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## Martin 34 No. 2 2012 Quarterly Groundwater Monitoring Report

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Prepared for: ConocoPhillips Company  
Risk Management and Remediation

**Conestoga-Rovers & Associates**  
6121 Indian School Road, NE Suite 200  
Albuquerque, New Mexico 87110

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## 1.0 INTRODUCTION

This report details the results of quarterly groundwater monitoring events conducted by Conestoga-Rovers & Associates, Inc. (CRA) on March 8, 2012 at the ConocoPhillips Company (ConocoPhillips) Martin 34 No. 2 natural gas well site (Site). The Site is located in Section 34, Township 30N, Range 11W, San Juan County, New Mexico, near the intersection of US Highway 550 and Utah Road (**Figure 1**). A Site detail map is included as **Figure 2**.

### 1.1 SITE BACKGROUND

The properties in the vicinity of the Site are privately owned. The historical summary for the Site is detailed below, and is also included as **Table 1**.

Hydrocarbon impacts were discovered during production equipment upgrade and relocation activities at the Site during December 2010. During remedial excavation activities conducted in January 2011, Brandon Powell of the New Mexico Oil Conservation Division (NMOCD) requested that the excavation of the hydrocarbon impacted area be extended from 25 feet below ground surface (bgs) to 30 feet bgs in order to continue vertical delineation of soil impacts. Final excavation dimensions measured approximately 30 feet by 75 feet by 30 feet deep when the practical extent of excavation was reached. Analytical results from confirmation soil samples collected by Envirotech, Inc. (Envirotech) from the north wall and both the north and south bottoms of the excavation indicated hydrocarbon concentrations exceeding NMOCD Site soil action limits. The excavation was subsequently backfilled.

On March 1st and 2nd, 2011, Tetra Tech, Inc. (Tetra Tech) supervised the completion of three soil borings, B-1, B-2 and B-3, using a truck-mounted, direct-push Geoprobe® rig to conduct soil and groundwater sampling in and around the former excavation. Groundwater was encountered at approximately 40 feet bgs in boring B-2 located upgradient and in B-3 located downgradient of the former condensate tank location. The saturated interval in soil borings B-2 and B-3 corresponded with a slightly damp interval in boring B-1 located in the center of the former excavation. Because the interval was slightly damp, not wet in B-1, it was not considered water-bearing at the time of advancement. The Geoprobe® rig encountered refusal at a hard, dense, dry clay layer directly below the damp interval in this boring. Photo-ionization detector (PID) results decreased from 1,315 parts per million (ppm) in the interval above the dry clay to 20 ppm in the dry layer.

Analytical results for the groundwater samples collected from the water-bearing borings exceeded the New Mexico Water Quality Control Commission (NMWQCC) standards for chloride, benzene, toluene, ethylbenzene, and xylenes (BTEX). Based on these results, it was determined that further investigation was needed at the Site.

On June 15, 2011, Site consulting responsibilities were transferred from Tetra Tech to CRA of Albuquerque, NM. To further investigate hydrocarbon impacts to soil and groundwater, CRA supervised the installation of four two-inch diameter polyvinylchloride (PVC) groundwater monitor wells (MW-1, MW-2, MW-3 and MW-4), between July 19th and 22nd, 2011. A baseline groundwater monitoring event was conducted by CRA on July 27th, 2011. On September 30th, 2011 CRA conducted the first quarterly groundwater monitoring event at the Site. Based on analytical results from the baseline and first quarterly groundwater monitoring events, it was concluded that further investigation was necessary.

Between November 9th and 10th, 2011, JR Drilling, LLC (JR Drilling) of Edgewood, New Mexico advanced four soil borings at the Site under the supervision of CRA using a truck-mounted, direct push, Geoprobe® rig: B-4, B-5, B-6, and B-7. Soil borings B-4 and B-5 were advanced on November 9th, 2011 to total depths of 47 feet below ground surface (bgs) and 56.5 feet bgs, respectively. The first observation of groundwater in boring B-4 was recorded at 44 feet bgs. In boring B-5, the first observation of groundwater was recorded at a depth of 52 feet bgs. Borings B-6 and B-7 were advanced on November 10th, 2011 to total depths of 30.5 feet bgs and 38 feet bgs, respectively. Direct push advancement was terminated due to refusal in borings B-6 and B-7 at the completion depth. Groundwater was not encountered in borings B-6 or B-7.

Soil samples were collected from all four soil borings either from the interval directly above groundwater or the deepest interval if groundwater was not encountered. Soil samples collected from B-4, B-5, B-6, and B-7 indicated concentrations below laboratory detection limits and below NMOCD soil action limits for BTEX, total petroleum hydrocarbons (TPH) gasoline range organics (GRO) and TPH diesel range organics (DRO).

Groundwater samples from both B-4 and B-5 indicated concentrations below method detection limits and NMWQCC standards for BTEX, 1,1,2,2-tetrachlorethane, methylene chloride, and naphthalene. Concentrations of fluoride, sulfate, dissolved boron, and TDS were above NMWQCC standards in groundwater from B-4 and B-5. Groundwater from B-5 also contained concentrations of chloride and dissolved manganese above

NMWQCC standards. A summary of groundwater analytical results is presented as **Table 2**.

Between November 28th and December 1st of 2011, CRA supervised the installation of three additional groundwater monitor wells at the Site, MW-5, MW-6 and MW-7.

Soil samples were collected for laboratory analysis from all three of the monitor well soil borings. Results for all soil samples had concentrations of BTEX, TPH GRO, and TPH DRO at levels below NMOCD recommended soil action limits except for the sample collected from MW-6 from 55 to 57 feet bgs, which contained a concentration for total BTEX of 100.74 milligrams per kilogram (mg/kg) and a total TPH concentration of 2304 mg/kg. The NMOCD recommended site-specific soil action limits for total BTEX and total TPH are 50 mg/kg and 100 mg/kg, respectively.

During the drilling of MW-5 it was noted that the water-bearing zone was different than in other areas. It was located at approximately 47 feet bgs, was approximately two feet thick, and was underlain by dry, dense, brown shale. Following monitor well installation, only 0.9 feet of water accumulated in the well overnight.

Boring logs from monitor well installations were used to create generalized geologic cross sections for the Site which are presented in **Figures 3 and 4**.

## 2.0 GROUNDWATER MONITORING SUMMARY, SAMPLING METHODOLOGY AND RESULTS

### 2.1 GROUNDWATER MONITORING SUMMARY

Quarterly groundwater quality monitoring events were conducted on March 7th and 8th, June 6th and 7th, September 24th and 25th, and December 19th and 20th, 2012. Prior to collection of groundwater samples from Site monitor wells, depth to groundwater in each well was determined using an oil/water interface probe. The top of casings (TOC) for all Site monitor wells were surveyed on January 24th, 2012 using an arbitrary reference-elevation of 100. Top of casing elevations were used with groundwater levels to develop potentiometric surface maps (**Figures 5, 6, 7, and 8**). Using these data, groundwater flow direction at the Site is calculated to be toward the south. A summary of groundwater elevation data is included in **Table 4**.

It should be noted that stratigraphic correlation is poor between MW-5 and other Site monitor wells. For this reason, the groundwater elevation for MW-5 was not included in the groundwater potentiometric surface maps.

### 2.2 GROUNDWATER SAMPLING METHODOLOGY

During the quarterly groundwater monitoring events, Site monitor wells were either bailed dry and allowed to recharge, or purged of at least three casing volumes of groundwater using a 1.5-inch diameter dedicated polyethylene bailer. While bailing each monitor well, groundwater parameters, including temperature, pH, conductivity, oxidation/reduction potential (ORP), and total dissolved solids (TDS), were measured using a YSI 556 multi-parameter sonde. Parameters were recorded along with general observations such as color, odor, and clarity on CRA Well Sampling Field Information Forms (**Appendix A**). Field parameters were not collected from Monitor Wells MW-1 and MW-5 during events where insufficient water columns were present in these wells.

All groundwater samples were collected using dedicated, 1.5-inch, polyethylene bailers and were placed in laboratory prepared bottles, packed on ice, and shipped under chain of custody documentation to Pace Analytical Services, Inc. of Lenexa, Kansas for analysis. Groundwater samples were analyzed for VOCs by EPA Method 5030B/8260; Chloride, Fluoride, and Sulfate by EPA Method 300.0; TDS by SM 2540C; and dissolved iron, dissolved boron, and dissolved manganese by EPA Method 6010.

## 2.3 MARCH, JUNE, SEPTEMBER, AND DECEMBER 2012 GROUNDWATER MONITORING RESULTS

The 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 during 2012 quarterly groundwater monitoring events are discussed below. Insufficient well volume present in Monitor Wells MW-1 and MW-5 resulted in a limited number of analytes for these wells. The corresponding laboratory analytical reports for 2012 quarterly sampling events, including quality control documentation, are included in **Appendix B**. Groundwater benzene concentration maps for each sampling event are included as **Figures 9, 10, 11, and 12**. A summary of all groundwater analytical data is included as **Table 3**.

### March 2012

#### Benzene

The groundwater quality standard for benzene is 0.010 milligrams per liter (mg/L). Groundwater collected from Monitor Wells MW-1, MW-2, MW-5, MW-6 and MW-7 contained benzene concentrations of 5.10 mg/L, 0.295 mg/L, 1.20 mg/L, 0.0432mg/L, and 0.0186 mg/L, respectively.

#### Toluene

The groundwater quality standard for toluene is 0.750 mg/L. Groundwater collected from Monitor Well MW-1 contained a concentration of toluene of 2.49 mg/L.

#### Xylenes

The groundwater quality standard for total xylenes is 0.620 mg/L. Groundwater samples collected from MW-1 and MW-6 contained total xylenes at concentrations of 9.08 mg/L and 3.32 mg/L, respectively.

#### Naphthalene

The groundwater quality standard for naphthalene is 0.030 mg/L. Groundwater collected from Monitor Well MW-2 was found to contain naphthalene at a concentration of 0.074 mg/L. Naphthalene was reported by Pace to be below their specified reporting limits for groundwater collected from Monitor Wells

MW-1, MW-6, and MW-7; however, the reporting limits were above the NMWQCC standard.

#### **Dissolved Boron**

The groundwater quality standard for dissolved boron is 0.75 mg/L. Groundwater collected from Monitor Wells MW-1, MW-2, MW-3, and MW-7 contained dissolved boron concentrations of 1.10 mg/L, 0.922 mg/L, 0.962 mg/L, and 0.84 mg/L.

#### **Dissolved Manganese**

The groundwater quality standard for dissolved manganese is 0.2 mg/L. Groundwater collected from Monitor Wells MW-1, MW-2, MW-3, MW-4, MW-6 and MW-7 contained dissolved manganese concentrations of 3.48 mg/L, 3.76 mg/L, 4.47 mg/L, 8.28 mg/L, 2.53 mg/L, and 4.05 mg/L, respectively.

#### **Dissolved Iron**

The groundwater quality standard for dissolved iron is 1.0 mg/L. Groundwater samples collected from Monitor Wells MW-1, MW-3, and MW-4 contained dissolved iron concentrations at 7.34 mg/L, 4.75 mg/L, and 1.04 mg/L, respectively.

#### **Total Dissolved Solids**

The NMWQCC groundwater quality standard for TDS is 1,000 mg/L. Groundwater samples collected from all Site monitor wells were found to contain TDS concentrations greater than 1,000 mg/L. TDS values in groundwater samples ranged from 8,520mg/L to 38,400 mg/L.

#### **Sulfate**

The NMWQCC groundwater quality standard for sulfate is 600 mg/L. Groundwater samples collected from all Site monitor wells contained sulfate in concentrations greater than 600 mg/L. Sulfate concentrations in groundwater samples ranged from 5,810 to 31,600 mg/L.

#### **Chloride**

The groundwater quality standard for chloride is 250 mg/L. Groundwater samples collected from Monitor Wells MW-2, MW-3, MW-4, MW-6, and MW-7 were found to contain chloride in concentrations greater than 250 mg/L.

Chloride concentrations in groundwater samples ranged from 307 mg/L to 456 mg/L.

#### Fluoride

The groundwater quality standard for fluoride is 1.6 mg/L. Fluoride was reported below the specified reporting limits for groundwater collected from all Site monitor wells; however, the reporting limit was above the NMWQCC standard.

### **June 2012**

#### Benzene

The groundwater quality standard for benzene is 0.010 milligrams per liter (mg/L). Groundwater collected from Monitor Wells MW-1, MW-2, MW-5, MW-6 and MW-7 contained benzene concentrations of 3.00 mg/L, 0.207 mg/L, 1.03 mg/L, 0.0255 mg/L, and 0.0122 mg/L, respectively.

#### Toluene

The groundwater quality standard for toluene is 0.750 mg/L. Groundwater collected from Monitor Well MW-1 contained a concentration of toluene of 3.83 mg/L.

#### Xylenes

The groundwater quality standard for total xylenes is 0.620 mg/L. Groundwater samples collected from MW-1 and MW-6 contained total xylenes at concentrations of 4.05 mg/L and 3.16 mg/L, respectively.

#### Naphthalene

The groundwater quality standard for naphthalene is 0.030 mg/L. Groundwater collected from Monitor Well MW-6 was found to contain naphthalene at a concentration of 0.034 mg/L.

#### Dissolved Boron

The groundwater quality standard for dissolved boron is 0.75 mg/L. Groundwater collected from Monitor Wells MW-1, MW-2, MW-3, and MW-7 contained dissolved boron concentrations of 1.00 mg/L, 0.847 mg/L, 0.889 mg/L, and 0.824 mg/L.

#### Dissolved Manganese

The groundwater quality standard for dissolved manganese is 0.2 mg/L. Groundwater collected from Monitor Wells MW-1, MW-2, MW-3, MW-4, MW-6 and MW-7 contained dissolved manganese concentrations of 2.09 mg/L, 3.88 mg/L, 2.02 mg/L, 5.25 mg/L, 2.01 mg/L, and 3.14 mg/L, respectively.

#### Dissolved Iron

The groundwater quality standard for dissolved iron is 1.0 mg/L. Groundwater samples from Monitor Wells MW-1, and MW-2 contained dissolved iron concentrations at 5.98 mg/L, and 4.79 mg/L, respectively.

#### Total Dissolved Solids

The NMWQCC groundwater quality standard for TDS is 1,000 mg/L. Groundwater samples collected from all Site monitor wells were found to contain TDS concentrations greater than 1,000 mg/L. TDS values in groundwater samples ranged from 13,900 mg/L to 40,600 mg/L.

#### Sulfate

The NMWQCC groundwater quality standard for sulfate is 600 mg/L. Groundwater samples collected from all Site monitor wells were found to contain sulfate in concentrations greater than 600 mg/L. Sulfate concentrations in groundwater samples ranged from 8,010 mg/L to 28,400 mg/L.

#### Chloride

The groundwater quality standard for chloride is 250 mg/L. Groundwater samples collected from Monitor Wells MW-1, MW-2, MW-3, MW-4, MW-6, and MW-7 were found to contain chloride in concentrations greater than 250 mg/L. Chloride concentrations in groundwater samples ranged from 285 mg/L to 431 mg/L.

**September 2012**

#### Benzene

The groundwater quality standard for benzene is 0.010 milligrams per liter (mg/L). Groundwater collected from Monitor Wells MW-1, MW-2, MW-5, MW-6 and MW-7 contained benzene concentrations of 5.040 mg/L, 0.127 mg/L, 1.040 mg/L, 0.0218 mg/L, and 0.0109 mg/L, respectively.

### *Toluene*

The groundwater quality standard for toluene is 0.750 mg/L. Groundwater collected from Monitor Well MW-1 contained a concentration of toluene of 1.660 mg/L.

### *Xylenes*

The groundwater quality standard for total xylenes is 0.620 mg/L. Groundwater samples collected from MW-1 and MW-6 contained total xylenes at concentrations of 8.850 mg/L and 2.920 mg/L, respectively.

### *Naphthalene*

The groundwater quality standard for naphthalene is 0.030 mg/L. Groundwater collected from Monitor Wells MW-1 and MW-2 contained naphthalene at concentrations of 0.0456 mg/L and 0.0583 mg/L.

### *Dissolved Boron*

The groundwater quality standard for dissolved boron is 0.75 mg/L. Groundwater collected from Monitor Wells MW-2 and MW-3 contained dissolved boron concentrations of 1.02 mg/L and 0.986 mg/L, respectively.

### *Dissolved Manganese*

The groundwater quality standard for dissolved manganese is 0.2 mg/L. Groundwater collected from Monitor Wells MW-2, MW-3, MW-4, MW-6 and MW-7 contained dissolved manganese concentrations of 2.30 mg/L, 0.497 mg/L, 5.17 mg/L, 2.19 mg/L, and 4.08 mg/L, respectively.

### *Dissolved Iron*

The groundwater quality standard for dissolved iron is 1.0 mg/L. Groundwater samples collected from Monitor Wells MW-4 and MW-7 contained dissolved iron concentrations at 1.02 mg/L and 1.25 mg/L, respectively.

### *Total Dissolved Solids*

The NMWQCC groundwater quality standard for TDS is 1,000 mg/L. Groundwater samples collected from all Site monitor wells were found to contain TDS concentrations greater than 1,000 mg/L. TDS values in groundwater samples ranged from 11,600 mg/L to 38,900 mg/L.

### Sulfate

The NMWQCC groundwater quality standard for sulfate is 600 mg/L. Groundwater samples collected from all Site monitor wells were found to contain sulfate in concentrations greater than 600 mg/L. Sulfate concentrations in groundwater samples ranged from 6,800 mg/L to 25,600 mg/L.

### Chloride

The groundwater quality standard for chloride is 250 mg/L. Groundwater samples collected from Monitor Wells MW-1, MW-2, MW-3, MW-4, MW-6, and MW-7 were found to contain chloride in concentrations greater than 250 mg/L. Chloride concentrations in groundwater samples ranged from 266 mg/L to 468 mg/L.

### Fluoride

The groundwater quality standard for fluoride is 1.6 mg/L. Groundwater collected from Monitor Well MW-4 contained fluoride at a concentration of 5.8 mg/L. Fluoride was reported below the specified reporting limits for groundwater collected from Monitor Wells MW-1, MW-2, MW-3, MW-5, MW-6, and MW-7; however, the reporting limit was above the NMWQCC standard.

## **December 2012**

### Benzene

The groundwater quality standard for benzene is 0.010 milligrams per liter (mg/L). Groundwater collected from Monitor Wells MW-1, MW-2, MW-5, and MW-6 contained benzene concentrations of 3.96 mg/L, 0.202 mg/L, 0.861 mg/L, and 0.0214 mg/L, respectively.

### Toluene

The groundwater quality standard for toluene is 0.750 mg/L. Groundwater collected from Monitor Well MW-1 contained a concentration of toluene of 2.57 mg/L.

### Xylenes

The groundwater quality standard for total xylenes is 0.620 mg/L. Groundwater samples collected from MW-1 and MW-6 contained total xylenes at concentrations of 6.45 mg/L and 3.30 mg/L, respectively.

### *Dissolved Boron*

The groundwater quality standard for dissolved boron is 0.75 mg/L. Groundwater collected from Monitor Wells MW-1, MW-2, MW-3, MW-4, MW-5, and MW-7 contained dissolved boron concentrations of 1.23 mg/L, 1.04 mg/L, 1.03 mg/L, 0.808 mg/L, 1.55 mg/L, and 0.803 mg/L, respectively.

### *Dissolved Manganese*

The groundwater quality standard for dissolved manganese is 0.2 mg/L. Groundwater collected from Monitor Wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6 and MW-7 contained dissolved manganese concentrations of 0.886 mg/L, 1.98 mg/L, 0.547 mg/L, 4.84 mg/L, 1.06 mg/L, 2.34 mg/L and 2.42 mg/L, respectively.

### *Dissolved Iron*

The groundwater quality standard for dissolved iron is 1.0 mg/L. Groundwater samples collected from Monitor Wells MW-1, MW-2, and MW-5 contained dissolved iron concentrations at 1.25 mg/L, 1.20 mg/L, and 2.15 mg/L, respectively.

### *Total Dissolved Solids*

The NMWQCC groundwater quality standard for TDS is 1,000 mg/L. Groundwater samples collected from all Site monitor wells were found to contain TDS concentrations greater than 1,000 mg/L. TDS values in groundwater samples ranged from 12,000 mg/L to 36,400 mg/L.

### *Sulfate*

The NMWQCC groundwater quality standard for sulfate is 600 mg/L. Groundwater samples collected from all Site monitor wells were found to contain sulfate in concentrations greater than 600 mg/L. Sulfate concentrations in groundwater samples ranged from 7,090 mg/L to 28,500 mg/L.

### *Chloride*

The groundwater quality standard for chloride is 250 mg/L. Groundwater samples collected from Monitor Wells MW-1, MW-2, MW-3, MW-4, and MW-6 were found to contain chloride in concentrations greater than 250 mg/L. Chloride concentrations in groundwater samples ranged from 301 mg/L to 458 mg/L.

### 3.0 CONCLUSIONS AND RECOMMENDATIONS

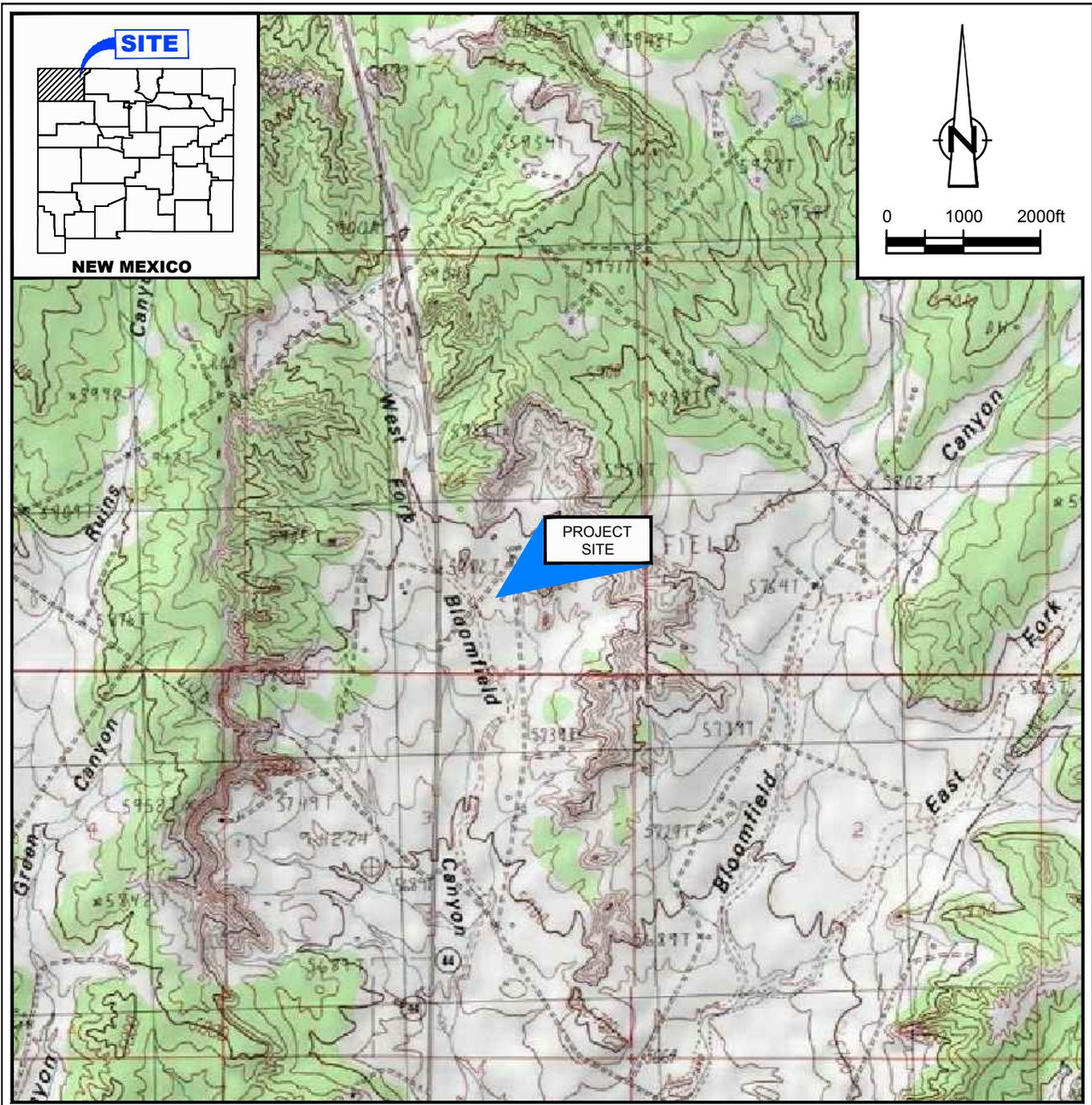
CRA conducted quarterly groundwater monitoring events during March, June, September, and December 2012 at the Martin 34 No. 2 site. CRA recommends the continuation of quarterly groundwater monitoring until concentrations of all monitored groundwater quality parameters are below NMWQCC standards, appear stable or reach regional background levels.

In order to determine background groundwater conditions, CRA recommends the installation of an upgradient monitor well north of MW-5. Installation of this well is planned for the summer of 2013. The proposed location is shown on **Figure 13**.

Groundwater flow direction at the Site has historically been toward the south. CRA will continue to monitor groundwater flow direction at the Site and will note any changes should they occur.

A quarterly groundwater monitoring event took place in March 2013. Additional quarterly groundwater monitoring events are scheduled for June, September and December 2013.

## FIGURES



SOURCE: USGS 7.5 MINUTE QUAD  
 "AZTEC AND BLOOMFIELD, NEW MEXICO"

LAT/LONG: 36.7638° NORTH, 107.9762° WEST  
 COORDINATE: NAD83 DATUM, U.S. FOOT  
 STATE PLANE ZONE - NEW MEXICO WEST

Figure 1  
 SITE VICINITY MAP  
 MARTIN 34 No. 2 GAS WELL REMEDIATION SITE  
 SEC 12, T27N, R9W, SAN JUAN COUNTY, NEW MEXICO  
 ConocoPhillips Company





RE: NAIP Aerial Photograph



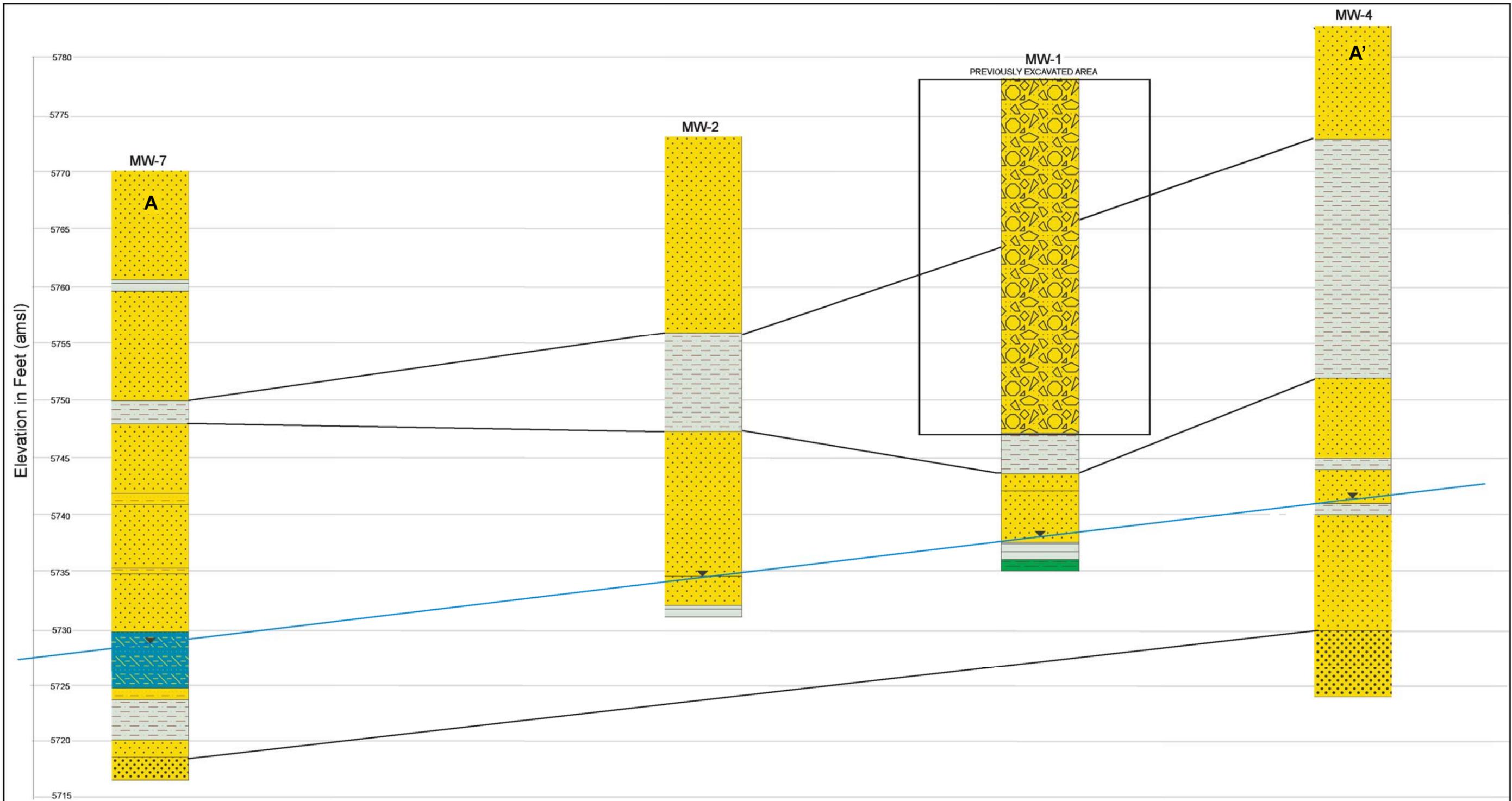


Figure 3  
 GENERALIZED GEOLOGIC CROSS SECTION A - A'  
 MARTIN 34 NO. 2 GAS WELL REMEDIATION SITE  
 SAN JUAN COUNTY, NEW MEXICO  
 ConocoPhillips company

**LEGEND**

- |  |               |  |               |  |             |
|--|---------------|--|---------------|--|-------------|
|  | Clean Fill    |  | Silt          |  | Shale       |
|  | Sand          |  | Clay          |  | Sandstone   |
|  | Sand and Silt |  | Clay and Sand |  | Groundwater |

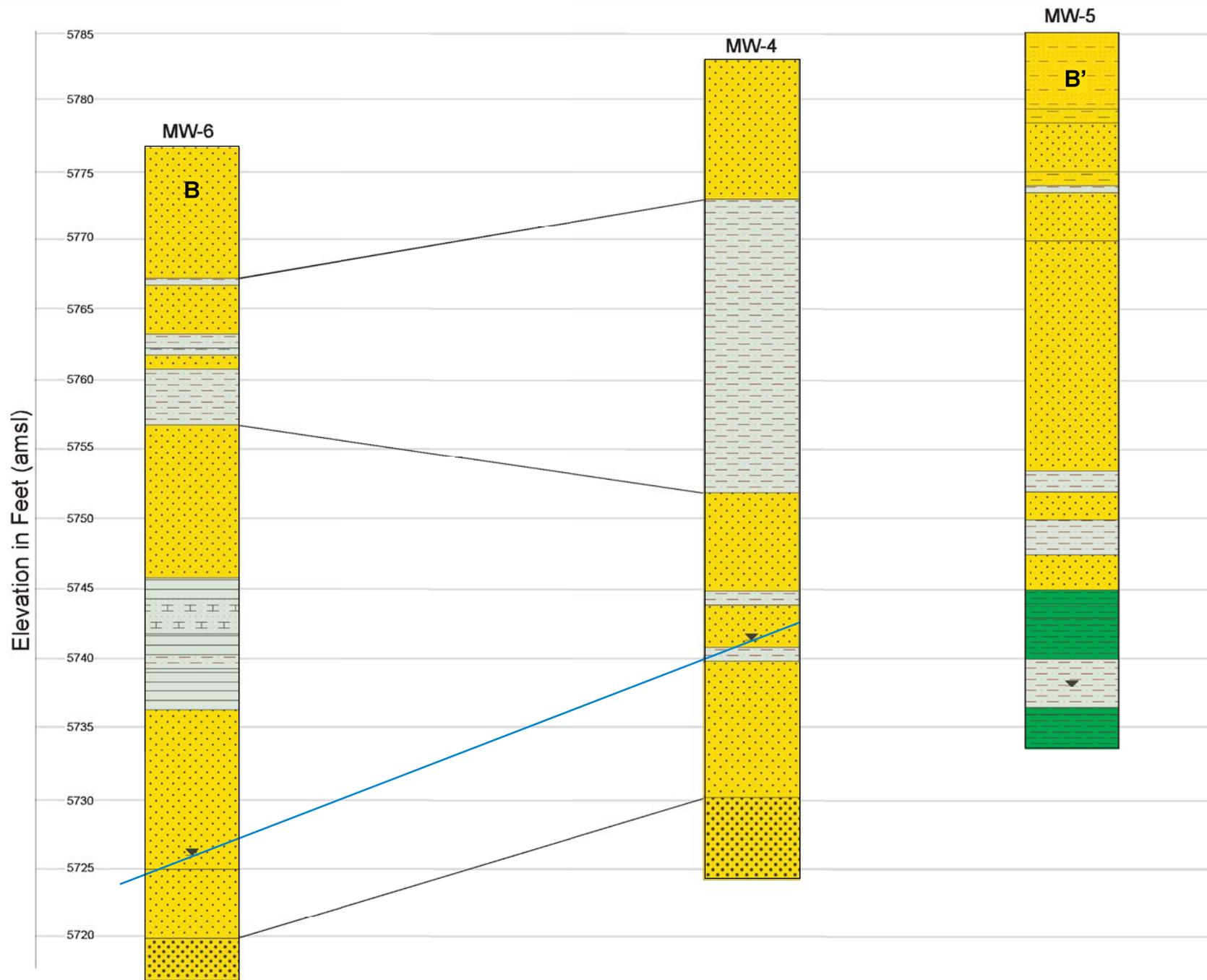


Figure 4  
 GENERALIZED GEOLOGIC CROSS SECTION B - B'  
 MARTIN 34 NO. 2 GAS WELL REMEDIATION SITE  
 SAN JUAN COUNTY, NEW MEXICO  
 ConocoPhillips company

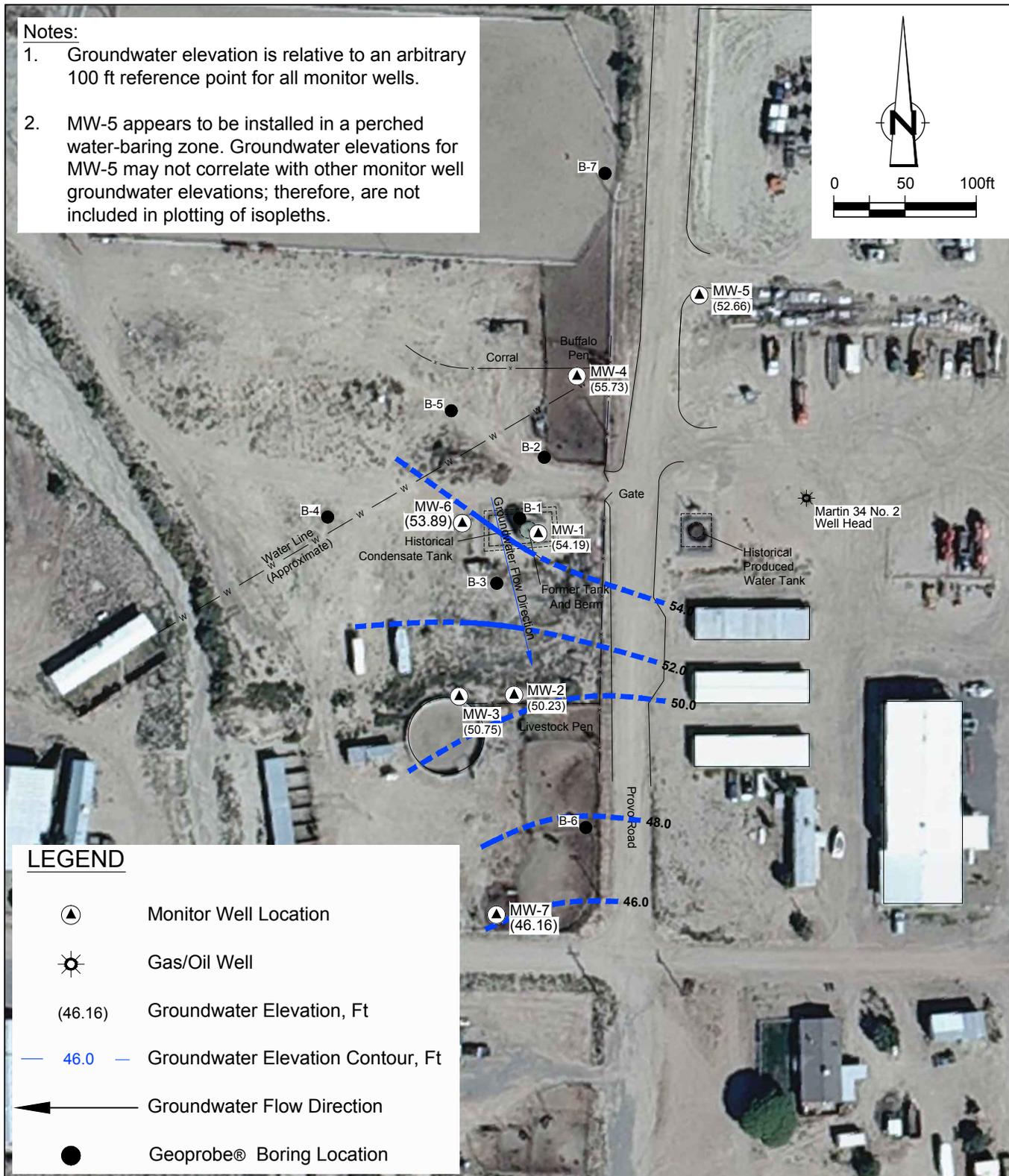
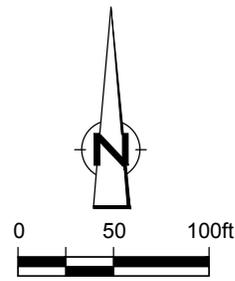
-  Sand and Silt
-  Sand
-  Silt

**LEGEND**

-  Clay
-  Shale
-  Sandstone
-  Groundwater

**Notes:**

1. Groundwater elevation is relative to an arbitrary 100 ft reference point for all monitor wells.
2. MW-5 appears to be installed in a perched water-bearing zone. Groundwater elevations for MW-5 may not correlate with other monitor well groundwater elevations; therefore, are not included in plotting of isopleths.



