mg/L)	Manganese (dissolved) (mg/L)	Nitrate (as N) (mg/L)	Sulfate (mg/L)	
MW-1	MW-1	2/19/1998	(orig)	0.21	0.034	0.37	2.044	--	--	--	--	
	MW-1	12/29/1998	(orig)	0.35	ND	0.42	2.8	--	--	--	--	
	MW-1	5/9/2005	(orig)	0.017	< 0.0007	0.074	0.25	--	--	< 0.40	77.8	
	MW-1	10/19/2005	(orig)	0.034	< 0.001	0.17	1.4	--	--	0.15	39.9	
	MW-1	11/14/2006	(orig)	0.018	< 0.0007	0.19	1.6	--	--	< 0.015	145	
	MW-1	11/7/2007	(orig)	0.007	< 0.0007	0.12	0.25	--	--	< 0.015	38.4	
	MW-1	7/24/2008	(orig)	< 0.005	< 0.005	0.09	0.035	--	--	< 0.5	4.76	
	MW-1 Duplicate	7/24/2008	(orig)	< 0.005	< 0.005	0.11	0.059	--	--	--	--	
	MW-1	10/22/2008	(orig)	< 0.005	< 0.005	0.088	0.165	--	--	< 0.5	17	
	MW-1 Duplicate	10/22/2008	(orig)	< 0.005	< 0.005	0.095	0.186	--	--	--	--	
	MW-1	1/21/2009			Free Product - Not Sampled							
	MW-1	4/1/2009	(orig)	< 0.005	< 0.005	0.011	< 0.005	--	--	--	--	
	MW-1	6/10/2009	(orig)	< 0.005	< 0.005	0.096	< 0.005	--	--	--	--	
	MW-1	10/1/2009	(orig)	0.0013	< 0.001	0.058	0.142	0.233	--	--	--	
	MW-1	12/17/2009	(orig)	0.0014	< 0.001	0.1	0.0028	0.521	--	--	--	
	MW-1	3/29/2010	(orig)	< 0.001	< 0.001	0.051	< 0.001	0.0803	--	--	--	
	MW-1	6/11/2010	(orig)	0.0011	< 0.001	0.098	0.0018	0.0217	--	--	--	
	MW-1	9/24/2010	(orig)	< 0.001	< 0.001	0.092	0.0278	0.0285	--	--	--	
	MW-1	2/7/2011	(orig)	< 0.001	< 0.001	0.026	< 0.001	--	0.459	--	--	
	MW-1	3/18/2011	(orig)	< 0.001	< 0.001	0.01	< 0.001	< 0.02	0.477	--	--	
		GW-BCOM-062011-CMB-002	6/20/2011	(orig)	< 0.0010	< 0.0010	0.0912	0.0018	0.157	0.424	--	--
		GW-BCOM-062011-CMB-003	6/20/2011	(Duplicate)	< 0.0010	< 0.0010	0.0952	< 0.0030	--	--	--	--
		GW-074938-093011-CM-005	9/30/2011	(orig)	< 0.001	< 0.001	0.058	0.0048	4.1	0.268	--	--
	GW-074938-093011-CM-006	9/30/2011	(Duplicate)	< 0.001	< 0.001	0.0618	0.0052	--	--	--	--	
	GW-074938-121511-CB-MW-1	12/15/2011	(orig)	0.00024 J	< 0.001	0.0848	0.0095	1.91	0.35	--	--	
	GW-074938-121511-CB-DUP	12/15/2011	(Duplicate)	0.00029 J	< 0.001	0.0807	0.0092	--	--	--	--	
MW-3	GW-074938-121511-CB-MW-3	12/15/2011	(orig)	--	--	--	--	0.246	0.112	--	--	

TABLE 3

**GROUNDWATER LABORATORY ANALYTICAL RESULTS SUMMARY**  
**FEBRUARY 1998 - DECEMBER 2011**  
**CONOCOPHILLIPS COMPANY**  
**FARMINGTON B COM No. 1E**  
**SAN JUAN COUNTY, NEW MEXICO**

Well ID	Sample ID	Date	Sample Type	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (total) (mg/L)	Iron (dissolved) (mg/L)	Manganese (dissolved) (mg/L)	Nitrate (as N) (mg/L)	Sulfate (mg/L)
MW-6	MW-6	9/15/1998	(orig)	ND	ND	ND	ND	--	--	--	--
	MW-6	12/29/1998	(orig)	ND	ND	ND	ND	--	--	--	--
	MW-6	3/3/1999	(orig)	ND	ND	ND	ND	--	--	--	--
	MW-6	6/15/1999	(orig)	ND	ND	ND	ND	--	--	--	--
	MW-6	9/15/1999	(orig)	ND	0.0007	0.0011	ND	--	--	--	--
	MW-6	12/14/1999	(orig)	ND	0.0018	0.0007	0.0019	--	--	--	--
	MW-6	1/22/2004	(orig)	ND	ND	ND	ND	--	--	--	--
	MW-6	5/9/2005	(orig)	< 0.0005	< 0.0007	< 0.0008	< 0.0008	--	--	< 0.4	97
	MW-6	10/19/2005	(orig)	< 0.0005	< 0.0007	< 0.0008	< 0.0008	--	--	5.4	52.6
	MW-6	11/14/2006	(orig)	< 0.0005	< 0.0007	< 0.0008	0.001	--	--	< 0.015	159
	MW-6	11/7/2007	(orig)	< 0.0005	< 0.0007	< 0.0008	< 0.0008	--	--	< 0.015	112
	MW-6	7/24/2008	(orig)	< 0.005	< 0.005	< 0.005	< 0.005	--	--	< 0.5	44.4
	MW-6	10/22/2008	(orig)	< 0.005	< 0.005	< 0.005	< 0.005	--	--	< 0.5	43.7
	MW-6	1/21/2009	(orig)	< 0.005	< 0.005	< 0.005	< 0.005	--	--	< 0.5	31.1
	MW-6	4/1/2009	(orig)	< 0.005	< 0.005	< 0.005	< 0.005	--	--	--	--
	MW-6	6/10/2009	(orig)	< 0.005	< 0.005	< 0.005	< 0.005	--	--	--	--
	MW-6	10/1/2009	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	< 0.02	--	--	--
	MW-6	12/17/2009	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	0.0511	--	--	--
	MW-6	3/29/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0200	--	--	--
	MW-6	6/11/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0200	--	--	--
MW-6	9/24/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0200	--	--	--	
MW-6	2/7/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	<b>0.543</b>	--	--	
MW-6	3/18/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	< 0.02	<b>0.0679</b>	--	--	
	GW-BCOM-062011-CMB-001	6/20/2011	(orig)	< 0.0010	< 0.0010	< 0.0010	< 0.0030	< 0.1	<b>0.43</b>	--	--
	GW-074938-093011-CM-004	9/30/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.05	<b>0.0261</b>	--	--
	GW-074938-121511-CB-MW-6	12/15/2011	(orig)	<b>0.000069 J</b>	< 0.001	< 0.001	< 0.003	<b>0.429</b>	<b>1.06</b>	--	--
<b>NMWQCC Groundwater Quality Standards</b>				<b>0.01</b>	<b>0.75</b>	<b>0.75</b>	<b>0.62</b>	<b>1.0</b>	<b>0.2</b>	<b>10</b>	<b>600</b>

**Notes:**

1. MW = monitoring well
2. NMWQCC = New Mexico Water Quality Control Commission
3. Constituents in **BOLD** are in excess of NMWQCC groundwater quality standards
4. mg/L = milligrams per liter (parts per million)
5. < 1.0 = Below laboratory detection limit of 1.0 mg/L
6. ND = Below laboratory detection limit
7. -- = not sampled
8. J = indicates an estimated value between the method detection limit and the laboratory reporting limit

APPENDIX A

JUNE, SEPTEMBER, AND DECEMBER 2011  
QUARTERLY GROUNDWATER SAMPLING FIELD FORMS

## WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: Farmington B-Com No. 1E JOB# 074938  
 SAMPLE ID: GW-074938-062011-CMB-002 WELL# MW-1

### WELL PURGING INFORMATION

PURGE DATE (MM DD YY) 6.20.11 SAMPLE DATE (MM DD YY) 6.20.11 SAMPLE TIME (24 HOUR) 1900 WATER VOL. IN CASING (GALLONS) 1.12 ACTUAL VOL. PURGED (GALLONS) 3.3

### PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.....DEDICATED  N (CIRCLE ONE) SAMPLING EQUIPMENT.....DEDICATED  N (CIRCLE ONE)

PURGING DEVICE	<u>G</u>	A - SUBMERSIBLE PUMP	D - GAS LIFT PUMP	G - BAILER	X= _____
SAMPLING DEVICE	<u>G</u>	B - PERISTALTIC PUMP	E - PURGE PUMP	H - WATERRA®	PURGING DEVICE OTHER (SPECIFY)
		C - BLADDER PUMP	F - DIPPER BOTTLE	X - OTHER	X= _____
PURGING MATERIAL	<u>E</u>	A - TEFLON	D - PVC		X= _____
SAMPLING MATERIAL	<u>E</u>	B - STAINLESS STEEL	E - POLYETHYLENE		PURGING MATERIAL OTHER (SPECIFY)
		C - POLYPROPYLENE	X - OTHER		X= _____
PURGE TUBING	<u>C</u>	A - TEFLON	D - POLYPROPYLENE	G - COMBINATION	X= _____
SAMPLING TUBING	<u>C</u>	B - TYGON	E - POLYETHYLENE	TEFLON/POLYPROPYLENE	PURGE TUBING OTHER (SPECIFY)
		C - ROPE	F - SILICONE	X - OTHER	X= _____

FILTERING DEVICES 0.45  A - IN-LINE DISPOSABLE B - PRESSURE C - VACUUM

### FIELD MEASUREMENTS

DEPTH TO WATER	<u>27.00</u>	(feet)	WELL ELEVATION	<u>101.37</u>	(feet)
WELL DEPTH	<u>34.02</u>	(feet)	GROUNDWATER ELEVATION	<u>74.3</u>	(feet)

TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
<input type="text"/> (°C)	<input type="text"/> (std)	<input type="text"/> (g/L)	<input type="text"/> (µS/cm)	<input type="text"/> (mV)	<input type="text"/> (gal)
<input type="text"/> (°C)	<input type="text"/> (std)	<input type="text"/> (g/L)	<input type="text"/> (µS/cm)	<input type="text"/> (mV)	<input type="text"/> (gal)
<input type="text"/> (°C)	<input type="text"/> (std)	<input type="text"/> (g/L)	<input type="text"/> (µS/cm)	<input type="text"/> (mV)	<input type="text"/> (gal)
<input type="text"/> (°C)	<input type="text"/> (std)	<input type="text"/> (g/L)	<input type="text"/> (µS/cm)	<input type="text"/> (mV)	<input type="text"/> (gal)
<input type="text"/> (°C)	<input type="text"/> (std)	<input type="text"/> (g/L)	<input type="text"/> (µS/cm)	<input type="text"/> (mV)	<input type="text"/> (gal)