**LEGEND**

- Monitor Well Location
- Gas/Oil Well
- (46.16) Groundwater Elevation, Ft
- 46.0 — Groundwater Elevation Contour, Ft
- Groundwater Flow Direction
- Geoprobe® Boring Location

RE: NAIP Aerial Photograph

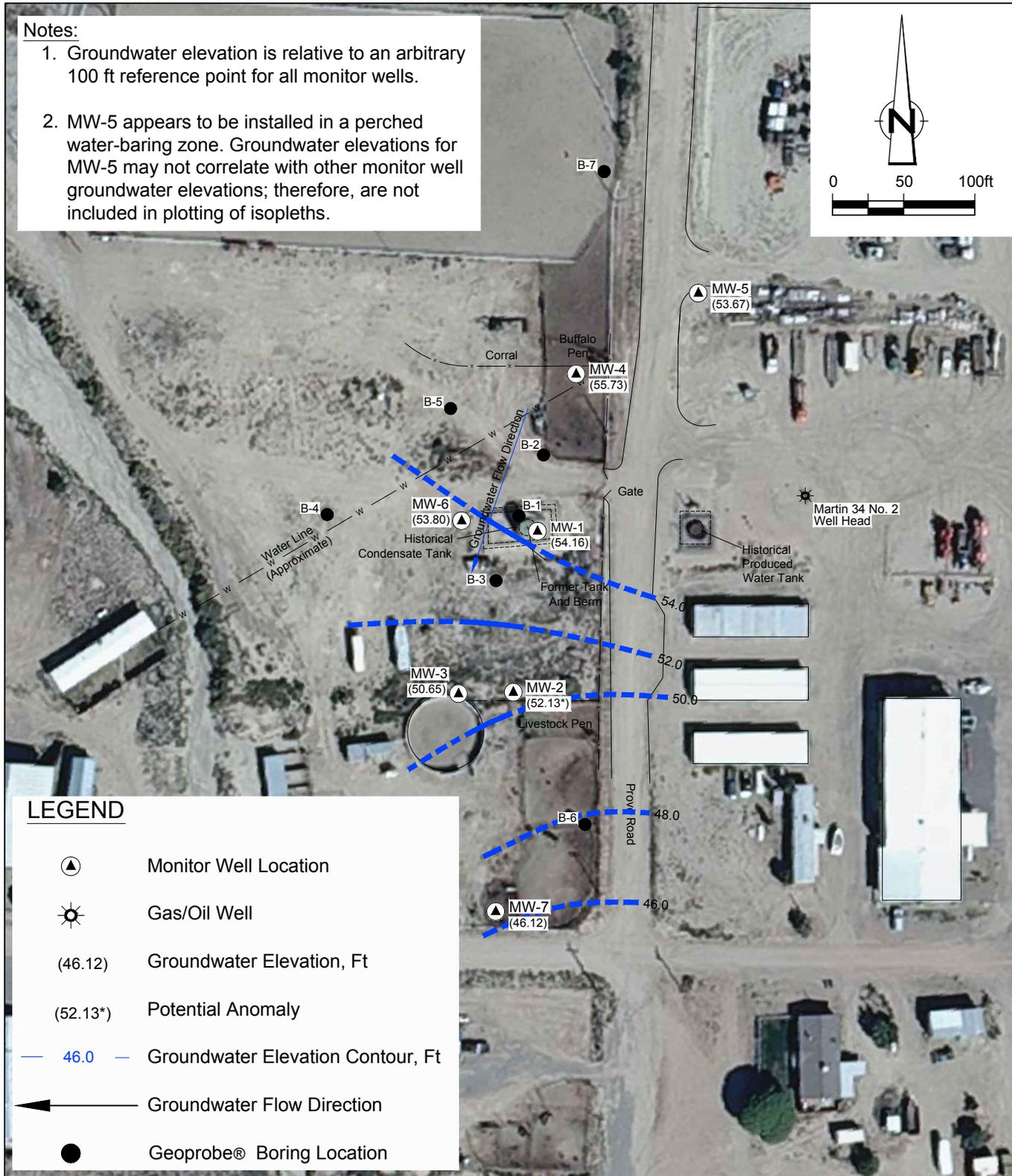
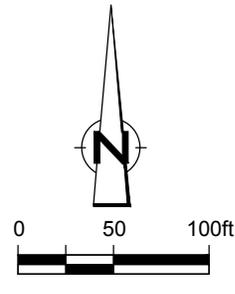
Figure 5

MARCH 2012 GROUNDWATER POTENTIOMETRIC SURFACE MAP  
 MARTIN 34 No. 2 GAS WELL REMEDIATION SITE  
 SAN JUAN COUNTY, NEW MEXICO  
*ConocoPhillips Company*



**Notes:**

1. Groundwater elevation is relative to an arbitrary 100 ft reference point for all monitor wells.
2. MW-5 appears to be installed in a perched water-bearing zone. Groundwater elevations for MW-5 may not correlate with other monitor well groundwater elevations; therefore, are not included in plotting of isopleths.



**LEGEND**

- Monitor Well Location
- Gas/Oil Well
- (46.12) Groundwater Elevation, Ft
- (52.13\*) Potential Anomaly
- 46.0 — Groundwater Elevation Contour, Ft
- Groundwater Flow Direction
- Geoprobe® Boring Location

RE: NAIP Aerial Photograph

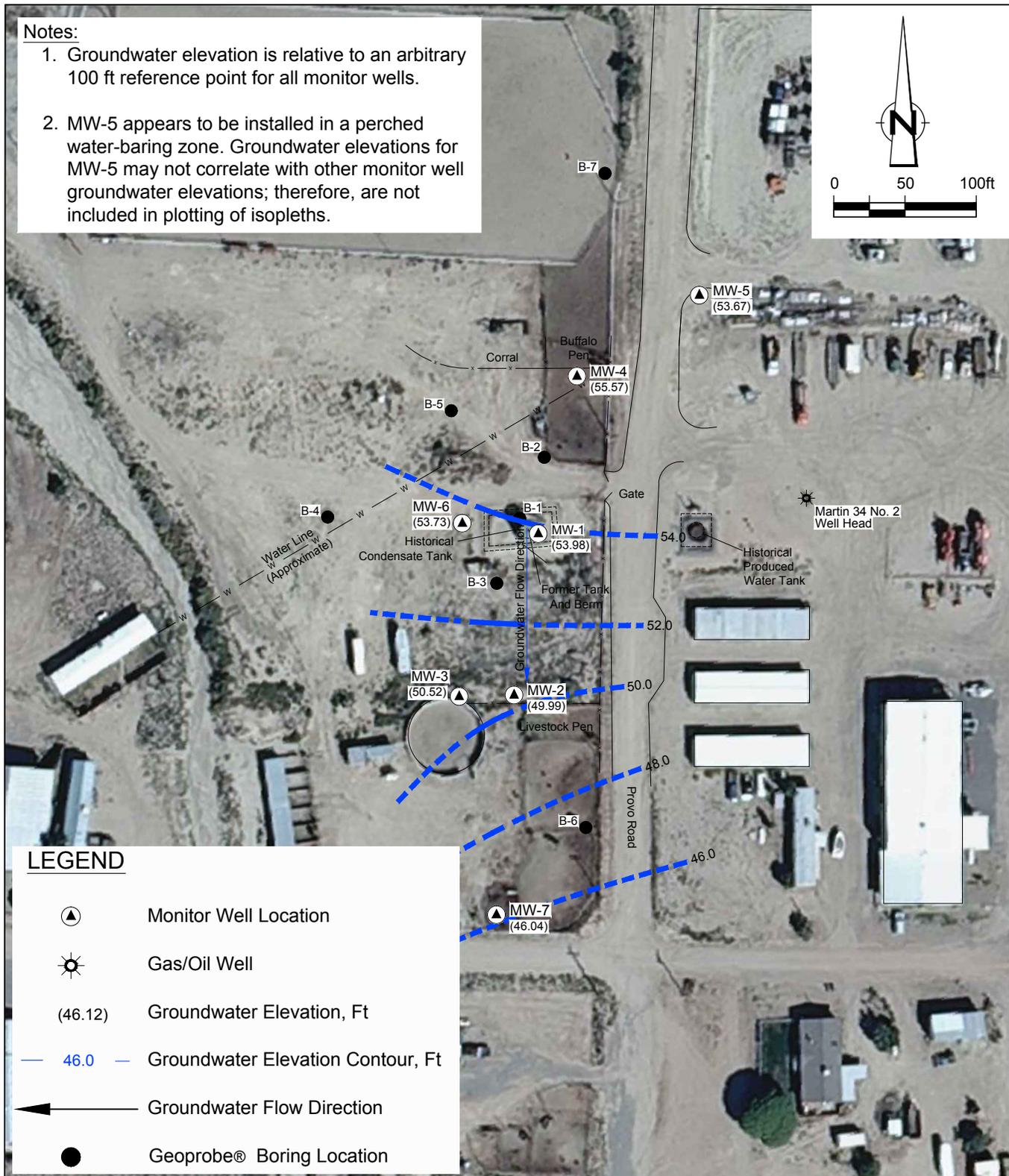
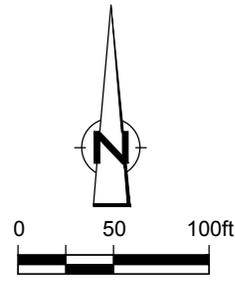
Figure 6

**JUNE 2012 GROUNDWATER POTENTIOMETRIC SURFACE MAP  
MARTIN 34 No. 2 GAS WELL REMEDIATION SITE  
SAN JUAN COUNTY, NEW MEXICO  
ConocoPhillips Company**



**Notes:**

1. Groundwater elevation is relative to an arbitrary 100 ft reference point for all monitor wells.
2. MW-5 appears to be installed in a perched water-bearing zone. Groundwater elevations for MW-5 may not correlate with other monitor well groundwater elevations; therefore, are not included in plotting of isopleths.



**LEGEND**

- Monitor Well Location
- Gas/Oil Well
- (46.12) Groundwater Elevation, Ft
- 46.0 — Groundwater Elevation Contour, Ft
- Groundwater Flow Direction
- Geoprobe® Boring Location

RE: NAIP Aerial Photograph

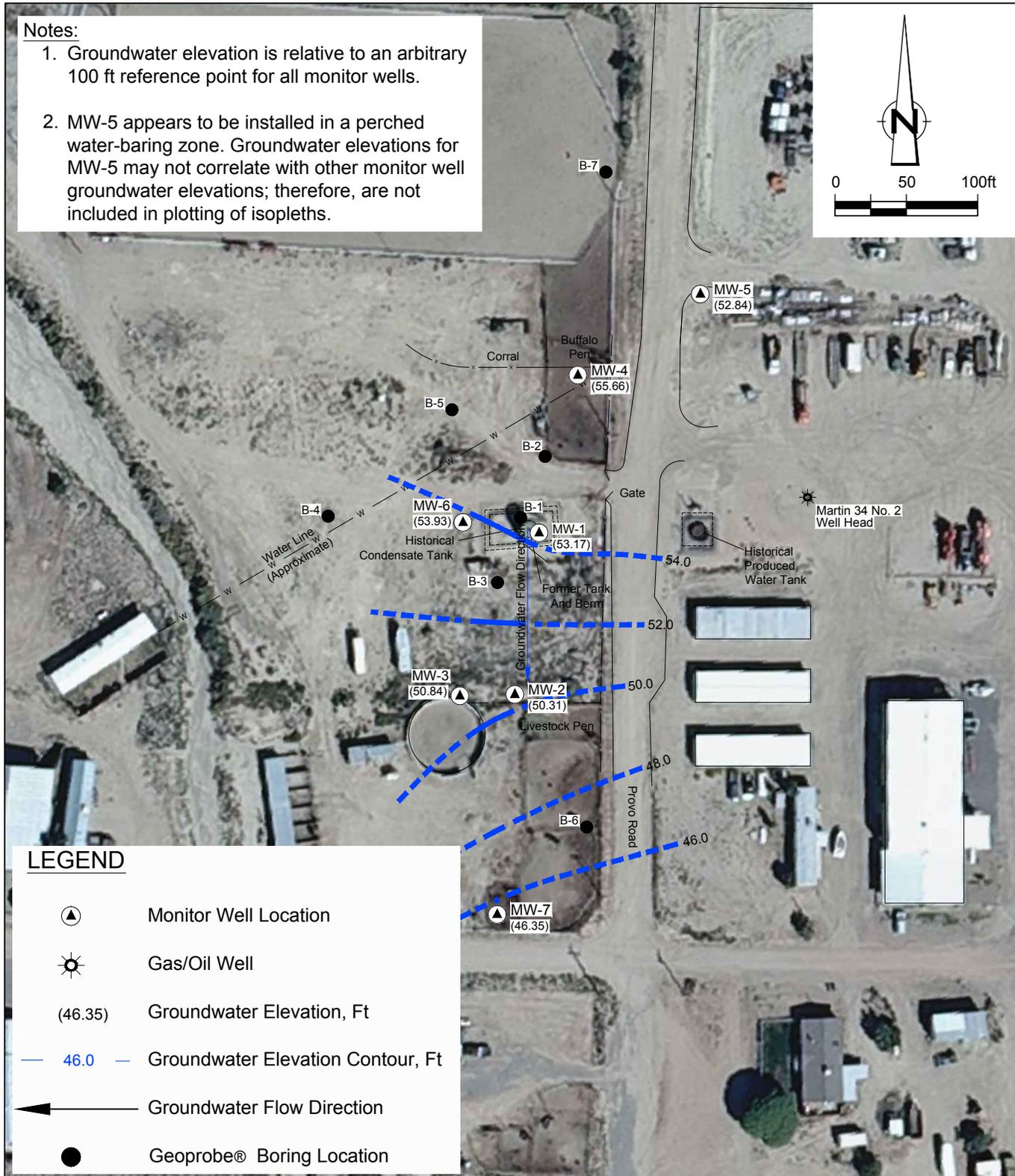
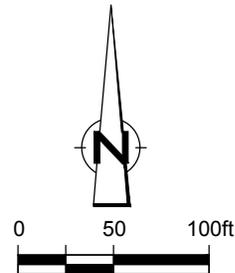
Figure 7

SEPTEMBER 2012 GROUNDWATER POTENTIOMETRIC SURFACE MAP  
 MARTIN 34 No. 2 GAS WELL REMEDIATION SITE  
 SAN JUAN COUNTY, NEW MEXICO  
*ConocoPhillips Company*



**Notes:**

1. Groundwater elevation is relative to an arbitrary 100 ft reference point for all monitor wells.
2. MW-5 appears to be installed in a perched water-bearing zone. Groundwater elevations for MW-5 may not correlate with other monitor well groundwater elevations; therefore, are not included in plotting of isopleths.



**LEGEND**

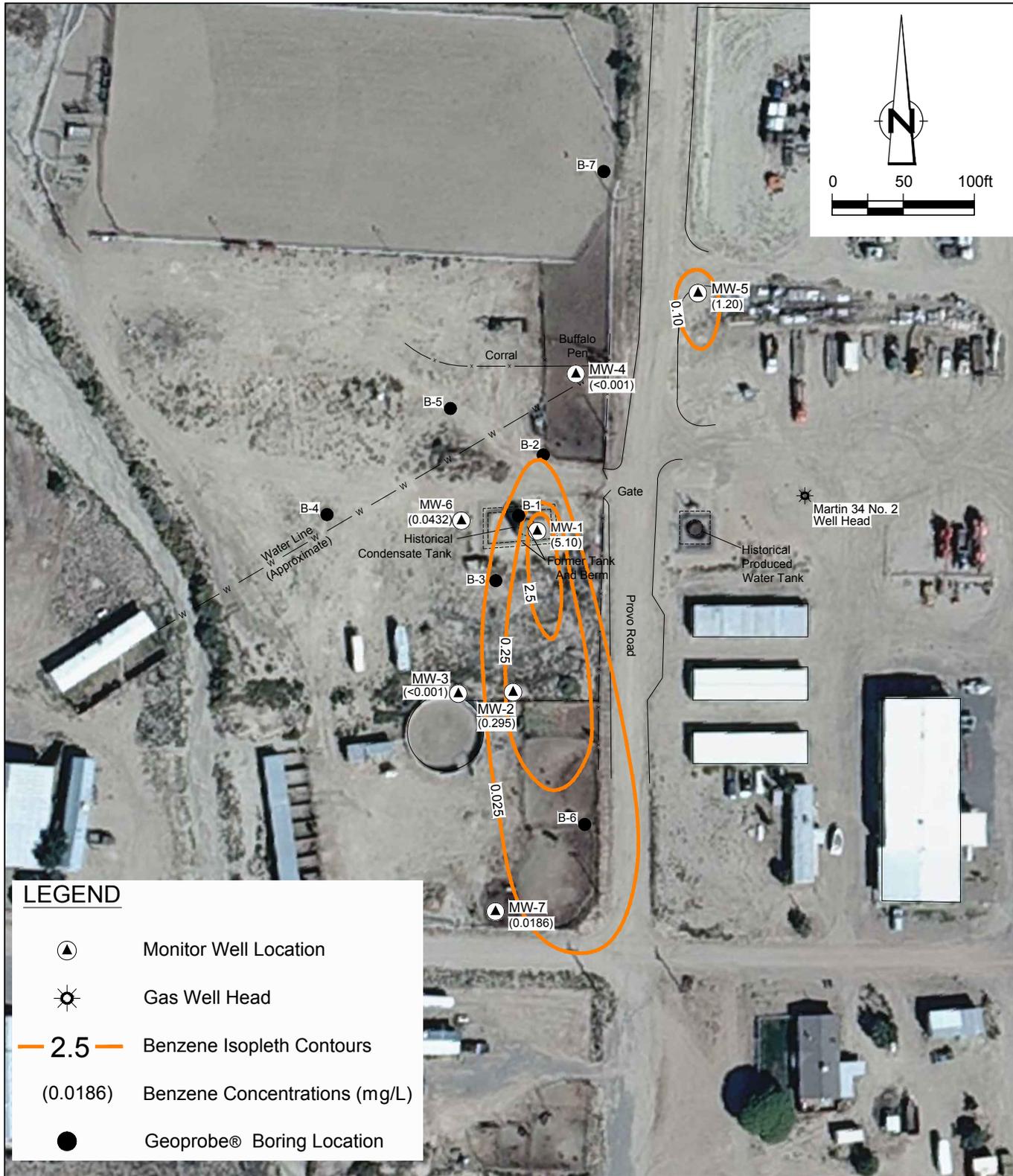
- Monitor Well Location
- Gas/Oil Well
- (46.35) Groundwater Elevation, Ft
- 46.0 — Groundwater Elevation Contour, Ft
- Groundwater Flow Direction
- Geoprobe® Boring Location

RE: NAIP Aerial Photograph

Figure 8

DECEMBER 2012 GROUNDWATER POTENTIOMETRIC SURFACE MAP  
 MARTIN 34 No. 2 GAS WELL REMEDIATION SITE  
 SAN JUAN COUNTY, NEW MEXICO  
*ConocoPhillips Company*



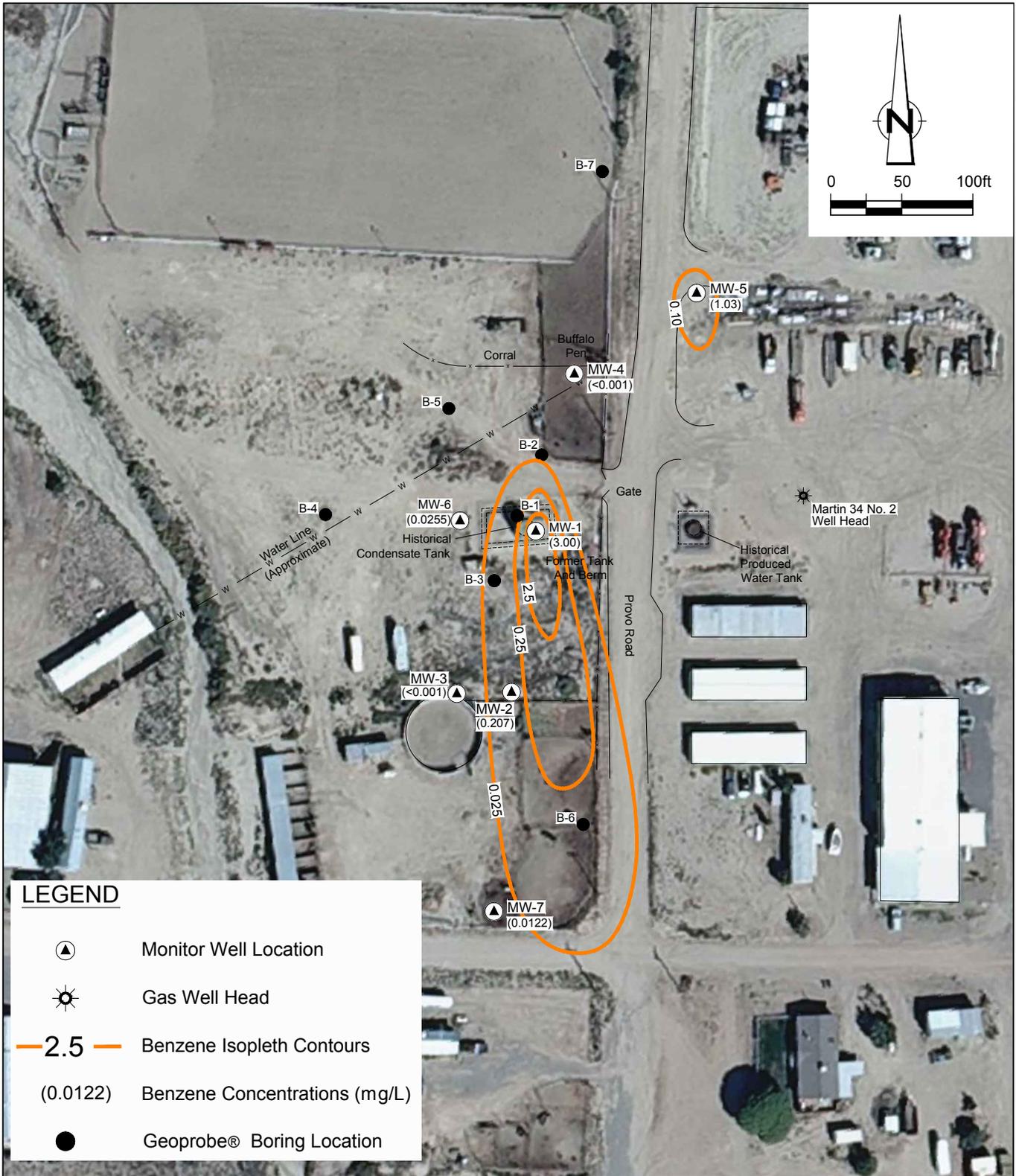


RE: NAIP Aerial Photograph

Figure 9

**MARCH 2012 BENZENE CONCENTRATION MAP**  
**MARTIN 34 No. 2 GAS WELL REMEDIATION SITE**  
**SAN JUAN COUNTY, NEW MEXICO**  
*ConocoPhillips Company*



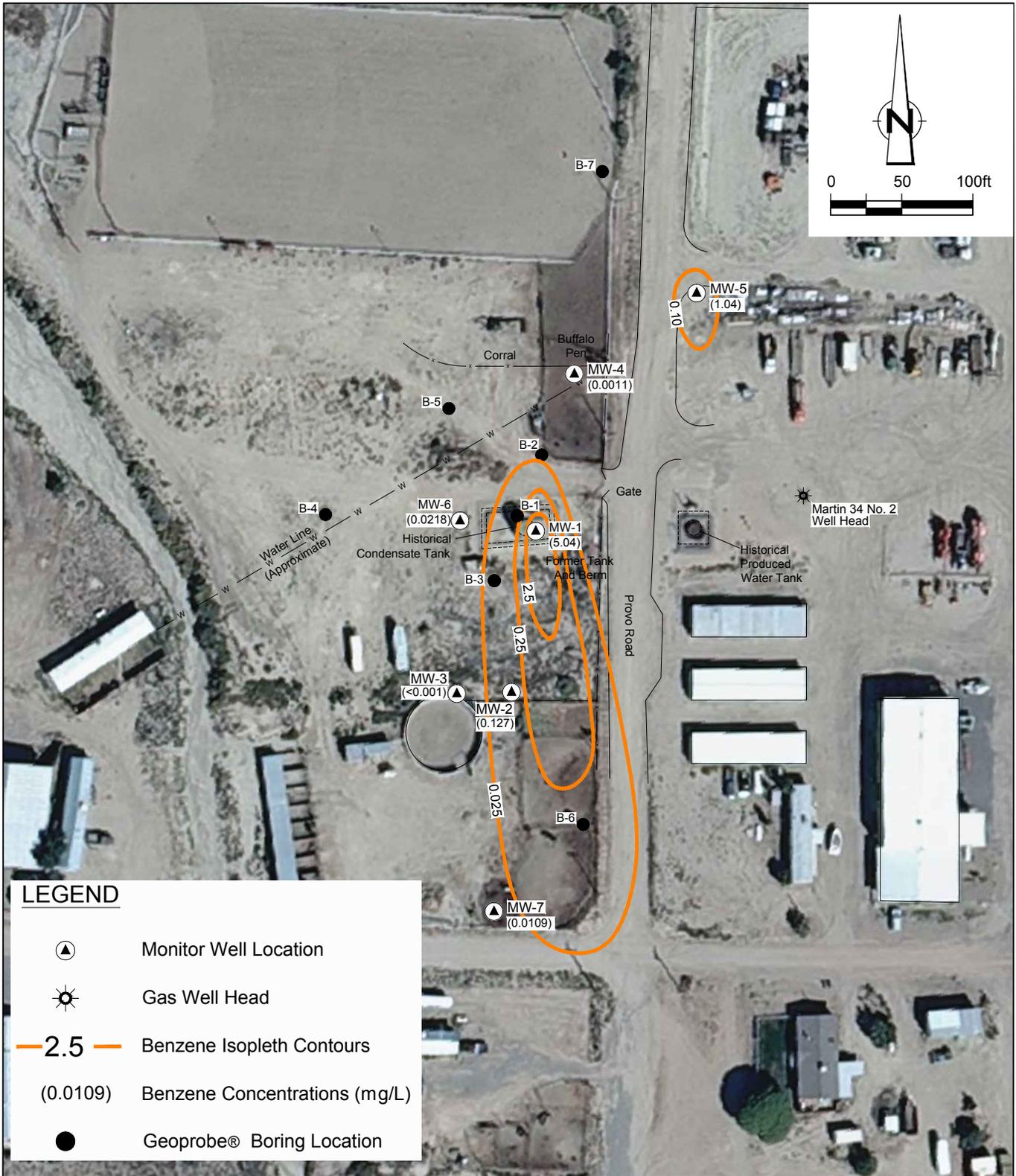


RE: NAIP Aerial Photograph

Figure 10

**JUNE 2012 BENZENE CONCENTRATION MAP  
MARTIN 34 No. 2 GAS WELL REMEDIATION SITE  
SAN JUAN COUNTY, NEW MEXICO**  
*ConocoPhillips Company*



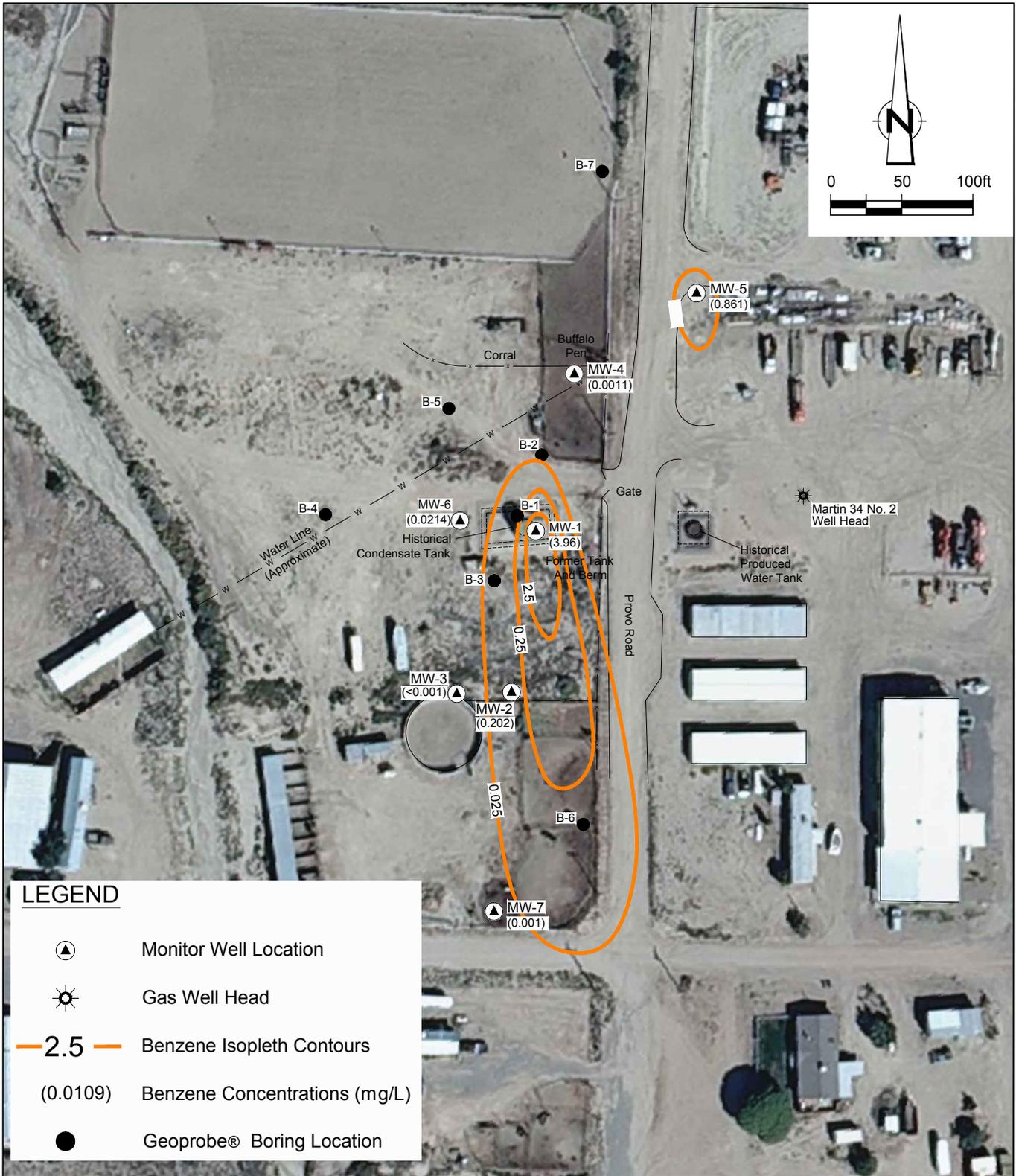


RE: NAIP Aerial Photograph

Figure 11

SEPTEMBER 2012 BENZENE CONCENTRATION MAP  
 MARTIN 34 No. 2 GAS WELL REMEDIATION SITE  
 SAN JUAN COUNTY, NEW MEXICO  
*ConocoPhillips Company*





**LEGEND**

- ▲ Monitor Well Location
- ☀ Gas Well Head
- 2.5 — Benzene Isopleth Contours
- (0.0109) Benzene Concentrations (mg/L)
- Geoprobe® Boring Location

RE: NAIP Aerial Photograph

Figure 12

DECEMBER 2012 BENZENE CONCENTRATION MAP  
 MARTIN 34 No. 2 GAS WELL REMEDIATION SITE  
 SAN JUAN COUNTY, NEW MEXICO  
*ConocoPhillips Company*





RE: NAIP Aerial Photograph

Figure 13

**PROPOSED UPGRADIENT MONITORING WELL LOCATION MAP  
MARTIN 34 No. 2 GAS WELL REMEDIATION SITE  
SAN JUAN COUNTY, NEW MEXICO  
ConocoPhillips Company**



## TABLES

**TABLE 1**  
**SITE HISTORY TIMELINE**  
**CONOCOPHILLIPS COMPANY**  
**MARTIN 34 No. 2**  
**SAN JUAN COUNTY, NM**

Date/Time Period	Event/Action	Description/Comments
December 3, 2010	Initial Site Assessment	ConocoPhillips removed the above ground production tank. The landowner subsequently discovered hydrocarbon-stained soil in the vicinity of the former tank while regrading the area. ConocoPhillips obtained samples of the soil following notification from the landowner.
December 6, 2010	Analytical Results	Laboratory analytical results from soil samples collected on December 3, 2010 revealed hydrocarbons in excess of regulatory standards.
January 12 through 24, 2011	Soil Excavation	Excavation of soil and confirmatory sampling was conducted in the location of the former production tank. Brandon Powell of the New Mexico Oil Conservation Division (NMOCD) requested on January 20 <sup>th</sup> that the excavation be continued to a depth of 30 feet below ground surface (bgs) from a depth of 25 feet bgs. Final excavation dimensions were approximately 60 ft long by 75 feet wide by 30 feet deep. Analytical results from the final round of confirmation sampling of the excavated area indicated that the north wall and both north and south bottom areas of the excavation still contained hydrocarbons in excess of regulatory standards. The lateral extent of the excavation to the north was reached due to the proximity of a roadway. Continued lateral and vertical delineation by means other than excavation would be necessary.
January 31, 2011	Backfilling of Excavation	Backfilling of the excavation began in preparation for delineation by means of soil boring.
February 16, 2011	Meeting between ConocoPhillips and Tetra Tech, Inc.	Tetra Tech, Inc.(Tetra Tech) and ConocoPhillips made a site visit to discuss delineation plans and to meet with the property owner.
March 1 through 2, 2011	Delineation of Impacts	Tetra Tech supervised the installation of three soil borings using a direct-push Geoprobe® rig. With the exception of the soil sample collected from 38-40 feet below ground surface (bgs) in the boring that was drilled in the area of the former tank, all laboratory soil samples collected were either below laboratory detection limits or below NMOCD recommended action levels. Groundwater was encountered in two borings, located upgradient and downgradient of the former tank, at approximately 40 feet bgs. The saturated interval in these two borings matched an interval that was damp, not wet, in the boring located in the area of the former tank. Groundwater samples collected from the two water-bearing borings exceeded the New Mexico Water Quality Control Commission (NMWQCC) standards for benzene and chloride.
July 18 through 22, 2011	Monitor Well Installation	Conestoga Rovers and Associates (CRA) supervised the installation of four groundwater monitor wells at the Site. Hydrocarbon impacts to soil accompanied by a change in color from light tan/gray to dark gray were encountered at approximately 50 feet bgs in MW-4, the upgradient monitor well and at approximately 38 feet bgs in monitor well MW-2, the downgradient monitor well. Elevated photo-ionization detector (PID) readings were present in Monitor Well MW-1, located in the area of the former tank, from excavation bottom to a saturated seam at approximately 40 feet bgs. Laboratory analytical results on soil samples collected from MW-1, MW-2, and MW-4 were found to contain TPH and BTEX above NMOCD recommended action levels.
July 27, 2011	Baseline Groundwater Monitoring	CRA conducted a baseline groundwater monitoring event for Monitor Wells MW-1 through MW-4. Laboratory analytical results were found to contain BTEX, dissolved iron, dissolved manganese, dissolved boron, chloride, fluoride, sulfate, total dissolved solids (TDS), and naphthalene in exceedance of NMWQCC standards.
September 30, 2011	Quarterly Groundwater Monitoring	CRA conducted quarterly groundwater sampling.
November 9 through November 10, 2011	Delineation of Impacts	JR Drilling, under CRA supervision, advanced four soil borings using a direct-push Geoprobe® rig to further delineate impacts.

**TABLE 1**  
**SITE HISTORY TIMELINE**  
**CONOCOPHILLIPS COMPANY**  
**MARTIN 34 No. 2**  
**SAN JUAN COUNTY, NM**

Date/Time Period	Event/Action	Description/Comments
November 28 through December 1, 2011	Monitor Well Installation	CRA supervised the installation of three groundwater monitor wells at the Site. Hydrocarbon impacts to soil were noted during field screening of soil from both MW-5 and MW-6 borings. Laboratory analytical results on soil samples collected from MW-6 were found to contain TPH and BTEX above NMOCD recommended action levels.
December 13, 2011	Quarterly Groundwater Monitoring	CRA conducted quarterly groundwater sampling.
March 8, 2012	Quarterly Groundwater Monitoring	CRA conducted quarterly groundwater sampling.
June 6, 2012	Quarterly Groundwater Monitoring	CRA conducted quarterly groundwater sampling.
September 25, 2012	Quarterly Groundwater Monitoring	CRA conducted quarterly groundwater sampling.
December 19, 2012	Quarterly Groundwater Monitoring	CRA conducted quarterly groundwater sampling.

TABLE 2

GROUNDWATER LABORATORY ANALYTICAL RESULTS SUMMARY  
CONOCOPHILLIPS COMPANY  
MARTIN 34 No. 2  
SAN JUAN COUNTY, NM

Well ID	Sample ID	Date	Sample Type	Benzene (mg/L)	Ethylbenzene (mg/L)	Toluene (mg/L)	Xylenes (total) (mg/L)	1,1,2-Tetrachloroethane (mg/L)	Methylene chloride (mg/L)	Naphthalene (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulfate (mg/L)	Boron (dissolved) (mg/L)	Iron (dissolved) (mg/L)	Manganese (dissolved) (mg/L)	Total Dissolved Solids (TDS) (mg/L)	
B-4	GW-075035-110911-B4	11/9/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.001	< 0.001	< 0.01	12.1	2.2	5610	0.96	< 0.05	0.134	7030	
B-5	GW-075035-110911-B5	11/9/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.001	0.0012	< 0.01	509	2.2	20500	0.977	< 0.05	5.03	26000	
MW-1	GW-075035-072711-CFM-003	7/27/2011	(orig)	4.46	0.782	13.3	7.85	< 0.5	0.667	< 5	--	--	--	--	--	--	--	
	GW-075035-093011-CM-009	9/30/2011	(orig)	4.47	0.772	9.48	8.33	< 0.02	< 0.02	< 0.2	287	< 2.0	13300	--	--	--	21000	
	GW-075036-121311-CB-MW-1	12/13/2011	(orig)	4.44	0.751	6.23	9.04	< 0.1	< 0.1	< 1.0	270	2.1	12300	1.12	8.94	4.17	20700	
	GW-075036-121311-CB-DUP	12/13/2011	(Duplicate)	4.31	0.812	4.98	9.57	--	--	--	--	--	--	--	--	--	--	--
	GW-075035-3812-CB-MW-1	3/8/2012	(orig)	5.10	0.669	2.49	9.08	< 0.1	< 0.1	< 1.0	--	--	--	1.10	7.34	3.48	--	
	GW-075035-060712-CB-MW-1	6/7/2012	(orig)	3.00	0.300	3.83	4.05	< 0.1	< 0.1	< 1.0	285	< 0.20	14100	1.00	5.98	2.09	25000	
	GW-075035-092512-CM-MW-1	9/25/2012	(orig)	5.040	0.626	1.660	8.850	< 0.1	< 0.1	0.0456	268	< 4.0	13100	--	--	--	24100	
GW-075035-122012-CM-MW-1	12/20/2012	(orig)	3.960	0.336	2.570	6.450	< 0.05	< 0.05	0.0012	301	< 0.20	15300	1.230	1.250	0.886	23100		
MW-2	GW-075035-072711-CFM-001	7/27/2011	(orig)	0.244	0.152	< 0.01	0.0814	0.0191	0.0165	< 0.112 / < 0.1	330	2.9	17100	1.09	3.46	2.71	26600	
	GW-075035-072711-CFM-002	7/27/2011	(Duplicate)	0.23	0.143	< 0.005	0.0784	0.0092	0.0096	0.0535	--	--	--	--	--	--	--	
	GW-075035-093011-CM-007	9/30/2011	(orig)	0.197	0.155	< 0.001	0.112	< 0.001	< 0.001	0.0727	328	< 2.0	19100	1.08	3.59	2.54	26000	
	GW-075035-093011-CM-010	9/30/2011	(Duplicate)	0.258	0.189	< 0.005	0.113	< 0.005	0.0144	0.0715	--	--	--	--	--	--	--	
	GW-075036-121311-CB-MW-2	12/13/2011	(orig)	0.249	0.199	0.0266	0.143	< 0.010	< 0.010	< 0.10	348	0.75	16800	1.12	4.16	2.280	26600	
	GW-075035-3812-CB-MW-2	3/8/2012	(orig)	0.295	0.221	< 0.005	0.0647	< 0.005	< 0.005	0.074	398	< 0.010	23200	0.922	< 0.050	3.76	30200	
	GW-075035-060712-CB-MW-2	6/6/2012	(orig)	0.207	0.219	< 0.005	0.0443	< 0.005	< 0.005	0.0238	400	< 0.2	26100	0.847	4.79	3.88	28000	
	GW-075035-092512-CM-MW-2	9/25/2012	(orig)	0.127	0.161	< 0.005	0.0408	< 0.005	0.0076	0.0583	382	< 4.0	19900	1.020	0.913	2.30	31100	
	GW-075035-092512-CM-DUP	9/25/2012	(Duplicate)	0.142	0.181	< 0.02	0.0356	--	--	--	--	--	--	--	--	--	--	
	GW-075035-121912-CM-MW-2	12/19/2012	(orig)	0.202	0.281	< 0.005	0.081	< 0.005	< 0.005	< 0.0005	423	< 0.2	22300	1.040	1.200	1.980	33200	
MW-3	GW-075035-072711-CFM-005	7/27/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.001	< 0.001	< 0.01 / < 0.0128	437	2.7	17600	0.976	0.495	1.1	29200	
	GW-075035-093011-CM-006	9/30/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.001	< 0.001	< 0.01	399	< 2.0	19500	0.914	< 0.05	3.74	26800	
	GW-075036-121311-CB-MW-3	12/13/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.001	< 0.001	< 0.01	375	< 0.20	17100	0.997	1.02	0.776	27500	
	GW-075035-3812-CB-MW-3	3/8/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.001	< 0.001	< 0.01	456	< 10	21500	0.962	4.75	4.47	30500	
	GW-075035-060712-CB-MW-3	6/7/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.001	< 0.001	< 0.01	431	< 0.20	23300	0.889	< 0.05	2.02	34100	
	GW-075035-092512-CM-MW-3	9/25/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.001	< 0.001	< 0.01	468	< 4.0	18900	0.986	< 0.05	0.497	30000	
	GW-075035-121912-CM-MW-3	12/19/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.001	< 0.001	< 0.0005	458	< 0.2	21400	1.030	0.152	0.547	30600	
MW-4	GW-075035-072711-CFM-004	7/27/2011	(orig)	0.0021	0.0055	0.0054	0.0705	0.0019	< 0.001	< 0.0111 / < 0.01	435	4.3	25200	0.638	0.677	10.5	40200	
	GW-075035-093011-CM-008	9/30/2011	(orig)	0.0027	0.0037	0.0014	0.0815	< 0.001	< 0.001	< 0.01	449	2.8	27400	0.664	1.13	10.8	37200	
	GW-075036-121311-CB-MW-4	12/13/2011	(orig)	0.0024	< 0.001	< 0.001	0.0099	< 0.001	< 0.001	< 0.01	344	< 0.20	26900	0.651	1.43	8.50	40700	
	GW-075035-3812-CB-MW-4	3/8/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.001	< 0.001	< 0.01	377	< 10	30200	0.554	1.04	8.28	38400	
	GW-075035-060712-CB-MW-4	6/7/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.001	< 0.001	< 0.01	378	1.4	28400	0.558	0.983	5.25	40300	
	GW-075035-092512-CM-MW-4	9/25/2012	(orig)	0.0011	< 0.001	< 0.001	< 0.003	< 0.001	< 0.001	< 0.01	347	5.8	25600	0.704	1.020	5.170	38900	
	GW-075035-121912-CM-MW-4	12/19/2012	(orig)	0.0011	< 0.001	< 0.001	< 0.003	< 0.001	< 0.001	< 0.0005	397	< 0.2	28500	0.808	0.782	4.840	36400	
MW-5	GW-075036-121311-CB-MW-5	12/13/2011	(orig)	0.195	0.0027	< 0.001	0.0081	< 0.001	< 0.001	< 0.01	--	--	--	--	--	--	--	
	GW-075035-3812-CB-MW-5	3/8/2012	(orig)	1.20	0.0628	< 0.001	0.0613	< 0.001	< 0.001	< 0.01	187	< 4.0	5810	--	--	--	8520	
	GW-075035-060712-CB-MW-5	6/7/2012	(orig)	1.03	< 0.02	< 0.02	< 0.06	< 0.02	< 0.02	< 0.2	219	0.69	8010	--	--	--	13900	
	GW-075035-092512-CM-MW-5	9/25/2012	(orig)	1.040	0.772	< 0.02	< 0.06	< 0.02	0.0289	< 0.2	202	< 4.0	6800	--	--	--	11600	
	GW-075035-121912-CM-MW-5	12/19/2012	(orig)	0.861	0.0436	< 0.02	< 0.06	< 0.02	< 0.02	< 0.0005	230	< 0.2	7090	1.550	2.150	1.060	12000	
MW-6	GW-075036-121311-CB-MW-6	12/13/2011	(orig)	0.0247	0.191	< 0.005	2.650	< 0.005	< 0.005	< 0.05	288	< 0.20	24900	0.681	4.10	2.93	37800	
	GW-075035-3812-CB-MW-6	3/8/2012	(orig)	0.0432	0.190	< 0.01	3.32	< 0.01	< 0.01	< 0.10	369	< 10	31600	0.622	< 0.05	2.53	37500	
	GW-075035-3812-CB-DUP	3/8/2012	(Duplicate)	< 0.050	0.199	< 0.05	3.61	< 0.05	< 0.05	< 0.5	--	--	--	--	--	--	--	
	GW-075035-060712-CB-MW-6	6/7/2012	(orig)	0.0255	0.181	< 0.01	3.16	< 0.01	< 0.01	0.034	326	0.84	26800	0.572	< 0.05	2.01	40600	
	GW-075035-060712-CB-DUP	6/7/2012	(Duplicate)	0.0247	0.178	< 0.005	3.22	< 0.005	< 0.005	< 0.05	--	--	--	--	--	--	--	
	GW-075035-092512-CM-MW-6	9/25/2012	(orig)	0.0218	0.166	< 0.01	2.92	< 0.01	< 0.01	0.0237	345	< 4.0	25500	0.656	< 0.05	2.190	37800	
MW-7	GW-075035-121912-CM-MW-6	12/19/2012	(orig)	0.0214	0.180	< 0.01	3.30	< 0.01	< 0.01	0.0223	392	< 0.2	27300	0.687	< 0.1	2.340	34600	
	GW-075035-121912-CM-DUP	12/19/2012	(Duplicate)	0.0219	0.198	< 0.01	3.53	--	--	--	--	--	--	--	--	--	--	
	GW-075036-121311-CB-MW-7	12/13/2011	(orig)	0.0196	0.351	< 0.001	0.0405	< 0.001	< 0.001	0.0329	269	1.5	17800	0.772	0.076	2.28	21400	
	GW-075035-3812-CB-MW-7	3/8/2012	(orig)	0.0186	0.357	< 0.005	0.015	< 0.005	< 0.005	< 0.05	307	< 4.0	20600	0.840	0.612	4.05	28400	
MW-7	GW-075035-060712-CB-MW-7	6/7/2012	(orig)	0.0122	0.333	< 0.005	0.015	< 0.005	< 0.005	< 0.05	300	< 0.20	25900	0.824	0.866	3.14	35700	
	GW-075035-092512-CM-MW-7	9/25/2012	(orig)	0.0109	0.426	< 0.005	0.015	< 0.005	0.0061	266	< 4.0	19500	0.895	1.250	4.080	30500		
	GW-075035-121912-CM-MW-7	12/19/2012	(orig)	0.001	0.0397	< 0.001	< 0.003	< 0.001	< 0.001	< 0.0005	124	0.84	10300	0.803	0.779	2.420	13800	
NMWQCC Groundwater Quality Standards				0.01	0.75	0.75	0.62	0.01	0.1	0.03	250	1.6	600	0.75	1	0.2	1000	

## Notes:

NMWQCC = New Mexico Water Quality Control Commission

mg/L = milligrams per liter (parts per million)

&lt;0.001 = Below laboratory detection limit of 0.001 mg/L

Bold = concentrations that exceed the NMWQCC groundwater quality standard

TABLE 3

**MONITOR WELL SPECIFICATIONS AND GROUNDWATER ELEVATION SUMMARY  
CONOCOPHILLIPS COMPANY  
MARTIN 34 No. 2  
SAN JUAN COUNTY, NM**

Well ID	Total Depth 2" PVC Casing (ft bgs)	0.010" Slot Screen Interval (ft bgs)	TOC Elevation* (ft)	Date Measured	Depth to Groundwater (ft below TOC)	Relative Groundwater Elevation
MW-1	41	31 - 41	93.09	7/27/2011	40.45	52.64
				9/30/2011	40.23	52.86
			93.28	12/13/2011	39.23	54.05
				3/7/2012	39.09	54.19
				6/6/2012	39.12	54.16
				9/24/2012	39.30	53.98
12/19/2012	39.11	54.17				
MW-2	41.5	31.5 - 41.5	87.45	7/27/2011	37.68	49.77
				9/30/2011	37.68	49.77
			87.59	12/13/2011	37.51	50.08
				3/7/2012	37.36	50.23
				6/6/2012	35.46**	52.13**
				9/24/2012	37.60	49.99
12/19/2012	37.28	50.31				
MW-3	46	31 - 46	87.19	7/27/2011	36.95	50.24
				9/30/2011	36.98	50.21
			87.32	12/13/2011	36.70	50.62
				3/7/2012	36.57	50.75
				6/6/2012	36.67	50.65
				9/24/2012	36.80	50.52
12/19/2012	36.48	50.84				
MW-4	53	38 - 53	99.63	7/27/2011	44.37	55.26
				9/30/2011	44.40	55.23
			99.82	12/13/2011	44.18	55.64
				3/7/2012	44.09	55.73
				6/6/2012	44.09	55.73
				9/24/2012	44.25	55.57
12/19/2012	44.16	55.66				
MW-5	48.5	38.5 - 48.5	98.27	12/13/2011	47.61	50.66
				3/7/2012	45.61	52.66
				6/6/2012	44.60	53.67
				9/24/2012	44.60	53.67
				12/19/2012	45.43	52.84

TABLE 3

**MONITOR WELL SPECIFICATIONS AND GROUNDWATER ELEVATION SUMMARY  
CONOCOPHILLIPS COMPANY  
MARTIN 34 No. 2  
SAN JUAN COUNTY, NM**

Well ID	Total Depth 2" PVC Casing (ft bgs)	0.010" Slot Screen Interval (ft bgs)	TOC Elevation* (ft)	Date Measured	Depth to Groundwater (ft below TOC)	Relative Groundwater Elevation
MW-6	59.0	44-59	94.8	12/13/2011	41.01	53.79
				3/7/2012	40.91	53.89
				6/6/2012	41.00	53.80
				9/24/2012	41.07	53.73
				12/19/2012	40.87	53.93
MW-7	51.5	36.5-51.5	86.49	12/13/2011	40.49	46.00
				3/7/2012	40.33	46.16
				6/6/2012	40.37	46.12
				9/24/2012	40.45	46.04
				12/19/2012	40.14	46.35

ft = Feet

TOC = Top of casing

bgs = below ground surface

\* Elevation relative to an arbitrary reference elevation of 100 feet

\*\* Anomalous data point

APPENDIX A

GROUNDWATER SAMPLING FIELD FORMS

# WELL SAMPLING FIELD INFORMATION FORM

WELL/PROJECT NAME: Martin 3A No. 2

JOB# 075035

SAMPLE ID: GW-075035-2812-LB-MW-1

WELL# MW-1

### WELL PURGING INFORMATION

3.7.12  
PURGE DATE  
(MM DD YY)

3.8.12  
SAMPLE DATE  
(MM DD YY)

1040  
SAMPLE TIME  
(24 HOUR)

0.46  
WATER VOL. IN CASING  
(GALLONS)

1.0\*  
ACTUAL VOL. PURGED  
(GALLONS)

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

### FIELD MEASUREMENTS

DEPTH TO WATER	<u>39.09</u>	(feet)	WELL ELEVATION	<u>93.28</u>	(feet)
WELL DEPTH	<u>40.05</u>	(feet)	GROUNDWATER ELEVATION	<u>54.05</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: slightly cloudy ODOR: hydrocarbon COLOR: gray SHEEN Y/ N

WEATHER CONDITIONS: TEMPERATURE ~45° WINDY Y/ N PRECIPITATION Y/ N (IF Y TYPE) \_\_\_\_\_

SPECIFIC COMMENTS: .96 x .110 = .153 x 3 = 0.46

\*well bailed dry on 3.7.12.  
Insufficient water present for param field parameters

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

3.8.12  
DATE

Jason Ploss  
PRINT

[Signature]  
SIGNATURE

# WELL SAMPLING FIELD INFORMATION FORM

TE/PROJECT NAME: Martin 39 No. 2

JOB# 075034

SAMPLE ID: GW-075034-3812' LB MW-2

WELL# MW-2

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

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

### FIELD MEASUREMENTS

DEPTH TO WATER	<input type="text" value="37.36"/>	(feet)	WELL ELEVATION	<input type="text" value="87.59"/>	(feet)
WELL DEPTH	<input type="text" value="40.62"/>	(feet)	GROUNDWATER ELEVATION	<input type="text" value="50.23"/>	(feet)
TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
<input type="text" value="15.48"/> (°C)	<input type="text" value="7.38"/> (std)	<input type="text" value="18.22"/> (g/L)	<input type="text" value="22935"/> (µS/cm)	<input type="text" value="-163.6"/> (mV)	<input type="text" value="0.75"/> (gal)
<input type="text" value="15.70"/> (°C)	<input type="text" value="7.40"/> (std)	<input type="text" value="17.92"/> (g/L)	<input type="text" value="22694"/> (µS/cm)	<input type="text" value="-190.8"/> (mV)	<input type="text" value="1.0"/> (gal)
<input type="text" value="15.72"/> (°C)	<input type="text" value="7.51"/> (std)	<input type="text" value="17.78"/> (g/L)	<input type="text" value="22515"/> (µS/cm)	<input type="text" value="-205.8"/> (mV)	<input type="text" value="1.25"/> (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: black particles    
 ODOR: yes - H<sub>2</sub>O    
 COLOR: black    
 SHEEN Y/N: slight

WEATHER CONDITIONS:    
 TEMPERATURE: 35    
 WINDY Y/N: N    
 PRECIPITATION Y/N (IF Y TYPE): N

SPECIFIC COMMENTS:

8.94.12 = 1.43 FA-29

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

DATE 3.8.12

PRINT Cassie Brown

SIGNATURE (Signature)

# WELL SAMPLING FIELD INFORMATION FORM

**FE/PROJECT NAME:** Martin 3A No. 2      **JOB#** 075035  
**SAMPLE ID:** GW-075035-3812-CB-MWA      **WELL#** MW-3

**WELL PURGING INFORMATION**

3.8.12      3.8.12      1045      1.43      4.5  
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  Y      N      SAMPLING EQUIPMENT.....DEDICATED  Y      N  
(CIRCLE ONE)      (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) _____
PURGING MATERIAL	<u>E</u>	C - BLADDER PUMP	F - DIPPER BOTTLE	X - OTHER	SAMPLING DEVICE OTHER (SPECIFY) _____
SAMPLING MATERIAL	<u>E</u>	A - TEFLON	D - PVC		X= _____
PURGE TUBING	<u>C</u>	B - STAINLESS STEEL	E - POLYETHYLENE		PURGING MATERIAL OTHER (SPECIFY) _____
SAMPLING TUBING	<u>C</u>	C - POLYPROPYLENE	X - OTHER		X= _____
FILTERING DEVICES 0.45	<u>A</u>	A - IN-LINE DISPOSABLE	B - PRESSURE	C - VACUUM	SAMPLING MATERIAL OTHER (SPECIFY) _____

**FIELD MEASUREMENTS**

DEPTH TO WATER	<u>36.57</u>	(feet)	WELL ELEVATION	<u>87.32</u>	(feet)
WELL DEPTH	<u>45.51</u>	(feet)	GROUNDWATER ELEVATION	<u>50.75</u>	(feet)

TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
<u>14.42</u> (°C)	<u>7.39</u> (std)	<u>17.77</u> (g/L)	<u>21802</u> (µS/cm)	<u>-31.3</u> (mV)	<u>3.5</u> (gal)
<u>14.91</u> (°C)	<u>7.46</u> (std)	<u>17.60</u> (g/L)	<u>21913</u> (µS/cm)	<u>-17.1</u> (mV)	<u>4.0</u> (gal)
<u>15.06</u> (°C)	<u>7.57</u> (std)	<u>17.63</u> (g/L)	<u>21997</u> (µS/cm)	<u>1.0</u> (mV)	<u>4.5</u> (gal)

**FIELD COMMENTS**

SAMPLE APPEARANCE: silty/cloudy      ODOR: None      COLOR: H. brown      SHEEN Y/N: No  
 WEATHER CONDITIONS:      TEMPERATURE: AO      WINDY Y/N: N      PRECIPITATION Y/N (IF Y TYPE): N

SPECIFIC COMMENTS:

3.24 - 0.98 = 1.51  
1.43 x 3.2 = 4.58

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CWA PROTOCOLS  
3.8.12      Cassie Brown      Cassie Brown  
DATE      PRINT      SIGNATURE

# WELL SAMPLING FIELD INFORMATION FORM

TE/PROJECT NAME: Martin 3A No. 2

JOB# 075035

SAMPLE ID: GW-075035-3812-1B-MW-A

WELL# MW-A

### WELL PURGING INFORMATION

3.8.12  
PURGE DATE  
(MM DD YY)

3.8.12  
SAMPLE DATE  
(MM DD YY)

1200  
SAMPLE TIME  
(24 HOUR)

1.81  
WATER VOL. IN CASING  
(GALLONS)

5.5  
ACTUAL VOL. PURGED  
(GALLONS)

### PURGING AND SAMPLING EQUIPMENT

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

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

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

### FIELD MEASUREMENTS

DEPTH TO WATER 44.09 (feet)      WELL ELEVATION 99.82 (feet)  
WELL DEPTH 55.42 (feet)      GROUNDWATER ELEVATION 55.73 (feet)

TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
<u>14.42</u> (°C)	<u>7.39</u> (std)	<u>17.77</u> (g/L)	<u>21802</u> (µS/cm)	<u>-31.3</u> (mV)	<u>3.5</u> (gal)
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	<u>4.6</u> (gal)
<u>15.91</u> (°C)	<u>7.86</u> (std)	<u>22.06</u> (g/L)	<u>28054</u> (µS/cm)	<u>-260.7</u> (mV)	<u>4.5</u> (gal)
<u>15.90</u> (°C)	<u>7.85</u> (std)	<u>21.87</u> (g/L)	<u>27807</u> (µS/cm)	<u>-247.5</u> (mV)	<u>5.0</u> (gal)
<u>15.96</u> (°C)	<u>7.88</u> (std)	<u>21.80</u> (g/L)	<u>27764</u> (µS/cm)	<u>-242.9</u> (mV)	<u>5.5</u> (gal)

### FIELD COMMENTS

SAMPLE APPEARANCE: still cloudy      ODOR: none      COLOR: lt. brown      SHEEN Y/N: N  
WEATHER CONDITIONS: TEMPERATURE 40      WINDY Y/N: N      PRECIPITATION Y/N (IF Y TYPE): N

SPECIFIC COMMENTS:

11.33.110 - 1.81 x 3 = 5.43

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

3.8.12  
DATE

Cassie Brown  
PRINT

Cassie Brown  
SIGNATURE

# WELL SAMPLING FIELD INFORMATION FORM

WELL/PROJECT NAME: Martin 34 No. 2

JOB# 075035

SAMPLE ID: LW-075035-2812-CB-MW-5

WELL# MW-5

### WELL PURGING INFORMATION

3.8.12  
PURGE DATE  
(MM DD YY)

3.8.12  
SAMPLE DATE  
(MM DD YY)

1240  
SAMPLE TIME  
(24 HOUR)

0.25  
WATER VOL. IN CASING  
(GALLONS)

0.3  
ACTUAL VOL. PURGED  
(GALLONS)

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

### FIELD MEASUREMENTS

DEPTH TO WATER	<u>45.61</u>	(feet)	WELL ELEVATION	<u>98.27</u>	(feet)
WELL DEPTH	<u>47.19</u>	(feet)	GROUNDWATER ELEVATION	<u>52.66</u>	(feet)
TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
<u>15.93</u> (°C)	<u>7.58</u> (std)	<u>7.365</u> (g/L)	<u>9364</u> (µS/cm)	<u>-231.2</u> (mV)	<u>.25</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: clear      ODOR: None      COLOR: clear      SHEEN  Y  N

WEATHER CONDITIONS: TEMPERATURE -50°      WINDY  Y  N      PRECIPITATION  Y  N (IF Y TYPE) \_\_\_\_\_

SPECIFIC COMMENTS: \_\_\_\_\_

1.58x.16 = .25x3 = .75

8 Purged 0.75 gallons on 3.7.12. If did not appear that well would bail dry. Picked 20.3 gallons on 3.8.12 before well bailed down to <3" water. Collected VOC samples.

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

3.8.12  
DATE

Jason Flow  
PRINT

[Signature]  
SIGNATURE

# WELL SAMPLING FIELD INFORMATION FORM

**WELL/PROJECT NAME:** Martin 3A No. 2      **JOB#** 075035  
**SAMPLE ID:** LW 075035 3812 CB MW 6      **WELL#** MW 6

**WELL PURGING INFORMATION**

3.8.12      3.8.12      1140      2.72      8.5  
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  Y  N      SAMPLING EQUIPMENT.....DEDICATED  Y  N  
(CIRCLE ONE)      (CIRCLE ONE)

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

### FIELD MEASUREMENTS

DEPTH TO WATER	<u>40.91</u>	(feet)	WELL ELEVATION	<u>94.80</u>	(feet)
WELL DEPTH	<u>57.94</u>	(feet)	GROUNDWATER ELEVATION	<u>53.89</u>	(feet)

TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
<u>15.73</u> (°C)	<u>8.04</u> (std)	<u>21.33</u> (g/L)	<u>27007</u> (µS/cm)	<u>-378.8</u> (mV)	<u>7.50</u> (gal)
<u>15.76</u> (°C)	<u>8.04</u> (std)	<u>21.34</u> (g/L)	<u>27034</u> (µS/cm)	<u>-379.3</u> (mV)	<u>8.00</u> (gal)
<u>15.84</u> (°C)	<u>7.96</u> (std)	<u>21.25</u> (g/L)	<u>27099</u> (µS/cm)	<u>-383.8</u> (mV)	<u>8.50</u> (gal)
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	_____ (gal)
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	_____ (gal)

### FIELD COMMENTS

SAMPLE APPEARANCE: black      ODOR: hydrocarbon      COLOR: black      SHEEN  Y  N spitty, discontinuous  
 WEATHER CONDITIONS:      TEMPERATURE ~45      WINDY  Y  N      PRECIPITATION  Y  N (IF Y TYPE) \_\_\_\_\_  
 SPECIFIC COMMENTS: 17.03 x 1.0 = 2.72 x 3 = 8.17  
Dep @ 1145

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS  
3.8.12      Jessie Moss      \_\_\_\_\_  
DATE      PRINT      SIGNATURE

# WELL SAMPLING FIELD INFORMATION FORM

TE/PROJECT NAME: Martin 39 No. 2

JOB# 075035

SAMPLE ID: GW-075035-2812-CB-MWT

WELL# MWT

### WELL PURGING INFORMATION

3-8-12  
PURGE DATE  
(MM DD YY)

3-8-12  
SAMPLE DATE  
(MM DD YY)

0955  
SAMPLE TIME  
(24 HOUR)

1.86  
WATER VOL. IN CASING  
(GALLONS)

6.0  
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	D - GAS LIFT PUMP	G - BAILER	X= _____ PURGING DEVICE OTHER (SPECIFY)
		B - PERISTALTIC PUMP	E - PURGE PUMP	H - WATERRA®	
SAMPLING DEVICE	<input checked="" type="checkbox"/>	C - BLADDER PUMP	F - DIPPER BOTTLE	X - OTHER	X= _____ SAMPLING DEVICE OTHER (SPECIFY)
PURGING MATERIAL	<input checked="" type="checkbox"/>	A - TEFLON	D - PVC		X= _____ PURGING MATERIAL OTHER (SPECIFY)
		B - STAINLESS STEEL	E - POLYETHYLENE		
SAMPLING MATERIAL	<input checked="" type="checkbox"/>	C - POLYPROPYLENE	X - OTHER		X= _____ SAMPLING MATERIAL OTHER (SPECIFY)
PURGE TUBING	<input checked="" type="checkbox"/>	A - TEFLON	D - POLYPROPYLENE	G - COMBINATION TEFLON/POLYPROPYLENE	X= _____ PURGE TUBING OTHER (SPECIFY)
		B - TYGON	E - POLYETHYLENE		
SAMPLING TUBING	<input checked="" type="checkbox"/>	C - ROPE	F - SILICONE	X - OTHER	X= _____ SAMPLING TUBING OTHER (SPECIFY)
FILTERING DEVICES 0.45	<input checked="" type="checkbox"/>	A - IN-LINE DISPOSABLE	B - PRESSURE	C - VACUUM	

### FIELD MEASUREMENTS

DEPTH TO WATER	<u>40.33</u>	(feet)	WELL ELEVATION	<u>86.49</u>	(feet)
WELL DEPTH	<u>51.47</u>	(feet)	GROUNDWATER ELEVATION	<u>46.16</u>	(feet)
TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
<u>15.27</u> (°C)	<u>7.49</u> (std)	<u>14.28</u> (g/L)	<u>17882</u> (µS/cm)	<u>-87.6</u> (mV)	<u>5.0</u> (gal)
<u>15.34</u> (°C)	<u>7.38</u> (std)	<u>16.15</u> (g/L)	<u>20276</u> (µS/cm)	<u>-87.9</u> (mV)	<u>5.5</u> (gal)
<u>15.39</u> (°C)	<u>7.34</u> (std)	<u>16.63</u> (g/L)	<u>20872</u> (µS/cm)	<u>-79.3</u> (mV)	<u>6.0</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: tan    SHEEN Y/ N

WEATHER CONDITIONS:    TEMPERATURE ~40°    WINDY Y/ N    PRECIPITATION Y/ N (IF Y TYPE) \_\_\_\_\_

SPECIFIC COMMENTS:  
11.204 x 16 = 1.86 x 3 = 5.58

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

3-8-12  
DATE

Jason Hoss  
PRINT

[Signature]  
SIGNATURE

# WELL SAMPLING FIELD INFORMATION FORM

TE/PROJECT NAME: Martin 34 No 2 JOB# 075035  
 SAMPLE ID: GW-075035-060712-CB-MW-1 WELL# MW-1

**WELL PURGING INFORMATION**

6.6.12 PURGE DATE (MM DD YY)      6.7.12 SAMPLE DATE (MM DD YY)      1500 SAMPLE TIME (24 HOUR)      0.36 WATER VOL. IN CASING (GALLONS)      0.8 \* ACTUAL VOL. PURGED (GALLONS)

**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= _____
		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      A A - IN-LINE DISPOSABLE      B - PRESSURE      C - VACUUM

**FIELD MEASUREMENTS**

DEPTH TO WATER 39.12 (feet)      WELL ELEVATION 93.28 (feet)  
 WELL DEPTH 41.36 (feet)      GROUNDWATER ELEVATION 54.16 (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: slightly cloudy      ODOR: hydrocarbon      COLOR: slight gray      SHEEN Y/N N  
 WEATHER CONDITIONS: TEMPERATURE ~90°      WINDY Y/N N      PRECIPITATION Y/N (IF Y TYPE) N

SPECIFIC COMMENTS:  
1.00 \*BAILED DRY @ 0.8 GAL

No Field Parameters collected due to low volume in well.