### FIELD COMMENTS

SAMPLE APPEARANCE: \_\_\_\_\_ ODOR: \_\_\_\_\_ COLOR: \_\_\_\_\_ SHEEN  N  
 WEATHER CONDITIONS: TEMPERATURE \_\_\_\_\_ WINDY Y/N \_\_\_\_\_ PRECIPITATION - Y/N (IF Y TYPE) \_\_\_\_\_  
 SPECIFIC COMMENTS: No parameters taken due to sheen.

duplicate GW-074938-062011-CMB-003 taken at 1905

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CWA PROTOCOLS  
 DATE 6.20.11 PRINT [Signature] SIGNATURE [Signature]

## WELL SAMPLING FIELD INFORMATION FORM

**SITE/PROJECT NAME:** Farmington B-Com No 1E      **JOB#** 074938  
**SAMPLE ID:** GW-074938-062011-CMB-001      **WELL#** MW-6

### WELL PURGING INFORMATION

**PURGE DATE (MM DD YY)** 6.20.11      **SAMPLE DATE (MM DD YY)** 6.20.11      **SAMPLE TIME (24 HOUR)** 1840      **WATER VOL. IN CASING (GALLONS)** 0.88      **ACTUAL VOL. PURGED (GALLONS)** 2.6

### PURGING AND SAMPLING EQUIPMENT

**PURGING EQUIPMENT.....DEDICATED**  N (CIRCLE ONE)      **SAMPLING EQUIPMENT.....DEDICATED**  N (CIRCLE ONE)

<b>PURGING DEVICE</b>	<input checked="" type="checkbox"/>	A - SUBMERSIBLE PUMP	<input type="checkbox"/>	D - GAS LIFT PUMP	<input type="checkbox"/>	G - BAILER	<input type="checkbox"/>	X = _____
		B - PERISTALTIC PUMP		E - PURGE PUMP		H - WATERA®		PURGING DEVICE OTHER (SPECIFY)
<b>SAMPLING DEVICE</b>	<input checked="" type="checkbox"/>	C - BLADDER PUMP		F - DIPPER BOTTLE		X - OTHER		X = _____
								SAMPLING DEVICE OTHER (SPECIFY)
<b>PURGING MATERIAL</b>	<input checked="" type="checkbox"/>	A - TEFLON		D - PVC				X = _____
		B - STAINLESS STEEL		E - POLYETHYLENE				PURGING MATERIAL OTHER (SPECIFY)
<b>SAMPLING MATERIAL</b>	<input checked="" type="checkbox"/>	C - POLYPROPYLENE		X - OTHER				X = _____
								SAMPLING MATERIAL OTHER (SPECIFY)
<b>PURGE TUBING</b>	<input checked="" type="checkbox"/>	A - TEFLON		D - POLYPROPYLENE		G - COMBINATION		X = _____
		B - TYGON		E - POLYETHYLENE		TEFLON/POLYPROPYLENE		PURGE TUBING OTHER (SPECIFY)
<b>SAMPLING TUBING</b>	<input checked="" type="checkbox"/>	C - ROPE		F - SILICONE		X - OTHER		X = _____
								SAMPLING TUBING OTHER (SPECIFY)

**FILTERING DEVICES 0.45**       A - IN-LINE DISPOSABLE       B - PRESSURE       C - VACUUM

### FIELD MEASUREMENTS

**DEPTH TO WATER** 28.50 (feet)      **WELL ELEVATION** 102.14 (feet)  
**WELL DEPTH** 34.00 (feet)      **GROUNDWATER ELEVATION** 73.64 (feet)

TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
<u>16.08</u> (°C)	<u>6.98</u> (std)	_____ (g/L)	<u>58557</u> (µS/cm)	_____ (mV)	<u>2.6</u> (gal)
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	_____ (gal)
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	_____ (gal)
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	_____ (gal)
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	_____ (gal)

### FIELD COMMENTS

**SAMPLE APPEARANCE:** \_\_\_\_\_ **ODOR:** \_\_\_\_\_ **COLOR:** \_\_\_\_\_ **SHEEN Y/N** \_\_\_\_\_  
**WEATHER CONDITIONS:**      **TEMPERATURE** \_\_\_\_\_ **WINDY Y/N** \_\_\_\_\_ **PRECIPITATION Y/N (IF Y TYPE)** \_\_\_\_\_  
**SPECIFIC COMMENTS:** \_\_\_\_\_

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS  
6.20.11      David Brown      [Signature]  
 DATE      PRINT      SIGNATURE

## WELL SAMPLING FIELD INFORMATION FORM

**WELL/PROJECT NAME:** BC<sub>com</sub> No. 1E      **JOB#** 074938  
**SAMPLE ID:** GW-074938-093011-CM-005      **WELL#** MW-1

**WELL PURGING INFORMATION**

9.30.11      9.30.11      920      1.55      4.75  
PURGE DATE (MM DD YY)      SAMPLE DATE (MM DD YY)      SAMPLE TIME (24 HOUR)      WATER VOL. IN CASING (GALLONS)      ACTUAL VOL. PURGED (GALLONS)

**PURGING AND SAMPLING EQUIPMENT**

PURGING EQUIPMENT.....DEDICATED  N      SAMPLING EQUIPMENT.....DEDICATED  N  
(CIRCLE ONE)      (CIRCLE ONE)

PURGING DEVICE	<u>G</u>	A - SUBMERSIBLE PUMP	D - GAS LIFT PUMP	G - BAILER	X= _____
		B - PERISTALTIC PUMP	E - PURGE PUMP	H - WATERRA®	PURGING DEVICE OTHER (SPECIFY)
SAMPLING DEVICE	<u>G</u>	C - BLADDER PUMP	F - DIPPER BOTTLE	X - OTHER	X= _____
					SAMPLING DEVICE OTHER (SPECIFY)
PURGING MATERIAL	<u>E</u>	A - TEFLON	D - PVC		X= _____
		B - STAINLESS STEEL	E - POLYETHYLENE		PURGING MATERIAL OTHER (SPECIFY)
SAMPLING MATERIAL	<u>E</u>	C - POLYPROPYLENE	X - OTHER		X= _____
					SAMPLING MATERIAL OTHER (SPECIFY)
PURGE TUBING	<u>C</u>	A - TEFLON	D - POLYPROPYLENE	G - COMBINATION	X= _____
		B - TYGON	E - POLYETHYLENE	TEFLON/POLYPROPYLENE	PURGE TUBING OTHER (SPECIFY)
SAMPLING TUBING	<u>C</u>	C - ROPE	F - SILICONE	X - OTHER	X= _____
					SAMPLING TUBING OTHER (SPECIFY)
FILTERING DEVICES 0.45	<u>A</u>	A - IN-LINE DISPOSABLE	B - PRESSURE	C - VACUUM	

### FIELD MEASUREMENTS

DEPTH TO WATER	<u>24.32</u>	(feet)	WELL ELEVATION	<u>101.37</u>	(feet)
WELL DEPTH	<u>34.01</u>	(feet)	GROUNDWATER ELEVATION	<u>77.05</u>	(feet)
TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	_____ (gal)
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	_____ (gal)
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	_____ (gal)
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	_____ (gal)
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	_____ (gal)

### FIELD COMMENTS

**SAMPLE APPEARANCE:** cloudy      **ODOR:** hydrocarbon      **COLOR:** gray/yellow      **SHEEN:** Y      slight but continuous  
**WEATHER CONDITIONS:**      **TEMPERATURE** 75°      **WINDY:** Y      **PRECIPITATION:** Y (IFY TYPE) \_\_\_\_\_  
**SPECIFIC COMMENTS:** No parameters collected due to continuous sheen  
Duplicate GW-074938-093011-CM-006 collected @ 925  
Volume = 9.69 x 0.16 = 1.55 x 3 = 4.65

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS  
**DATE:** 9.30.11      **PRINT:** Jason Doss      **SIGNATURE:** \_\_\_\_\_

# WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: BCom No. 1E JOB# 074938

SAMPLE ID: GW-074938-093011-LM-004 WELL# MW-6

### WELL PURGING INFORMATION

PURGE DATE (MM DD YY)    
  SAMPLE DATE (MM DD YY)    
  SAMPLE TIME (24 HOUR)    
  WATER VOL. IN CASING (GALLONS)    
  ACTUAL VOL. PURGED (GALLONS)

### PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.....DEDICATED  N (CIRCLE ONE)    
 SAMPLING EQUIPMENT.....DEDICATED  N (CIRCLE ONE)

PURGING DEVICE	<input checked="" type="checkbox"/>	A - SUBMERSIBLE PUMP	<input type="checkbox"/>	D - GAS LIFT PUMP	<input type="checkbox"/>	G - BAILER	<input type="checkbox"/>	X= _____
		B - PERISTALTIC PUMP	<input type="checkbox"/>	E - PURGE PUMP	<input type="checkbox"/>	H - WATERRA®	<input type="checkbox"/>	PURGING DEVICE OTHER (SPECIFY)
SAMPLING DEVICE	<input checked="" type="checkbox"/>	C - BLADDER PUMP	<input type="checkbox"/>	F - DIPPER BOTTLE	<input type="checkbox"/>	X - OTHER	<input type="checkbox"/>	X= _____
								SAMPLING DEVICE OTHER (SPECIFY)
PURGING MATERIAL	<input checked="" type="checkbox"/>	A - TEFLON	<input type="checkbox"/>	D - PVC	<input type="checkbox"/>		<input type="checkbox"/>	X= _____
		B - STAINLESS STEEL	<input type="checkbox"/>	E - POLYETHYLENE	<input type="checkbox"/>		<input type="checkbox"/>	PURGING MATERIAL OTHER (SPECIFY)
SAMPLING MATERIAL	<input checked="" type="checkbox"/>	C - POLYPROPYLENE	<input type="checkbox"/>	X - OTHER	<input type="checkbox"/>		<input type="checkbox"/>	X= _____
								SAMPLING MATERIAL OTHER (SPECIFY)
PURGE TUBING	<input checked="" type="checkbox"/>	A - TEFLON	<input type="checkbox"/>	D - POLYPROPYLENE	<input type="checkbox"/>	G - COMBINATION	<input type="checkbox"/>	X= _____
		B - TYGON	<input type="checkbox"/>	E - POLYETHYLENE	<input type="checkbox"/>	TEFLON/POLYPROPYLENE	<input type="checkbox"/>	PURGE TUBING OTHER (SPECIFY)
SAMPLING TUBING	<input checked="" type="checkbox"/>	C - ROPE	<input type="checkbox"/>	F - SILICONE	<input type="checkbox"/>	X - OTHER	<input type="checkbox"/>	X= _____
								SAMPLING TUBING OTHER (SPECIFY)
FILTERING DEVICES 0.45	<input checked="" type="checkbox"/>	A - IN-LINE DISPOSABLE	<input type="checkbox"/>	B - PRESSURE	<input type="checkbox"/>	C - VACUUM	<input type="checkbox"/>	

### FIELD MEASUREMENTS

DEPTH TO WATER  (feet)     WELL ELEVATION  (feet)  
 WELL DEPTH  (feet)     GROUNDWATER ELEVATION  (feet)

TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
<input type="text" value="18.51"/> (°C)	<input type="text" value="6.93"/> (std)	<input type="text" value="0.944"/> (g/L)	<input type="text" value="1279"/> (µS/cm)	<input type="text" value="216.7"/> (mV)	<input type="text" value="3.0"/> (gal)
<input type="text" value="18.45"/> (°C)	<input type="text" value="6.95"/> (std)	<input type="text" value="0.943"/> (g/L)	<input type="text" value="1269"/> (µS/cm)	<input type="text" value="215.9"/> (mV)	<input type="text" value="3.5"/> (gal)
<input type="text" value="18.34"/> (°C)	<input type="text" value="6.98"/> (std)	<input type="text" value="0.945"/> (g/L)	<input type="text" value="1270"/> (µS/cm)	<input type="text" value="215.0"/> (mV)	<input type="text" value="4.0"/> (gal)
<input type="text"/> (°C)	<input type="text"/> (std)	<input type="text"/> (g/L)	<input type="text"/> (µS/cm)	<input type="text"/> (mV)	<input type="text"/> (gal)
<input type="text"/> (°C)	<input type="text"/> (std)	<input type="text"/> (g/L)	<input type="text"/> (µS/cm)	<input type="text"/> (mV)	<input type="text"/> (gal)

### FIELD COMMENTS

SAMPLE APPEARANCE: cloudy     ODOR: None     COLOR: reddish brown     SHEEN Y/ N  
 WEATHER CONDITIONS:     TEMPERATURE ~75°     WINDY Y/ N     PRECIPITATION Y/ N (IF Y TYPE) \_\_\_\_\_  
 SPECIFIC COMMENTS: \_\_\_\_\_

$Volume = 8.14 \times 0.16 = 1.30 \times 3 = 3.91$

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CWA PROTOCOLS

DATE 9.30.11     PRINT Jason Hoss     SIGNATURE [Signature]

# WELL SAMPLING FIELD INFORMATION FORM

IE/PROJECT NAME: B-COM #1E JOB# 07A938  
 SAMPLE ID: GW-07A938-121511-CB-MW-1 WELL# MW-1

**WELL PURGING INFORMATION**  
 PURGE DATE (MM DD YY): 12-15-11 SAMPLE DATE (MM DD YY): 12-15-11 SAMPLE TIME (24 HOUR): 1015  
 WATER VOL. IN CASING (GALLONS): 1.14 ACTUAL VOL. PURGED (GALLONS): 3.5

**PURGING AND SAMPLING EQUIPMENT**  
 PURGING EQUIPMENT.....DEDICATED  Y  N (CIRCLE ONE)  
 SAMPLING EQUIPMENT.....DEDICATED  Y  N (CIRCLE ONE)

PURGING DEVICE	<u>G</u>	A - SUBMERSIBLE PUMP	D - GAS LIFT PUMP	G - BAILER	X= _____
SAMPLING DEVICE	<u>G</u>	B - PERISTALTIC PUMP	E - PURGE PUMP	H - WATERA®	PURGING DEVICE OTHER (SPECIFY) _____
		C - BLADDER PUMP	F - DIPPER BOTTLE	X - OTHER	X= _____
PURGING MATERIAL	<u>E</u>	A - TEFLON	D - PVC	X= _____	
SAMPLING MATERIAL	<u>E</u>	B - STAINLESS STEEL	E - POLYETHYLENE	PURGING MATERIAL OTHER (SPECIFY) _____	
		C - POLYPROPYLENE	X - OTHER	X= _____	
PURGE TUBING	<u>C</u>	A - TEFLON	D - POLYPROPYLENE	G - COMBINATION	X= _____
SAMPLING TUBING	<u>C</u>	B - TYGON	E - POLYETHYLENE	TEFLON/POLYPROPYLENE	PURGE TUBING OTHER (SPECIFY) _____
		C - ROPE	F - SILICONE	X - OTHER	X= _____
FILTERING DEVICES 0.45	<u>A</u>	A - IN-LINE DISPOSABLE	B - PRESSURE	C - VACUUM	SAMPLING TUBING OTHER (SPECIFY) _____

### FIELD MEASUREMENTS

DEPTH TO WATER	<u>26.90</u>	(feet)	WELL ELEVATION	<u>101.37</u>	(feet)
WELL DEPTH	<u>34.00</u>	(feet)	GROUNDWATER ELEVATION	<u>74.47</u>	(feet)

TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	_____ (gal)
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	_____ (gal)
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	_____ (gal)
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	_____ (gal)

### FIELD COMMENTS

SAMPLE APPEARANCE: clear w/ greenish tinge ODOR: slight COLOR: clearish SHEEN  Y  N continuous  
 WEATHER CONDITIONS: TEMPERATURE -30° WINDY  Y  N PRECIPITATION  Y  N (IF Y TYPE) \_\_\_\_\_  
 SPECIFIC COMMENTS: No parameters taken due to continuous sheen  
7.1 x 0.16 = 1.136 x 3 = 3.41  
Dup collected at 1020

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS.  
 DATE: 12-15-11 PRINT: Cassie Brown SIGNATURE: Cassie Brown

## WELL SAMPLING FIELD INFORMATION FORM

FE/PROJECT NAME: B-COM #1E JOB# 074988  
 SAMPLE ID: GW-074988-121511-18-MW3 WELL# MW-3

PURGE DATE (MM DD YY) 12.15.11 WELL PURGING INFORMATION  
 SAMPLE DATE (MM DD YY) 12.15.11 SAMPLE TIME (24 HOUR) 1025 WATER VOL. IN CASING (GALLONS) 1.02 ACTUAL VOL. PURGED (GALLONS) 3.25

PURGING AND SAMPLING EQUIPMENT  
 PURGING EQUIPMENT.....DEDICATED  Y  N (CIRCLE ONE)  
 SAMPLING EQUIPMENT.....DEDICATED  Y  N (CIRCLE ONE)

PURGING DEVICE	<u>G</u>	A - SUBMERSIBLE PUMP	D - GAS LIFT PUMP	G - BAILER	X = _____
SAMPLING DEVICE	<u>G</u>	B - PERISTALTIC PUMP	E - PURGE PUMP	H - WATERRA®	PURGING DEVICE OTHER (SPECIFY)
		C - BLADDER PUMP	F - DIPPER BOTTLE	X - OTHER	X = _____
PURGING MATERIAL	<u>E</u>	A - TEFLON	D - PVC	X = _____	
SAMPLING MATERIAL	<u>E</u>	B - STAINLESS STEEL	E - POLYETHYLENE	PURGING MATERIAL OTHER (SPECIFY)	
		C - POLYPROPYLENE	X - OTHER	X = _____	
PURGE TUBING	<u>C</u>	A - TEFLON	D - POLYPROPYLENE	G - COMBINATION	X = _____
SAMPLING TUBING	<u>C</u>	B - TYGON	E - POLYETHYLENE	TEFLON/POLYPROPYLENE	PURGE TUBING OTHER (SPECIFY)
		C - ROPE	F - SILICONE	X - OTHER	X = _____
FILTERING DEVICES 0.45	<u>A</u>	A - IN-LINE DISPOSABLE	B - PRESSURE	C - VACUUM	SAMPLING TUBING OTHER (SPECIFY)

### FIELD MEASUREMENTS

DEPTH TO WATER	<u>27.41</u>	(feet)	WELL ELEVATION	<u>102.1</u>	(feet)
WELL DEPTH	<u>33.82</u>	(feet)	GROUNDWATER ELEVATION	<u>74.69</u>	(feet)
TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
<u>17.12</u> (°C)	<u>8.02</u> (std)	<u>0.358</u> (g/L)	<u>468</u> (µS/cm)	<u>104.9</u> (mV)	<u>2.0</u> (gal)
<u>17.02</u> (°C)	<u>7.79</u> (std)	<u>0.386</u> (g/L)	<u>505</u> (µS/cm)	<u>62.7</u> (mV)	<u>2.75</u> (gal)
<u>17.08</u> (°C)	<u>7.68</u> (std)	<u>0.407</u> (g/L)	<u>532</u> (µS/cm)	<u>59.4</u> (mV)	<u>3.0</u> (gal)
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	_____ (gal)
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	_____ (gal)

### FIELD COMMENTS

SAMPLE APPEARANCE: Silly/cloudy ODOR: None COLOR: orange/brown SHEEN Y/N  Y  N  
 WEATHER CONDITIONS: TEMPERATURE 25 WINDY Y/N N PRECIPITATION Y/N (IF Y, TYPE) N  
 SPECIFIC COMMENTS: 1.02 x 3 = 3.07

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS  
 DATE 12.15.11 PRINT Casson Brown SIGNATURE Casson Brown

# WELL SAMPLING FIELD INFORMATION FORM

FE/PROJECT NAME: B-CON #1E JOB# 074933  
 SAMPLE ID: GW-074933-121511-CB-MW-6 WELL# MW-6

WELL PURGING INFORMATION

PURGE DATE (MM DD YY) 12-15-11 SAMPLE DATE (MM DD YY) 12-15-11 SAMPLE TIME (24 HOUR) 0150 WATER VOL. IN CASING (GALLONS) 0.8312 ACTUAL VOL. PURGED (GALLONS) 2.75

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.....DEDICATED  Y  N (CIRCLE ONE) SAMPLING EQUIPMENT.....DEDICATED  Y  N (CIRCLE ONE)

PURGING DEVICE	<input checked="" type="checkbox"/>	A - SUBMERSIBLE PUMP	<input type="checkbox"/>	D - GAS LIFT PUMP	<input type="checkbox"/>	G - BAILER	<input type="checkbox"/>	X = _____
		B - PERISTALTIC PUMP	<input type="checkbox"/>	E - PURGE PUMP	<input type="checkbox"/>	H - WATERRA®	<input type="checkbox"/>	PURGING DEVICE OTHER (SPECIFY)
SAMPLING DEVICE	<input checked="" type="checkbox"/>	C - BLADDER PUMP	<input type="checkbox"/>	F - DIPPER BOTTLE	<input type="checkbox"/>	X - OTHER	<input type="checkbox"/>	X = _____
								SAMPLING DEVICE OTHER (SPECIFY)
PURGING MATERIAL	<input checked="" type="checkbox"/>	A - TEFLON	<input type="checkbox"/>	D - PVC	<input type="checkbox"/>		<input type="checkbox"/>	X = _____
		B - STAINLESS STEEL	<input type="checkbox"/>	E - POLYETHYLENE	<input type="checkbox"/>		<input type="checkbox"/>	PURGING MATERIAL OTHER (SPECIFY)
SAMPLING MATERIAL	<input checked="" type="checkbox"/>	C - POLYPROPYLENE	<input type="checkbox"/>	X - OTHER	<input type="checkbox"/>		<input type="checkbox"/>	X = _____
								SAMPLING MATERIAL OTHER (SPECIFY)
PURGE TUBING	<input checked="" type="checkbox"/>	A - TEFLON	<input type="checkbox"/>	D - POLYPROPYLENE	<input type="checkbox"/>	G - COMBINATION	<input type="checkbox"/>	X = _____
		B - TYGON	<input type="checkbox"/>	E - POLYETHYLENE	<input type="checkbox"/>	TEFLON/POLYPROPYLENE	<input type="checkbox"/>	PURGE TUBING OTHER (SPECIFY)
SAMPLING TUBING	<input checked="" type="checkbox"/>	C - ROPE	<input type="checkbox"/>	F - SILICONE	<input type="checkbox"/>	X - OTHER	<input type="checkbox"/>	X = _____
								SAMPLING TUBING OTHER (SPECIFY)
FILTERING DEVICES 0.45	<input checked="" type="checkbox"/>	A - IN-LINE DISPOSABLE	<input type="checkbox"/>	B - PRESSURE	<input type="checkbox"/>	C - VACUUM	<input type="checkbox"/>	