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

6.7.12  
DATE

Jason Hess  
PRINT

[Signature]  
SIGNATURE

16 x 3

# WELL SAMPLING FIELD INFORMATION FORM

TE/PROJECT NAME: Marlin 34 No. 2

JOB# 075035

SAMPLE ID: GW-075035-060612-EB-MW-2

WELL# MW-2

### WELL PURGING INFORMATION

<u>6.6.12</u>	<u>6.6.12</u>	<u>1830</u>	<u>190</u>	<u>3.5</u>
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	<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 A A - IN-LINE DISPOSABLE      B - PRESSURE      C - VACUUM

### FIELD MEASUREMENTS

DEPTH TO WATER	<u>35.46</u>	(feet)	WELL ELEVATION	<u>87.59</u>	(feet)
WELL DEPTH	<u>41.06</u>	(feet)	GROUNDWATER ELEVATION	<u>52.13</u>	(feet)

TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
<u>16.29</u> (°C)	<u>7.92</u> (std)	<u>17.82</u> (g/L)	<u>22851</u> (µS/cm)	<u>-285.5</u> (mV)	<u>7.5</u> (gal)
<u>16.18</u> (°C)	<u>7.72</u> (std)	<u>17.62</u> (g/L)	<u>22544</u> (µS/cm)	<u>-291.7</u> (mV)	<u>3.0</u> (gal)
<u>16.12</u> (°C)	<u>7.69</u> (std)	<u>17.51</u> (g/L)	<u>22365</u> (µS/cm)	<u>-286.9</u> (mV)	<u>3.5</u> (gal)

### FIELD COMMENTS

SAMPLE APPEARANCE: black      ODOR: hydrocarbon      COLOR: black      SHEEN Y/ N

WEATHER CONDITIONS: TEMPERATURE 80°      WINDY Y/ N      PRECIPITATION Y/ N (IF Y TYPE) \_\_\_\_\_

SPECIFIC COMMENTS: 2.6A

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

6.6.12  
DATE

Jason Floss  
PRINT

[Signature]  
SIGNATURE

# WELL SAMPLING FIELD INFORMATION FORM

TE/PROJECT NAME: Marlin 34 No. 2 JOB# 075035  
 SAMPLE ID: GL-075035-060712-CB-MW-3 WELL# MW-3

**WELL PURGING INFORMATION**

PURGE DATE (MM DD YY) 6-7-12 SAMPLE DATE (MM DD YY) 6-7-12 SAMPLE TIME (24 HOUR) 1400 WATER VOL. IN CASING (GALLONS) 1.5 ACTUAL VOL. PURGED (GALLONS) 4.5

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

**FIELD MEASUREMENTS**

DEPTH TO WATER 36.67 (feet) WELL ELEVATION 87.32 (feet)  
 WELL DEPTH 46.05 (feet) GROUNDWATER ELEVATION 50.65 (feet)

TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
<u>15.99</u> (°C)	<u>7.55</u> (std)	<u>18.20</u> (g/L)	<u>23167</u> (µS/cm)	<u>-7.8</u> (mV)	<u>3.5</u> (gal)
<u>16.16</u> (°C)	<u>7.63</u> (std)	<u>18.20</u> (g/L)	<u>23272</u> (µS/cm)	<u>6.5</u> (mV)	<u>4.0</u> (gal)
<u>16.30</u> (°C)	<u>7.66</u> (std)	<u>18.34</u> (g/L)	<u>23553</u> (µS/cm)	<u>10.5</u> (mV)	<u>4.8</u> (gal)
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	_____ (gal)
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	_____ (gal)

**FIELD COMMENTS**

SAMPLE APPEARANCE: cloudy ODOR: None COLOR: milky brown SHEEN Y/ N \_\_\_\_\_  
 WEATHER CONDITIONS: TEMPERATURE ~90° WINDY Y/ N \_\_\_\_\_ PRECIPITATION Y/ N (IF Y TYPE) \_\_\_\_\_  
 SPECIFIC COMMENTS: 4.5

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

6-7-12 DATE Jason Ploss PRINT [Signature] SIGNATURE

# WELL SAMPLING FIELD INFORMATION FORM

**WELL/PROJECT NAME:** Marlin 34 No. 2      **JOB#** 075035  
**SAMPLE ID:** GW-075035-070612-CB-MW-4      **WELL#** MW-4

### WELL PURGING INFORMATION

16.7.12      6.7.12      1445      1.94      6.0  
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 - WATERA®	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>44.09</u>	(feet)	WELL ELEVATION	<u>99.82</u>	(feet)
WELL DEPTH	<u>56.23</u>	(feet)	GROUNDWATER ELEVATION	<u>55.73</u>	(feet)
TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
<u>16.67</u> (°C)	<u>7.62</u> (std)	<u>22.08</u> (g/L)	<u>28520</u> (µS/cm)	<u>21.0</u> (mV)	<u>5</u> (gal)
<u>16.45</u> (°C)	<u>7.61</u> (std)	<u>22.11</u> (g/L)	<u>28458</u> (µS/cm)	<u>-48.9</u> (mV)	<u>5.5</u> (gal)
<u>16.78</u> (°C)	<u>7.65</u> (std)	<u>22.14</u> (g/L)	<u>29316</u> (µS/cm)	<u>-52.9</u> (mV)	<u>6.0</u> (gal)

### FIELD COMMENTS

SAMPLE APPEARANCE: silty      ODOR: None      COLOR: lt. brown      SHEEN Y/N: N  
 WEATHER CONDITIONS:      TEMPERATURE: 29.0°      WINDY Y/N: N      PRECIPITATION Y/N (IF Y TYPE): N  
 SPECIFIC COMMENTS: 5.83

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

6.7.12  
DATE

Jason Pless  
PRINT

[Signature]  
SIGNATURE

# WELL SAMPLING FIELD INFORMATION FORM

**WELL/PROJECT NAME:** Martin 3rd No 7      **JOB#** 075035  
**SAMPLE ID:** GW-075035-060712-CB-MW-5      **WELL#** MW-5

### WELL PURGING INFORMATION

6.6.12      6.7.12      1520      0.66      2.25  
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 44.60 (feet)      WELL ELEVATION 98.27 (feet)  
 WELL DEPTH 48.73 (feet)      GROUNDWATER ELEVATION 53.67 (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: Clear      ODOR: None      COLOR: Clear      SHEEN  N  
 WEATHER CONDITIONS: TEMPERATURE ~90°      WINDY Y/N N      PRECIPITATION Y/N (IF Y TYPE) N  
 SPECIFIC COMMENTS: \_\_\_\_\_  
1.93

Bailed dry @ 2.25 gallons on 6.6.12  
No Parameters recorded due to poor recharge

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS  
6.7.12      Jason Ploss  
DATE      PRINT      SIGNATURE

# WELL SAMPLING FIELD INFORMATION FORM

**TE/PROJECT NAME:** Marlin 34 No. 2      **JOB#** 075035  
**SAMPLE ID:** GW-075035-060612-CB-MW-6      **WELL#** MW-6

### WELL PURGING INFORMATION

6.6.12      6.6.12      1800      2.81      118.5  
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  Y  N      SAMPLING EQUIPMENT.....DEDICATED  Y  N  
(CIRCLE ONE)      (CIRCLE ONE)

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

### FIELD MEASUREMENTS

DEPTH TO WATER	<u>41.00</u>	(feet)	WELL ELEVATION	<u>94.80</u>	(feet)
WELL DEPTH	<u>58.62</u>	(feet)	GROUNDWATER ELEVATION	<u>53.80</u>	(feet)
TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
<u>16.23</u> (°C)	<u>8.01</u> (std)	<u>20.32</u> (g/L)	<u>26030</u> (µS/cm)	<u>-373.9</u> (mV)	<u>7.5</u> (gal)
<u>16.06</u> (°C)	<u>8.05</u> (std)	<u>20.24</u> (g/L)	<u>25837</u> (µS/cm)	<u>-381.6</u> (mV)	<u>8.0</u> (gal)
<u>15.95</u> (°C)	<u>8.09</u> (std)	<u>20.29</u> (g/L)	<u>25807</u> (µS/cm)	<u>-389.6</u> (mV)	<u>8.5</u> (gal)
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	_____ (gal)
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	_____ (gal)

### FIELD COMMENTS

SAMPLE APPEARANCE: black      ODOR: hydrocarbon      COLOR: black      SHEEN Y/ N  
 WEATHER CONDITIONS: TEMPERATURE 85°      WINDY Y/ N      PRECIPITATION Y/ N (TYPE) \_\_\_\_\_  
 SPECIFIC COMMENTS: 8.46

Dup collected at 1810

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

6.6.12      Jason Ploss  
DATE      PRINT      SIGNATURE

# WELL SAMPLING FIELD INFORMATION FORM

WELL/PROJECT NAME: Martin 34 No 2

JOB# 075035

SAMPLE ID: 075035-060712-CB-MW-7

WELL# MW-7

### 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  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= _____
		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>40.37</u>	(feet)	WELL ELEVATION	<u>86.49</u>	(feet)
WELL DEPTH	<u>52.65</u>	(feet)	GROUNDWATER ELEVATION	<u>46.12</u>	(feet)
TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
<u>15.79</u> (°C)	<u>7.15</u> (std)	<u>17.64</u> (g/L)	<u>22363</u> (µS/cm)	<u>-2.6</u> (mV)	<u>5.0</u> (gal)
<u>15.67</u> (°C)	<u>7.15</u> (std)	<u>17.62</u> (g/L)	<u>22284</u> (µS/cm)	<u>-11.7</u> (mV)	<u>5.5</u> (gal)
<u>15.63</u> (°C)	<u>7.15</u> (std)	<u>17.81</u> (g/L)	<u>22524</u> (µS/cm)	<u>-12.8</u> (mV)	<u>6.0</u> (gal)

### FIELD COMMENTS

SAMPLE APPEARANCE: slightly cloudy     ODOR: None     COLOR: light brown     SHEEN Y/ N  
 WEATHER CONDITIONS: TEMPERATURE ~90°     WINDY Y/ N     PRECIPITATION Y/ N (IF Y TYPE)  
 SPECIFIC COMMENTS: 5. bag

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

6-7-12  
DATE

Jason Pross  
PRINT

[Signature]  
SIGNATURE

# WELL SAMPLING FIELD INFORMATION FORM

ITE/PROJECT NAME: Martin 34 No.2

JOB# 075035

SAMPLE ID: GW-075035-092512-CM-MW

WELL# MW-1

### WELL PURGING INFORMATION

PURGE DATE (MM DD YY) 9.24.12      SAMPLE DATE (MM DD YY) 9.25.12      SAMPLE TIME (24 HOUR) 0855      WATER VOL. IN CASING (GALLONS) 126 3008      ACTUAL VOL. PURGED (GALLONS) .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	X= _____
		B - PERISTALTIC PUMP	<input type="checkbox"/>	E - PURGE PUMP	<input type="checkbox"/>	H - WATERRA®	PURGING DEVICE OTHER (SPECIFY) _____
SAMPLING DEVICE	<input checked="" type="checkbox"/>	C - BLADDER PUMP	<input type="checkbox"/>	F - DIPPER BOTTLE	<input type="checkbox"/>	X - OTHER	X= _____
							SAMPLING DEVICE OTHER (SPECIFY) _____
PURGING MATERIAL	<input checked="" type="checkbox"/>	A - TEFLON	<input type="checkbox"/>	D - PVC	<input type="checkbox"/>		X= _____
		B - STAINLESS STEEL	<input type="checkbox"/>	E - POLYETHYLENE	<input type="checkbox"/>		PURGING MATERIAL OTHER (SPECIFY) _____
SAMPLING MATERIAL	<input checked="" type="checkbox"/>	C - POLYPROPYLENE	<input type="checkbox"/>	X - OTHER	<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 TEFLON/POLYPROPYLENE	X= _____
		B - TYGON	<input type="checkbox"/>	E - POLYETHYLENE	<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	X= _____
							SAMPLING TUBING OTHER (SPECIFY) _____

FILTERING DEVICES 0.45  A - IN-LINE DISPOSABLE      B - PRESSURE      C - VACUUM      .45 for metals only

### FIELD MEASUREMENTS

DEPTH TO WATER	<u>39</u>	<u>30</u>	(feet)	WELL ELEVATION	<u>93</u>	<u>28</u>	(feet)
WELL DEPTH	<u>47</u>	<u>18</u>	(feet)	GROUNDWATER ELEVATION	<u>53</u>	<u>98</u>	(feet)
TEMPERATURE (°C)	pH	TDS (g/L)	CONDUCTIVITY (µS/cm)	ORP (mV)	VOLUME (gal)		
_____	_____ (std)	_____	_____	_____	_____		
_____	_____ (std)	_____	_____	_____	_____		
_____	_____ (std)	_____	_____	_____	_____		
_____	_____ (std)	_____	_____	_____	_____		
_____	_____ (std)	_____	_____	_____	_____		

### FIELD COMMENTS

SAMPLE APPEARANCE: Cloudy      ODOR: strong bio      COLOR: Dark gray      SHEEN  Y  N      Very slight spotty discoloration

WEATHER CONDITIONS: TEMPERATURE 60° 75°/60°      WINDY  Y  N      Strong wind/breezy      PRECIPITATION  Y  N (IF Y TYPE)      heavy rain

SPECIFIC COMMENTS: 9-24-12 - Dry @ .75 gallons

126 x 3 = 378      Sampled on 9.25.12

3008 x 3 = 9024      No parameters collected due to low volume

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

DATE: 9/25/12      PRINT: Christine Matthews      SIGNATURE: [Signature]

# WELL SAMPLING FIELD INFORMATION FORM

**WELL/PROJECT NAME:** Martin 34 No. 2      **JOB#** 075035  
**SAMPLE ID:** GW-075035-092512-CM-MW-2 **WELL#** MW-2

**WELL PURGING INFORMATION**

9.25.12      9.25.12      0945      0.49      2:25  
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  Y    N      SAMPLING EQUIPMENT.....DEDICATED  Y    N  
(CIRCLE ONE)      (CIRCLE ONE)

PURGING DEVICE	<input checked="" type="checkbox"/>	A - SUBMERSIBLE PUMP	D - GAS LIFT PUMP	G - BAILER	X= _____
		B - PERISTALTIC PUMP	E - PURGE PUMP	H - WATERRA®	PURGING DEVICE OTHER (SPECIFY)
SAMPLING DEVICE	<input checked="" type="checkbox"/>	C - BLADDER PUMP	F - DIPPER BOTTLE	X - OTHER	X= _____
					SAMPLING DEVICE OTHER (SPECIFY)
PURGING MATERIAL	<input checked="" type="checkbox"/>	A - TEFLON	D - PVC		X= _____
		B - STAINLESS STEEL	E - POLYETHYLENE		PURGING MATERIAL OTHER (SPECIFY)
SAMPLING MATERIAL	<input checked="" type="checkbox"/>	C - POLYPROPYLENE	X - OTHER		X= _____
					SAMPLING MATERIAL OTHER (SPECIFY)
PURGE TUBING	<input checked="" type="checkbox"/>	A - TEFLON	D - POLYPROPYLENE	G - COMBINATION	X= _____
		B - TYGON	E - POLYETHYLENE	TEFLON/POLYPROPYLENE	PURGE TUBING OTHER (SPECIFY)
SAMPLING TUBING	<input checked="" type="checkbox"/>	C - ROPE	F - SILICONE	X - OTHER	X= _____
					SAMPLING TUBING OTHER (SPECIFY)
FILTERING DEVICES 0.45	<input checked="" type="checkbox"/>	A - IN-LINE DISPOSABLE	B - PRESSURE	C - VACUUM	<u>.45 for metals only</u>

**FIELD MEASUREMENTS**

DEPTH TO WATER	<u>37.60</u>	(feet)	WELL ELEVATION	<u>87.59</u>	(feet)
WELL DEPTH	<u>40.65</u>	(feet)	GROUNDWATER ELEVATION	<u>49.99</u>	(feet)

TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
<u>16.34</u> (°C)	<u>7.80</u> (std)	<u>19.63</u> (g/L)	<u>25235</u> (µS/cm)	<u>-269.0</u> (mV)	<u>1.75</u> (gal)
<u>16.21</u> (°C)	<u>7.61</u> (std)	<u>19.74</u> (g/L)	<u>25297</u> (µS/cm)	<u>-286.7</u> (mV)	<u>2.00</u> (gal)
<u>16.29</u> (°C)	<u>7.52</u> (std)	<u>19.70</u> (g/L)	<u>25277</u> (µS/cm)	<u>-301.7</u> (mV)	<u>2.25</u> (gal)
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	_____ (gal)
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	_____ (gal)

**FIELD COMMENTS**

SAMPLE APPEARANCE: cloudy      ODOR: bio odor      COLOR: dark gray      SHEEN  Y    N  
 WEATHER CONDITIONS: TEMPERATURE 65°      WIND  Y    N      PRECIPITATION  Y    N (IF Y TYPE) slight rain  
 SPECIFIC COMMENTS: \_\_\_\_\_

0.49 x 3 = 1.46

Duplicate collected @ 950

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

DATE 9/25/12      PRINT Christine Matthews      SIGNATURE [Signature]

DO NOT  
 107.2  
 17.02  
 10.42

# WELL SAMPLING FIELD INFORMATION FORM

WELL/PROJECT NAME: Martin 34 No. 2 JOB# 075035

SAMPLE ID: GW-075035-092512-01-MW-3 WELL# MW-3

### 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  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= _____
SAMPLING DEVICE	<input checked="" type="checkbox"/>	B - PERISTALTIC PUMP	<input type="checkbox"/>	E - PURGE PUMP	<input type="checkbox"/>	H - WATERRA®	<input type="checkbox"/>	PURGING DEVICE OTHER (SPECIFY) _____
		C - BLADDER PUMP	<input type="checkbox"/>	F - DIPPER BOTTLE	<input type="checkbox"/>	X - OTHER	<input type="checkbox"/>	SAMPLING DEVICE OTHER (SPECIFY) _____
PURGING MATERIAL	<input checked="" type="checkbox"/>	A - TEFLON	<input type="checkbox"/>	D - PVC	<input type="checkbox"/>	X= _____		PURGING MATERIAL OTHER (SPECIFY) _____
SAMPLING MATERIAL	<input checked="" type="checkbox"/>	B - STAINLESS STEEL	<input type="checkbox"/>	E - POLYETHYLENE	<input type="checkbox"/>	X= _____		SAMPLING MATERIAL OTHER (SPECIFY) _____
		C - POLYPROPYLENE	<input type="checkbox"/>	X - OTHER	<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= _____
SAMPLING TUBING	<input checked="" type="checkbox"/>	B - TYGON	<input type="checkbox"/>	E - POLYETHYLENE	<input type="checkbox"/>	TEFLON/POLYPROPYLENE	<input type="checkbox"/>	PURGE TUBING OTHER (SPECIFY) _____
		C - ROPE	<input type="checkbox"/>	F - SILICONE	<input type="checkbox"/>	X - OTHER	<input type="checkbox"/>	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"/>	.45 for metals only

### 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="16.02"/> (°C)	<input type="text" value="7.54"/> (std)	<input type="text" value="19.67"/> (g/L)	<input type="text" value="25244"/> (µS/cm)	<input type="text" value="-101.4"/> (mV)	<input type="text" value="3.25"/> (gal)
<input type="text" value="16.02"/> (°C)	<input type="text" value="7.44"/> (std)	<input type="text" value="19.23"/> (g/L)	<input type="text" value="24508"/> (µS/cm)	<input type="text" value="-85.0"/> (mV)	<input type="text" value="3.75"/> (gal)
<input type="text" value="15.95"/> (°C)	<input type="text" value="7.40"/> (std)	<input type="text" value="19.00"/> (g/L)	<input type="text" value="24199"/> (µS/cm)	<input type="text" value="-70.9"/> (mV)	<input type="text" value="4.25"/> (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: light brown     SHEEN  Y  N  
 WEATHER CONDITIONS: TEMPERATURE 70°     WIND  Y  N     breezy     PRECIPITATION  Y  N (IF Y TYPE) \_\_\_\_\_  
 SPECIFIC COMMENTS: \_\_\_\_\_

1.40 x 3 - 4.2

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

DATE: 9/25/12

PRINT: Christine Matthews

SIGNATURE: [Signature]

DO  
1984  
13.2  
11.5

# WELL SAMPLING FIELD INFORMATION FORM

WELL/PROJECT NAME: Martin 34 No. 2 JOB# 075035

SAMPLE ID: GW-075035-092512-CM-MW-4 WELL# MW-4

9.25.12  
PURGE DATE  
(MM DD YY)

9.25.12  
SAMPLE DATE  
(MM DD YY)

110  
WELL PURGING INFORMATION  
SAMPLE TIME  
(24 HOUR)

1.83  
WATER VOL. IN CASING  
(GALLONS)

4.5  
ACTUAL VOL. PURGED  
(GALLONS)

### 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		E - PURGE PUMP		H - WATERA®		PURGING DEVICE OTHER (SPECIFY)
SAMPLING DEVICE	<input checked="" type="checkbox"/>	C - BLADDER PUMP		F - DIPPER BOTTLE		X - OTHER		X= _____
								SAMPLING DEVICE OTHER (SPECIFY)
PURGING MATERIAL	<input checked="" type="checkbox"/>	A - TEFLON		D - PVC				X= _____
		B - STAINLESS STEEL		E - POLYETHYLENE				PURGING MATERIAL OTHER (SPECIFY)
SAMPLING MATERIAL	<input checked="" type="checkbox"/>	C - POLYPROPYLENE		X - OTHER				X= _____
								SAMPLING MATERIAL OTHER (SPECIFY)
PURGE TUBING	<input checked="" type="checkbox"/>	A - TEFLON		D - POLYPROPYLENE		G - COMBINATION		X= _____
		B - TYGON		E - POLYETHYLENE		TEFLON/POLYPROPYLENE		PURGE TUBING OTHER (SPECIFY)
SAMPLING TUBING	<input checked="" type="checkbox"/>	C - ROPE		F - SILICONE		X - OTHER		X= _____
								SAMPLING TUBING OTHER (SPECIFY)
FILTERING DEVICES 0.45	<input checked="" type="checkbox"/>	A - IN-LINE DISPOSABLE		B - PRESSURE		C - VACUUM		<u>.45 for metals only</u>

### FIELD MEASUREMENTS

DEPTH TO WATER	<u>44.25</u>	(feet)	WELL ELEVATION	<u>99.82</u>	(feet)
WELL DEPTH	<u>55.95</u>	(feet)	GROUNDWATER ELEVATION	<u>55.57</u>	(feet)
TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
<u>16.33</u> (°C)	<u>7.65</u> (std)	<u>22.86</u> (g/L)	<u>29354</u> (µS/cm)	<u>-218.7</u> (mV)	<u>3.5</u> (gal)
<u>16.36</u> (°C)	<u>7.60</u> (std)	<u>22.82</u> (g/L)	<u>29318</u> (µS/cm)	<u>-218.5</u> (mV)	<u>3.75</u> (gal)
<u>16.41</u> (°C)	<u>7.57</u> (std)	<u>22.80</u> (g/L)	<u>29337</u> (µS/cm)	<u>-218.4</u> (mV)	<u>4.0</u> (gal)
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	_____ (gal)
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	_____ (gal)

### FIELD COMMENTS

SAMPLE APPEARANCE: cloudy ODOR: slight big COLOR: light gray SHEEN Y/N  Y  N

WEATHER CONDITIONS: TEMPERATURE 65 WINDY Y/N breezy PRECIPITATION Y/N (IF Y TYPE) \_\_\_\_\_

SPECIFIC COMMENTS: \_\_\_\_\_

$1.83 \times 3 = 5.49$

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

DATE 9/25/12

PRINT

Christine Matthews

SIGNATURE

[Signature]

002  
1635  
27.11  
17.70

# WELL SAMPLING FIELD INFORMATION FORM

FE/PROJECT NAME: Martin 34 No. 2

JOB# 075035

SAMPLE ID: GW-075035-092512-0m-mw-5

WELL# MW-5

9.24.12

PURGE DATE  
(MM DD YY)

9.25.12

SAMPLE DATE  
(MM DD YY)

1315

SAMPLE TIME  
(24 HOUR)

0.58

WATER VOL. IN CASING  
(GALLONS)

2.0 2.5

ACTUAL VOL. PURGED  
(GALLONS)

### WELL PURGING INFORMATION

### PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT.....DEDICATED  Y  N

(CIRCLE ONE)

SAMPLING EQUIPMENT.....DEDICATED  Y  N

(CIRCLE ONE)

PURGING DEVICE

G

A - SUBMERSIBLE PUMP

D - GAS LIFT PUMP

G - BAILER

X=

B - PERISTALTIC PUMP

E - PURGE PUMP

H - WATERRA®

PURGING DEVICE OTHER (SPECIFY)

SAMPLING DEVICE

G

C - BLADDER PUMP

F - DIPPER BOTTLE

X - OTHER

X=

SAMPLING DEVICE OTHER (SPECIFY)

PURGING MATERIAL

E

A - TEFLON

D - PVC

X=

B - STAINLESS STEEL

E - POLYETHYLENE

PURGING MATERIAL OTHER (SPECIFY)

SAMPLING MATERIAL

E

C - POLYPROPYLENE

X - OTHER

X=

SAMPLING MATERIAL OTHER (SPECIFY)

PURGE TUBING

C

A - TEFLON

D - POLYPROPYLENE

G - COMBINATION

X=

B - TYGON

E - POLYETHYLENE

TEFLON/POLYPROPYLENE

PURGE TUBING OTHER (SPECIFY)

SAMPLING TUBING

C

C - ROPE

F - SILICONE

X - OTHER

X=

SAMPLING TUBING OTHER (SPECIFY)

FILTERING DEVICES 0.45

A

A - IN-LINE DISPOSABLE

B - PRESSURE

C - VACUUM

.45 micron for metals only

### FIELD MEASUREMENTS

DEPTH TO WATER

44.60

(feet)

WELL ELEVATION

98.27

(feet)

WELL DEPTH

48.20

(feet)

GROUNDWATER ELEVATION

53.67

(feet)

TEMPERATURE

pH

TDS 9.332

CONDUCTIVITY

ORP

VOLUME

16.34 (°C)

7.08 (std)

12007 (g/L)

12007 (µS/cm)

-115.9 (mV)

2.0 (gal)

16.33 (°C)

7.07 (std)

9.376 (g/L)

12039 (µS/cm)

-123.8 (mV)

2.25 (gal)

16.34 (°C)

7.09 (std)

9.382 (g/L)

12052 (µS/cm)

-124.3 (mV)

2.5 (gal)

\_\_\_\_\_ (°C)

\_\_\_\_\_ (std)

\_\_\_\_\_ (g/L)

\_\_\_\_\_ (µS/cm)

\_\_\_\_\_ (mV)

\_\_\_\_\_ (gal)

\_\_\_\_\_ (°C)

\_\_\_\_\_ (std)

\_\_\_\_\_ (g/L)

\_\_\_\_\_ (µS/cm)

\_\_\_\_\_ (mV)

\_\_\_\_\_ (gal)

### FIELD COMMENTS

SAMPLE APPEARANCE: cloudy

ODOR: bio

COLOR: gray

SHEEN N

WEATHER CONDITIONS: TEMPERATURE 70

WIND 0/N

PRECIPITATION 0

PRECIPITATION Y/N (IF Y TYPE) \_\_\_\_\_

SPECIFIC COMMENTS: \_\_\_\_\_

0.58 x 3 = 1.73

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

DATE 9/25/12

PRINT Christine Matthews

SIGNATURE Christine Matthews

# WELL SAMPLING FIELD INFORMATION FORM

TE/PROJECT NAME: Martin 34 No. 2

JOB# 075035

SAMPLE ID: GW-075035-092512-0m-mw

WELL# MW-6

<u>9.25.12</u>	<u>9.25.12</u>	<u>0920</u>	<u>2.84</u>	<u>8.75</u>
PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)

WELL PURGING INFORMATION

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	<u>.45 for metals only</u>

FIELD MEASUREMENTS

DEPTH TO WATER	<u>41.07</u>	(feet)	WELL ELEVATION	<u>94.80</u>	(feet)
WELL DEPTH	<u>58.85</u>	(feet)	GROUNDWATER ELEVATION	<u>53.73</u>	(feet)

TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
<u>15.93</u> (°C)	<u>7.94</u> (std)	<u>22.53</u> (g/L)	<u>28654</u> (µS/cm)	<u>-385.2</u> (mV)	<u>7.75</u> (gal)
<u>15.96</u> (°C)	<u>8.02</u> (std)	<u>22.52</u> (g/L)	<u>28671</u> (µS/cm)	<u>-383.4</u> (mV)	<u>8.25</u> (gal)
<u>15.92</u> (°C)	<u>8.10</u> (std)	<u>22.52</u> (g/L)	<u>28642</u> (µS/cm)	<u>-378.3</u> (mV)	<u>8.75</u> (gal)

DO  
5.78  
5.62  
4.58

FIELD COMMENTS

SAMPLE APPEARANCE: Cloudy      ODOR: Strong bio      COLOR: dark gray      SHEEN:  Y  N      Very slight spotty discolorities

WEATHER CONDITIONS: TEMPERATURE 65°      WINDY:  Y  N      PRECIPITATION:  Y  N (IF Y TYPE) Slight rain

SPECIFIC COMMENTS: \_\_\_\_\_

2.84 x 3 = 8.53

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

9/25/12      Christine Matthews      [Signature]

DATE      PRINT      SIGNATURE

# WELL SAMPLING FIELD INFORMATION FORM

**WELL/PROJECT NAME:** Martin 34 No. 2      **JOB#** 075035  
**SAMPLE ID:** GW-075035-092512-CM.mw      **WELL#** MW-7

**WELL PURGING INFORMATION**

9.25.12      09 24 12      1220      1.95      6.00  
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  Y     N      SAMPLING EQUIPMENT.....DEDICATED  Y     N  
(CIRCLE ONE)      (CIRCLE ONE)

PURGING DEVICE	<input checked="" type="checkbox"/>	A - SUBMERSIBLE PUMP	D - GAS LIFT PUMP	G - BAILER	X= _____
SAMPLING DEVICE	<input checked="" type="checkbox"/>	B - PERISTALTIC PUMP	E - PURGE PUMP	H - WATERRA®	PURGING DEVICE OTHER (SPECIFY) _____
		C - BLADDER PUMP	F - DIPPER BOTTLE	X - OTHER	X= _____
PURGING MATERIAL	<input checked="" type="checkbox"/>	A - TEFLON	D - PVC	X= _____	
SAMPLING MATERIAL	<input checked="" type="checkbox"/>	B - STAINLESS STEEL	E - POLYETHYLENE	PURGING MATERIAL OTHER (SPECIFY) _____	
		C - POLYPROPYLENE	X - OTHER	X= _____	
PURGE TUBING	<input checked="" type="checkbox"/>	A - TEFLON	D - POLYPROPYLENE	G - COMBINATION	X= _____
SAMPLING TUBING	<input checked="" type="checkbox"/>	B - TYGON	E - POLYETHYLENE	TEFLON/POLYPROPYLENE	PURGE TUBING OTHER (SPECIFY) _____
		C - ROPE	F - SILICONE	X - OTHER	X= _____
FILTERING DEVICES 0.45	<input checked="" type="checkbox"/>	A - IN-LINE DISPOSABLE	B - PRESSURE	C - VACUUM	<u>.45 for metals only</u>

**FIELD MEASUREMENTS**

DEPTH TO WATER	<u>40</u>	<u>45</u>	(feet)	WELL ELEVATION	<u>86</u>	<u>49</u>	(feet)
WELL DEPTH	<u>52</u>	<u>65</u>	(feet)	GROUNDWATER ELEVATION	<u>46</u>	<u>04</u>	(feet)

TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
<u>16.10</u> (°C)	<u>7.34</u> (std)	<u>14.38</u> (g/L)	<u>18373</u> (µS/cm)	<u>-46.6</u> (mV)	<u>5.5</u> (gal)
<u>16.18</u> (°C)	<u>7.31</u> (std)	<u>15.95</u> (g/L)	<u>20432</u> (µS/cm)	<u>-55.6</u> (mV)	<u>5.75</u> (gal)
<u>15.89</u> (°C)	<u>7.26</u> (std)	<u>18.41</u> (g/L)	<u>73422</u> (µS/cm)	<u>-58.6</u> (mV)	<u>6.05</u> (gal)
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	_____ (gal)
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	_____ (gal)

**FIELD COMMENTS**

SAMPLE APPEARANCE: Cloudy      ODOR: none      COLOR: light brown      SHEEN  Y  N  
 WEATHER CONDITIONS:      TEMPERATURE 70°      WINDY  Y  N      breezy      PRECIPITATION  Y  N (IF Y TYPE) \_\_\_\_\_  
 SPECIFIC COMMENTS: \_\_\_\_\_

1.95 x 3 = 5.86

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS  
9/25/12      Christine Matthews      [Signature]  
DATE      PRINT      SIGNATURE

DO

43.21

17.40

14.44

# WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: St Martin 34 No 2 JOB# 075035  
 SAMPLE ID: GW-075035-122012-CM-MW-1 WELL# MW-1

**WELL PURGING INFORMATION**

PURGE DATE (MM DD YY) 12/19/12 SAMPLE DATE (MM DD YY) 12/20/12 SAMPLE TIME (24 HOUR) 1345/1030 WATER VOL. IN CASING (GALLONS) 0.3136 ACTUAL VOL. PURGED (GALLONS) 1.0 gal

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

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

### FIELD MEASUREMENTS

DEPTH TO WATER 39 11 (feet) WELL ELEVATION 93 28 (feet)  
 WELL DEPTH 41 07 (feet) GROUNDWATER ELEVATION 54 17 (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: dark gray SHEEN  Y  N No  
 WEATHER CONDITIONS: TEMPERATURE 20° WINDY Y/N yes PRECIPITATION Y/N (IF Y TYPE) No  
 SPECIFIC COMMENTS: \_\_\_\_\_

0.3136 x 3 = 0.9408 - completed @ 1030 on 12/20/12  
No parameters due to low volume and slow recharge of well

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS  
 DATE 12/20/12 PRINT Jason Pass SIGNATURE [Signature]

# WELL SAMPLING FIELD INFORMATION FORM

**WELL/PROJECT NAME:** Martin 34 No. 2      **JOB#** 075035  
**SAMPLE ID:** GW-075035-121912-CM-MW-2      **WELL#** MW-2

**WELL PURGING INFORMATION**

12/19/12      12/19/12      1230      0.542      2.0  
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  Y  N      SAMPLING EQUIPMENT.....DEDICATED  Y  N  
(CIRCLE ONE)      (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 - WATERA®	<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 TEFLON/POLYPROPYLENE	<input type="checkbox"/>	X = _____
		B - TYGON	<input type="checkbox"/>	E - POLYETHYLENE	<input type="checkbox"/>		<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 37.28 (feet)      WELL ELEVATION 87.59 (feet)  
 WELL DEPTH 40.67 (feet)      GROUNDWATER ELEVATION 50.31 (feet)

TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
<u>14.56</u> (°C)	<u>7.66</u> (std)	<u>20.73</u> (g/L)	<u>25504</u> (µS/cm)	<u>-280.4</u> (mV)	<u>1.5</u> (gal)
<u>14.87</u> (°C)	<u>7.65</u> (std)	<u>20.83</u> (g/L)	<u>25404</u> (µS/cm)	<u>-289.7</u> (mV)	<u>2.0</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)

**FIELD COMMENTS**

SAMPLE APPEARANCE: cloudy      ODOR: slight hydrocarbon      COLOR: gray/brown      SHEEN  Y  N      NO  
 WEATHER CONDITIONS:      TEMPERATURE 23.0°      WINDY  Y  N      yes      PRECIPITATION  Y  N (IF Y TYPE)      NO  
 SPECIFIC COMMENTS: \_\_\_\_\_

0.542 x 3 = 1.627

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS  
12/19/12      Jason Ploss  
DATE      PRINT      SIGNATURE

# WELL SAMPLING FIELD INFORMATION FORM

**WELL/PROJECT NAME:** Martin 34 No. 2      **JOB#** 075035  
**SAMPLE ID:** GW-075035-121912-CM-MW-3      **WELL#** MW-3

**WELL PURGING INFORMATION**

12/19/12      12/19/12      1245      1,462      475  
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  Y  N      SAMPLING EQUIPMENT.....DEDICATED  Y  N  
(CIRCLE ONE)      (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 36.48 (feet)      WELL ELEVATION 87.32 (feet)  
 WELL DEPTH 45.62 (feet)      GROUNDWATER ELEVATION 50.84 (feet)

TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
<u>13.86</u> (°C)	<u>7.73</u> (std)	<u>21.13</u> (g/L)	<u>25735</u> (µS/cm)	<u>-195.0</u> (mV)	<u>3.15</u> (gal)
<u>14.66</u> (°C)	<u>7.57</u> (std)	<u>20.28</u> (g/L)	<u>24930</u> (µS/cm)	<u>-185.7</u> (mV)	<u>4.25</u> (gal)
<u>14.71</u> (°C)	<u>7.58</u> (std)	<u>20.12</u> (g/L)	<u>24766</u> (µS/cm)	<u>-172.1</u> (mV)	<u>4.75</u> (gal)

### FIELD COMMENTS

SAMPLE APPEARANCE: cloudy      ODOR: none      COLOR: light brown      SHEEN Y/N: no  
 WEATHER CONDITIONS:      TEMPERATURE 20°      WINDY Y/N: yes      PRECIPITATION Y/N (IF Y TYPE): no  
 SPECIFIC COMMENTS: \_\_\_\_\_

1,462 x 3 = 4,39

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS  
12/19/12      Jason Ploss  
DATE      PRINT      SIGNATURE

# WELL SAMPLING FIELD INFORMATION FORM

**SITE/PROJECT NAME:** Martin 34 No 2      **JOB#** 075035  
**SAMPLE ID:** GW-075035-121912-CM-MW-4      **WELL#** MW-4

**WELL PURGING INFORMATION**

12/19/12      12/19/12      1400      1.798      5.5  
PURGE DATE (MM DD YY)      SAMPLE DATE (MM DD YY)      SAMPLE TIME (24 HOUR)      WATER VOL. IN CASING (GALLONS)      ACTUAL VOL. PURGED (GALLONS)

**PURGING EQUIPMENT.....DEDICATED**  Y  N      **SAMPLING EQUIPMENT.....DEDICATED**  Y  N  
(CIRCLE ONE)      (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 TEFLON/POLYPROPYLENE	<input type="checkbox"/>	X= _____
		B - TYGON	<input type="checkbox"/>	E - POLYETHYLENE	<input type="checkbox"/>		<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 44.16 (feet)      WELL ELEVATION 99.82 (feet)  
 WELL DEPTH 55.40 (feet)      GROUNDWATER ELEVATION 55.66 (feet)

TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
<u>14.64</u> (°C)	<u>7.85</u> (std)	<u>23.92</u> (g/L)	<u>29534</u> (µS/cm)	<u>-248.1</u> (mV)	<u>4.5</u> (gal)
<u>15.01</u> (°C)	<u>7.77</u> (std)	<u>23.99</u> (g/L)	<u>29861</u> (µS/cm)	<u>-218.7</u> (mV)	<u>5.0</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)

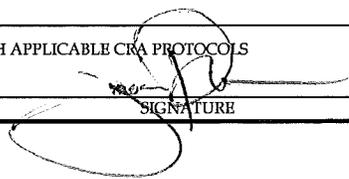
### FIELD COMMENTS

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

1.798 x 3 = 5.40

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

12/19/12  
 DATE      Jason Ross  
 PRINT

  
 SIGNATURE

# WELL SAMPLING FIELD INFORMATION FORM

WELL/PROJECT NAME: Martin 34 No. 2 JOB# 075035  
 SAMPLE ID: GW-075035-12/19/12-AM MW-5 WELL# MW-5

PURGE DATE (MM DD YY) 12/19/12 SAMPLE DATE (MM DD YY) 12/19/12 WELL PURGING INFORMATION  
 SAMPLE TIME (24 HOUR) 1455 WATER VOL. IN CASING (GALLONS) 0.4432 ACTUAL VOL. PURGED (GALLONS) 1.25

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

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

### FIELD MEASUREMENTS

DEPTH TO WATER 45.43 (feet) WELL ELEVATION 98.27 (feet)  
 WELL DEPTH 48.20 (feet) GROUNDWATER ELEVATION 52.84 (feet)

TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
<u>11.64</u> (°C)	<u>7.54</u> (std)	<u>12.60</u> (g/L)	<u>14440</u> (µS/cm)	<u>-302.4</u> (mV)	<u>.5</u> (gal)
<u>13.34</u> (°C)	<u>7.49</u> (std)	<u>11.06</u> (g/L)	<u>13210</u> (µS/cm)	<u>-285.8</u> (mV)	<u>.75</u> (gal)
<u>14.14</u> (°C)	<u>7.47</u> (std)	<u>10.42</u> (g/L)	<u>12688</u> (µS/cm)	<u>-271.0</u> (mV)	<u>1.0</u> (gal)
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	_____ (gal)
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	_____ (gal)

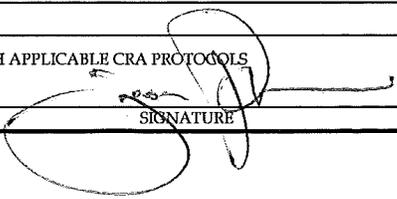
### FIELD COMMENTS

SAMPLE APPEARANCE: cloudy ODOR: slight H<sub>2</sub>S COLOR: dark gray SHEEN Y/N no  
 WEATHER CONDITIONS: TEMPERATURE 20° WINDY Y/N yes PRECIPITATION Y/N (IF Y TYPE) no  
 SPECIFIC COMMENTS: \_\_\_\_\_

0.4432 x 3 = 1.33

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

DATE: 12/19/12 PRINT: Jason Poss

SIGNATURE: 



# WELL SAMPLING FIELD INFORMATION FORM

**WELL/PROJECT NAME:** Martin 34 No. 2      **JOB#** 075035  
**SAMPLE ID:** GW-075035-121912-CM-MW-7      **WELL#** MW-7

**WELL PURGING INFORMATION**

**PURGE DATE** (MM DD YY) 12/19/12      **SAMPLE DATE** (MM DD YY) 12/19/12      **SAMPLE TIME** (24 HOUR) 1430      **WATER VOL. IN CASING** (GALLONS) 1.88      **ACTUAL VOL. PURGED** (GALLONS) 6.25

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

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

### FIELD MEASUREMENTS

<b>DEPTH TO WATER</b>	<u>40.14</u>	(feet)	<b>WELL ELEVATION</b>	<u>86.49</u>	(feet)
<b>WELL DEPTH</b>	<u>51.89</u>	(feet)	<b>GROUNDWATER ELEVATION</b>	<u>46.35</u>	(feet)
<b>TEMPERATURE</b>	<b>pH</b>	<b>TDS</b>	<b>CONDUCTIVITY</b>	<b>ORP</b>	<b>VOLUME</b>
<u>14.62</u> (°C)	<u>7.58</u> (std)	<u>18.53</u> (g/L)	<u>228930</u> (µS/cm)	<u>-73.6</u> (mV)	<u>5.75</u> (gal)
<u>14.55</u> (°C)	<u>7.53</u> (std)	<u>16.20</u> (g/L)	<u>2019845</u> (µS/cm)	<u>-85.7</u> (mV)	<u>6.0</u> (gal)
<u>14.13</u> (°C)	<u>7.55</u> (std)	<u>14.68</u> (g/L)	<u>17949</u> (µS/cm)	<u>-88.5</u> (mV)	<u>6.25</u> (gal)
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	_____ (gal)
_____ (°C)	_____ (std)	_____ (g/L)	_____ (µS/cm)	_____ (mV)	_____ (gal)

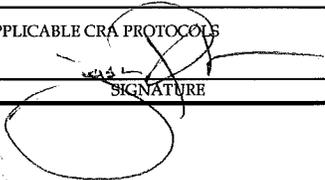
### FIELD COMMENTS

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

1.88 x 3 = 5.64

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

**DATE** 12/19/12      **PRINT** Jason Ploss

  
**SIGNATURE**

APPENDIX B

GROUNDWATER LABORATORY ANALYTICAL REPORTS

March 29, 2012

Cassie Brown  
COP Conestoga-Rovers & Associa

RE: Project: MARTIN 34 NO 2  
Pace Project No.: 60117039

Dear Cassie Brown:

Enclosed are the analytical results for sample(s) received by the laboratory on March 10, 2012. 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,



Alice Tracy

alice.tracy@pacelabs.com  
Project Manager

Enclosures

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



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: MARTIN 34 NO 2

Pace Project No.: 60117039

### **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

## REPORT OF LABORATORY ANALYSIS

Page 2 of 31

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### SAMPLE SUMMARY

Project: MARTIN 34 NO 2

Pace Project No.: 60117039

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60117039001	GW-075085-3812-CB-MW-1	Water	03/08/12 10:40	03/10/12 09:00
60117039002	GW-075085-3812-CB-MW-2	Water	03/08/12 09:50	03/10/12 09:00
60117039003	GW-075085-3812-CB-MW-3	Water	03/08/12 10:45	03/10/12 09:00
60117039004	GW-075085-3812-CB-MW-4	Water	03/08/12 12:00	03/10/12 09:00
60117039005	GW-075085-3812-CB-MW-5	Water	03/08/12 12:40	03/10/12 09:00
60117039006	GW-075085-3812-CB-MW-6	Water	03/08/12 11:40	03/10/12 09:00
60117039007	GW-075085-3812-CB-MW-7	Water	03/08/12 09:55	03/10/12 09:00
60117039008	GW-075085-3812-CB-DUP	Water	03/08/12 11:45	03/10/12 09:00
60117039009	TRIP BLANK	Water	03/08/12 00:00	03/10/12 09:00

### REPORT OF LABORATORY ANALYSIS

### SAMPLE ANALYTE COUNT

Project: MARTIN 34 NO 2

Pace Project No.: 60117039

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60117039001	GW-075085-3812-CB-MW-1	EPA 6010	JGP	3
		EPA 5030B/8260	PRG	12
60117039002	GW-075085-3812-CB-MW-2	EPA 6010	JGP	3
		EPA 8270 by SIM	JTK	4
		EPA 5030B/8260	PRG	12
		SM 2540C	CMG	1
		EPA 300.0	JML	3
60117039003	GW-075085-3812-CB-MW-3	EPA 6010	JGP	3
		EPA 8270 by SIM	JTK	4
		EPA 5030B/8260	PRG	12
		SM 2540C	CMG	1
		EPA 300.0	JML	3
60117039004	GW-075085-3812-CB-MW-4	EPA 6010	JGP	3
		EPA 8270 by SIM	JTK	4
		EPA 5030B/8260	JDM	12
		SM 2540C	CMG	1
		EPA 300.0	JML	3
60117039005	GW-075085-3812-CB-MW-5	EPA 5030B/8260	JDM, PRG	12
		SM 2540C	CMG	1
		EPA 300.0	JML	3
60117039006	GW-075085-3812-CB-MW-6	EPA 6010	JGP	3
		EPA 8270 by SIM	JTK	4
		EPA 5030B/8260	PRG	12
		SM 2540C	CMG	1
		EPA 300.0	JML	3
60117039007	GW-075085-3812-CB-MW-7	EPA 6010	JGP	3
		EPA 8270 by SIM	JTK	4
		EPA 5030B/8260	JDM	12
		SM 2540C	CMG	1
		EPA 300.0	JML	3
60117039008	GW-075085-3812-CB-DUP	EPA 5030B/8260	PRG	12
60117039009	TRIP BLANK	EPA 5030B/8260	PRG	12

### REPORT OF LABORATORY ANALYSIS

## PROJECT NARRATIVE

Project: MARTIN 34 NO 2

Pace Project No.: 60117039

---

**Method:** EPA 6010

**Description:** 6010 MET ICP, Dissolved

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** March 29, 2012

**General Information:**

6 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:**

## PROJECT NARRATIVE

Project: MARTIN 34 NO 2

Pace Project No.: 60117039

---

**Method:** EPA 8270 by SIM

**Description:** 8270 MSSV PAH by SIM

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** March 29, 2012

**General Information:**

5 samples were analyzed for EPA 8270 by SIM. 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 3510 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: MSSV/10125

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

QC Batch: MSSV/10158

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:**

## REPORT OF LABORATORY ANALYSIS

## PROJECT NARRATIVE

Project: MARTIN 34 NO 2

Pace Project No.: 60117039

---

**Method:** EPA 5030B/8260

**Description:** 8260 MSV

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** March 29, 2012

**General Information:**

9 samples were analyzed for EPA 5030B/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/44271

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60117231002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 966517)
  - Benzene
- MSD (Lab ID: 966518)
  - Benzene

**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: MARTIN 34 NO 2

Pace Project No.: 60117039

---

**Method:** EPA 5030B/8260

**Description:** 8260 MSV

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** March 29, 2012

Analyte Comments:

QC Batch: MSV/44271

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- GW-075085-3812-CB-DUP (Lab ID: 60117039008)
  - 4-Bromofluorobenzene (S)

## REPORT OF LABORATORY ANALYSIS

Page 8 of 31

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## PROJECT NARRATIVE

Project: MARTIN 34 NO 2

Pace Project No.: 60117039

---

**Method:** SM 2540C

**Description:** 2540C Total Dissolved Solids

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** March 29, 2012

**General Information:**

6 samples were analyzed for SM 2540C. 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.

**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: MARTIN 34 NO 2

Pace Project No.: 60117039

---

**Method:** EPA 300.0

**Description:** 300.0 IC Anions 28 Days

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** March 29, 2012

**General Information:**

6 samples were analyzed for EPA 300.0. 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.

**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:**

Analyte Comments:

QC Batch: WETA/19623

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- GW-075085-3812-CB-MW-2 (Lab ID: 60117039002)
  - Fluoride
- GW-075085-3812-CB-MW-3 (Lab ID: 60117039003)
  - Fluoride
- GW-075085-3812-CB-MW-4 (Lab ID: 60117039004)
  - Fluoride
- GW-075085-3812-CB-MW-5 (Lab ID: 60117039005)
  - Fluoride
- GW-075085-3812-CB-MW-6 (Lab ID: 60117039006)
  - Fluoride
- GW-075085-3812-CB-MW-7 (Lab ID: 60117039007)
  - Fluoride

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

## REPORT OF LABORATORY ANALYSIS

Page 10 of 31

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## ANALYTICAL RESULTS

Project: MARTIN 34 NO 2

Pace Project No.: 60117039

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>Sample: GW-075085-3812-CB-MW-1    Lab ID: 60117039001    Collected: 03/08/12 10:40    Received: 03/10/12 09:00    Matrix: Water</b>								
<b>6010 MET ICP, Dissolved</b> Analytical Method: EPA 6010    Preparation Method: EPA 3010								
Boron, Dissolved	<b>1100</b>	ug/L	500	5	03/14/12 16:35	03/20/12 13:27	7440-42-8	
Iron, Dissolved	<b>7340</b>	ug/L	250	5	03/14/12 16:35	03/20/12 13:27	7439-89-6	
Manganese, Dissolved	<b>3480</b>	ug/L	25.0	5	03/14/12 16:35	03/20/12 13:27	7439-96-5	
<b>8260 MSV</b> Analytical Method: EPA 5030B/8260								
Benzene	<b>5100</b>	ug/L	100	100		03/16/12 21:22	71-43-2	
Ethylbenzene	<b>669</b>	ug/L	100	100		03/16/12 21:22	100-41-4	
Methylene chloride	ND	ug/L	100	100		03/16/12 21:22	75-09-2	
Naphthalene	ND	ug/L	1000	100		03/16/12 21:22	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	100	100		03/16/12 21:22	79-34-5	
Toluene	<b>2490</b>	ug/L	100	100		03/16/12 21:22	108-88-3	
Xylene (Total)	<b>9080</b>	ug/L	300	100		03/16/12 21:22	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	100 %		87-113	100		03/16/12 21:22	460-00-4	
Dibromofluoromethane (S)	106 %		86-112	100		03/16/12 21:22	1868-53-7	
1,2-Dichloroethane-d4 (S)	105 %		82-119	100		03/16/12 21:22	17060-07-0	
Toluene-d8 (S)	98 %		90-110	100		03/16/12 21:22	2037-26-5	
Preservation pH	<b>1.0</b>		0.10	100		03/16/12 21:22		

## ANALYTICAL RESULTS

Project: MARTIN 34 NO 2

Pace Project No.: 60117039

Sample: <b>GW-075085-3812-CB-MW-2</b>	Lab ID: <b>60117039002</b>	Collected: 03/08/12 09:50	Received: 03/10/12 09:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Boron, Dissolved	<b>922</b> ug/L		500	5	03/14/12 16:35	03/20/12 13:31	7440-42-8	
Iron, Dissolved	ND	ug/L	50.0	1	03/14/12 16:35	03/20/12 12:54	7439-89-6	
Manganese, Dissolved	<b>3760</b> ug/L		25.0	5	03/14/12 16:35	03/20/12 13:31	7439-96-5	
<b>8270 MSSV PAH by SIM</b>								
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510								
Naphthalene	ND	ug/L	0.50	1	03/20/12 00:00	03/22/12 03:38	91-20-3	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	111 %		42-112	1	03/20/12 00:00	03/22/12 03:38	4165-60-0	
2-Fluorobiphenyl (S)	76 %		44-115	1	03/20/12 00:00	03/22/12 03:38	321-60-8	
Terphenyl-d14 (S)	98 %		46-131	1	03/20/12 00:00	03/22/12 03:38	1718-51-0	
<b>8260 MSV</b>								
Analytical Method: EPA 5030B/8260								
Benzene	<b>295</b> ug/L		5.0	5		03/16/12 21:37	71-43-2	
Ethylbenzene	<b>221</b> ug/L		5.0	5		03/16/12 21:37	100-41-4	
Methylene chloride	ND	ug/L	5.0	5		03/16/12 21:37	75-09-2	
Naphthalene	<b>74.0</b> ug/L		50.0	5		03/16/12 21:37	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	5		03/16/12 21:37	79-34-5	
Toluene	ND	ug/L	5.0	5		03/16/12 21:37	108-88-3	
Xylene (Total)	<b>64.7</b> ug/L		15.0	5		03/16/12 21:37	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	100 %		87-113	5		03/16/12 21:37	460-00-4	
Dibromofluoromethane (S)	106 %		86-112	5		03/16/12 21:37	1868-53-7	
1,2-Dichloroethane-d4 (S)	109 %		82-119	5		03/16/12 21:37	17060-07-0	
Toluene-d8 (S)	101 %		90-110	5		03/16/12 21:37	2037-26-5	
Preservation pH	<b>1.0</b>		0.10	5		03/16/12 21:37		
<b>2540C Total Dissolved Solids</b>								
Analytical Method: SM 2540C								
Total Dissolved Solids	<b>30200</b> mg/L		5.0	1		03/15/12 10:33		
<b>300.0 IC Anions 28 Days</b>								
Analytical Method: EPA 300.0								
Chloride	<b>398</b> mg/L		50.0	50		03/27/12 12:54	16887-00-6	
Fluoride	ND	mg/L	10.0	50		03/27/12 12:54	16984-48-8	D3
Sulfate	<b>23200</b> mg/L		2000	2000		03/28/12 08:29	14808-79-8	

### ANALYTICAL RESULTS

Project: MARTIN 34 NO 2

Pace Project No.: 60117039

Sample: <b>GW-075085-3812-CB-MW-3</b>	Lab ID: <b>60117039003</b>	Collected: 03/08/12 10:45	Received: 03/10/12 09:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Boron, Dissolved	<b>962</b> ug/L		500	5	03/14/12 16:35	03/20/12 13:34	7440-42-8	
Iron, Dissolved	<b>4750</b> ug/L		250	5	03/14/12 16:35	03/20/12 13:34	7439-89-6	
Manganese, Dissolved	<b>4470</b> ug/L		25.0	5	03/14/12 16:35	03/20/12 13:34	7439-96-5	
<b>8270 MSSV PAH by SIM</b>								
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510								
Naphthalene	ND ug/L		0.50	1	03/14/12 00:00	03/15/12 11:28	91-20-3	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	56 %		42-112	1	03/14/12 00:00	03/15/12 11:28	4165-60-0	
2-Fluorobiphenyl (S)	71 %		44-115	1	03/14/12 00:00	03/15/12 11:28	321-60-8	
Terphenyl-d14 (S)	108 %		46-131	1	03/14/12 00:00	03/15/12 11:28	1718-51-0	
<b>8260 MSV</b>								
Analytical Method: EPA 5030B/8260								
Benzene	ND ug/L		1.0	1		03/16/12 21:51	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		03/16/12 21:51	100-41-4	
Methylene chloride	ND ug/L		1.0	1		03/16/12 21:51	75-09-2	
Naphthalene	ND ug/L		10.0	1		03/16/12 21:51	91-20-3	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	1		03/16/12 21:51	79-34-5	
Toluene	ND ug/L		1.0	1		03/16/12 21:51	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		03/16/12 21:51	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	101 %		87-113	1		03/16/12 21:51	460-00-4	
Dibromofluoromethane (S)	107 %		86-112	1		03/16/12 21:51	1868-53-7	
1,2-Dichloroethane-d4 (S)	116 %		82-119	1		03/16/12 21:51	17060-07-0	
Toluene-d8 (S)	101 %		90-110	1		03/16/12 21:51	2037-26-5	
Preservation pH	<b>1.0</b>		0.10	1		03/16/12 21:51		
<b>2540C Total Dissolved Solids</b>								
Analytical Method: SM 2540C								
Total Dissolved Solids	<b>30500</b> mg/L		5.0	1		03/15/12 10:33		
<b>300.0 IC Anions 28 Days</b>								
Analytical Method: EPA 300.0								
Chloride	<b>456</b> mg/L		50.0	50		03/27/12 13:27	16887-00-6	
Fluoride	ND mg/L		10.0	50		03/27/12 13:27	16984-48-8	D3
Sulfate	<b>21500</b> mg/L		2000	2000		03/27/12 13:43	14808-79-8	

### ANALYTICAL RESULTS

Project: MARTIN 34 NO 2

Pace Project No.: 60117039

Sample: <b>GW-075085-3812-CB-MW-4</b>	Lab ID: <b>60117039004</b>	Collected: 03/08/12 12:00	Received: 03/10/12 09:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Boron, Dissolved	<b>554</b> ug/L		500	5	03/14/12 16:35	03/20/12 13:38	7440-42-8	
Iron, Dissolved	<b>1040</b> ug/L		250	5	03/14/12 16:35	03/20/12 13:38	7439-89-6	
Manganese, Dissolved	<b>8280</b> ug/L		25.0	5	03/14/12 16:35	03/20/12 13:38	7439-96-5	
<b>8270 MSSV PAH by SIM</b>								
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510								
Naphthalene	<b>1.1</b> ug/L		0.50	1	03/14/12 00:00	03/15/12 11:49	91-20-3	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	63 %		42-112	1	03/14/12 00:00	03/15/12 11:49	4165-60-0	
2-Fluorobiphenyl (S)	69 %		44-115	1	03/14/12 00:00	03/15/12 11:49	321-60-8	
Terphenyl-d14 (S)	100 %		46-131	1	03/14/12 00:00	03/15/12 11:49	1718-51-0	
<b>8260 MSV</b>								
Analytical Method: EPA 5030B/8260								
Benzene	ND ug/L		1.0	1		03/19/12 18:07	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		03/19/12 18:07	100-41-4	
Methylene chloride	ND ug/L		1.0	1		03/19/12 18:07	75-09-2	
Naphthalene	ND ug/L		10.0	1		03/19/12 18:07	91-20-3	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	1		03/19/12 18:07	79-34-5	
Toluene	ND ug/L		1.0	1		03/19/12 18:07	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		03/19/12 18:07	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	100 %		87-113	1		03/19/12 18:07	460-00-4	
Dibromofluoromethane (S)	100 %		86-112	1		03/19/12 18:07	1868-53-7	
1,2-Dichloroethane-d4 (S)	105 %		82-119	1		03/19/12 18:07	17060-07-0	
Toluene-d8 (S)	98 %		90-110	1		03/19/12 18:07	2037-26-5	
Preservation pH	<b>1.0</b>		0.10	1		03/19/12 18:07		
<b>2540C Total Dissolved Solids</b>								
Analytical Method: SM 2540C								
Total Dissolved Solids	<b>38400</b> mg/L		5.0	1		03/15/12 10:33		
<b>300.0 IC Anions 28 Days</b>								
Analytical Method: EPA 300.0								
Chloride	<b>377</b> mg/L		50.0	50		03/27/12 14:00	16887-00-6	
Fluoride	ND mg/L		10.0	50		03/27/12 14:00	16984-48-8	D3
Sulfate	<b>30200</b> mg/L		5000	5000		03/27/12 14:17	14808-79-8	

## ANALYTICAL RESULTS

Project: MARTIN 34 NO 2

Pace Project No.: 60117039

Sample: <b>GW-075085-3812-CB-MW-5</b>	Lab ID: <b>60117039005</b>	Collected: 03/08/12 12:40	Received: 03/10/12 09:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260						
Benzene	<b>1200</b> ug/L		20.0	20		03/19/12 18:23	71-43-2	
Ethylbenzene	<b>62.8</b> ug/L		1.0	1		03/16/12 22:21	100-41-4	
Methylene chloride	ND ug/L		1.0	1		03/16/12 22:21	75-09-2	
Naphthalene	ND ug/L		10.0	1		03/16/12 22:21	91-20-3	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	1		03/16/12 22:21	79-34-5	
Toluene	ND ug/L		1.0	1		03/16/12 22:21	108-88-3	
Xylene (Total)	<b>61.3</b> ug/L		3.0	1		03/16/12 22:21	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	103 %		87-113	1		03/16/12 22:21	460-00-4	
Dibromofluoromethane (S)	109 %		86-112	1		03/16/12 22:21	1868-53-7	
1,2-Dichloroethane-d4 (S)	115 %		82-119	1		03/16/12 22:21	17060-07-0	
Toluene-d8 (S)	99 %		90-110	1		03/16/12 22:21	2037-26-5	
Preservation pH	<b>1.0</b>		0.10	1		03/16/12 22:21		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	<b>8520</b> mg/L		5.0	1		03/15/12 10:33		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Chloride	<b>187</b> mg/L		20.0	20		03/27/12 15:23	16887-00-6	
Fluoride	ND mg/L		4.0	20		03/27/12 15:23	16984-48-8	D3
Sulfate	<b>5810</b> mg/L		500	500		03/27/12 14:33	14808-79-8	

### ANALYTICAL RESULTS

Project: MARTIN 34 NO 2

Pace Project No.: 60117039

Sample: <b>GW-075085-3812-CB-MW-6</b>	Lab ID: <b>60117039006</b>	Collected: 03/08/12 11:40	Received: 03/10/12 09:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Boron, Dissolved	<b>622</b> ug/L		500	5	03/14/12 16:35	03/20/12 13:42	7440-42-8	
Iron, Dissolved	ND	ug/L	50.0	1	03/14/12 16:35	03/20/12 13:13	7439-89-6	
Manganese, Dissolved	<b>2530</b>	ug/L	25.0	5	03/14/12 16:35	03/20/12 13:42	7439-96-5	
<b>8270 MSSV PAH by SIM</b>								
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510								
Naphthalene	<b>23.4</b>	ug/L	5.0	10	03/14/12 00:00	03/15/12 16:02	91-20-3	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	62	%	42-112	10	03/14/12 00:00	03/15/12 16:02	4165-60-0	
2-Fluorobiphenyl (S)	64	%	44-115	10	03/14/12 00:00	03/15/12 16:02	321-60-8	
Terphenyl-d14 (S)	97	%	46-131	10	03/14/12 00:00	03/15/12 16:02	1718-51-0	
<b>8260 MSV</b>								
Analytical Method: EPA 5030B/8260								
Benzene	<b>43.2</b>	ug/L	10.0	10		03/16/12 22:35	71-43-2	
Ethylbenzene	<b>190</b>	ug/L	10.0	10		03/16/12 22:35	100-41-4	
Methylene chloride	ND	ug/L	10.0	10		03/16/12 22:35	75-09-2	
Naphthalene	ND	ug/L	100	10		03/16/12 22:35	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	10.0	10		03/16/12 22:35	79-34-5	
Toluene	ND	ug/L	10.0	10		03/16/12 22:35	108-88-3	
Xylene (Total)	<b>3320</b>	ug/L	30.0	10		03/16/12 22:35	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	106	%	87-113	10		03/16/12 22:35	460-00-4	
Dibromofluoromethane (S)	101	%	86-112	10		03/16/12 22:35	1868-53-7	
1,2-Dichloroethane-d4 (S)	109	%	82-119	10		03/16/12 22:35	17060-07-0	
Toluene-d8 (S)	99	%	90-110	10		03/16/12 22:35	2037-26-5	
Preservation pH	<b>1.0</b>		0.10	10		03/16/12 22:35		
<b>2540C Total Dissolved Solids</b>								
Analytical Method: SM 2540C								
Total Dissolved Solids	<b>37500</b>	mg/L	5.0	1		03/15/12 10:33		
<b>300.0 IC Anions 28 Days</b>								
Analytical Method: EPA 300.0								
Chloride	<b>369</b>	mg/L	50.0	50		03/27/12 15:39	16887-00-6	
Fluoride	ND	mg/L	10.0	50		03/27/12 15:39	16984-48-8	D3
Sulfate	<b>31600</b>	mg/L	5000	5000		03/27/12 15:56	14808-79-8	

### ANALYTICAL RESULTS

Project: MARTIN 34 NO 2

Pace Project No.: 60117039

Sample: <b>GW-075085-3812-CB-MW-7</b>	Lab ID: <b>60117039007</b>	Collected: 03/08/12 09:55	Received: 03/10/12 09:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010						
Boron, Dissolved	<b>840</b> ug/L		500	5	03/14/12 16:35	03/20/12 13:45	7440-42-8	
Iron, Dissolved	<b>612</b> ug/L		250	5	03/14/12 16:35	03/20/12 13:45	7439-89-6	
Manganese, Dissolved	<b>4050</b> ug/L		25.0	5	03/14/12 16:35	03/20/12 13:45	7439-96-5	
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510						
Naphthalene	<b>5.9</b> ug/L		0.50	1	03/14/12 00:00	03/15/12 12:31	91-20-3	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	93 %		42-112	1	03/14/12 00:00	03/15/12 12:31	4165-60-0	
2-Fluorobiphenyl (S)	69 %		44-115	1	03/14/12 00:00	03/15/12 12:31	321-60-8	
Terphenyl-d14 (S)	89 %		46-131	1	03/14/12 00:00	03/15/12 12:31	1718-51-0	
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260						
Benzene	<b>18.6</b> ug/L		5.0	5		03/19/12 18:38	71-43-2	
Ethylbenzene	<b>357</b> ug/L		5.0	5		03/19/12 18:38	100-41-4	
Methylene chloride	ND ug/L		5.0	5		03/19/12 18:38	75-09-2	
Naphthalene	ND ug/L		50.0	5		03/19/12 18:38	91-20-3	
1,1,2,2-Tetrachloroethane	ND ug/L		5.0	5		03/19/12 18:38	79-34-5	
Toluene	ND ug/L		5.0	5		03/19/12 18:38	108-88-3	
Xylene (Total)	ND ug/L		15.0	5		03/19/12 18:38	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	98 %		87-113	5		03/19/12 18:38	460-00-4	
Dibromofluoromethane (S)	99 %		86-112	5		03/19/12 18:38	1868-53-7	
1,2-Dichloroethane-d4 (S)	95 %		82-119	5		03/19/12 18:38	17060-07-0	
Toluene-d8 (S)	100 %		90-110	5		03/19/12 18:38	2037-26-5	
Preservation pH	<b>1.0</b>		0.10	5		03/19/12 18:38		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	<b>28400</b> mg/L		5.0	1		03/15/12 16:14		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Chloride	<b>307</b> mg/L		20.0	20		03/27/12 16:12	16887-00-6	
Fluoride	ND mg/L		4.0	20		03/27/12 16:12	16984-48-8	D3
Sulfate	<b>20600</b> mg/L		2000	2000		03/27/12 16:29	14808-79-8	

### ANALYTICAL RESULTS

Project: MARTIN 34 NO 2

Pace Project No.: 60117039

Sample: <b>GW-075085-3812-CB-DUP</b>		Lab ID: <b>60117039008</b>	Collected: 03/08/12 11:45	Received: 03/10/12 09:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260						
Benzene	ND	ug/L	50.0	50		03/16/12 23:05	71-43-2	
Ethylbenzene	<b>199</b>	ug/L	50.0	50		03/16/12 23:05	100-41-4	
Methylene chloride	ND	ug/L	50.0	50		03/16/12 23:05	75-09-2	
Naphthalene	ND	ug/L	500	50		03/16/12 23:05	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	50.0	50		03/16/12 23:05	79-34-5	
Toluene	ND	ug/L	50.0	50		03/16/12 23:05	108-88-3	
Xylene (Total)	<b>3610</b>	ug/L	150	50		03/16/12 23:05	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	102	%	87-113	50		03/16/12 23:05	460-00-4	D3
Dibromofluoromethane (S)	103	%	86-112	50		03/16/12 23:05	1868-53-7	
1,2-Dichloroethane-d4 (S)	109	%	82-119	50		03/16/12 23:05	17060-07-0	
Toluene-d8 (S)	99	%	90-110	50		03/16/12 23:05	2037-26-5	
Preservation pH	<b>1.0</b>		0.10	50		03/16/12 23:05		

## ANALYTICAL RESULTS

Project: MARTIN 34 NO 2

Pace Project No.: 60117039

<b>Sample: TRIP BLANK</b>		<b>Lab ID: 60117039009</b>	Collected: 03/08/12 00:00	Received: 03/10/12 09:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260						
Benzene	ND	ug/L	1.0	1		03/16/12 23:20	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		03/16/12 23:20	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		03/16/12 23:20	75-09-2	
Naphthalene	ND	ug/L	10.0	1		03/16/12 23:20	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/16/12 23:20	79-34-5	
Toluene	ND	ug/L	1.0	1		03/16/12 23:20	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		03/16/12 23:20	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	98 %		87-113	1		03/16/12 23:20	460-00-4	
Dibromofluoromethane (S)	101 %		86-112	1		03/16/12 23:20	1868-53-7	
1,2-Dichloroethane-d4 (S)	107 %		82-119	1		03/16/12 23:20	17060-07-0	
Toluene-d8 (S)	101 %		90-110	1		03/16/12 23:20	2037-26-5	
Preservation pH	<b>1.0</b>		0.10	1		03/16/12 23:20		