### FIELD MEASUREMENTS

DEPTH TO WATER	<u>28.41</u>	(feet)	WELL ELEVATION	<u>102.14</u>	(feet)
WELL DEPTH	<u>33.98</u>	(feet)	GROUNDWATER ELEVATION	<u>73.73</u>	(feet)

TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
<u>17.40</u> (°C)	<u>7.96</u> (std)	<u>0.637</u> (g/L)	<u>839</u> (µS/cm)	<u>410</u> (mV)	<u>4.75</u> (gal)
<u>17.53</u> (°C)	<u>7.96</u> (std)	<u>0.638</u> (g/L)	<u>841</u> (µS/cm)	<u>239</u> (mV)	<u>4.29</u> (gal)
<u>17.63</u> (°C)	<u>7.00</u> (std)	<u>0.639</u> (g/L)	<u>842</u> (µS/cm)	<u>7.9</u> (mV)	<u>2.75</u> (gal)
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	_____ (gal)
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	_____ (gal)

### FIELD COMMENTS

SAMPLE APPEARANCE: slightly cloudy ODOR: None COLOR: light yellow SHEEN Y/N \_\_\_\_\_  
 WEATHER CONDITIONS: TEMPERATURE ~35° WINDY Y/N \_\_\_\_\_ PRECIPITATION Y/N (IF Y TYPE) \_\_\_\_\_  
 SPECIFIC COMMENTS:  
0.8312 x 3 = 2.4936  
2.4936 + 0.2734 = 2.767

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS

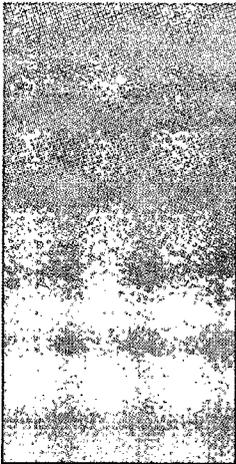
12-15-11 DATE Cassie Brown PRINT Cassie Brown SIGNATURE

APPENDIX B

JUNE, SEPTEMBER, AND DECEMBER 2011  
QUARTERLY GROUNDWATER LABORATORY ANALYTICAL REPORTS



07/06/11



**Technical Report for**

**Conoco Phillips**

B Com 1E

B Com 1E

Accutest Job Number: T79403

Sampling Date: 06/20/11

Report to:

Conestoga Rovers & Associates  
6121 Indian School Rd. NE, Ste. 200  
Albuquerque, NM 87110  
keblanchard@croworld.com; christine.mathews@tetrattech.com;  
cassandre.brown@tetrattech.com  
ATTN: Kelly Blanchard

Total number of pages in report: 24



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Paul Canevaro  
Laboratory Director

Client Service contact: Erica Cardenas 713-271-4700

Certifications: TX (T104704220-10-3) AR (88-0756) FL (E87628) KS (E-10366) LA (85695/04004)  
OK (9103)

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Test results relate only to samples analyzed.

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### Sample Summary

Conoco Phillips

Job No: T79403

B Com 1E

Project No: B Com 1E

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
T79403-1	06/20/11	18:40	06/23/11	AQ	Ground Water	GW-BCOM-062011-CMB-001
T79403-1F	06/20/11	18:40	06/23/11	AQ	Groundwater Filtered	GW-BCOM-062011-CMB-001 (DISSOLVED)
T79403-2	06/20/11	19:00	06/23/11	AQ	Ground Water	GW-BCOM-062011-CMB-002 (DISSOLVED)
T79403-2F	06/20/11	19:00	06/23/11	AQ	Groundwater Filtered	GW-BCOM-062011-CMB-002
T79403-3	06/20/11	19:00	06/23/11	AQ	Ground Water	GW-BCOM-062011-CMB-003
T79403-4	06/20/11	00:00	06/23/11	AQ	Ground Water	TRIP BLANK



Sample Results

Report of Analysis

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**Report of Analysis**

2.1  
2

<b>Client Sample ID:</b> GW-BCOM-062011-CMB-001	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> T79403-1	<b>Date Received:</b> 06/23/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8260B	
<b>Project:</b> B Com 1E	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E0008745.D	1	06/24/11	LT	n/a	n/a	VE438
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0010	0.00025	mg/l	
108-88-3	Toluene	ND	0.0010	0.00026	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00025	mg/l	
1330-20-7	Xylene (total)	ND	0.0030	0.00071	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		79-122%
17060-07-0	1,2-Dichloroethane-D4	98%		75-121%
2037-26-5	Toluene-D8	95%		87-119%
460-00-4	4-Bromofluorobenzene	94%		80-133%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	GW-BCOM-062011-CMB-001 (DISSOLVED)		
<b>Lab Sample ID:</b>	T79403-1F	<b>Date Sampled:</b>	06/20/11
<b>Matrix:</b>	AQ - Groundwater Filtered	<b>Date Received:</b>	06/23/11
<b>Project:</b>	B Com 1E	<b>Percent Solids:</b>	n/a

### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Iron	<100	100	ug/l	1	06/24/11	06/30/11 EG	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>
Manganese	430	15	ug/l	1	06/24/11	06/30/11 EG	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

- (1) Instrument QC Batch: MA5885
- (2) Prep QC Batch: MP15062

RL = Reporting Limit

## Report of Analysis

2.3  
2

<b>Client Sample ID:</b> GW-BCOM-062011-CMB-002 (DISSOLVED)	
<b>Lab Sample ID:</b> T79403-2	<b>Date Sampled:</b> 06/20/11
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 06/23/11
<b>Method:</b> SW846 8260B	<b>Percent Solids:</b> n/a
<b>Project:</b> B Com 1E	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E0008744.D	1	06/24/11	LT	n/a	n/a	VE438
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0010	0.00025	mg/l	
108-88-3	Toluene	ND	0.0010	0.00026	mg/l	
100-41-4	Ethylbenzene	0:0912	0.0010	0.00025	mg/l	
1330-20-7	Xylene (total)	0:0018	0.0030	0.00071	mg/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		79-122%
17060-07-0	1,2-Dichloroethane-D4	98%		75-121%
2037-26-5	Toluene-D8	99%		87-119%
460-00-4	4-Bromofluorobenzene	96%		80-133%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

24  
2

<b>Client Sample ID:</b> GW-BCOM-062011-CMB-002	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> T79403-2F	<b>Date Received:</b> 06/23/11
<b>Matrix:</b> AQ - Groundwater Filtered	<b>Percent Solids:</b> n/a
<b>Project:</b> B Com 1E	

**Dissolved Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Iron	157	100	ug/l	1	06/24/11	06/30/11 EG	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>
Manganese	424	15	ug/l	1	06/24/11	06/30/11 EG	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

- (1) Instrument QC Batch: MA5885
- (2) Prep QC Batch: MP15062

---

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> GW-BCOM-062011-CMB-003	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> T79403-3	<b>Date Received:</b> 06/23/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8260B	
<b>Project:</b> B Com 1E	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E0008743.D	1	06/24/11	LT	n/a	n/a	VE438
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0010	0.00025	mg/l	
108-88-3	Toluene	ND	0.0010	0.00026	mg/l	
100-41-4	Ethylbenzene	0.0952	0.0010	0.00025	mg/l	
1330-20-7	Xylene (total)	ND	0.0030	0.00071	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		79-122%
17060-07-0	1,2-Dichloroethane-D4	99%		75-121%
2037-26-5	Toluene-D8	98%		87-119%
460-00-4	4-Bromofluorobenzene	100%		80-133%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

**Report of Analysis**

<b>Client Sample ID:</b> TRIP BLANK	<b>Date Sampled:</b> 06/20/11
<b>Lab Sample ID:</b> T79403-4	<b>Date Received:</b> 06/23/11
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8260B	
<b>Project:</b> B Com 1E	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E0008737.D	1	06/24/11	LT	n/a	n/a	VE438
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0010	0.00025	mg/l	
108-88-3	Toluene	ND	0.0010	0.00026	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00025	mg/l	
1330-20-7	Xylene (total)	ND	0.0030	0.00071	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		79-122%
17060-07-0	1,2-Dichloroethane-D4	95%		75-121%
2037-26-5	Toluene-D8	96%		87-119%
460-00-4	4-Bromofluorobenzene	96%		80-133%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



Misc. Forms

Custody Documents and Other Forms

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Includes the following where applicable:

- Chain of Custody



Accutest Job Number: T79403 Client: CONOCO PHILLIPS Project: B COM 1E  
 Date / Time Received: 6/23/2011 Delivery Method: FedEx Airbill #'s: 4868-9990-4666  
 No. Coolers: 1 Therm ID: IRGUN4; Temp Adjustment Factor: -0.1;  
 Cooler Temps (Initial/Adjusted): #1: (1.9/1.8);

3.1

**Cooler Security**

1. Custody Seals Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3. COC Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Custody Seals Intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4. Smpl Dates/Time OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Cooler Temperature**

1. Temp criteria achieved:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Cooler temp verification:	IR Gun	
3. Cooler media:	Ice (Bag)	

**Quality Control Preservation**

	<b>Y</b>	<b>or</b>	<b>N</b>	<b>N/A</b>	<b>WTB</b>	<b>STB</b>
1. Trip Blank present / cooler:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Trip Blank listed on COC:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		
3. Samples preserved properly:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		
4. VOCs headspace free:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		

**Sample Integrity - Documentation**

1. Sample labels present on bottles:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Container labeling complete:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Sample container label / COC agree:	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Sample Integrity - Condition**

1. Sample recvd within HT:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. All containers accounted for:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Condition of sample:	Intact	

**Sample Integrity - Instructions**

	<b>Y</b>	<b>or</b>	<b>N</b>	<b>N/A</b>
1. Analysis requested is clear:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
2. Bottles received for unspecified tests	<input type="checkbox"/>		<input checked="" type="checkbox"/>	
3. Sufficient volume recvd for analysis:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. Compositing instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Filtering instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments [REDACTED]

B.L.C. 6/23/11

Job #: T79403

Date / Time Received: 6/23/2011 9:55:00 AM

Initials: BG

Client: CONOCO PHILLIPS

3.1  


Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	T79403-1	500 ml	1	1Z	N/P	Note #2 - Preservative check not applicable.	IRGUN4	1.9	-0.1	1.8
1	T79403-1	40 ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IRGUN4	1.9	-0.1	1.8
1	T79403-1	40 ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IRGUN4	1.9	-0.1	1.8
1	T79403-1	40 ml	4	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IRGUN4	1.9	-0.1	1.8
1	T79403-2	500 ml	1	1Z	N/P	Note #2 - Preservative check not applicable.	IRGUN4	1.9	-0.1	1.8
1	T79403-2	40 ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IRGUN4	1.9	-0.1	1.8
1	T79403-2	40 ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IRGUN4	1.9	-0.1	1.8
1	T79403-2	40 ml	4	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IRGUN4	1.9	-0.1	1.8
1	T79403-3	40 ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IRGUN4	1.9	-0.1	1.8
1	T79403-3	40 ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IRGUN4	1.9	-0.1	1.8
1	T79403-3	40 ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IRGUN4	1.9	-0.1	1.8
1	T79403-4	40 ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IRGUN4	1.9	-0.1	1.8
1	T79403-4	40 ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IRGUN4	1.9	-0.1	1.8

T79403: Chain of Custody  
Page 3 of 3



## GC/MS Volatiles

### QC Data Summaries

---

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

# Method Blank Summary

Job Number: T79403  
 Account: CONOCO Conoco Phillips  
 Project: B Com 1E

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VE438-MB	E0008736.D	1	06/24/11	LT	n/a	n/a	VE438

4.1.1  
4

The QC reported here applies to the following samples:

Method: SW846 8260B

T79403-1, T79403-2, T79403-3, T79403-4

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.25	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.26	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.71	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	96% 79-122%
17060-07-0	1,2-Dichloroethane-D4	97% 75-121%
2037-26-5	Toluene-D8	94% 87-119%
460-00-4	4-Bromofluorobenzene	94% 80-133%

# Blank Spike Summary

**Job Number:** T79403  
**Account:** CONOCO Conoco Phillips  
**Project:** B Com 1E

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VE438-BS	E0008734.D	1	06/24/11	LT	n/a	n/a	VE438

4.2.1  
4

The QC reported here applies to the following samples:

Method: SW846 8260B

T79403-1, T79403-2, T79403-3, T79403-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	25	22.4	90	76-118
100-41-4	Ethylbenzene	25	23.7	95	75-112
108-88-3	Toluene	25	22.7	91	77-114
1330-20-7	Xylene (total)	75	71.4	95	75-111

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	79-122%
17060-07-0	1,2-Dichloroethane-D4	99%	75-121%
2037-26-5	Toluene-D8	95%	87-119%
460-00-4	4-Bromofluorobenzene	95%	80-133%

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T79403  
 Account: CONOCO Conoco Phillips  
 Project: B Com 1E

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T78978-13MS	E0008740.D	50	06/24/11	LT	n/a	n/a	VE438
T78978-13MSD	E0008741.D	50	06/24/11	LT	n/a	n/a	VE438
T78978-13	E0008739.D	50	06/24/11	LT	n/a	n/a	VE438

The QC reported here applies to the following samples:

Method: SW846 8260B

T79403-1, T79403-2, T79403-3, T79403-4

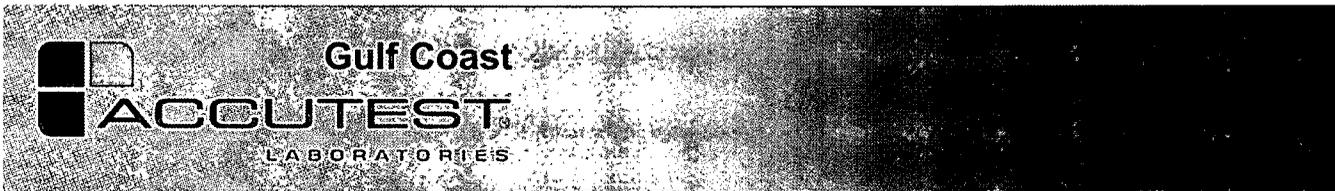
CAS No.	Compound	T78978-13 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	3730	1250	4710	78	4520	63* a	4	76-118/16
100-41-4	Ethylbenzene	712	1250	1850	91	1760	84	5	75-112/12
108-88-3	Toluene	ND	1250	1150	92	1140	91	1	77-114/12
1330-20-7	Xylene (total)	2490	3750	5860	90	5660	85	3	75-111/12

CAS No.	Surrogate Recoveries	MS	MSD	T78978-13	Limits
1868-53-7	Dibromofluoromethane	165%* b	159%* b	96%	79-122%
17060-07-0	1,2-Dichloroethane-D4	165%* b	165%* b	99%	75-121%
2037-26-5	Toluene-D8	160%* b	160%* b	98%	87-119%
460-00-4	4-Bromofluorobenzene	161%* b	157%* b	95%	80-133%

(a) Outside control limits due to high level in sample relative to spike amount.

(b) Outside control limits biased high.

4.3.1  
4



Metals Analysis



QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: T79403  
Account: CONOCO - Conoco Phillips  
Project: B Com 1E

QC Batch ID: MP15062  
Matrix Type: AQUEOUS

Methods: SW846 6010B  
Units: ug/l

Prep Date: 06/24/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	8.3	12		
Antimony	5.0	1	1		
Arsenic	5.0	1.7	1		
Barium	200	.97	3.4		
Beryllium	5.0	.056	.16		
Boron	100	1.4	7.8		
Cadmium	4.0	.11	.09		
Calcium	5000	7.4	25		
Chromium	10	.23	.27		
Cobalt	50	.15	.22		
Copper	25	1.1	5.9		
Iron	100	1.1	23	5.9	<100
Lead	3.0	1	1.8		
Lithium	300	2	2		
Magnesium	5000	7.7	7.9		
Manganese	15	.054	1.9	0.82	<15
Molybdenum	10	.39	.2		
Nickel	40	.69	1.4		
Potassium	5000	39	45		
Selenium	5.0	1.5	.98		
Silver	10	1.2	.24		
Sodium	5000	9.2	100		
Strontium	10	.061	.4		
Thallium	10	.67	1.2		
Tin	20	.69	2.8		
Titanium	20	.29	.3		
Vanadium	50	.3	.3		
Zinc	20	.51	3.5		

Associated samples MP15062: T79403-1F, T79403-2F

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits  
(anr) Analyte not requested

5.1.1  
5

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T79403  
 Account: CONOCO - Conoco Phillips  
 Project: B Com 1E

QC Batch ID: MP15062  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 06/24/11 06/24/11

Metal	T79318-1F Original DUP	RPD	QC Limits	T79318-1F Original MS	Spikelot MPTW4	% Rec	QC Limits
Aluminum							
Antimony							
Arsenic	anr						
Barium	anr						
Beryllium							
Boron							
Cadmium	anr						
Calcium							
Chromium							
Cobalt							
Copper							
Iron	7.3	11.2	42.2 (a) 0-20	7.3	53500	50000	107.0 80-120
Lead	anr						
Lithium							
Magnesium							
Manganese	115	116	0.9 0-20	115	536	400	105.3 80-120
Molybdenum							
Nickel							
Potassium							
Selenium	anr						
Silver							
Sodium							
Strontium							
Thallium							
Tin							
Titanium							
Vanadium							
Zinc							

Associated samples MP15062: T79403-1F, T79403-2F

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested  
 (a) RPD acceptable due to low duplicate and sample concentrations.

5.1.2  
 5

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T79403  
 Account: CONOCO - Conoco Phillips  
 Project: B Com 1E

QC Batch ID: MP15062  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 06/24/11

Metal	T79318-1F Original MSD	Spikelot MPTW4	% Rec	MSD RPD	QC Limit
Aluminum					
Antimony					
Arsenic	anr				
Barium	anr				
Beryllium					
Boron					
Cadmium	anr				
Calcium					
Chromium					
Cobalt					
Copper					
Iron	7.3	51800	50000	103.6	3.2 20
Lead	anr				
Lithium					
Magnesium					
Manganese	115	524	400	102.3	2.3 20
Molybdenum					
Nickel					
Potassium					
Selenium	anr				
Silver					
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Vanadium					
Zinc					

Associated samples MP15062: T79403-1F, T79403-2F

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested

5.1.2  
 5

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: T79403  
 Account: CONOCO - Conoco Phillips  
 Project: B Com 1E

QC Batch ID: MP15062  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 06/24/11

Metal	BSP Result	Spikelet MPTW4	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	anr			
Beryllium				
Boron				
Cadmium	anr			
Calcium				
Chromium				
Cobalt				
Copper				
Iron	53100	50000	106.2	80-120
Lead	anr			
Lithium				
Magnesium				
Manganese	425	400	106.3	80-120
Molybdenum				
Nickel				
Potassium				
Selenium	anr			
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP15062: T79403-1F, T79403-2F

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (anr) Analyte not requested

5.1.3  
 5

SERIAL DILUTION RESULTS SUMMARY

Login Number: T79403  
 Account: CONOCO - Conoco Phillips  
 Project: B Com 1E

QC Batch ID: MP15062  
 Matrix Type: AQUEOUS

Methods: SW846 6010B  
 Units: ug/l

Prep Date: 06/24/11

Metal	T79318-1F	Original	SDL 1:5	%DIF	QC Limits
Aluminum					
Antimony					
Arsenic	anr				
Barium	anr				
Beryllium					
Boron					
Cadmium	anr				
Calcium					
Chromium					
Cobalt					
Copper					
Iron	7.28	7.20	1.1		0-10
Lead	anr				
Lithium					
Magnesium					
Manganese	115	116	1.2		0-10
Molybdenum					
Nickel					
Potassium					
Selenium	anr				
Silver					
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Vanadium					
Zinc					

Associated samples MP15062: T79403-1F, T79403-2F

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (anr) Analyte not requested

5.1.4  
**5**



Pace Analytical Services, Inc.  
9608 Loiret Blvd.  
Lenexa, KS 66219  
(913)599-5665

October 13, 2011

Angela Bown  
COP Conestoga-Rovers & Associa  
6121 Indian School Rd  
#200  
Albuquerque, NM 87110

RE: Project: B COM NO. 1 E  
Pace Project No.: 60107343

Dear Angela Bown:

Enclosed are the analytical results for sample(s) received by the laboratory on October 01, 2011. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Anna Custer for  
Dianna Meier  
dianna.meier@pacelabs.com  
Project Manager

Enclosures

cc: Kelly Blanchard, COP Conestoga-Rovers & Associa  
Cassie Brown, COP Conestoga-Rovers & Associa



### REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219  
(913)599-5665

### CERTIFICATIONS

Project: B COM NO. 1 E  
Pace Project No.: 60107343

#### Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219  
A2LA Certification #: 2456.01  
Arkansas Certification #: 05-008-0  
Illinois Certification #: 001191  
Iowa Certification #: 118  
Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055  
Nevada Certification #: KS000212008A  
Oklahoma Certification #: 9205/9935  
Texas Certification #: T104704407-08-TX  
Utah Certification #: 9135995665

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### REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219  
(913)599-5665

### SAMPLE SUMMARY

Project: B COM NO. 1 E  
Pace Project No.: 60107343

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60107343001	GW-074938-093011-CM-004	Water	09/30/11 09:20	10/01/11 08:00
60107343002	GW-074938-093011-CM-005	Water	09/30/11 09:20	10/01/11 08:00
60107343003	GW-074938-093011-CM-006	Water	09/30/11 09:25	10/01/11 08:00
60107343004	TB-093011-001	Water	09/30/11 09:30	10/01/11 08:00

### REPORT OF LABORATORY ANALYSIS

Page 3 of 14

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**SAMPLE ANALYTE COUNT**

Project: B COM NO. 1 E  
Pace Project No.: 60107343

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60107343001	GW-074938-093011-CM-004	EPA 6010	JDH	2
		EPA 8260	HNS	9
60107343002	GW-074938-093011-CM-005	EPA 6010	JDH	2
		EPA 8260	HNS	9
60107343003	GW-074938-093011-CM-006	EPA 8260	HNS	9
60107343004	TB-093011-001	EPA 8260	HNS	9