### QUALITY CONTROL DATA

Project: MARTIN 34 NO 2

Pace Project No.: 60117039

QC Batch: MPRP/17310      Analysis Method: EPA 6010  
 QC Batch Method: EPA 3010      Analysis Description: 6010 MET Dissolved  
 Associated Lab Samples: 60117039001, 60117039002, 60117039003, 60117039004, 60117039006, 60117039007

METHOD BLANK: 965102      Matrix: Water  
 Associated Lab Samples: 60117039001, 60117039002, 60117039003, 60117039004, 60117039006, 60117039007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	03/20/12 11:47	
Iron, Dissolved	ug/L	ND	50.0	03/20/12 11:47	
Manganese, Dissolved	ug/L	ND	5.0	03/20/12 11:47	

LABORATORY CONTROL SAMPLE: 965103

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	968	97	80-120	
Iron, Dissolved	ug/L	10000	10000	100	80-120	
Manganese, Dissolved	ug/L	1000	1000	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 965104      965105

Parameter	Units	60117005001		MS		MSD		% Rec		Max		Qual
		Result	Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	
Boron, Dissolved	ug/L	135	1000	1000	1070	1070	93	94	75-125	0	20	
Iron, Dissolved	ug/L	40.9J	10000	10000	10800	10800	107	107	75-125	0	20	
Manganese, Dissolved	ug/L	955	1000	1000	1810	1820	86	87	75-125	0	20	

### QUALITY CONTROL DATA

Project: MARTIN 34 NO 2  
Pace Project No.: 60117039

QC Batch: MSV/44271 Analysis Method: EPA 5030B/8260  
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge  
Associated Lab Samples: 60117039001, 60117039002, 60117039003, 60117039005, 60117039006, 60117039008, 60117039009

METHOD BLANK: 966515 Matrix: Water  
Associated Lab Samples: 60117039001, 60117039002, 60117039003, 60117039005, 60117039006, 60117039008, 60117039009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	03/16/12 21:07	
Benzene	ug/L	ND	1.0	03/16/12 21:07	
Ethylbenzene	ug/L	ND	1.0	03/16/12 21:07	
Methylene chloride	ug/L	ND	1.0	03/16/12 21:07	
Naphthalene	ug/L	ND	10.0	03/16/12 21:07	
Toluene	ug/L	ND	1.0	03/16/12 21:07	
Xylene (Total)	ug/L	ND	3.0	03/16/12 21:07	
1,2-Dichloroethane-d4 (S)	%	104	82-119	03/16/12 21:07	
4-Bromofluorobenzene (S)	%	101	87-113	03/16/12 21:07	
Dibromofluoromethane (S)	%	103	86-112	03/16/12 21:07	
Toluene-d8 (S)	%	100	90-110	03/16/12 21:07	

LABORATORY CONTROL SAMPLE: 966516

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	20.7	103	78-124	
Benzene	ug/L	20	21.7	109	82-117	
Ethylbenzene	ug/L	20	19.6	98	79-121	
Methylene chloride	ug/L	20	21.0	105	75-118	
Naphthalene	ug/L	20	20.4	102	66-133	
Toluene	ug/L	20	20.1	100	80-120	
Xylene (Total)	ug/L	60	62.4	104	75-120	
1,2-Dichloroethane-d4 (S)	%			102	82-119	
4-Bromofluorobenzene (S)	%			98	87-113	
Dibromofluoromethane (S)	%			103	86-112	
Toluene-d8 (S)	%			98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 966517 966518

Parameter	Units	60117231002		MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result					
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	24.1	24.1	119	119	48-137	0	26	
Benzene	ug/L	156	20	20	209	194	265	192	58-139	7	21	M1
Ethylbenzene	ug/L	93.3	20	20	114	114	105	104	56-138	0	19	
Methylene chloride	ug/L	ND	20	20	20.4	18.1	101	89	44-133	12	27	
Naphthalene	ug/L	46.0	20	20	71.3	69.4	127	117	26-159	3	34	
Toluene	ug/L	ND	20	20	19.0	19.5	93	95	59-140	3	19	
Xylene (Total)	ug/L	101	60	60	158	159	96	98	52-146	1	19	
1,2-Dichloroethane-d4 (S)	%						106	106	82-119			
4-Bromofluorobenzene (S)	%						103	105	87-113			

Date: 03/29/2012 04:46 PM

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: MARTIN 34 NO 2

Pace Project No.: 60117039

Parameter	Units	60117231002		966517		966518		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec				
Dibromofluoromethane (S)	%							101 98			
Toluene-d8 (S)	%							97 100			
Preservation pH		1.0			1.0	1.0			0		

**QUALITY CONTROL DATA**

Project: MARTIN 34 NO 2

Pace Project No.: 60117039

QC Batch: MSV/44319 Analysis Method: EPA 5030B/8260  
 QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge  
 Associated Lab Samples: 60117039004, 60117039005, 60117039007

METHOD BLANK: 967913 Matrix: Water

Associated Lab Samples: 60117039004, 60117039005, 60117039007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	03/19/12 16:02	
Benzene	ug/L	ND	1.0	03/19/12 16:02	
Ethylbenzene	ug/L	ND	1.0	03/19/12 16:02	
Methylene chloride	ug/L	ND	1.0	03/19/12 16:02	
Naphthalene	ug/L	ND	10.0	03/19/12 16:02	
Toluene	ug/L	ND	1.0	03/19/12 16:02	
Xylene (Total)	ug/L	ND	3.0	03/19/12 16:02	
1,2-Dichloroethane-d4 (S)	%	95	82-119	03/19/12 16:02	
4-Bromofluorobenzene (S)	%	95	87-113	03/19/12 16:02	
Dibromofluoromethane (S)	%	99	86-112	03/19/12 16:02	
Toluene-d8 (S)	%	101	90-110	03/19/12 16:02	

LABORATORY CONTROL SAMPLE: 967914

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	19.4	97	78-124	
Benzene	ug/L	20	18.8	94	82-117	
Ethylbenzene	ug/L	20	19.1	95	79-121	
Methylene chloride	ug/L	20	18.2	91	75-118	
Naphthalene	ug/L	20	16.9	85	66-133	
Toluene	ug/L	20	18.7	94	80-120	
Xylene (Total)	ug/L	60	55.0	92	75-120	
1,2-Dichloroethane-d4 (S)	%			96	82-119	
4-Bromofluorobenzene (S)	%			97	87-113	
Dibromofluoromethane (S)	%			100	86-112	
Toluene-d8 (S)	%			100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 967915 967916

Parameter	Units	60117035001		MS		MSD		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result							
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	18.1	18.5	90	92	92	48-137	2	26		
Benzene	ug/L	ND	20	20	21.0	20.4	105	102	102	58-139	3	21		
Ethylbenzene	ug/L	1.8	20	20	23.1	23.4	106	108	108	56-138	1	19		
Methylene chloride	ug/L	ND	20	20	19.3	19.2	97	96	96	44-133	1	27		
Naphthalene	ug/L	ND	20	20	16.3	17.8	82	89	89	26-159	8	34		
Toluene	ug/L	ND	20	20	21.2	20.9	106	105	105	59-140	1	19		
Xylene (Total)	ug/L	20.1	60	60	82.4	81.8	104	103	103	52-146	1	19		
1,2-Dichloroethane-d4 (S)	%						91	92	92	82-119				
4-Bromofluorobenzene (S)	%						93	98	98	87-113				

Date: 03/29/2012 04:46 PM

**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: MARTIN 34 NO 2

Pace Project No.: 60117039

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		967915		967916									
Parameter	Units	60117035001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
Dibromofluoromethane (S)	%						98	99	86-112				
Toluene-d8 (S)	%						101	102	90-110				
Preservation pH		1.0			1.0	1.0				0			



### QUALITY CONTROL DATA

Project: MARTIN 34 NO 2

Pace Project No.: 60117039

QC Batch: OEXT/32465

Analysis Method: EPA 8270 by SIM

QC Batch Method: EPA 3510

Analysis Description: 8270 Water PAH by SIM MSSV

Associated Lab Samples: 60117039002

METHOD BLANK: 968066

Matrix: Water

Associated Lab Samples: 60117039002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Naphthalene	ug/L	ND	0.50	03/22/12 02:56	
2-Fluorobiphenyl (S)	%	83	44-115	03/22/12 02:56	
Nitrobenzene-d5 (S)	%	80	42-112	03/22/12 02:56	
Terphenyl-d14 (S)	%	99	46-131	03/22/12 02:56	

LABORATORY CONTROL SAMPLE: 968067

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Naphthalene	ug/L	1	0.79	79	41-112	
2-Fluorobiphenyl (S)	%			78	44-115	
Nitrobenzene-d5 (S)	%			80	42-112	
Terphenyl-d14 (S)	%			91	46-131	



**QUALITY CONTROL DATA**

Project: MARTIN 34 NO 2

Pace Project No.: 60117039

QC Batch: WET/34008

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 60117039007

METHOD BLANK: 966010

Matrix: Water

Associated Lab Samples: 60117039007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	03/15/12 16:13	

SAMPLE DUPLICATE: 966011

Parameter	Units	60117039007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	28400	24300	16	17	

### QUALITY CONTROL DATA

Project: MARTIN 34 NO 2

Pace Project No.: 60117039

QC Batch: WETA/19623 Analysis Method: EPA 300.0  
 QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
 Associated Lab Samples: 60117039002, 60117039003, 60117039004, 60117039005, 60117039006, 60117039007

METHOD BLANK: 971834 Matrix: Water  
 Associated Lab Samples: 60117039002, 60117039003, 60117039004, 60117039005, 60117039006, 60117039007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	03/27/12 12:21	
Fluoride	mg/L	ND	0.20	03/27/12 12:21	
Sulfate	mg/L	ND	1.0	03/27/12 12:21	

LABORATORY CONTROL SAMPLE: 971835

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	95	90-110	
Fluoride	mg/L	2.5	2.4	97	90-110	
Sulfate	mg/L	5	5.1	102	90-110	

MATRIX SPIKE SAMPLE: 971836

Parameter	Units	60117220001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	14.5	25	39.4	99	64-118	
Fluoride	mg/L	ND	12.5	12.0	92	75-110	
Sulfate	mg/L	205	100	310	105	61-119	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 971837 971838

Parameter	Units	60117231002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	235	500	500	705	720	94	97	64-118	2	12	
Fluoride	mg/L	ND	250	250	250	269	98	105	75-110	7	10	
Sulfate	mg/L	681	500	500	1210	1220	107	108	61-119	0	10	

## QUALIFIERS

Project: MARTIN 34 NO 2

Pace Project No.: 60117039

### 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.

TNI - The NELAC Institute.

### BATCH QUALIFIERS

Batch: OEXT/32389

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

Batch: OEXT/32465

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

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: MARTIN 34 NO 2  
Pace Project No.: 60117039

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60117039001	GW-075085-3812-CB-MW-1	EPA 3010	MPRP/17310	EPA 6010	ICP/14765
60117039002	GW-075085-3812-CB-MW-2	EPA 3010	MPRP/17310	EPA 6010	ICP/14765
60117039003	GW-075085-3812-CB-MW-3	EPA 3010	MPRP/17310	EPA 6010	ICP/14765
60117039004	GW-075085-3812-CB-MW-4	EPA 3010	MPRP/17310	EPA 6010	ICP/14765
60117039006	GW-075085-3812-CB-MW-6	EPA 3010	MPRP/17310	EPA 6010	ICP/14765
60117039007	GW-075085-3812-CB-MW-7	EPA 3010	MPRP/17310	EPA 6010	ICP/14765
60117039002	GW-075085-3812-CB-MW-2	EPA 3510	OEXT/32389	EPA 8270 by SIM	MSSV/10125
60117039002	GW-075085-3812-CB-MW-2	EPA 3510	OEXT/32465	EPA 8270 by SIM	MSSV/10158
60117039003	GW-075085-3812-CB-MW-3	EPA 3510	OEXT/32389	EPA 8270 by SIM	MSSV/10125
60117039004	GW-075085-3812-CB-MW-4	EPA 3510	OEXT/32389	EPA 8270 by SIM	MSSV/10125
60117039006	GW-075085-3812-CB-MW-6	EPA 3510	OEXT/32389	EPA 8270 by SIM	MSSV/10125
60117039007	GW-075085-3812-CB-MW-7	EPA 3510	OEXT/32389	EPA 8270 by SIM	MSSV/10125
60117039001	GW-075085-3812-CB-MW-1	EPA 5030B/8260	MSV/44271		
60117039002	GW-075085-3812-CB-MW-2	EPA 5030B/8260	MSV/44271		
60117039003	GW-075085-3812-CB-MW-3	EPA 5030B/8260	MSV/44271		
60117039004	GW-075085-3812-CB-MW-4	EPA 5030B/8260	MSV/44319		
60117039005	GW-075085-3812-CB-MW-5	EPA 5030B/8260	MSV/44271		
60117039005	GW-075085-3812-CB-MW-5	EPA 5030B/8260	MSV/44319		
60117039006	GW-075085-3812-CB-MW-6	EPA 5030B/8260	MSV/44271		
60117039007	GW-075085-3812-CB-MW-7	EPA 5030B/8260	MSV/44319		
60117039008	GW-075085-3812-CB-DUP	EPA 5030B/8260	MSV/44271		
60117039009	TRIP BLANK	EPA 5030B/8260	MSV/44271		
60117039002	GW-075085-3812-CB-MW-2	SM 2540C	WET/34000		
60117039003	GW-075085-3812-CB-MW-3	SM 2540C	WET/34000		
60117039004	GW-075085-3812-CB-MW-4	SM 2540C	WET/34000		
60117039005	GW-075085-3812-CB-MW-5	SM 2540C	WET/34000		
60117039006	GW-075085-3812-CB-MW-6	SM 2540C	WET/34000		
60117039007	GW-075085-3812-CB-MW-7	SM 2540C	WET/34008		
60117039002	GW-075085-3812-CB-MW-2	EPA 300.0	WETA/19623		
60117039003	GW-075085-3812-CB-MW-3	EPA 300.0	WETA/19623		
60117039004	GW-075085-3812-CB-MW-4	EPA 300.0	WETA/19623		
60117039005	GW-075085-3812-CB-MW-5	EPA 300.0	WETA/19623		
60117039006	GW-075085-3812-CB-MW-6	EPA 300.0	WETA/19623		
60117039007	GW-075085-3812-CB-MW-7	EPA 300.0	WETA/19623		





Sample Condition Upon Receipt – ESI Tech Specs

Client Name: COP CRA

Project #: 6007039

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other

Optional  
Proj Due Date: 3/22  
Proj Name:

Tracking #: 898638321800 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  ZPIC

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

Cooler Temperature: 48/28

Date and initials of person examining contents: PV 3-10-12

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 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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Exceptions: <u>(VOA)</u> coliform, TOC, O&G, WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank lot # (if purchased): <u>021312-3</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>

mw-1 pH is 6.0  
mw-2 - mw-7 pH is 3.0  
Added 2.5ml HCl to each sample all equal pH 4.5  
Initial when completed: hr Lot # of added preservative: 6090

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

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

Comments/ Resolution: 3/12/12 preserve samples w/ high pH

Temp Log: Record start and finish times when unpacking cooler, if >20 min, recheck sample temps.	
Start: <u>1130</u>	Start:
End: <u>1140</u>	End:
Temp:	Temp:

Project Manager Review: AT Date: 3/12/12

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).

**Alice Tracy - RE: Pace Project 60117039 Martin 34 No 2**

---

**From:** "Bown, Angela" <abown@croworld.com>  
**To:** "Alice Tracy" <Alice.Tracy@pacelabs.com>, "Mathews, Christine" <cmathews...>  
**Date:** 3/19/2012 1:55 PM  
**Subject:** RE: Pace Project 60117039 Martin 34 No 2

---

Sure, go ahead and re-extract & re-run.

Thanks,

Angie

---

**From:** Alice Tracy [mailto:Alice.Tracy@pacelabs.com]  
**Sent:** Monday, March 19, 2012 2:32 PM  
**To:** Bown, Angela; Mathews, Christine; Blanchard, Kelly E.  
**Subject:** Pace Project 60117039 Martin 34 No 2

Hi Christine/Kelly/Angela,

Sample GW-075085-3812-CB-MW-2 has nitrobenzene d5 out high in the surrgates. This is most likely due to matrix interference from a significant naphthalene hit. The sample results will be posted and flagged for surrogate failure.

We can re-extract the sample and re-run it, if you'd like?

Please, let me know how you would like to move forward.

Thanks,

**Alice Tracy**

Project Manager  
Pace Analytical Services, Inc.  
9608 Loiret Boulevard  
Lenexa, KS 66219  
Office: 913-563-1409  
Fax: 913-438-3449  
[alice.tracy@pacelabs.com](mailto:alice.tracy@pacelabs.com)  
[www.pacelabs.com](http://www.pacelabs.com)

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June 21, 2012

Cassie Brown  
COP Conestoga-Rovers & Associa

RE: Project: Martin 34 No. 2 (075035)  
Pace Project No.: 60122981

Dear Cassie Brown:

Enclosed are the analytical results for sample(s) received by the laboratory on June 08, 2012. 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,



Alice Flanagan

alice.flanagan@pacelabs.com  
Project Manager

Enclosures

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



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

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### **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: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60122981001	GW075035-060712-CB-MW-1	Water	06/07/12 15:00	06/08/12 08:45
60122981002	GW075035-060712-CB-MW-2	Water	06/06/12 18:30	06/08/12 08:45
60122981003	GW075035-060712-CB-MW-3	Water	06/07/12 14:00	06/08/12 08:45
60122981004	GW075035-060712-CB-MW-4	Water	06/07/12 14:45	06/08/12 08:45
60122981005	GW075035-060712-CB-MW-5	Water	06/07/12 15:20	06/08/12 08:45
60122981006	GW075035-060712-CB-MW-6	Water	06/07/12 18:00	06/08/12 08:45
60122981007	GW075035-060712-CB-MW-7	Water	06/07/12 14:15	06/08/12 08:45
60122981008	GW075035-060712-CB-DUP	Water	06/07/12 18:10	06/08/12 08:45
60122981009	TRIP BLANK	Water	06/07/12 08:00	06/08/12 08:45

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60122981001	GW075035-060712-CB-MW-1	EPA 6010	JDH	3
		EPA 8270C by SIM	BRM	4
		EPA 5030B/8260	PRG	12
		SM 2540C	DJR	1
60122981002	GW075035-060712-CB-MW-2	EPA 300.0	OL	3
		EPA 6010	JDH	3
		EPA 8270C by SIM	BRM	4
		EPA 5030B/8260	PRG	12
60122981003	GW075035-060712-CB-MW-3	SM 2540C	DJR	1
		EPA 300.0	OL	3
		EPA 6010	JDH	3
		EPA 8270C by SIM	BRM	4
60122981004	GW075035-060712-CB-MW-4	EPA 5030B/8260	PRG	12
		SM 2540C	DJR	1
		EPA 300.0	OL	3
		EPA 6010	JDH	3
60122981005	GW075035-060712-CB-MW-5	EPA 8270C by SIM	BRM	4
		EPA 5030B/8260	PRG	12
		SM 2540C	DJR	1
		EPA 300.0	OL	3
60122981006	GW075035-060712-CB-MW-6	EPA 6010	JDH	3
		EPA 8270C by SIM	BRM	4
		EPA 5030B/8260	PRG	12
		SM 2540C	DJR	1
60122981007	GW075035-060712-CB-MW-7	EPA 300.0	OL	3
		EPA 6010	JDH	3
		EPA 8270C by SIM	BRM	4
		EPA 5030B/8260	PRG	12
60122981008	GW075035-060712-CB-DUP	SM 2540C	DJR	1
		EPA 300.0	OL	3
		EPA 5030B/8260	PRG	12
60122981009	TRIP BLANK	EPA 5030B/8260	PRG	12

### REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

---

**Method:** EPA 6010

**Description:** 6010 MET ICP, Dissolved

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** June 21, 2012

**General Information:**

6 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:**

Analyte Comments:

QC Batch: MPRP/18387

B: Analyte was detected in the associated method blank.

- GW075035-060712-CB-MW-1 (Lab ID: 60122981001)
  - Manganese, Dissolved
- GW075035-060712-CB-MW-2 (Lab ID: 60122981002)
  - Manganese, Dissolved
- GW075035-060712-CB-MW-3 (Lab ID: 60122981003)
  - Manganese, Dissolved
- GW075035-060712-CB-MW-4 (Lab ID: 60122981004)
  - Manganese, Dissolved
- GW075035-060712-CB-MW-6 (Lab ID: 60122981006)
  - Manganese, Dissolved

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

---

**Method:** EPA 6010

**Description:** 6010 MET ICP, Dissolved

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** June 21, 2012

Analyte Comments:

QC Batch: MPRP/18387

B: Analyte was detected in the associated method blank.

- GW075035-060712-CB-MW-7 (Lab ID: 60122981007)
- Manganese, Dissolved

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

---

**Method:** EPA 8270C by SIM

**Description:** 8270 MSSV PAH by SIM

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** June 21, 2012

**General Information:**

7 samples were analyzed for EPA 8270C by SIM. 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 3510C 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.

QC Batch: OEXT/33549

S0: Surrogate recovery outside laboratory control limits.

- GW075035-060712-CB-MW-1 (Lab ID: 60122981001)
  - Nitrobenzene-d5 (S)
- GW075035-060712-CB-MW-2 (Lab ID: 60122981002)
  - Nitrobenzene-d5 (S)

**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: MSSV/10547

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

QC Batch: MSSV/10548

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

## REPORT OF LABORATORY ANALYSIS

## PROJECT NARRATIVE

Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

---

**Method:** EPA 8270C by SIM

**Description:** 8270 MSSV PAH by SIM

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** June 21, 2012

**Duplicate Sample:**

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

**Additional Comments:**

## PROJECT NARRATIVE

Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

---

**Method:** EPA 5030B/8260

**Description:** 8260 MSV

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** June 21, 2012

**General Information:**

9 samples were analyzed for EPA 5030B/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.

QC Batch: MSV/46290

S0: Surrogate recovery outside laboratory control limits.

- GW075035-060712-CB-MW-4 (Lab ID: 60122981004)

- 4-Bromofluorobenzene (S)

**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/46290

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

QC Batch: MSV/46380

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:**

## REPORT OF LABORATORY ANALYSIS

## PROJECT NARRATIVE

Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

---

**Method:** SM 2540C

**Description:** 2540C Total Dissolved Solids

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** June 21, 2012

**General Information:**

7 samples were analyzed for SM 2540C. 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.

**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:**

## PROJECT NARRATIVE

Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

---

**Method:** EPA 300.0

**Description:** 300.0 IC Anions 28 Days

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** June 21, 2012

**General Information:**

7 samples were analyzed for EPA 300.0. 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.

**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:**

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

### ANALYTICAL RESULTS

Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

**Sample:** GW075035-060712-CB-MW-1 **Lab ID:** 60122981001 **Collected:** 06/07/12 15:00 **Received:** 06/08/12 08:45 **Matrix:** Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010						
Boron, Dissolved	1000	ug/L	100	1	06/15/12 15:55	06/18/12 12:27	7440-42-8	
Iron, Dissolved	5980	ug/L	50.0	1	06/15/12 15:55	06/18/12 12:27	7439-89-6	
Manganese, Dissolved	2090	ug/L	5.0	1	06/15/12 15:55	06/18/12 12:27	7439-96-5	B
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C						
Naphthalene	22.0	ug/L	2.5	5	06/13/12 00:00	06/20/12 13:10	91-20-3	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	149	%	42-120	1	06/13/12 00:00	06/19/12 19:39	4165-60-0	S0
2-Fluorobiphenyl (S)	57	%	44-120	1	06/13/12 00:00	06/19/12 19:39	321-60-8	
Terphenyl-d14 (S)	91	%	46-131	1	06/13/12 00:00	06/19/12 19:39	1718-51-0	
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260						
Benzene	3000	ug/L	100	100		06/13/12 12:56	71-43-2	
Ethylbenzene	300	ug/L	100	100		06/13/12 12:56	100-41-4	
Methylene chloride	ND	ug/L	100	100		06/13/12 12:56	75-09-2	
Naphthalene	ND	ug/L	1000	100		06/13/12 12:56	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	100	100		06/13/12 12:56	79-34-5	
Toluene	3830	ug/L	100	100		06/13/12 12:56	108-88-3	
Xylene (Total)	4050	ug/L	300	100		06/13/12 12:56	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	103	%	87-113	100		06/13/12 12:56	460-00-4	
Dibromofluoromethane (S)	97	%	86-112	100		06/13/12 12:56	1868-53-7	
1,2-Dichloroethane-d4 (S)	102	%	82-119	100		06/13/12 12:56	17060-07-0	
Toluene-d8 (S)	98	%	90-110	100		06/13/12 12:56	2037-26-5	
Preservation pH	1.0		0.10	100		06/13/12 12:56		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	25000	mg/L	5.0	1		06/14/12 10:40		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Chloride	285	mg/L	50.0	50		06/19/12 14:32	16887-00-6	
Fluoride	ND	mg/L	0.20	1		06/18/12 17:23	16984-48-8	
Sulfate	14100	mg/L	2000	2000		06/19/12 14:47	14808-79-8	

### ANALYTICAL RESULTS

Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

**Sample:** GW075035-060712-CB-MW-2    **Lab ID:** 60122981002    Collected: 06/06/12 18:30    Received: 06/08/12 08:45    Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010						
Boron, Dissolved	847	ug/L	100	1	06/15/12 15:55	06/18/12 12:30	7440-42-8	
Iron, Dissolved	4790	ug/L	50.0	1	06/15/12 15:55	06/18/12 12:30	7439-89-6	
Manganese, Dissolved	3880	ug/L	5.0	1	06/15/12 15:55	06/18/12 12:30	7439-96-5	B
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C						
Naphthalene	23.8	ug/L	2.5	5	06/13/12 00:00	06/20/12 13:25	91-20-3	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	121	%	42-120	1	06/13/12 00:00	06/19/12 19:55	4165-60-0	S0
2-Fluorobiphenyl (S)	61	%	44-120	1	06/13/12 00:00	06/19/12 19:55	321-60-8	
Terphenyl-d14 (S)	84	%	46-131	1	06/13/12 00:00	06/19/12 19:55	1718-51-0	
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260						
Benzene	207	ug/L	5.0	5		06/13/12 13:10	71-43-2	
Ethylbenzene	219	ug/L	5.0	5		06/13/12 13:10	100-41-4	
Methylene chloride	ND	ug/L	5.0	5		06/13/12 13:10	75-09-2	
Naphthalene	61.1	ug/L	50.0	5		06/13/12 13:10	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	5		06/13/12 13:10	79-34-5	
Toluene	ND	ug/L	5.0	5		06/13/12 13:10	108-88-3	
Xylene (Total)	44.3	ug/L	15.0	5		06/13/12 13:10	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	103	%	87-113	5		06/13/12 13:10	460-00-4	
Dibromofluoromethane (S)	101	%	86-112	5		06/13/12 13:10	1868-53-7	
1,2-Dichloroethane-d4 (S)	106	%	82-119	5		06/13/12 13:10	17060-07-0	
Toluene-d8 (S)	98	%	90-110	5		06/13/12 13:10	2037-26-5	
Preservation pH	1.0		0.10	5		06/13/12 13:10		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	28000	mg/L	5.0	1		06/13/12 09:50		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Chloride	400	mg/L	50.0	50		06/19/12 15:03	16887-00-6	
Fluoride	ND	mg/L	0.20	1		06/18/12 17:38	16984-48-8	
Sulfate	26100	mg/L	2000	2000		06/19/12 15:18	14808-79-8	

### ANALYTICAL RESULTS

Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

**Sample:** GW075035-060712-CB-MW-3    **Lab ID:** 60122981003    Collected: 06/07/12 14:00    Received: 06/08/12 08:45    Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Boron, Dissolved	889	ug/L	100	1	06/15/12 15:55	06/18/12 12:32	7440-42-8	
Iron, Dissolved	ND	ug/L	50.0	1	06/15/12 15:55	06/18/12 12:32	7439-89-6	
Manganese, Dissolved	2020	ug/L	5.0	1	06/15/12 15:55	06/18/12 12:32	7439-96-5	B
<b>8270 MSSV PAH by SIM</b>								
Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C								
Naphthalene	ND	ug/L	0.50	1	06/13/12 00:00	06/19/12 20:10	91-20-3	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	72	%	42-120	1	06/13/12 00:00	06/19/12 20:10	4165-60-0	
2-Fluorobiphenyl (S)	65	%	44-120	1	06/13/12 00:00	06/19/12 20:10	321-60-8	
Terphenyl-d14 (S)	80	%	46-131	1	06/13/12 00:00	06/19/12 20:10	1718-51-0	
<b>8260 MSV</b>								
Analytical Method: EPA 5030B/8260								
Benzene	ND	ug/L	1.0	1		06/13/12 13:25	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		06/13/12 13:25	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		06/13/12 13:25	75-09-2	
Naphthalene	ND	ug/L	10.0	1		06/13/12 13:25	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		06/13/12 13:25	79-34-5	
Toluene	ND	ug/L	1.0	1		06/13/12 13:25	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		06/13/12 13:25	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	106	%	87-113	1		06/13/12 13:25	460-00-4	
Dibromofluoromethane (S)	102	%	86-112	1		06/13/12 13:25	1868-53-7	
1,2-Dichloroethane-d4 (S)	110	%	82-119	1		06/13/12 13:25	17060-07-0	
Toluene-d8 (S)	97	%	90-110	1		06/13/12 13:25	2037-26-5	
Preservation pH	1.0		0.10	1		06/13/12 13:25		
<b>2540C Total Dissolved Solids</b>								
Analytical Method: SM 2540C								
Total Dissolved Solids	34100	mg/L	5.0	1		06/14/12 10:40		
<b>300.0 IC Anions 28 Days</b>								
Analytical Method: EPA 300.0								
Chloride	431	mg/L	50.0	50		06/19/12 15:34	16887-00-6	
Fluoride	ND	mg/L	0.20	1		06/18/12 17:54	16984-48-8	
Sulfate	23300	mg/L	2000	2000		06/19/12 16:04	14808-79-8	

### ANALYTICAL RESULTS

Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

**Sample:** GW075035-060712-CB-MW-4    **Lab ID:** 60122981004    Collected: 06/07/12 14:45    Received: 06/08/12 08:45    Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Boron, Dissolved	558	ug/L	100	1	06/15/12 15:55	06/18/12 12:34	7440-42-8	
Iron, Dissolved	983	ug/L	50.0	1	06/15/12 15:55	06/18/12 12:34	7439-89-6	
Manganese, Dissolved	5250	ug/L	5.0	1	06/15/12 15:55	06/18/12 12:34	7439-96-5	B
<b>8270 MSSV PAH by SIM</b>								
Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C								
Naphthalene	0.79	ug/L	0.50	1	06/13/12 00:00	06/19/12 20:26	91-20-3	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	67	%	42-120	1	06/13/12 00:00	06/19/12 20:26	4165-60-0	
2-Fluorobiphenyl (S)	65	%	44-120	1	06/13/12 00:00	06/19/12 20:26	321-60-8	
Terphenyl-d14 (S)	90	%	46-131	1	06/13/12 00:00	06/19/12 20:26	1718-51-0	
<b>8260 MSV</b>								
Analytical Method: EPA 5030B/8260								
Benzene	ND	ug/L	1.0	1		06/13/12 13:39	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		06/13/12 13:39	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		06/13/12 13:39	75-09-2	
Naphthalene	ND	ug/L	10.0	1		06/13/12 13:39	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		06/13/12 13:39	79-34-5	
Toluene	ND	ug/L	1.0	1		06/13/12 13:39	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		06/13/12 13:39	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	117	%	87-113	1		06/13/12 13:39	460-00-4	S0
Dibromofluoromethane (S)	104	%	86-112	1		06/13/12 13:39	1868-53-7	
1,2-Dichloroethane-d4 (S)	115	%	82-119	1		06/13/12 13:39	17060-07-0	
Toluene-d8 (S)	98	%	90-110	1		06/13/12 13:39	2037-26-5	
Preservation pH	1.0		0.10	1		06/13/12 13:39		
<b>2540C Total Dissolved Solids</b>								
Analytical Method: SM 2540C								
Total Dissolved Solids	40300	mg/L	5.0	1		06/14/12 10:40		
<b>300.0 IC Anions 28 Days</b>								
Analytical Method: EPA 300.0								
Chloride	378	mg/L	50.0	50		06/19/12 17:06	16887-00-6	
Fluoride	1.4	mg/L	0.20	1		06/18/12 18:09	16984-48-8	
Sulfate	28400	mg/L	2000	2000		06/19/12 17:22	14808-79-8	

### ANALYTICAL RESULTS

Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

**Sample:** GW075035-060712-CB-MW-5 **Lab ID:** 60122981005 **Collected:** 06/07/12 15:20 **Received:** 06/08/12 08:45 **Matrix:** Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C						
Naphthalene	ND	ug/L	0.50	1	06/13/12 00:00	06/19/12 20:41	91-20-3	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	69	%	42-120	1	06/13/12 00:00	06/19/12 20:41	4165-60-0	
2-Fluorobiphenyl (S)	63	%	44-120	1	06/13/12 00:00	06/19/12 20:41	321-60-8	
Terphenyl-d14 (S)	66	%	46-131	1	06/13/12 00:00	06/19/12 20:41	1718-51-0	
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260						
Benzene	1030	ug/L	20.0	20		06/13/12 13:53	71-43-2	
Ethylbenzene	ND	ug/L	20.0	20		06/13/12 13:53	100-41-4	
Methylene chloride	ND	ug/L	20.0	20		06/13/12 13:53	75-09-2	
Naphthalene	ND	ug/L	200	20		06/13/12 13:53	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	20.0	20		06/13/12 13:53	79-34-5	
Toluene	ND	ug/L	20.0	20		06/13/12 13:53	108-88-3	
Xylene (Total)	ND	ug/L	60.0	20		06/13/12 13:53	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	104	%	87-113	20		06/13/12 13:53	460-00-4	
Dibromofluoromethane (S)	104	%	86-112	20		06/13/12 13:53	1868-53-7	
1,2-Dichloroethane-d4 (S)	102	%	82-119	20		06/13/12 13:53	17060-07-0	
Toluene-d8 (S)	99	%	90-110	20		06/13/12 13:53	2037-26-5	
Preservation pH	1.0		0.10	20		06/13/12 13:53		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	13900	mg/L	5.0	1		06/14/12 10:41		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Chloride	219	mg/L	50.0	50		06/19/12 17:37	16887-00-6	
Fluoride	0.69	mg/L	0.20	1		06/18/12 18:24	16984-48-8	
Sulfate	8010	mg/L	2000	2000		06/19/12 17:52	14808-79-8	