**REPORT OF LABORATORY ANALYSIS**

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## PROJECT NARRATIVE

Project: B COM NO. 1 E  
Pace Project No.: 60107343

---

**Method:** EPA 6010  
**Description:** 6010 MET ICP, Dissolved  
**Client:** COP Conestoga-Rovers & Associates, Inc. NM  
**Date:** October 13, 2011

**General Information:**

2 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

**Initial Calibrations (Including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS



## PROJECT NARRATIVE

Project: B COM NO. 1 E  
Pace Project No.: 60107343

---

**Method:** EPA 8260  
**Description:** 8260 MSV UST, Water  
**Client:** COP Conestoga-Rovers & Associates, Inc. NM  
**Date:** October 13, 2011

**General Information:**

4 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/40757

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

**Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

**Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.

## REPORT OF LABORATORY ANALYSIS



**ANALYTICAL RESULTS**

Project: B COM NO. 1 E  
 Pace Project No.: 60107343

Sample: **GW-074938-093011-CM-004** Lab ID: **60107343001** Collected: 09/30/11 09:20 Received: 10/01/11 08:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Iron, Dissolved	ND	ug/L	50.0	6.0	1	10/03/11 13:37	10/04/11 18:05	7439-89-6	
Manganese, Dissolved	26.1	ug/L	5.0	0.90	1	10/03/11 13:37	10/04/11 18:05	7439-96-5	
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	0.040	1		10/12/11 01:07	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.10	1		10/12/11 01:07	100-41-4	
Toluene	ND	ug/L	1.0	0.10	1		10/12/11 01:07	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.30	1		10/12/11 01:07	1330-20-7	
Dibromofluoromethane (S)	95 %		86-112		1		10/12/11 01:07	1868-53-7	
Toluene-d8 (S)	98 %		90-110		1		10/12/11 01:07	2037-26-5	
4-Bromofluorobenzene (S)	99 %		87-113		1		10/12/11 01:07	460-00-4	
1,2-Dichloroethane-d4 (S)	92 %		82-119		1		10/12/11 01:07	17060-07-0	
Preservation pH	1.0		1.0	0.10	1		10/12/11 01:07		



**ANALYTICAL RESULTS**

Project: B COM NO. 1 E  
 Pace Project No.: 60107343

Sample: **GW-074938-093011-CM-005** Lab ID: **60107343002** Collected: 09/30/11 09:20 Received: 10/01/11 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Iron, Dissolved	<b>4100</b>	ug/L	50.0	6.0	1	10/03/11 13:37	10/04/11 18:07	7439-89-6	
Manganese, Dissolved	<b>268</b>	ug/L	5.0	0.90	1	10/03/11 13:37	10/04/11 18:07	7439-96-5	
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	0.040	1		10/12/11 01:56	71-43-2	
Ethylbenzene	<b>58.0</b>	ug/L	1.0	0.10	1		10/12/11 01:56	100-41-4	
Toluene	ND	ug/L	1.0	0.10	1		10/12/11 01:56	108-88-3	
Xylene (Total)	<b>4.8</b>	ug/L	3.0	0.30	1		10/12/11 01:56	1330-20-7	
Dibromofluoromethane (S)	96	%	86-112		1		10/12/11 01:56	1868-53-7	
Toluene-d8 (S)	103	%	90-110		1		10/12/11 01:56	2037-26-5	
4-Bromofluorobenzene (S)	105	%	87-113		1		10/12/11 01:56	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	82-119		1		10/12/11 01:56	17060-07-0	
Preservation pH	<b>1.0</b>		1.0	0.10	1		10/12/11 01:56		



**ANALYTICAL RESULTS**

Project: B COM NO. 1 E  
 Pace Project No.: 60107343

Sample: GW-074938-093011-CM-006 Lab ID: 60107343003 Collected: 09/30/11 09:25 Received: 10/01/11 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	0.040	1		10/12/11 02:12	71-43-2	
Ethylbenzene	61.8	ug/L	1.0	0.10	1		10/12/11 02:12	100-41-4	
Toluene	ND	ug/L	1.0	0.10	1		10/12/11 02:12	108-88-3	
Xylene (Total)	5.2	ug/L	3.0	0.30	1		10/12/11 02:12	1330-20-7	
Dibromofluoromethane (S)	94	%	86-112		1		10/12/11 02:12	1868-53-7	
Toluene-d8 (S)	104	%	90-110		1		10/12/11 02:12	2037-26-5	
4-Bromofluorobenzene (S)	105	%	87-113		1		10/12/11 02:12	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	82-119		1		10/12/11 02:12	17060-07-0	
Preservation pH	1.0		1.0	0.10	1		10/12/11 02:12		



**ANALYTICAL RESULTS**

Project: B COM NO. 1 E  
 Pace Project No.: 60107343

Sample: TB-093011-001 Lab ID: 60107343004 Collected: 09/30/11 09:30 Received: 10/01/11 08:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	0.040	1		10/12/11 02:29	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.10	1		10/12/11 02:29	100-41-4	
Toluene	ND	ug/L	1.0	0.10	1		10/12/11 02:29	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.30	1		10/12/11 02:29	1330-20-7	
Dibromofluoromethane (S)	91	%	86-112		1		10/12/11 02:29	1868-53-7	
Toluene-d8 (S)	100	%	90-110		1		10/12/11 02:29	2037-26-5	
4-Bromofluorobenzene (S)	101	%	87-113		1		10/12/11 02:29	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	82-119		1		10/12/11 02:29	17060-07-0	
Preservation pH	1.0		1.0	0.10	1		10/12/11 02:29		



**QUALITY CONTROL DATA**

Project: B COM NO. 1 E  
 Pace Project No.: 60107343

QC Batch: MPRP/15527 Analysis Method: EPA 6010  
 QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved  
 Associated Lab Samples: 60107343001, 60107343002

METHOD BLANK: 885402 Matrix: Water  
 Associated Lab Samples: 60107343001, 60107343002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron, Dissolved	ug/L	ND	50.0	10/04/11 17:44	
Manganese, Dissolved	ug/L	ND	5.0	10/04/11 17:44	

LABORATORY CONTROL SAMPLE: 885403

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Dissolved	ug/L	10000	9680	97	80-120	
Manganese, Dissolved	ug/L	1000	980	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 885404 885405

Parameter	Units	60107298001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result	MSD Result						
Iron, Dissolved	ug/L	532	10000	10200	10100	97	96	75-125	1	20		
Manganese, Dissolved	ug/L	1820	1000	2830	2820	101	100	75-125	1	20		



**QUALITY CONTROL DATA**

Project: B COM NO. 1 E  
 Pace Project No.: 60107343

QC Batch: MSV/40757 Analysis Method: EPA 8260  
 QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER  
 Associated Lab Samples: 60107343001, 60107343002, 60107343003, 60107343004

METHOD BLANK: 889123 Matrix: Water  
 Associated Lab Samples: 60107343001, 60107343002, 60107343003, 60107343004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	10/11/11 21:19	
Ethylbenzene	ug/L	ND	1.0	10/11/11 21:19	
Toluene	ug/L	ND	1.0	10/11/11 21:19	
Xylene (Total)	ug/L	ND	3.0	10/11/11 21:19	
1,2-Dichloroethane-d4 (S)	%	94	82-119	10/11/11 21:19	
4-Bromofluorobenzene (S)	%	97	87-113	10/11/11 21:19	
Dibromofluoromethane (S)	%	96	86-112	10/11/11 21:19	
Toluene-d8 (S)	%	101	90-110	10/11/11 21:19	

LABORATORY CONTROL SAMPLE: 889124

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	17.5	87	82-117	
Ethylbenzene	ug/L	20	16.9	85	79-121	
Toluene	ug/L	20	17.6	88	80-120	
Xylene (Total)	ug/L	60	51.7	86	79-120	
1,2-Dichloroethane-d4 (S)	%			98	82-119	
4-Bromofluorobenzene (S)	%			104	87-113	
Dibromofluoromethane (S)	%			99	86-112	
Toluene-d8 (S)	%			102	90-110	



## QUALIFIERS

Project: B COM NO. 1 E  
Pace Project No.: 60107343

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

### BATCH QUALIFIERS

Batch: MSV/40757

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.



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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: B COM NO. 1 E  
Pace Project No.: 60107343

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60107343001	GW-074938-093011-CM-004	EPA 3010	MPRP/15527	EPA 6010	ICP/13478
60107343002	GW-074938-093011-CM-005	EPA 3010	MPRP/15527	EPA 6010	ICP/13478
60107343001	GW-074938-093011-CM-004	EPA 8260	MSV/40757		
60107343002	GW-074938-093011-CM-005	EPA 8260	MSV/40757		
60107343003	GW-074938-093011-CM-006	EPA 8260	MSV/40757		
60107343004	TB-093011-001	EPA 8260	MSV/40757		





**Sample Condition Upon Receipt – ESI Tech Specs**

Client Name: COP CRA Nm

Project #: 00107343

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other

Optional
Proj Due Date: <u>10/13/11</u>
Proj Name:

Tracking #: 876803375894 Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other

Thermometer Used: T-191 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun.  
(circle one)

Cooler Temperature: 1.9  
Temperature should be above freezing to 6°C

Date and initials of person examining contents: 10/11/11 *[initials]*

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody filled out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler name & signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Includes date/time/ID/analyses Matrix: <u>WT</u>		13.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased): <u>Covered</u>		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State: <u>NC</u>

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Temp Log: Record start and finish times when unpacking cooler, if >20 min, recheck sample temps.	
Start: <u>1001</u>	Start:
End: <u>1005</u>	End:
Temp:	Temp:

Project Manager Review: DKM Date: 10/3/11

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the NCDENR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers).



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December 28, 2011

Christine Matthews  
CRA  
6121 Indian School Rd NE  
Suite 200  
Albuquerque, NM 87110

RE: Project: B COM NO. 1 E (074938)  
Pace Project No.: 60112350

Dear Christine Matthews:

Enclosed are the analytical results for sample(s) received by the laboratory on December 16, 2011. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Anna Custer

anna.custer@pacelabs.com  
Project Manager

Enclosures

cc: Kelly Blanchard, COP Conestoga-Rovers & Associa  
Angela Bown, COP Conestoga-Rovers & Associa



### REPORT OF LABORATORY ANALYSIS

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### CERTIFICATIONS

Project: B COM NO. 1 E (074938)  
Pace Project No.: 60112350

**Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219  
A2LA Certification #: 2456.01  
Arkansas Certification #: 05-008-0  
Illinois Certification #: 001191  
Iowa Certification #: 118  
Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055  
Nevada Certification #: KS000212008A  
Oklahoma Certification #: 9205/9935  
Texas Certification #: T104704407-08-TX  
Utah Certification #: 9135995665

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### REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: B COM NO. 1 E (074938)  
Pace Project No.: 60112350

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60112350001	GW-074938-121511-CB-MW-1	Water	12/15/11 10:15	12/16/11 09:00
60112350002	GW-074938-121511-MW-6	Water	12/15/11 09:50	12/16/11 09:00
60112350003	GW-074938-121511-CB-DUP	Water	12/15/11 10:20	12/16/11 09:00
60112350004	TB-074938-121511-CB-TB1	Water	12/15/11 10:50	12/16/11 09:00
60112350005	GW-074938-121511-CB-MW-3	Water	12/15/11 10:25	12/16/11 09:00

### REPORT OF LABORATORY ANALYSIS

Page 3 of 17

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**SAMPLE ANALYTE COUNT**

Project: B COM NO. 1 E (074938)  
Pace Project No.: 60112350

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60112350001	GW-074938-121511-CB-MW-1	EPA 6010	JDH	2
		EPA 8260	RNS	9
60112350002	GW-074938-121511-MW-6	EPA 6010	JDH	2
		EPA 8260	RNS	9
60112350003	GW-074938-121511-CB-DUP	EPA 8260	RNS	9
60112350004	TB-074938-121511-CB-TB1	EPA 8260	RNS	9
60112350005	GW-074938-121511-CB-MW-3	EPA 6010	JDH	2

**REPORT OF LABORATORY ANALYSIS**

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## PROJECT NARRATIVE

Project: B COM NO. 1 E (074938)  
Pace Project No.: 60112350

---

**Method:** EPA 6010  
**Description:** 6010 MET ICP, Dissolved  
**Client:** COP Conestoga-Rovers & Associates, Inc. NM  
**Date:** December 28, 2011

**General Information:**

3 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS



## PROJECT NARRATIVE

Project: B COM NO. 1 E (074938)  
Pace Project No.: 60112350

---

**Method:** EPA 8260  
**Description:** 8260 MSV UST, Water  
**Client:** COP Conestoga-Rovers & Associates, Inc. NM  
**Date:** December 28, 2011

**General Information:**

4 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/42582

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: MSV/42673

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

**Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

**Additional Comments:**

Analyte Comments:

QC Batch: MSV/42673

- B: Analyte was detected in the associated method blank.
- GW-074938-121511-CB-DUP (Lab ID: 60112350003)
- Ethylbenzene

## REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.  
9608 Loiret Blvd.  
Lenexa, KS 66219  
(913)599-5665

**PROJECT NARRATIVE**

Project: B COM NO. 1 E (074938)  
Pace Project No.: 60112350

**Method:** EPA 8260  
**Description:** 8260 MSV UST, Water  
**Client:** COP Conestoga-Rovers & Associates, Inc. NM  
**Date:** December 28, 2011

Analyte Comments:

QC Batch: MSV/42673

- B: Analyte was detected in the associated method blank.
  - GW-074938-121511-CB-MW-1 (Lab ID: 60112350001)
  - Ethylbenzene

This data package has been reviewed for quality and completeness and is approved for release.

**REPORT OF LABORATORY ANALYSIS**

Page 7 of 17

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**ANALYTICAL RESULTS**

Project: B COM NO. 1 E (074938)  
 Pace Project No.: 60112350

Sample: **GW-074938-121511-CB-MW-1** Lab ID: **60112350001** Collected: 12/15/11 10:15 Received: 12/16/11 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Iron, Dissolved	<b>1910</b>	ug/L	50.0	6.0	1	12/22/11 09:00	12/23/11 10:50	7439-89-6	
Manganese, Dissolved	<b>350</b>	ug/L	5.0	0.90	1	12/22/11 09:00	12/23/11 10:50	7439-96-5	
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260							
Benzene	<b>0.24J</b>	ug/L	1.0	0.040	1		12/22/11 15:57	71-43-2	
Ethylbenzene	<b>84.8</b>	ug/L	1.0	0.10	1		12/22/11 15:57	100-41-4	B
Toluene	<b>ND</b>	ug/L	1.0	0.10	1		12/22/11 15:57	108-88-3	
Xylene (Total)	<b>9.5</b>	ug/L	3.0	0.30	1		12/22/11 15:57	1330-20-7	
<b>Surrogates</b>									
Dibromofluoromethane (S)	101	%	86-112		1		12/22/11 15:57	1868-53-7	
Toluene-d8 (S)	105	%	90-110		1		12/22/11 15:57	2037-26-5	
4-Bromofluorobenzene (S)	98	%	87-113		1		12/22/11 15:57	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	82-119		1		12/22/11 15:57	17060-07-0	
Preservation pH	<b>1.0</b>		1.0	0.10	1		12/22/11 15:57		



**ANALYTICAL RESULTS**

Project: B COM NO. 1 E (074938)  
 Pace Project No.: 60112350

Sample: **GW-074938-121511-MW-6** Lab ID: **60112350002** Collected: 12/15/11 09:50 Received: 12/16/11 09:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Iron, Dissolved	<b>429</b>	ug/L	50.0	6.0	1	12/22/11 09:00	12/23/11 10:52	7439-89-6	
Manganese, Dissolved	<b>1060</b>	ug/L	5.0	0.90	1	12/22/11 09:00	12/23/11 10:52	7439-96-5	
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260							
Benzene	<b>0.069J</b>	ug/L	1.0	0.040	1		12/19/11 16:49	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.10	1		12/19/11 16:49	100-41-4	
Toluene	ND	ug/L	1.0	0.10	1		12/19/11 16:49	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.30	1		12/19/11 16:49	1330-20-7	
<b>Surrogates</b>									
Dibromofluoromethane (S)	100 %		86-112		1		12/19/11 16:49	1868-53-7	
Toluene-d8 (S)	101 %		90-110		1		12/19/11 16:49	2037-26-5	
4-Bromofluorobenzene (S)	100 %		87-113		1		12/19/11 16:49	460-00-4	
1,2-Dichloroethane-d4 (S)	91 %		82-119		1		12/19/11 16:49	17060-07-0	
Preservation pH	<b>1.0</b>		1.0	0.10	1		12/19/11 16:49		



**ANALYTICAL RESULTS**

Project: B COM NO. 1 E (074938)  
 Pace Project No.: 60112350

Sample: GW-074938-121511-CB-DUP Lab ID: 60112350003 Collected: 12/15/11 10:20 Received: 12/16/11 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>									
Analytical Method: EPA 8260									
Benzene	0.29J	ug/L	1.0	0.040	1		12/22/11 16:13	71-43-2	
Ethylbenzene	80.7	ug/L	1.0	0.10	1		12/22/11 16:13	100-41-4	B
Toluene	ND	ug/L	1.0	0.10	1		12/22/11 16:13	108-88-3	
Xylene (Total)	9.2	ug/L	3.0	0.30	1		12/22/11 16:13	1330-20-7	
<b>Surrogates</b>									
Dibromofluoromethane (S)	102	%	86-112		1		12/22/11 16:13	1868-53-7	
Toluene-d8 (S)	107	%	90-110		1		12/22/11 16:13	2037-26-5	
4-Bromofluorobenzene (S)	101	%	87-113		1		12/22/11 16:13	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	82-119		1		12/22/11 16:13	17060-07-0	
Preservation pH	1.0		1.0	0.10	1		12/22/11 16:13		



**ANALYTICAL RESULTS**

Project: B COM NO. 1 E (074938)  
 Pace Project No.: 60112350

Sample: TB-074938-121511-CB-TB1 Lab ID: 60112350004 Collected: 12/15/11 10:50 Received: 12/16/11 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST, Water</b>		Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	0.040	1		12/19/11 17:21	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.10	1		12/19/11 17:21	100-41-4	
Toluene	ND	ug/L	1.0	0.10	1		12/19/11 17:21	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.30	1		12/19/11 17:21	1330-20-7	
<b>Surrogates</b>									
Dibromofluoromethane (S)	101 %		86-112		1		12/19/11 17:21	1868-53-7	
Toluene-d8 (S)	100 %		90-110		1		12/19/11 17:21	2037-26-5	
4-Bromofluorobenzene (S)	100 %		87-113		1		12/19/11 17:21	460-00-4	
1,2-Dichloroethane-d4 (S)	94 %		82-119		1		12/19/11 17:21	17060-07-0	
Preservation pH	1.0		1.0	0.10	1		12/19/11 17:21		



**ANALYTICAL RESULTS**

Project: B COM NO. 1 E (074938)  
 Pace Project No.: 60112350

Sample: **GW-074938-121511-CB-MW-3** Lab ID: **60112350005** Collected: 12/15/11 10:25 Received: 12/16/11 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>									
Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Iron, Dissolved	246	ug/L	50.0	6.0	1	12/22/11 09:00	12/23/11 11:00	7439-89-6	
Manganese, Dissolved	112	ug/L	5.0	0.90	1	12/22/11 09:00	12/23/11 11:00	7439-96-5	



**QUALITY CONTROL DATA**

Project: B COM NO. 1 E (074938)  
 Pace Project No.: 60112350

QC Batch: MPRP/16530 Analysis Method: EPA 6010  
 QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved  
 Associated Lab Samples: 60112350001, 60112350002, 60112350005

METHOD BLANK: 930306 Matrix: Water  
 Associated Lab Samples: 60112350001, 60112350002, 60112350005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron, Dissolved	ug/L	ND	50.0	12/23/11 09:58	
Manganese, Dissolved	ug/L	ND	5.0	12/23/11 09:58	

LABORATORY CONTROL SAMPLE: 930307

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Dissolved	ug/L	10000	9770	98	80-120	
Manganese, Dissolved	ug/L	1000	992	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 930308 930309

Parameter	Units	60112207001		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
		Result	MS Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec				
Iron, Dissolved	ug/L	201	10000	10000	9880	9790	97	96	75-125	1	20	
Manganese, Dissolved	ug/L	278	1000	1000	1260	1240	98	97	75-125	1	20	



**QUALITY CONTROL DATA**

Project: B COM NO. 1 E (074938)  
 Pace Project No.: 60112350

QC Batch: MSV/42582 Analysis Method: EPA 8260  
 QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER  
 Associated Lab Samples: 60112350002, 60112350004

METHOD BLANK: 928969 Matrix: Water  
 Associated Lab Samples: 60112350002, 60112350004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	0.079J	1.0	12/19/11 16:16	
Ethylbenzene	ug/L	ND	1.0	12/19/11 16:16	
Toluene	ug/L	ND	1.0	12/19/11 16:16	
1,2-Dichloroethane-d4 (S)	%	93	82-119	12/19/11 16:16	
4-Bromofluorobenzene (S)	%	104	87-113	12/19/11 16:16	
Dibromofluoromethane (S)	%	100	86-112	12/19/11 16:16	
Toluene-d8 (S)	%	101	90-110	12/19/11 16:16	

LABORATORY CONTROL SAMPLE: 928970

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	20.0	100	82-117	
Ethylbenzene	ug/L	20	21.2	106	79-121	
Toluene	ug/L	20	20.3	102	80-120	
1,2-Dichloroethane-d4 (S)	%			93	82-119	
4-Bromofluorobenzene (S)	%			100	87-113	
Dibromofluoromethane (S)	%			97	86-112	
Toluene-d8 (S)	%			100	90-110	



**QUALITY CONTROL DATA**

Project: B COM NO. 1 E (074938)  
 Pace Project No.: 60112350

QC Batch: MSV/42673 Analysis Method: EPA 8260  
 QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER  
 Associated Lab Samples: 60112350001, 60112350003

METHOD BLANK: 930694 Matrix: Water  
 Associated Lab Samples: 60112350001, 60112350003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	12/22/11 10:46	
Ethylbenzene	ug/L	0.16J	1.0	12/22/11 10:46	
Toluene	ug/L	0.12J	1.0	12/22/11 10:46	
Xylene (Total)	ug/L	ND	3.0	12/22/11 10:46	
1,2-Dichloroethane-d4 (S)	%	102	82-119	12/22/11 10:46	
4-Bromofluorobenzene (S)	%	99	87-113	12/22/11 10:46	
Dibromofluoromethane (S)	%	99	86-112	12/22/11 10:46	
Toluene-d8 (S)	%	103	90-110	12/22/11 10:46	

LABORATORY CONTROL SAMPLE: 930695

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	17.9	90	82-117	
Ethylbenzene	ug/L	20	18.7	93	79-121	
Toluene	ug/L	20	18.5	93	80-120	
Xylene (Total)	ug/L	60	59.7	99	79-120	
1,2-Dichloroethane-d4 (S)	%			101	82-119	
4-Bromofluorobenzene (S)	%			92	87-113	
Dibromofluoromethane (S)	%			97	86-112	
Toluene-d8 (S)	%			98	90-110	



## QUALIFIERS

Project: B COM NO. 1 E (074938)  
Pace Project No.: 60112350

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

### BATCH QUALIFIERS

Batch: MSV/42582

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: MSV/42673

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

### ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.



**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: B COM NO. 1 E (074938)  
Pace Project No.: 60112350

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60112350001	GW-074938-121511-CB-MW-1	EPA 3010	MPRP/16530	EPA 6010	ICP/14221
60112350002	GW-074938-121511-MW-6	EPA 3010	MPRP/16530	EPA 6010	ICP/14221
60112350005	GW-074938-121511-CB-MW-3	EPA 3010	MPRP/16530	EPA 6010	ICP/14221
60112350001	GW-074938-121511-CB-MW-1	EPA 8260	MSV/42673		
60112350002	GW-074938-121511-MW-6	EPA 8260	MSV/42582		
60112350003	GW-074938-121511-CB-DUP	EPA 8260	MSV/42673		
60112350004	TB-074938-121511-CB-TB1	EPA 8260	MSV/42582		



# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

<b>Section A</b> Required Client Information:		<b>Section B</b> Required Project Information:		<b>Section C</b> Invoice Information:	
Company: COP CRA NM		Report To: Christine Mathews		Attention: ENFOS	
Address: 6121 Indian School Rd NE, Ste 200 Albuquerque, NM 87110		Copy To: Kelly Blanchard, Angela Bown		Company Name:	
Email To: cmathews@croworld.com		Purchase Order No.: 4515860214		Address:	
Phone: (505)884-0672 Fax: (505)884-4932		Project Name: B Com No. 1 E		Pace Quote Reference:	
Requested Due Date/TAT: standard		Project Number: 074938		Pace Project Manager: Alice Tracy	
				Pace Profile #: 5514, 5	
				<b>REGULATORY AGENCY</b>	
				<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER <i>NMCD</i>	
				Site Location	
				STATE: NM	

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE DRINKING WATER DW WATER WT WASTE WATER WW PRODUCT P SOIL/SOLID SL OIL OL WIPE WP AIR AR OTHER OT TISSUE TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analysis Test V/N	Requested Analysis Filtered (Y/N)		Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.		
					COMPOSITE START		COMPOSITE END/GRAB				Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>		Methanol	Other			8260 BTEX	6010 Dissolved Fe & Mn
					DATE	TIME	DATE	TIME															
1	GW 074938-121511-CB-MW-1		WTG				12.15.11	1616	4		X	X						X	X	BP3E1.5	302596	12.15.11CWB	
2	GW 074938-121511-CB-MW-3		WTG				12.15.11		3		X	X						X	X	BP3E1.5	302596	12.15.11CWB	
3	GW 074938-121511-MW-10		WTG				12.15.11	0920	4		X	X						X	X	BP3E1.5	302596	202	
4	GW 074938-121511-CB-100		WTG				12.15.11	1020	3		X	X						X	X	BP3E1.5	302596	203	
5	TB 074938-121511-CB-TB1		WT				12.15.11	1050	3		X							X		BP3E1.5		204	
6	TEMP BLANK																						205
7	GW 074938-121511-CB-MW-3		WTG				12.15.11	1625	1		X							X		BP3E1.5			205

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS				
Include MDLs on report - J-flag *Note: metals containers have been field filtered.	Cassie Brown / CRA	12.15.11	1100	[Signature]	12/16/11	0900	2	1	Y	Y	Y

SAMPLER NAME AND SIGNATURE		Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Cassie Brown				
SIGNATURE of SAMPLER:	[Signature]	DATE Signed (MM/DD/YY):	12.15.11		

\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.



**Sample Condition Upon Receipt – ESI Tech Specs**

Client Name: COY CRA NM

Project #: 60012350

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other

Optional
Proj Due Date: <u>12/29/11</u>
Proj Name:

Tracking #: 898608913908 Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other

Thermometer Used: T-191 T-194

Type of Ice: Wet Blue None  Samples received on ice, cooling process has begun.  
(circle one)

Cooler Temperature: 2-1

Date and initials of person examining contents: 12/16/11 by

Temperature should be above freezing to 6°C

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody filled out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler name & signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Includes date/time/ID/analyses Matrix:	<u>WT</u>	13.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Exceptions: <u>VOA</u> , Coliform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Initial when completed: <u>12/16/11 by</u>
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Lot # of added preservative:
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State: <u>NC</u>

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Temp Log: Record start and finish times when unpacking cooler, if >20 min, recheck sample temps.	
Start: <u>1715</u>	Start:
End: <u>1720</u>	End:
Temp:	Temp:

Project Manager Review: [Signature] Date: 12/19/11

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the NCDENR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers).

APPENDIX C

SOUDER MILLER & ASSOCIATES HISTORICAL ANALYTICAL DATA

Table 2  
 BTEX Ground Water Analytical Summary  
 Farmington B Com 1E  
 Unit O, Sec. 15 T29N, R13W

Sample Date	Sample ID#	Monitor Well	Remarks	BTEX per EPA 8020 (ppb)			
				Benzene	Toluene	Ethylbenzene	Total-Xylene
2/19/98	9802020-01A	MW#1	On Site Lab.	210.0	34.0	370.0	2044.0
6/12/98	3" of free product	in the bailer					
9/15/98	Not Sampled	free product	in well				
12/29/98	9812053-04A			350.0	BDL	420	2800.0
No	Water	Samples	Taken	in	1999		
1/22/04	Not Sampled	free product	in well				
2/19/98	9802020-02A	MW#2	On Site Lab.	2.4	5.3	16.0	470.0
6/12/98	9806055-02A			0.8	2.7	32.0	171.0
9/15/98	9809035-01A			1.3	2.5	39.0	33.3
12/29/98	9812053-05A			BDL	0.6	2.1	35.0
3/3/99	9903012-05A			BDL	BDL	64	119.0
6/15/99	9906055-05A			BDL	BDL	BDL	BDL
9/15/99	9909054-05A			BDL	BDL	4.1	68.1
12/14/99	9912018-05A			BDL	BDL	1.8	36.4
1/22/04	0401011-004A		lina ba Lab	BDL	BDL	BDL	BDL
2/19/98	9802020-03A	MW#3	On Site Lab.	0.9	1.2	1.6	5.3
06/12/98	9806055-01A			BDL	BDL	0.5	2.0
9/15/98	9809035-02A			BDL	BDL	BDL	BDL
12/29/98	9812053-06A			BDL	BDL	BDL	BDL
3/3/99	9903012-04A			BDL	BDL	BDL	BDL
6/15/99	9906055-04A			BDL	0.9	3.1	56.0
9/15/99	9909054-04A			BDL	0.6	BDL	BDL
12/14/99	9912018-04A			BDL	BDL	BDL	BDL
1/22/04	0401011-002A		lina ba Lab	BDL	BDL	BDL	BDL
WQCC	Action	Levels		10.0	750.0	750.0	620.0

Table 2  
 BTEX Ground Water Analytical Summary  
 Farmington B Com 1E  
 Unit O, Sec. 15 T29N, R13W

Sample Date	Sample ID#	Monitor Well	Remarks	BTEX per EPA 8020 (ppb)			
				BDL	BDL	BDL	BDL
9/15/98	9809035-03A	MW#4	On Site Lab.	BDL	BDL	BDL	BDL
12/29/98	9812053-03A			BDL	BDL	0.6	BDL
3/3/99	9903012-03A			BDL	BDL	BDL	BDL
6/15/99	9906055-03A			BDL	BDL	BDL	BDL
9/15/99	9909054-03A			BDL	BDL	BDL	BDL
12/14/99	9912018-03A			BDL	0.7	BDL	BDL
3/27/00	0003041-01A			BDL	BDL	BDL	BDL
6/5/00	0006009-02A			BDL	BDL	BDL	BDL
9/11/00	0009020*01A			BDL	BDL	BDL	BDL
1/22/04	0401011-003A		lina ba Lab	BDL	BDL	BDL	BDL
-----							
9/15/98	9809035-04A	MW#5	On Site Lab.	BDL	BDL	BDL	BDL
12/29/98	9812053-02A			BDL	BDL	BDL	BDL
3/3/99	9903012-02A			BDL	BDL	BDL	BDL
6/15/99	9906055-02A			BDL	BDL	BDL	BDL
9/15/99	9909054-02A			BDL	BDL	BDL	BDL
12/14/99	9912018-02A			BDL	0.8	BDL	BDL
3/27/00	0003041-02A			BDL	BDL	BDL	BDL
6/5/00	0006009-01A			BDL	BDL	BDL	BDL
12/14/99	9912018-05A			BDL	BDL	1.8	36.4
1/22/04	0401011-005A		lina ba Lab	BDL	BDL	BDL	BDL
-----							
9/15/98	9809035-05A	MW#6	On Site Lab.	BDL	BDL	BDL	BDL
12/29/98	9812053-01A			BDL	BDL	BDL	BDL
3/3/99	9903012-01A			BDL	BDL	BDL	BDL
6/15/99	9906055-01A			BDL	BDL	BDL	BDL
9/15/99	9909054-01A			BDL	0.7	1.1	BDL
12/14/99	9912018-01A			BDL	1.8	0.7	1.9
1/22/04	0401011-006A		lina ba Lab	BDL	BDL	BDL	BDL
WQCC	Action	Levels		10.0	750.0	750.0	620.0

Table 2  
 BTEX Ground Water Analytical Summary  
 Farmington B Com 1E  
 Unit O, Sec. 15 T29N, R13W

Sample Date	Sample ID#	Monitor Well	Remarks	Anions ppm	Iron ppm	BOD	COD
1/22/04		MW#1	lina ba Lab	Not Sampled			
1/22/04	0401011-004	MW#2		65.1	BDL		
1/22/04	0401011-002	MW#3		73.3	BDL		
1/22/04	0401011-003	MW#4		67.7	BDL		
1/22/04	0401011-005	MW#5		86.8	BDL		
1/22/04	0401011-006	MW#6		28.2	0.194		