### ANALYTICAL RESULTS

Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

**Sample:** GW075035-060712-CB-MW-6 **Lab ID:** 60122981006 **Collected:** 06/07/12 18:00 **Received:** 06/08/12 08:45 **Matrix:** Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Boron, Dissolved	572	ug/L	100	1	06/15/12 15:55	06/18/12 12:37	7440-42-8	
Iron, Dissolved	ND	ug/L	50.0	1	06/15/12 15:55	06/18/12 12:37	7439-89-6	
Manganese, Dissolved	2010	ug/L	5.0	1	06/15/12 15:55	06/18/12 12:37	7439-96-5	B
<b>8270 MSSV PAH by SIM</b>								
Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C								
Naphthalene	34.0	ug/L	2.5	5	06/14/12 00:00	06/20/12 13:40	91-20-3	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	84	%	42-120	1	06/14/12 00:00	06/19/12 21:27	4165-60-0	
2-Fluorobiphenyl (S)	59	%	44-120	1	06/14/12 00:00	06/19/12 21:27	321-60-8	
Terphenyl-d14 (S)	97	%	46-131	1	06/14/12 00:00	06/19/12 21:27	1718-51-0	
<b>8260 MSV</b>								
Analytical Method: EPA 5030B/8260								
Benzene	25.5	ug/L	10.0	10		06/13/12 14:08	71-43-2	
Ethylbenzene	181	ug/L	10.0	10		06/13/12 14:08	100-41-4	
Methylene chloride	ND	ug/L	10.0	10		06/13/12 14:08	75-09-2	
Naphthalene	ND	ug/L	100	10		06/13/12 14:08	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	10.0	10		06/13/12 14:08	79-34-5	
Toluene	ND	ug/L	10.0	10		06/13/12 14:08	108-88-3	
Xylene (Total)	3160	ug/L	30.0	10		06/13/12 14:08	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	102	%	87-113	10		06/13/12 14:08	460-00-4	
Dibromofluoromethane (S)	103	%	86-112	10		06/13/12 14:08	1868-53-7	
1,2-Dichloroethane-d4 (S)	106	%	82-119	10		06/13/12 14:08	17060-07-0	
Toluene-d8 (S)	97	%	90-110	10		06/13/12 14:08	2037-26-5	
Preservation pH	1.0		0.10	10		06/13/12 14:08		
<b>2540C Total Dissolved Solids</b>								
Analytical Method: SM 2540C								
Total Dissolved Solids	40600	mg/L	5.0	1		06/14/12 10:41		
<b>300.0 IC Anions 28 Days</b>								
Analytical Method: EPA 300.0								
Chloride	326	mg/L	50.0	50		06/19/12 18:08	16887-00-6	
Fluoride	0.84	mg/L	0.20	1		06/18/12 18:40	16984-48-8	
Sulfate	26800	mg/L	2000	2000		06/19/12 18:23	14808-79-8	

## ANALYTICAL RESULTS

Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

**Sample:** GW075035-060712-CB-MW-7    **Lab ID:** 60122981007    Collected: 06/07/12 14:15    Received: 06/08/12 08:45    Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Boron, Dissolved	824	ug/L	100	1	06/15/12 15:55	06/18/12 12:39	7440-42-8	
Iron, Dissolved	866	ug/L	50.0	1	06/15/12 15:55	06/18/12 12:39	7439-89-6	
Manganese, Dissolved	3140	ug/L	5.0	1	06/15/12 15:55	06/18/12 12:39	7439-96-5	B
<b>8270 MSSV PAH by SIM</b>								
Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C								
Naphthalene	4.2	ug/L	0.50	1	06/14/12 00:00	06/19/12 21:43	91-20-3	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	113	%	42-120	1	06/14/12 00:00	06/19/12 21:43	4165-60-0	
2-Fluorobiphenyl (S)	72	%	44-120	1	06/14/12 00:00	06/19/12 21:43	321-60-8	
Terphenyl-d14 (S)	104	%	46-131	1	06/14/12 00:00	06/19/12 21:43	1718-51-0	
<b>8260 MSV</b>								
Analytical Method: EPA 5030B/8260								
Benzene	12.2	ug/L	5.0	5		06/13/12 14:22	71-43-2	
Ethylbenzene	333	ug/L	5.0	5		06/13/12 14:22	100-41-4	
Methylene chloride	ND	ug/L	5.0	5		06/13/12 14:22	75-09-2	
Naphthalene	ND	ug/L	50.0	5		06/13/12 14:22	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	5		06/13/12 14:22	79-34-5	
Toluene	ND	ug/L	5.0	5		06/13/12 14:22	108-88-3	
Xylene (Total)	ND	ug/L	15.0	5		06/13/12 14:22	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	103	%	87-113	5		06/13/12 14:22	460-00-4	
Dibromofluoromethane (S)	103	%	86-112	5		06/13/12 14:22	1868-53-7	
1,2-Dichloroethane-d4 (S)	105	%	82-119	5		06/13/12 14:22	17060-07-0	
Toluene-d8 (S)	100	%	90-110	5		06/13/12 14:22	2037-26-5	
Preservation pH	1.0		0.10	5		06/13/12 14:22		
<b>2540C Total Dissolved Solids</b>								
Analytical Method: SM 2540C								
Total Dissolved Solids	35700	mg/L	5.0	1		06/14/12 10:41		
<b>300.0 IC Anions 28 Days</b>								
Analytical Method: EPA 300.0								
Chloride	300	mg/L	50.0	50		06/19/12 18:39	16887-00-6	
Fluoride	ND	mg/L	0.20	1		06/18/12 18:55	16984-48-8	
Sulfate	25900	mg/L	2000	2000		06/19/12 18:54	14808-79-8	

## ANALYTICAL RESULTS

Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

**Sample: GW075035-060712-CB-DUP**    **Lab ID: 60122981008**    Collected: 06/07/12 18:10    Received: 06/08/12 08:45    Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260						
Benzene	<b>24.7</b>	ug/L	5.0	5		06/13/12 14:36	71-43-2	
Ethylbenzene	<b>178</b>	ug/L	5.0	5		06/13/12 14:36	100-41-4	
Methylene chloride	ND	ug/L	5.0	5		06/13/12 14:36	75-09-2	
Naphthalene	ND	ug/L	50.0	5		06/13/12 14:36	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	5		06/13/12 14:36	79-34-5	
Toluene	ND	ug/L	5.0	5		06/13/12 14:36	108-88-3	
Xylene (Total)	<b>3220</b>	ug/L	30.0	10		06/15/12 17:45	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	102	%	87-113	5		06/13/12 14:36	460-00-4	
Dibromofluoromethane (S)	102	%	86-112	5		06/13/12 14:36	1868-53-7	
1,2-Dichloroethane-d4 (S)	103	%	82-119	5		06/13/12 14:36	17060-07-0	
Toluene-d8 (S)	95	%	90-110	5		06/13/12 14:36	2037-26-5	
Preservation pH	<b>1.0</b>		0.10	5		06/13/12 14:36		

## ANALYTICAL RESULTS

Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

<b>Sample: TRIP BLANK</b>		<b>Lab ID: 60122981009</b>	Collected: 06/07/12 08:00	Received: 06/08/12 08:45	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260						
Benzene	ND ug/L		1.0	1		06/13/12 14:51	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		06/13/12 14:51	100-41-4	
Methylene chloride	ND ug/L		1.0	1		06/13/12 14:51	75-09-2	
Naphthalene	ND ug/L		10.0	1		06/13/12 14:51	91-20-3	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	1		06/13/12 14:51	79-34-5	
Toluene	ND ug/L		1.0	1		06/13/12 14:51	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		06/15/12 17:59	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	103 %		87-113	1		06/13/12 14:51	460-00-4	
Dibromofluoromethane (S)	104 %		86-112	1		06/13/12 14:51	1868-53-7	
1,2-Dichloroethane-d4 (S)	104 %		82-119	1		06/13/12 14:51	17060-07-0	
Toluene-d8 (S)	97 %		90-110	1		06/13/12 14:51	2037-26-5	
Preservation pH	<b>1.0</b>		0.10	1		06/13/12 14:51		

**QUALITY CONTROL DATA**

Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

QC Batch: MPRP/18387 Analysis Method: EPA 6010  
 QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved  
 Associated Lab Samples: 60122981001, 60122981002, 60122981003, 60122981004, 60122981006, 60122981007

METHOD BLANK: 1014959 Matrix: Water  
 Associated Lab Samples: 60122981001, 60122981002, 60122981003, 60122981004, 60122981006, 60122981007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	06/18/12 11:47	
Iron, Dissolved	ug/L	ND	50.0	06/18/12 11:47	
Manganese, Dissolved	ug/L	11.2	5.0	06/18/12 11:47	

LABORATORY CONTROL SAMPLE: 1014960

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	959	96	80-120	
Iron, Dissolved	ug/L	10000	10100	101	80-120	
Manganese, Dissolved	ug/L	1000	934	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1014961 1014962

Parameter	Units	60122912001		MS		MSD		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result						
Boron, Dissolved	ug/L	132	1000	1000	1090	1100	96	97	75-125	1	20		
Iron, Dissolved	ug/L	20.1J	10000	10000	9880	9980	99	100	75-125	1	20		
Manganese, Dissolved	ug/L	886	1000	1000	1770	1790	88	91	75-125	1	20		







### QUALITY CONTROL DATA

Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

QC Batch: OEXT/33558

Analysis Method: EPA 8270C by SIM

QC Batch Method: EPA 3510C

Analysis Description: 8270 Water PAH by SIM MSSV

Associated Lab Samples: 60122981006, 60122981007

METHOD BLANK: 1013750

Matrix: Water

Associated Lab Samples: 60122981006, 60122981007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Naphthalene	ug/L	ND	0.50	06/19/12 20:57	
2-Fluorobiphenyl (S)	%	72	44-120	06/19/12 20:57	
Nitrobenzene-d5 (S)	%	80	42-120	06/19/12 20:57	
Terphenyl-d14 (S)	%	111	46-131	06/19/12 20:57	

LABORATORY CONTROL SAMPLE: 1013751

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Naphthalene	ug/L	10	7.6	76	41-112	
2-Fluorobiphenyl (S)	%			80	44-120	
Nitrobenzene-d5 (S)	%			71	42-120	
Terphenyl-d14 (S)	%			87	46-131	





**QUALITY CONTROL DATA**

Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

QC Batch: WETA/20584 Analysis Method: EPA 300.0  
 QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
 Associated Lab Samples: 60122981001, 60122981002, 60122981003, 60122981004, 60122981005, 60122981006, 60122981007

METHOD BLANK: 1016193 Matrix: Water  
 Associated Lab Samples: 60122981001, 60122981002, 60122981003, 60122981004, 60122981005, 60122981006, 60122981007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	06/18/12 19:11	
Fluoride	mg/L	ND	0.20	06/18/12 19:11	
Sulfate	mg/L	ND	1.0	06/18/12 19:11	

METHOD BLANK: 1017235 Matrix: Water  
 Associated Lab Samples: 60122981001, 60122981002, 60122981003, 60122981004, 60122981005, 60122981006, 60122981007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	06/19/12 08:38	
Sulfate	mg/L	ND	1.0	06/19/12 08:38	

LABORATORY CONTROL SAMPLE: 1016194

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.6	91	90-110	
Fluoride	mg/L	2.5	2.4	97	90-110	
Sulfate	mg/L	5	4.7	94	90-110	

LABORATORY CONTROL SAMPLE: 1017236

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	95	90-110	
Sulfate	mg/L	5	5.0	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1016195 1016196

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		60122892004 Result	Spike Conc.	Spike Conc.	MS Result						
Chloride	mg/L	8.6	5	5	13.3	13.1	93	89	64-118	2	12
Fluoride	mg/L	0.74	2.5	2.5	3.4	3.2	107	97	75-110	8	10
Sulfate	mg/L	96.5	50	50	147	149	102	104	61-119	1	10

### QUALITY CONTROL DATA

Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

MATRIX SPIKE SAMPLE:		1016197					
Parameter	Units	60122981003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	431	250	683	101	64-118	
Fluoride	mg/L	ND	125	129	103	75-110	
Sulfate	mg/L	23300	10000	34100	108	61-119	

## QUALIFIERS

Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

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### 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.

PRL - Pace Reporting Limit.

RL - Reporting 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.

TNI - The NELAC Institute.

### BATCH QUALIFIERS

Batch: OEXT/33549

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

Batch: MSV/46290

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

Batch: OEXT/33558

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

Batch: MSV/46380

[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.

S0 Surrogate recovery outside laboratory control limits.

### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60122981001	GW075035-060712-CB-MW-1	EPA 3010	MPRP/18387	EPA 6010	ICP/15405
60122981002	GW075035-060712-CB-MW-2	EPA 3010	MPRP/18387	EPA 6010	ICP/15405
60122981003	GW075035-060712-CB-MW-3	EPA 3010	MPRP/18387	EPA 6010	ICP/15405
60122981004	GW075035-060712-CB-MW-4	EPA 3010	MPRP/18387	EPA 6010	ICP/15405
60122981006	GW075035-060712-CB-MW-6	EPA 3010	MPRP/18387	EPA 6010	ICP/15405
60122981007	GW075035-060712-CB-MW-7	EPA 3010	MPRP/18387	EPA 6010	ICP/15405
60122981001	GW075035-060712-CB-MW-1	EPA 3510C	OEXT/33549	EPA 8270C by SIM	MSSV/10547
60122981002	GW075035-060712-CB-MW-2	EPA 3510C	OEXT/33549	EPA 8270C by SIM	MSSV/10547
60122981003	GW075035-060712-CB-MW-3	EPA 3510C	OEXT/33549	EPA 8270C by SIM	MSSV/10547
60122981004	GW075035-060712-CB-MW-4	EPA 3510C	OEXT/33549	EPA 8270C by SIM	MSSV/10547
60122981005	GW075035-060712-CB-MW-5	EPA 3510C	OEXT/33549	EPA 8270C by SIM	MSSV/10547
60122981006	GW075035-060712-CB-MW-6	EPA 3510C	OEXT/33558	EPA 8270C by SIM	MSSV/10548
60122981007	GW075035-060712-CB-MW-7	EPA 3510C	OEXT/33558	EPA 8270C by SIM	MSSV/10548
60122981001	GW075035-060712-CB-MW-1	EPA 5030B/8260	MSV/46290		
60122981002	GW075035-060712-CB-MW-2	EPA 5030B/8260	MSV/46290		
60122981003	GW075035-060712-CB-MW-3	EPA 5030B/8260	MSV/46290		
60122981004	GW075035-060712-CB-MW-4	EPA 5030B/8260	MSV/46290		
60122981005	GW075035-060712-CB-MW-5	EPA 5030B/8260	MSV/46290		
60122981006	GW075035-060712-CB-MW-6	EPA 5030B/8260	MSV/46290		
60122981007	GW075035-060712-CB-MW-7	EPA 5030B/8260	MSV/46290		
60122981008	GW075035-060712-CB-DUP	EPA 5030B/8260	MSV/46290		
60122981008	GW075035-060712-CB-DUP	EPA 5030B/8260	MSV/46380		
60122981009	TRIP BLANK	EPA 5030B/8260	MSV/46290		
60122981009	TRIP BLANK	EPA 5030B/8260	MSV/46380		
60122981001	GW075035-060712-CB-MW-1	SM 2540C	WET/35540		
60122981002	GW075035-060712-CB-MW-2	SM 2540C	WET/35515		
60122981003	GW075035-060712-CB-MW-3	SM 2540C	WET/35540		
60122981004	GW075035-060712-CB-MW-4	SM 2540C	WET/35540		
60122981005	GW075035-060712-CB-MW-5	SM 2540C	WET/35540		
60122981006	GW075035-060712-CB-MW-6	SM 2540C	WET/35540		
60122981007	GW075035-060712-CB-MW-7	SM 2540C	WET/35540		
60122981001	GW075035-060712-CB-MW-1	EPA 300.0	WETA/20584		
60122981002	GW075035-060712-CB-MW-2	EPA 300.0	WETA/20584		
60122981003	GW075035-060712-CB-MW-3	EPA 300.0	WETA/20584		
60122981004	GW075035-060712-CB-MW-4	EPA 300.0	WETA/20584		
60122981005	GW075035-060712-CB-MW-5	EPA 300.0	WETA/20584		
60122981006	GW075035-060712-CB-MW-6	EPA 300.0	WETA/20584		
60122981007	GW075035-060712-CB-MW-7	EPA 300.0	WETA/20584		



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

Client Name: COP CRA NM

Project #: 60122981

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other

Optional
Proj Due Date:
Proj Name: <u>Month 34</u>

Tracking #: 8993 9001 6600 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  ZAC

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

Cooler Temperature: 4.1/4.7

Date and initials of person examining contents: PV6-8-12

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 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: <u>VOA</u> , coliform, TOC, O&G, WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>PV</u> Lot # of added preservative <u>12624</u>
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank lot # (if purchased): <u>052112-3</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:

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: 1625 Start:

End: 1640 End:

Temp: \_\_\_\_\_ Temp:

Project Manager Review: AKF Date: 6/11/12

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).



October 10, 2012

Cassie Brown  
COP Conestoga-Rovers & Associa

RE: Project: 075035 MARTIN 34 NO 2  
Pace Project No.: 60129930

Dear Cassie Brown:

Enclosed are the analytical results for sample(s) received by the laboratory on September 27, 2012. 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,



Alice Flanagan

alice.flanagan@pacelabs.com  
Project Manager

Enclosures

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



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

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### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

A2LA Certification #: 2456.01

Arkansas Certification #: 12-019-0

Illinois Certification #: 002885

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-12-3

Utah Certification #: KS000212012-2

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## REPORT OF LABORATORY ANALYSIS

Page 2 of 26

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### SAMPLE SUMMARY

Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60129930001	GW-075035-092512-CM-MW-1	Water	09/25/12 08:55	09/27/12 08:20
60129930002	GW-075035-092512-CM-MW-6	Water	09/25/12 09:20	09/27/12 08:20
60129930003	GW-075035-092512-CM-MW-2	Water	09/25/12 09:45	09/27/12 08:20
60129930004	GW-075035-092512-CM-MW-4	Water	09/25/12 11:10	09/27/12 08:20
60129930005	GW-075035-092512-CM-MW-3	Water	09/25/12 11:30	09/27/12 08:20
60129930006	GW-075035-092512-CM-MW-7	Water	09/25/12 12:20	09/27/12 08:20
60129930007	GW-075035-092512-CM-MW-5	Water	09/25/12 13:15	09/27/12 08:20
60129930008	GW-075035-092512-CM-MW-DUP	Water	09/25/12 09:50	09/27/12 08:20
60129930009	TB-075035-092512-CM-MW-001	Water	09/25/12 00:00	09/27/12 08:20

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60129930001	GW-075035-092512-CM-MW-1	EPA 8270C by SIM	BRM	4
		EPA 5030B/8260	PRG	12
		SM 2540C	FJF	1
		EPA 300.0	AJM	3
60129930002	GW-075035-092512-CM-MW-6	EPA 6010	JGP, TDS	3
		EPA 8270C by SIM	BRM	4
		EPA 5030B/8260	PRG	12
		SM 2540C	FJF	1
60129930003	GW-075035-092512-CM-MW-2	EPA 300.0	AJM	3
		EPA 6010	JGP, TDS	3
		EPA 8270C by SIM	BRM	4
		EPA 5030B/8260	PRG	12
60129930004	GW-075035-092512-CM-MW-4	SM 2540C	FJF	1
		EPA 300.0	AJM	3
		EPA 6010	JGP, TDS	3
		EPA 8270C by SIM	BRM	4
60129930005	GW-075035-092512-CM-MW-3	EPA 5030B/8260	PRG	12
		SM 2540C	FJF	1
		EPA 300.0	AJM	3
		EPA 6010	JGP, TDS	3
60129930006	GW-075035-092512-CM-MW-7	EPA 8270C by SIM	BRM	4
		EPA 5030B/8260	PRG	12
		SM 2540C	FJF	1
		EPA 300.0	AJM	3
60129930007	GW-075035-092512-CM-MW-5	EPA 6010	JGP, TDS	3
		EPA 8270C by SIM	BRM	4
		EPA 5030B/8260	PRG	12
		SM 2540C	FJF	1
60129930008	GW-075035-092512-CM-MW-DUP	EPA 300.0	AJM	3
		EPA 5030B/8260	PRG	9
		EPA 8270C by SIM	BRM	4
60129930009	TB-075035-092512-CM-MW-001	EPA 5030B/8260	PRG	9

### REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

---

**Method:** EPA 6010

**Description:** 6010 MET ICP, Dissolved

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** October 10, 2012

**General Information:**

5 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.

QC Batch: MPRP/19736

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60129930002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1071191)
  - Boron, Dissolved
  - Manganese, Dissolved
- MSD (Lab ID: 1071192)
  - Boron, Dissolved
  - Manganese, Dissolved

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

## PROJECT NARRATIVE

Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

---

**Method:** EPA 8270C by SIM

**Description:** 8270 MSSV PAH by SIM

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** October 10, 2012

**General Information:**

7 samples were analyzed for EPA 8270C by SIM. 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 3510C 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: MSSV/11085

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

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

---

**Method:** EPA 5030B/8260

**Description:** 8260 MSV

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** October 10, 2012

**General Information:**

9 samples were analyzed for EPA 5030B/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/48910

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

QC Batch: MSV/48951

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

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

## PROJECT NARRATIVE

Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

---

**Method:** SM 2540C

**Description:** 2540C Total Dissolved Solids

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** October 10, 2012

**General Information:**

7 samples were analyzed for SM 2540C. 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.

**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:**

## PROJECT NARRATIVE

Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

---

**Method:** EPA 300.0

**Description:** 300.0 IC Anions 28 Days

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** October 10, 2012

**General Information:**

7 samples were analyzed for EPA 300.0. 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.

**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.

**Additional Comments:**

Analyte Comments:

QC Batch: WETA/21911

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- GW-075035-092512-CM-MW-1 (Lab ID: 60129930001)
  - Fluoride
- GW-075035-092512-CM-MW-2 (Lab ID: 60129930003)
  - Fluoride
- GW-075035-092512-CM-MW-3 (Lab ID: 60129930005)
  - Fluoride
- GW-075035-092512-CM-MW-4 (Lab ID: 60129930004)
  - Fluoride
- GW-075035-092512-CM-MW-5 (Lab ID: 60129930007)
  - Fluoride
- GW-075035-092512-CM-MW-6 (Lab ID: 60129930002)
  - Fluoride
- GW-075035-092512-CM-MW-7 (Lab ID: 60129930006)
  - Fluoride

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

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

**Sample:** GW-075035-092512-CM-MW-1    **Lab ID:** 60129930001    Collected: 09/25/12 08:55    Received: 09/27/12 08:20    Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270C by SIM    Preparation Method: EPA 3510C						
Naphthalene	45.6	ug/L	2.5	5	10/02/12 00:00	10/05/12 15:33	91-20-3	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	92	%	28-140	5	10/02/12 00:00	10/05/12 15:33	4165-60-0	
2-Fluorobiphenyl (S)	66	%	40-120	5	10/02/12 00:00	10/05/12 15:33	321-60-8	
Terphenyl-d14 (S)	71	%	43-122	5	10/02/12 00:00	10/05/12 15:33	1718-51-0	
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260						
Benzene	5040	ug/L	100	100		10/02/12 23:45	71-43-2	
Ethylbenzene	626	ug/L	100	100		10/02/12 23:45	100-41-4	
Methylene chloride	ND	ug/L	100	100		10/02/12 23:45	75-09-2	
Naphthalene	ND	ug/L	1000	100		10/02/12 23:45	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	100	100		10/02/12 23:45	79-34-5	
Toluene	1660	ug/L	100	100		10/02/12 23:45	108-88-3	
Xylene (Total)	8850	ug/L	300	100		10/02/12 23:45	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	100	%	80-120	100		10/02/12 23:45	460-00-4	
Dibromofluoromethane (S)	97	%	80-120	100		10/02/12 23:45	1868-53-7	
1,2-Dichloroethane-d4 (S)	101	%	80-120	100		10/02/12 23:45	17060-07-0	
Toluene-d8 (S)	101	%	80-120	100		10/02/12 23:45	2037-26-5	
Preservation pH	1.0		0.10	100		10/02/12 23:45		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	24100	mg/L	5.0	1		10/01/12 15:44		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Chloride	268	mg/L	20.0	20		10/06/12 16:00	16887-00-6	
Fluoride	ND	mg/L	4.0	20		10/06/12 16:00	16984-48-8	D3
Sulfate	13100	mg/L	2000	2000		10/06/12 16:17	14808-79-8	

## ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

**Sample:** GW-075035-092512-CM-MW-6    **Lab ID:** 60129930002    Collected: 09/25/12 09:20    Received: 09/27/12 08:20    Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Boron, Dissolved	656	ug/L	500	5	10/02/12 10:45	10/07/12 14:33	7440-42-8	M1
Iron, Dissolved	ND	ug/L	50.0	1	10/02/12 10:45	10/05/12 12:27	7439-89-6	
Manganese, Dissolved	2190	ug/L	25.0	5	10/02/12 10:45	10/07/12 14:33	7439-96-5	M1
<b>8270 MSSV PAH by SIM</b>								
Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C								
Naphthalene	23.7	ug/L	2.5	5	10/02/12 00:00	10/04/12 15:02	91-20-3	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	84	%	28-140	1	10/02/12 00:00	10/03/12 20:49	4165-60-0	
2-Fluorobiphenyl (S)	68	%	40-120	1	10/02/12 00:00	10/03/12 20:49	321-60-8	
Terphenyl-d14 (S)	72	%	43-122	1	10/02/12 00:00	10/03/12 20:49	1718-51-0	
<b>8260 MSV</b>								
Analytical Method: EPA 5030B/8260								
Benzene	21.8	ug/L	10.0	10		10/03/12 00:00	71-43-2	
Ethylbenzene	166	ug/L	10.0	10		10/03/12 00:00	100-41-4	
Methylene chloride	ND	ug/L	10.0	10		10/03/12 00:00	75-09-2	
Naphthalene	ND	ug/L	100	10		10/03/12 00:00	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	10.0	10		10/03/12 00:00	79-34-5	
Toluene	ND	ug/L	10.0	10		10/03/12 00:00	108-88-3	
Xylene (Total)	2920	ug/L	30.0	10		10/03/12 00:00	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	100	%	80-120	10		10/03/12 00:00	460-00-4	
Dibromofluoromethane (S)	98	%	80-120	10		10/03/12 00:00	1868-53-7	
1,2-Dichloroethane-d4 (S)	102	%	80-120	10		10/03/12 00:00	17060-07-0	
Toluene-d8 (S)	103	%	80-120	10		10/03/12 00:00	2037-26-5	
Preservation pH	1.0		0.10	10		10/03/12 00:00		
<b>2540C Total Dissolved Solids</b>								
Analytical Method: SM 2540C								
Total Dissolved Solids	37800	mg/L	5.0	1		10/01/12 15:45		
<b>300.0 IC Anions 28 Days</b>								
Analytical Method: EPA 300.0								
Chloride	345	mg/L	20.0	20		10/06/12 16:35	16887-00-6	
Fluoride	ND	mg/L	4.0	20		10/06/12 16:35	16984-48-8	D3
Sulfate	25500	mg/L	2000	2000		10/06/12 16:52	14808-79-8	

### ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

**Sample:** GW-075035-092512-CM-MW-2      **Lab ID:** 60129930003      Collected: 09/25/12 09:45      Received: 09/27/12 08:20      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Boron, Dissolved	1020	ug/L	500	5	10/02/12 10:45	10/07/12 14:25	7440-42-8	
Iron, Dissolved	913	ug/L	50.0	1	10/02/12 10:45	10/05/12 12:31	7439-89-6	
Manganese, Dissolved	2300	ug/L	25.0	5	10/02/12 10:45	10/07/12 14:25	7439-96-5	
<b>8270 MSSV PAH by SIM</b>								
Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C								
Naphthalene	58.3	ug/L	2.5	5	10/02/12 00:00	10/09/12 13:19	91-20-3	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	124	%	28-140	1	10/02/12 00:00	10/04/12 00:26	4165-60-0	
2-Fluorobiphenyl (S)	74	%	40-120	1	10/02/12 00:00	10/04/12 00:26	321-60-8	
Terphenyl-d14 (S)	82	%	43-122	1	10/02/12 00:00	10/04/12 00:26	1718-51-0	
<b>8260 MSV</b>								
Analytical Method: EPA 5030B/8260								
Benzene	127	ug/L	5.0	5		10/03/12 00:14	71-43-2	
Ethylbenzene	161	ug/L	5.0	5		10/03/12 00:14	100-41-4	
Methylene chloride	7.6	ug/L	5.0	5		10/03/12 00:14	75-09-2	
Naphthalene	56.6	ug/L	50.0	5		10/03/12 00:14	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	5		10/03/12 00:14	79-34-5	
Toluene	ND	ug/L	5.0	5		10/03/12 00:14	108-88-3	
Xylene (Total)	40.8	ug/L	15.0	5		10/03/12 00:14	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	105	%	80-120	5		10/03/12 00:14	460-00-4	
Dibromofluoromethane (S)	101	%	80-120	5		10/03/12 00:14	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	80-120	5		10/03/12 00:14	17060-07-0	
Toluene-d8 (S)	100	%	80-120	5		10/03/12 00:14	2037-26-5	
Preservation pH	1.0		0.10	5		10/03/12 00:14		
<b>2540C Total Dissolved Solids</b>								
Analytical Method: SM 2540C								
Total Dissolved Solids	31100	mg/L	5.0	1		10/01/12 15:45		
<b>300.0 IC Anions 28 Days</b>								
Analytical Method: EPA 300.0								
Chloride	382	mg/L	25.0	25		10/07/12 07:23	16887-00-6	
Fluoride	ND	mg/L	4.0	20		10/06/12 17:10	16984-48-8	D3
Sulfate	19900	mg/L	2000	2000		10/06/12 17:27	14808-79-8	

### ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

**Sample:** GW-075035-092512-CM-MW-4    **Lab ID:** 60129930004    Collected: 09/25/12 11:10    Received: 09/27/12 08:20    Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3010						
Boron, Dissolved	704	ug/L	500	5	10/02/12 10:45	10/07/12 14:27	7440-42-8	
Iron, Dissolved	1020	ug/L	50.0	1	10/02/12 10:45	10/05/12 12:34	7439-89-6	
Manganese, Dissolved	5170	ug/L	25.0	5	10/02/12 10:45	10/07/12 14:27	7439-96-5	
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270C by SIM    Preparation Method: EPA 3510C						
Naphthalene	1.8	ug/L	0.50	1	10/02/12 00:00	10/04/12 00:43	91-20-3	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	81	%	28-140	1	10/02/12 00:00	10/04/12 00:43	4165-60-0	
2-Fluorobiphenyl (S)	75	%	40-120	1	10/02/12 00:00	10/04/12 00:43	321-60-8	
Terphenyl-d14 (S)	82	%	43-122	1	10/02/12 00:00	10/04/12 00:43	1718-51-0	
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260						
Benzene	1.1	ug/L	1.0	1		10/03/12 00:29	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/03/12 00:29	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		10/03/12 00:29	75-09-2	
Naphthalene	ND	ug/L	10.0	1		10/03/12 00:29	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/03/12 00:29	79-34-5	
Toluene	ND	ug/L	1.0	1		10/03/12 00:29	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/03/12 00:29	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	107	%	80-120	1		10/03/12 00:29	460-00-4	
Dibromofluoromethane (S)	104	%	80-120	1		10/03/12 00:29	1868-53-7	
1,2-Dichloroethane-d4 (S)	113	%	80-120	1		10/03/12 00:29	17060-07-0	
Toluene-d8 (S)	92	%	80-120	1		10/03/12 00:29	2037-26-5	
Preservation pH	1.0		0.10	1		10/03/12 00:29		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	38900	mg/L	5.0	1		10/01/12 15:46		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Chloride	347	mg/L	20.0	20		10/06/12 17:44	16887-00-6	
Fluoride	5.8	mg/L	4.0	20		10/06/12 17:44	16984-48-8	D3
Sulfate	25600	mg/L	2000	2000		10/06/12 18:02	14808-79-8	

### ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

**Sample:** GW-075035-092512-CM-MW-3    **Lab ID:** 60129930005    Collected: 09/25/12 11:30    Received: 09/27/12 08:20    Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010						
Boron, Dissolved	986	ug/L	500	5	10/02/12 10:45	10/07/12 14:29	7440-42-8	
Iron, Dissolved	ND	ug/L	50.0	1	10/02/12 10:45	10/05/12 12:40	7439-89-6	
Manganese, Dissolved	497	ug/L	25.0	5	10/02/12 10:45	10/07/12 14:29	7439-96-5	
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C						
Naphthalene	0.67	ug/L	0.50	1	10/02/12 00:00	10/04/12 01:01	91-20-3	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	68	%	28-140	1	10/02/12 00:00	10/04/12 01:01	4165-60-0	
2-Fluorobiphenyl (S)	67	%	40-120	1	10/02/12 00:00	10/04/12 01:01	321-60-8	
Terphenyl-d14 (S)	75	%	43-122	1	10/02/12 00:00	10/04/12 01:01	1718-51-0	
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260						
Benzene	ND	ug/L	1.0	1		10/03/12 00:43	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/03/12 00:43	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		10/03/12 00:43	75-09-2	
Naphthalene	ND	ug/L	10.0	1		10/03/12 00:43	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/03/12 00:43	79-34-5	
Toluene	ND	ug/L	1.0	1		10/03/12 00:43	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/03/12 00:43	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	101	%	80-120	1		10/03/12 00:43	460-00-4	
Dibromofluoromethane (S)	99	%	80-120	1		10/03/12 00:43	1868-53-7	
1,2-Dichloroethane-d4 (S)	110	%	80-120	1		10/03/12 00:43	17060-07-0	
Toluene-d8 (S)	96	%	80-120	1		10/03/12 00:43	2037-26-5	
Preservation pH	1.0		0.10	1		10/03/12 00:43		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	30000	mg/L	5.0	1		10/01/12 15:46		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Chloride	468	mg/L	25.0	25		10/07/12 07:40	16887-00-6	
Fluoride	ND	mg/L	4.0	20		10/06/12 18:19	16984-48-8	D3
Sulfate	18900	mg/L	2000	2000		10/06/12 18:37	14808-79-8	

### ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

**Sample:** GW-075035-092512-CM-MW-7    **Lab ID:** 60129930006    Collected: 09/25/12 12:20    Received: 09/27/12 08:20    Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP, Dissolved</b>								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Boron, Dissolved	895	ug/L	500	5	10/02/12 10:45	10/07/12 14:31	7440-42-8	
Iron, Dissolved	1250	ug/L	50.0	1	10/02/12 10:45	10/05/12 12:42	7439-89-6	
Manganese, Dissolved	4080	ug/L	25.0	5	10/02/12 10:45	10/07/12 14:31	7439-96-5	
<b>8270 MSSV PAH by SIM</b>								
Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C								
Naphthalene	6.1	ug/L	0.50	1	10/02/12 00:00	10/04/12 01:18	91-20-3	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	125	%	28-140	1	10/02/12 00:00	10/04/12 01:18	4165-60-0	
2-Fluorobiphenyl (S)	82	%	40-120	1	10/02/12 00:00	10/04/12 01:18	321-60-8	
Terphenyl-d14 (S)	88	%	43-122	1	10/02/12 00:00	10/04/12 01:18	1718-51-0	
<b>8260 MSV</b>								
Analytical Method: EPA 5030B/8260								
Benzene	10.9	ug/L	5.0	5		10/03/12 00:58	71-43-2	
Ethylbenzene	426	ug/L	5.0	5		10/03/12 00:58	100-41-4	
Methylene chloride	ND	ug/L	5.0	5		10/03/12 00:58	75-09-2	
Naphthalene	ND	ug/L	50.0	5		10/03/12 00:58	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	5		10/03/12 00:58	79-34-5	
Toluene	ND	ug/L	5.0	5		10/03/12 00:58	108-88-3	
Xylene (Total)	ND	ug/L	15.0	5		10/03/12 00:58	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	98	%	80-120	5		10/03/12 00:58	460-00-4	
Dibromofluoromethane (S)	102	%	80-120	5		10/03/12 00:58	1868-53-7	
1,2-Dichloroethane-d4 (S)	106	%	80-120	5		10/03/12 00:58	17060-07-0	
Toluene-d8 (S)	96	%	80-120	5		10/03/12 00:58	2037-26-5	
Preservation pH	1.0		0.10	5		10/03/12 00:58		
<b>2540C Total Dissolved Solids</b>								
Analytical Method: SM 2540C								
Total Dissolved Solids	30500	mg/L	5.0	1		10/01/12 15:46		
<b>300.0 IC Anions 28 Days</b>								
Analytical Method: EPA 300.0								
Chloride	266	mg/L	20.0	20		10/06/12 19:29	16887-00-6	
Fluoride	ND	mg/L	4.0	20		10/06/12 19:29	16984-48-8	D3
Sulfate	19500	mg/L	2000	2000		10/06/12 19:46	14808-79-8	

### ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

**Sample:** GW-075035-092512-CM-MW-5    **Lab ID:** 60129930007    Collected: 09/25/12 13:15    Received: 09/27/12 08:20    Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270C by SIM    Preparation Method: EPA 3510C						
Naphthalene	ND	ug/L	0.50	1	10/02/12 00:00	10/04/12 01:35	91-20-3	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	81 %		28-140	1	10/02/12 00:00	10/04/12 01:35	4165-60-0	
2-Fluorobiphenyl (S)	72 %		40-120	1	10/02/12 00:00	10/04/12 01:35	321-60-8	
Terphenyl-d14 (S)	87 %		43-122	1	10/02/12 00:00	10/04/12 01:35	1718-51-0	
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260						
Benzene	<b>1040</b>	ug/L	20.0	20		10/03/12 01:13	71-43-2	
Ethylbenzene	<b>77.2</b>	ug/L	20.0	20		10/03/12 01:13	100-41-4	
Methylene chloride	<b>28.9</b>	ug/L	20.0	20		10/03/12 01:13	75-09-2	
Naphthalene	ND	ug/L	200	20		10/03/12 01:13	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	20.0	20		10/03/12 01:13	79-34-5	
Toluene	ND	ug/L	20.0	20		10/03/12 01:13	108-88-3	
Xylene (Total)	ND	ug/L	60.0	20		10/03/12 01:13	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	100 %		80-120	20		10/03/12 01:13	460-00-4	
Dibromofluoromethane (S)	97 %		80-120	20		10/03/12 01:13	1868-53-7	
1,2-Dichloroethane-d4 (S)	102 %		80-120	20		10/03/12 01:13	17060-07-0	
Toluene-d8 (S)	98 %		80-120	20		10/03/12 01:13	2037-26-5	
Preservation pH	<b>1.0</b>		0.10	20		10/03/12 01:13		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C						
Total Dissolved Solids	<b>11600</b>	mg/L	5.0	1		10/01/12 15:46		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0						
Chloride	<b>202</b>	mg/L	20.0	20		10/06/12 20:04	16887-00-6	
Fluoride	ND	mg/L	4.0	20		10/06/12 20:04	16984-48-8	D3
Sulfate	<b>6800</b>	mg/L	1000	1000		10/06/12 20:21	14808-79-8	

### ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

**Sample:** GW-075035-092512-CM-MW-DUP    **Lab ID:** 60129930008    Collected: 09/25/12 09:50    Received: 09/27/12 08:20    Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260						
Benzene	142	ug/L	2.0	2		10/03/12 18:11	71-43-2	
Ethylbenzene	181	ug/L	2.0	2		10/03/12 18:11	100-41-4	
Toluene	ND	ug/L	2.0	2		10/03/12 18:11	108-88-3	
Xylene (Total)	35.6	ug/L	6.0	2		10/03/12 18:11	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	102	%	80-120	2		10/03/12 18:11	460-00-4	
Dibromofluoromethane (S)	105	%	80-120	2		10/03/12 18:11	1868-53-7	
1,2-Dichloroethane-d4 (S)	113	%	80-120	2		10/03/12 18:11	17060-07-0	
Toluene-d8 (S)	98	%	80-120	2		10/03/12 18:11	2037-26-5	
Preservation pH	1.0		0.10	2		10/03/12 18:11		

## ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

**Sample:** TB-075035-092512-CM-MW-001      **Lab ID:** 60129930009      Collected: 09/25/12 00:00      Received: 09/27/12 08:20      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260						
Benzene	ND	ug/L	1.0	1		10/03/12 01:42	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/03/12 01:42	100-41-4	
Toluene	ND	ug/L	1.0	1		10/03/12 01:42	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/03/12 01:42	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	102	%	80-120	1		10/03/12 01:42	460-00-4	
Dibromofluoromethane (S)	101	%	80-120	1		10/03/12 01:42	1868-53-7	
1,2-Dichloroethane-d4 (S)	105	%	80-120	1		10/03/12 01:42	17060-07-0	
Toluene-d8 (S)	95	%	80-120	1		10/03/12 01:42	2037-26-5	
Preservation pH	<b>1.0</b>		0.10	1		10/03/12 01:42		

**QUALITY CONTROL DATA**

Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

QC Batch: MPRP/19736 Analysis Method: EPA 6010  
 QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved  
 Associated Lab Samples: 60129930002, 60129930003, 60129930004, 60129930005, 60129930006

METHOD BLANK: 1071189 Matrix: Water  
 Associated Lab Samples: 60129930002, 60129930003, 60129930004, 60129930005, 60129930006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	10/05/12 12:14	
Iron, Dissolved	ug/L	ND	50.0	10/05/12 12:14	
Manganese, Dissolved	ug/L	ND	5.0	10/05/12 12:14	

LABORATORY CONTROL SAMPLE: 1071190

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	979	98	80-120	
Iron, Dissolved	ug/L	10000	9840	98	80-120	
Manganese, Dissolved	ug/L	1000	976	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1071191 1071192

Parameter	Units	60129930002		MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result	% Rec	% Rec						
Boron, Dissolved	ug/L	656	1000	1000	1300	1290	64	63	75-125	0	20	M1			
Iron, Dissolved	ug/L	ND	10000	10000	10800	10800	108	107	75-125	1	20				
Manganese, Dissolved	ug/L	2190	1000	1000	5060	5090	287	290	75-125	1	20	M1			

**QUALITY CONTROL DATA**

Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

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QC Batch: MSV/48910 Analysis Method: EPA 5030B/8260  
 QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge  
 Associated Lab Samples: 60129930001, 60129930002, 60129930003, 60129930004, 60129930005, 60129930006, 60129930007, 60129930009

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METHOD BLANK: 1071334 Matrix: Water  
 Associated Lab Samples: 60129930001, 60129930002, 60129930003, 60129930004, 60129930005, 60129930006, 60129930007, 60129930009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	10/02/12 20:48	
Benzene	ug/L	ND	1.0	10/02/12 20:48	
Ethylbenzene	ug/L	ND	1.0	10/02/12 20:48	
Methylene chloride	ug/L	ND	1.0	10/02/12 20:48	
Naphthalene	ug/L	ND	10.0	10/02/12 20:48	
Toluene	ug/L	ND	1.0	10/02/12 20:48	
Xylene (Total)	ug/L	ND	3.0	10/02/12 20:48	
1,2-Dichloroethane-d4 (S)	%	98	80-120	10/02/12 20:48	
4-Bromofluorobenzene (S)	%	100	80-120	10/02/12 20:48	
Dibromofluoromethane (S)	%	100	80-120	10/02/12 20:48	
Toluene-d8 (S)	%	99	80-120	10/02/12 20:48	

LABORATORY CONTROL SAMPLE: 1071335

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	19.6	98	71-121	
Benzene	ug/L	20	21.1	106	74-123	
Ethylbenzene	ug/L	20	20.9	105	76-123	
Methylene chloride	ug/L	20	20.1	100	72-127	
Naphthalene	ug/L	20	19.2	96	63-128	
Toluene	ug/L	20	19.1	95	75-123	
Xylene (Total)	ug/L	60	61.2	102	76-123	
1,2-Dichloroethane-d4 (S)	%			97	80-120	
4-Bromofluorobenzene (S)	%			102	80-120	
Dibromofluoromethane (S)	%			99	80-120	
Toluene-d8 (S)	%			99	80-120	

### QUALITY CONTROL DATA

Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

---

QC Batch:	MSV/48951	Analysis Method:	EPA 5030B/8260
QC Batch Method:	EPA 5030B/8260	Analysis Description:	8260 MSV Water 10 mL Purge
Associated Lab Samples:	60129930008		

---

METHOD BLANK: 1072099 Matrix: Water

Associated Lab Samples: 60129930008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	10/03/12 16:27	
Ethylbenzene	ug/L	ND	1.0	10/03/12 16:27	
Toluene	ug/L	ND	1.0	10/03/12 16:27	
Xylene (Total)	ug/L	ND	3.0	10/03/12 16:27	
1,2-Dichloroethane-d4 (S)	%	99	80-120	10/03/12 16:27	
4-Bromofluorobenzene (S)	%	106	80-120	10/03/12 16:27	
Dibromofluoromethane (S)	%	103	80-120	10/03/12 16:27	
Toluene-d8 (S)	%	96	80-120	10/03/12 16:27	

---

LABORATORY CONTROL SAMPLE: 1072100

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	20.7	104	74-123	
Ethylbenzene	ug/L	20	20.9	104	76-123	
Toluene	ug/L	20	19.5	98	75-123	
Xylene (Total)	ug/L	60	61.8	103	76-123	
1,2-Dichloroethane-d4 (S)	%			102	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Dibromofluoromethane (S)	%			100	80-120	
Toluene-d8 (S)	%			98	80-120	



### QUALITY CONTROL DATA

Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

---

QC Batch:	WET/37440	Analysis Method:	SM 2540C
QC Batch Method:	SM 2540C	Analysis Description:	2540C Total Dissolved Solids
Associated Lab Samples:	60129930001, 60129930002, 60129930003, 60129930004, 60129930005, 60129930006, 60129930007		

---

METHOD BLANK: 1070930 Matrix: Water

Associated Lab Samples: 60129930001, 60129930002, 60129930003, 60129930004, 60129930005, 60129930006, 60129930007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	10/01/12 15:44	

---

SAMPLE DUPLICATE: 1070931

Parameter	Units	60129930001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	24100	24300	1	17	



## QUALIFIERS

Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

---

### 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.

PRL - Pace Reporting Limit.

RL - Reporting 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.

TNI - The NELAC Institute.

### BATCH QUALIFIERS

Batch: OEXT/35302

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

Batch: MSV/48910

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

Batch: MSV/48951

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

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60129930002	GW-075035-092512-CM-MW-6	EPA 3010	MPRP/19736	EPA 6010	ICP/16257
60129930003	GW-075035-092512-CM-MW-2	EPA 3010	MPRP/19736	EPA 6010	ICP/16257
60129930004	GW-075035-092512-CM-MW-4	EPA 3010	MPRP/19736	EPA 6010	ICP/16257
60129930005	GW-075035-092512-CM-MW-3	EPA 3010	MPRP/19736	EPA 6010	ICP/16257
60129930006	GW-075035-092512-CM-MW-7	EPA 3010	MPRP/19736	EPA 6010	ICP/16257
60129930001	GW-075035-092512-CM-MW-1	EPA 3510C	OEXT/35302	EPA 8270C by SIM	MSSV/11085
60129930002	GW-075035-092512-CM-MW-6	EPA 3510C	OEXT/35302	EPA 8270C by SIM	MSSV/11085
60129930003	GW-075035-092512-CM-MW-2	EPA 3510C	OEXT/35302	EPA 8270C by SIM	MSSV/11085
60129930004	GW-075035-092512-CM-MW-4	EPA 3510C	OEXT/35302	EPA 8270C by SIM	MSSV/11085
60129930005	GW-075035-092512-CM-MW-3	EPA 3510C	OEXT/35302	EPA 8270C by SIM	MSSV/11085
60129930006	GW-075035-092512-CM-MW-7	EPA 3510C	OEXT/35302	EPA 8270C by SIM	MSSV/11085
60129930007	GW-075035-092512-CM-MW-5	EPA 3510C	OEXT/35302	EPA 8270C by SIM	MSSV/11085
60129930001	GW-075035-092512-CM-MW-1	EPA 5030B/8260	MSV/48910		
60129930002	GW-075035-092512-CM-MW-6	EPA 5030B/8260	MSV/48910		
60129930003	GW-075035-092512-CM-MW-2	EPA 5030B/8260	MSV/48910		
60129930004	GW-075035-092512-CM-MW-4	EPA 5030B/8260	MSV/48910		
60129930005	GW-075035-092512-CM-MW-3	EPA 5030B/8260	MSV/48910		
60129930006	GW-075035-092512-CM-MW-7	EPA 5030B/8260	MSV/48910		
60129930007	GW-075035-092512-CM-MW-5	EPA 5030B/8260	MSV/48910		
60129930008	GW-075035-092512-CM-MW-DUP	EPA 5030B/8260	MSV/48951		
60129930009	TB-075035-092512-CM-MW-001	EPA 5030B/8260	MSV/48910		
60129930001	GW-075035-092512-CM-MW-1	SM 2540C	WET/37440		
60129930002	GW-075035-092512-CM-MW-6	SM 2540C	WET/37440		
60129930003	GW-075035-092512-CM-MW-2	SM 2540C	WET/37440		
60129930004	GW-075035-092512-CM-MW-4	SM 2540C	WET/37440		
60129930005	GW-075035-092512-CM-MW-3	SM 2540C	WET/37440		
60129930006	GW-075035-092512-CM-MW-7	SM 2540C	WET/37440		
60129930007	GW-075035-092512-CM-MW-5	SM 2540C	WET/37440		
60129930001	GW-075035-092512-CM-MW-1	EPA 300.0	WETA/21911		
60129930002	GW-075035-092512-CM-MW-6	EPA 300.0	WETA/21911		
60129930003	GW-075035-092512-CM-MW-2	EPA 300.0	WETA/21911		
60129930004	GW-075035-092512-CM-MW-4	EPA 300.0	WETA/21911		
60129930005	GW-075035-092512-CM-MW-3	EPA 300.0	WETA/21911		
60129930006	GW-075035-092512-CM-MW-7	EPA 300.0	WETA/21911		
60129930007	GW-075035-092512-CM-MW-5	EPA 300.0	WETA/21911		

# CHAIN-OF-CUSTODY / Analytical Request Document

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



Page: \_\_\_\_\_ of \_\_\_\_\_

<b>Section A</b> Required Client Information		<b>Section B</b> Required Project Information:		<b>Section C</b> Invoice Information	
Company:	COF CRA NIM	Report To:	Christine Matthews	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.:		Address:	
Phone:	(505)884-0672 Fax (505)884-4932	Project Name:	Martin 34 No. 2	Pace Quote Reference:	
Requested Due Date(TAT):	standard	Project Number:	075035	Pace Project Manager:	Alice Flanagan
				Pace Profile #:	5341, 7

**REGULATORY AGENCY**

NPDES  GROUND WATER  DRINKING WATER

UST  RCRA  OTHER

Site Location: \_\_\_\_\_

STATE: \_\_\_\_\_

NM

ITEM #	Section D Required Client Information	Valid Matrix Codes	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test ↓	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
					COMPOSITE START	COMPOSITE END/GRAB									
1	GW-075035-092512-CM-MW-1	DRINKING WATER DW	WT G	G	9-25-12	0855			7	X	X	X	X	X	3D69H 601
2	GW-075035-092512-CM-MW-6	WASTE WATER WW	WT G	G	9-25-12	0920			8	X	X	X	X	X	188N <sup>o</sup> 602
3	GW-075035-092512-CM-MW-2	WASTE WATER WW	WT G	G	9-25-12	0945			8	X	X	X	X	X	603
4	GW-075035-092512-CM-MW-4	WASTE WATER WW	WT G	G	9-25-12	1110			8	X	X	X	X	X	604
5	GW-075035-092512-CM-MW-3	WASTE WATER WW	WT G	G	9-25-12	1130			8	X	X	X	X	X	605
6	GW-075035-092512-CM-MW-7	WASTE WATER WW	WT G	G	9-25-12	1220			8	X	X	X	X	X	606
7	GW-075035-092512-CM-MW-5	WASTE WATER WW	WT G	G	9-25-12	1315			7	X	X	X	X	X	607
8	GW-075035-092512-CM-DUP	WASTE WATER WW	WT G	G	9-25-12	0950			3	X	X	X	X	X	3D69H 608
9	TR-075035-092512-CM-001	OTHER	WT						3	X	X	X	X	X	609
10															
11															
12															

ADDITIONAL COMMENTS	RELINQUISHED BY (AFFILIATION)	DATE	TIME	ACCEPTED BY (AFFILIATION)	DATE	TIME	SAMPLE CONDITIONS
	Christine Matthews	9-26-12	0730	Blanchard	9/27/12	0820	Y Y Y
*8260 VOCs BTEX N Methylene Chloride, 1,1,2,2-Tetrachloroethane							

Temp in °C \_\_\_\_\_

Received on \_\_\_\_\_

Cooler Sealed \_\_\_\_\_

Samples Intact \_\_\_\_\_

**SAMPLER NAME AND SIGNATURE**

PRINT Name of SAMPLER: Christine Matthews

SIGNATURE of SAMPLER: *Christine Matthews*

DATE Signed (MM/DD/YY): 9-26-12



Sample Condition Upon Receipt – ESI Tech Specs

Client Name: COPCRA NM

Project #: 00129930

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other

Optional  
Proj Due Date: 10/9  
Proj Name:

Tracking #: 800182004868 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  ZPLC

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

Cooler Temperature: 1.5  
Temperature should be above freezing to 6°C

Date and initials of person examining contents: 9-27-10 BA

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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed	Lot # of added preservative
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Pace Trip Blank lot # (if purchased): <u>080612-3</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: \_\_\_\_\_

Project Manager Review: [Signature] Date: 9/28/10

Temp Log: Record start and finish times when unpacking cooler, if >20 min, recheck sample temps.	
Start: <u>1645</u>	Start:
End: <u>1700</u>	End:
Temp:	Temp:

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).

January 07, 2013

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

RE: Project: 075035 MARTIN 34 NO. 2  
Pace Project No.: 60135913

Dear Christine Matthews:

Enclosed are the analytical results for sample(s) received by the laboratory on December 21, 2012. 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,



Alice Flanagan

alice.flanagan@pacelabs.com  
Project Manager

Enclosures

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



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

A2LA Certification #: 2456.01

Arkansas Certification #: 12-019-0

Illinois Certification #: 002885

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-12-3

Utah Certification #: KS000212012-2

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### SAMPLE SUMMARY

Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60135913001	GW-075035-122012-CM-MW-1	Water	12/20/12 10:30	12/21/12 11:15
60135913002	GW-075035-121912-CM-MW-2	Water	12/19/12 12:30	12/21/12 11:15
60135913003	GW-075035-121912-CM-MW-3	Water	12/19/12 12:45	12/21/12 11:15
60135913004	GW-075035-121912-CM-MW-4	Water	12/19/12 14:00	12/21/12 11:15
60135913005	GW-075035-121912-CM-MW-5	Water	12/19/12 14:00	12/21/12 11:15
60135913006	GW-075035-121912-CM-MW-6	Water	12/19/12 12:10	12/21/12 11:15
60135913007	GW-075035-121912-CM-MW-7	Water	12/19/12 14:30	12/21/12 11:15
60135913008	GW-075035-121912-CM-DUP	Water	12/19/12 12:15	12/21/12 11:15

### REPORT OF LABORATORY ANALYSIS

Page 3 of 28

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### SAMPLE ANALYTE COUNT

Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60135913001	GW-075035-122012-CM-MW-1	EPA 6010	TJG	3
		EPA 8270C by SIM	JMT	3
		EPA 5030B/8260	PRG	11
		SM 2540C	FJF	1
		EPA 300.0	AJM	3
60135913002	GW-075035-121912-CM-MW-2	EPA 6010	SMW, TJG	3
		EPA 8270C by SIM	JMT	3
		EPA 5030B/8260	PRG	11
		SM 2540C	FJF	1
		EPA 300.0	AJM	3
60135913003	GW-075035-121912-CM-MW-3	EPA 6010	TJG	3
		EPA 8270C by SIM	JMT	3
		EPA 5030B/8260	PRG	11
		SM 2540C	FJF	1
		EPA 300.0	AJM	3
60135913004	GW-075035-121912-CM-MW-4	EPA 6010	TJG	3
		EPA 8270C by SIM	JMT	3
		EPA 5030B/8260	PRG	11
		SM 2540C	FJF	1
		EPA 300.0	AJM	3
60135913005	GW-075035-121912-CM-MW-5	EPA 6010	TJG	3
		EPA 8270C by SIM	JMT	3
		EPA 5030B/8260	PRG	11
		SM 2540C	FJF	1
		EPA 300.0	AJM	3
60135913006	GW-075035-121912-CM-MW-6	EPA 6010	TJG	3
		EPA 8270C by SIM	JMT	3
		EPA 5030B/8260	PRG	11
		SM 2540C	FJF	1
		EPA 300.0	AJM	3
60135913007	GW-075035-121912-CM-MW-7	EPA 6010	TJG	3
		EPA 8270C by SIM	JMT	3
		EPA 5030B/8260	PRG	11
		SM 2540C	FJF	1
		EPA 300.0	AJM	3
60135913008	GW-075035-121912-CM-DUP	EPA 5030B/8260	PRG	9

### REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

---

**Method:** EPA 6010

**Description:** 6010 MET ICP, Dissolved

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** January 07, 2013

**General Information:**

7 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.

**Additional Comments:**

Sample Comments:

Client did not receive appropriate containers for method 8270, aliquot was taken from unpreserved plastic for Naphthalene by 8270.

- GW-075035-122012-CM-MW-1 (Lab ID: 60135913001)
- GW-075035-121912-CM-MW-2 (Lab ID: 60135913002)
- GW-075035-121912-CM-MW-3 (Lab ID: 60135913003)
- GW-075035-121912-CM-MW-4 (Lab ID: 60135913004)
- GW-075035-121912-CM-MW-5 (Lab ID: 60135913005)
- GW-075035-121912-CM-MW-6 (Lab ID: 60135913006)
- GW-075035-121912-CM-MW-7 (Lab ID: 60135913007)

## REPORT OF LABORATORY ANALYSIS

Page 5 of 28

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## PROJECT NARRATIVE

Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

---

**Method:** EPA 8270C by SIM

**Description:** 8270 MSSV PAH by SIM

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** January 07, 2013

**General Information:**

7 samples were analyzed for EPA 8270C by SIM. 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 3510C 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.

**Additional Comments:**

Sample Comments:

Client did not receive appropriate containers for method 8270, aliquot was taken from unpreserved plastic for Naphthalene by 8270.

- GW-075035-122012-CM-MW-1 (Lab ID: 60135913001)
- GW-075035-121912-CM-MW-2 (Lab ID: 60135913002)
- GW-075035-121912-CM-MW-3 (Lab ID: 60135913003)
- GW-075035-121912-CM-MW-4 (Lab ID: 60135913004)
- GW-075035-121912-CM-MW-5 (Lab ID: 60135913005)
- GW-075035-121912-CM-MW-6 (Lab ID: 60135913006)
- GW-075035-121912-CM-MW-7 (Lab ID: 60135913007)

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

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**Method:** EPA 5030B/8260

**Description:** 8260 MSV

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** January 07, 2013

**General Information:**

8 samples were analyzed for EPA 5030B/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/51049

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

QC Batch: MSV/51062

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

**Additional Comments:**

Sample Comments:

Client did not receive appropriate containers for method 8270, aliquot was taken from unpreserved plastic for Naphthalene by 8270.

- GW-075035-122012-CM-MW-1 (Lab ID: 60135913001)
- GW-075035-121912-CM-MW-2 (Lab ID: 60135913002)
- GW-075035-121912-CM-MW-3 (Lab ID: 60135913003)
- GW-075035-121912-CM-MW-4 (Lab ID: 60135913004)
- GW-075035-121912-CM-MW-5 (Lab ID: 60135913005)
- GW-075035-121912-CM-MW-6 (Lab ID: 60135913006)
- GW-075035-121912-CM-MW-7 (Lab ID: 60135913007)

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

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**Method:** SM 2540C

**Description:** 2540C Total Dissolved Solids

**Client:** COP Conestoga-Rovers & Associates, Inc. NM

**Date:** January 07, 2013

**General Information:**

7 samples were analyzed for SM 2540C. 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.

**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:**

Sample Comments:

Client did not receive appropriate containers for method 8270, aliquot was taken from unpreserved plastic for Naphthalene by 8270.

- GW-075035-122012-CM-MW-1 (Lab ID: 60135913001)
- GW-075035-121912-CM-MW-2 (Lab ID: 60135913002)
- GW-075035-121912-CM-MW-3 (Lab ID: 60135913003)
- GW-075035-121912-CM-MW-4 (Lab ID: 60135913004)
- GW-075035-121912-CM-MW-5 (Lab ID: 60135913005)
- GW-075035-121912-CM-MW-6 (Lab ID: 60135913006)
- GW-075035-121912-CM-MW-7 (Lab ID: 60135913007)

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 075035 MARTIN 34 NO. 2  
Pace Project No.: 60135913

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**Method:** EPA 300.0  
**Description:** 300.0 IC Anions 28 Days  
**Client:** COP Conestoga-Rovers & Associates, Inc. NM  
**Date:** January 07, 2013

**General Information:**

7 samples were analyzed for EPA 300.0. 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.

**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: WETA/23021

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60135798014,60135848001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1119921)
  - Fluoride
- MSD (Lab ID: 1119922)
  - Fluoride

**Additional Comments:**

Sample Comments:

Client did not receive appropriate containers for method 8270, aliquot was taken from unpreserved plastic for Naphthalene by 8270.

- GW-075035-122012-CM-MW-1 (Lab ID: 60135913001)
- GW-075035-121912-CM-MW-2 (Lab ID: 60135913002)
- GW-075035-121912-CM-MW-3 (Lab ID: 60135913003)
- GW-075035-121912-CM-MW-4 (Lab ID: 60135913004)
- GW-075035-121912-CM-MW-5 (Lab ID: 60135913005)
- GW-075035-121912-CM-MW-6 (Lab ID: 60135913006)
- GW-075035-121912-CM-MW-7 (Lab ID: 60135913007)

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

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

**Sample:** GW-075035-122012-CM-MW-1    **Lab ID:** 60135913001    Collected: 12/20/12 10:30    Received: 12/21/12 11:15    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									
Boron, Dissolved	1230	ug/L	100	1.8	1	12/26/12 15:45	01/02/13 13:50	7440-42-8	
Iron, Dissolved	1250	ug/L	50.0	17.2	1	12/26/12 15:45	01/02/13 13:50	7439-89-6	
Manganese, Dissolved	886	ug/L	5.0	0.60	1	12/26/12 15:45	01/02/13 13:50	7439-96-5	
<b>8270 MSSV PAH by SIM</b>									
Analytical Method: EPA 8270C by SIM    Preparation Method: EPA 3510C									
Naphthalene	1.2	ug/L	0.50	0.057	1	12/26/12 00:00	12/27/12 16:44	91-20-3	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	46	%	40-120		1	12/26/12 00:00	12/27/12 16:44	321-60-8	
Terphenyl-d14 (S)	72	%	43-122		1	12/26/12 00:00	12/27/12 16:44	1718-51-0	
<b>8260 MSV</b>									
Analytical Method: EPA 5030B/8260									
Benzene	3960	ug/L	50.0	4.9	50		12/27/12 21:54	71-43-2	
Ethylbenzene	336	ug/L	50.0	11.5	50		12/27/12 21:54	100-41-4	
Methylene chloride	ND	ug/L	50.0	12.0	50		12/27/12 21:54	75-09-2	
1,1,2,2-Tetrachloroethane	ND	ug/L	50.0	4.3	50		12/27/12 21:54	79-34-5	
Toluene	2570	ug/L	50.0	7.5	50		12/27/12 21:54	108-88-3	
Xylene (Total)	6450	ug/L	150	20.5	50		12/27/12 21:54	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	102	%	80-120		50		12/27/12 21:54	460-00-4	
Dibromofluoromethane (S)	103	%	80-120		50		12/27/12 21:54	1868-53-7	
1,2-Dichloroethane-d4 (S)	97	%	80-120		50		12/27/12 21:54	17060-07-0	
Toluene-d8 (S)	100	%	80-120		50		12/27/12 21:54	2037-26-5	
Preservation pH	1.0		0.10	0.10	50		12/27/12 21:54		
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C									
Total Dissolved Solids	23100	mg/L	5.0	5.0	1		12/24/12 13:11		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0									
Chloride	301	mg/L	20.0	10.0	20		12/27/12 18:22	16887-00-6	
Fluoride	ND	mg/L	0.20	0.069	1		12/27/12 18:05	16984-48-8	
Sulfate	15300	mg/L	1000	59.0	1000		12/27/12 18:39	14808-79-8	

## ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

**Sample:** GW-075035-121912-CM-MW-2    **Lab ID:** 60135913002    Collected: 12/19/12 12:30    Received: 12/21/12 11:15    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									
Boron, Dissolved	1040	ug/L	300	5.4	3	12/26/12 15:45	01/03/13 10:54	7440-42-8	
Iron, Dissolved	1200	ug/L	50.0	17.2	1	12/26/12 15:45	01/02/13 13:57	7439-89-6	
Manganese, Dissolved	1980	ug/L	15.0	1.8	3	12/26/12 15:45	01/03/13 10:54	7439-96-5	
<b>8270 MSSV PAH by SIM</b>									
Analytical Method: EPA 8270C by SIM    Preparation Method: EPA 3510C									
Naphthalene	ND	ug/L	0.50	0.057	1	12/26/12 00:00	12/27/12 14:48	91-20-3	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	71	%	40-120		1	12/26/12 00:00	12/27/12 14:48	321-60-8	
Terphenyl-d14 (S)	71	%	43-122		1	12/26/12 00:00	12/27/12 14:48	1718-51-0	
<b>8260 MSV</b>									
Analytical Method: EPA 5030B/8260									
Benzene	202	ug/L	5.0	0.49	5		12/27/12 17:06	71-43-2	
Ethylbenzene	281	ug/L	5.0	1.2	5		12/27/12 17:06	100-41-4	
Methylene chloride	ND	ug/L	5.0	1.2	5		12/27/12 17:06	75-09-2	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	0.43	5		12/27/12 17:06	79-34-5	
Toluene	ND	ug/L	5.0	0.75	5		12/27/12 17:06	108-88-3	
Xylene (Total)	81.1	ug/L	15.0	2.0	5		12/27/12 17:06	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	104	%	80-120		5		12/27/12 17:06	460-00-4	
Dibromofluoromethane (S)	105	%	80-120		5		12/27/12 17:06	1868-53-7	
1,2-Dichloroethane-d4 (S)	99	%	80-120		5		12/27/12 17:06	17060-07-0	
Toluene-d8 (S)	95	%	80-120		5		12/27/12 17:06	2037-26-5	
Preservation pH	1.0		0.10	0.10	5		12/27/12 17:06		
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C									
Total Dissolved Solids	33200	mg/L	5.0	5.0	1		12/24/12 13:09		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0									
Chloride	423	mg/L	50.0	25.0	50		12/28/12 13:48	16887-00-6	
Fluoride	ND	mg/L	0.20	0.069	1		12/28/12 13:31	16984-48-8	
Sulfate	22300	mg/L	2000	118	2000		12/28/12 14:04	14808-79-8	

### ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

**Sample:** GW-075035-121912-CM-MW-3    **Lab ID:** 60135913003    Collected: 12/19/12 12:45    Received: 12/21/12 11:15    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									
Boron, Dissolved	1030	ug/L	200	3.6	2	12/26/12 15:45	01/02/13 14:12	7440-42-8	
Iron, Dissolved	152	ug/L	100	34.4	2	12/26/12 15:45	01/02/13 14:12	7439-89-6	
Manganese, Dissolved	547	ug/L	10.0	1.2	2	12/26/12 15:45	01/02/13 14:12	7439-96-5	
<b>8270 MSSV PAH by SIM</b>									
Analytical Method: EPA 8270C by SIM    Preparation Method: EPA 3510C									
Naphthalene	ND	ug/L	0.50	0.057	1	12/26/12 00:00	12/27/12 15:07	91-20-3	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	71	%	40-120		1	12/26/12 00:00	12/27/12 15:07	321-60-8	
Terphenyl-d14 (S)	69	%	43-122		1	12/26/12 00:00	12/27/12 15:07	1718-51-0	
<b>8260 MSV</b>									
Analytical Method: EPA 5030B/8260									
Benzene	ND	ug/L	1.0	0.098	1		12/27/12 17:20	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.23	1		12/27/12 17:20	100-41-4	
Methylene chloride	ND	ug/L	1.0	0.24	1		12/27/12 17:20	75-09-2	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.086	1		12/27/12 17:20	79-34-5	
Toluene	ND	ug/L	1.0	0.15	1		12/27/12 17:20	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.41	1		12/27/12 17:20	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	103	%	80-120		1		12/27/12 17:20	460-00-4	
Dibromofluoromethane (S)	108	%	80-120		1		12/27/12 17:20	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	80-120		1		12/27/12 17:20	17060-07-0	
Toluene-d8 (S)	97	%	80-120		1		12/27/12 17:20	2037-26-5	
Preservation pH	1.0		0.10	0.10	1		12/27/12 17:20		
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C									
Total Dissolved Solids	30600	mg/L	5.0	5.0	1		12/24/12 13:09		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0									
Chloride	458	mg/L	50.0	25.0	50		12/27/12 20:40	16887-00-6	
Fluoride	ND	mg/L	0.20	0.069	1		12/27/12 20:23	16984-48-8	
Sulfate	21400	mg/L	2000	118	2000		12/27/12 20:57	14808-79-8	

### ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

**Sample:** GW-075035-121912-CM-MW-4    **Lab ID:** 60135913004    Collected: 12/19/12 14:00    Received: 12/21/12 11:15    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									
Boron, Dissolved	808	ug/L	200	3.6	2	12/26/12 15:45	01/02/13 14:14	7440-42-8	
Iron, Dissolved	782	ug/L	100	34.4	2	12/26/12 15:45	01/02/13 14:14	7439-89-6	
Manganese, Dissolved	4840	ug/L	10.0	1.2	2	12/26/12 15:45	01/02/13 14:14	7439-96-5	
<b>8270 MSSV PAH by SIM</b>									
Analytical Method: EPA 8270C by SIM    Preparation Method: EPA 3510C									
Naphthalene	ND	ug/L	0.50	0.057	1	12/26/12 00:00	12/27/12 15:26	91-20-3	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	80	%	40-120		1	12/26/12 00:00	12/27/12 15:26	321-60-8	
Terphenyl-d14 (S)	81	%	43-122		1	12/26/12 00:00	12/27/12 15:26	1718-51-0	
<b>8260 MSV</b>									
Analytical Method: EPA 5030B/8260									
Benzene	1.1	ug/L	1.0	0.098	1		12/27/12 17:35	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.23	1		12/27/12 17:35	100-41-4	
Methylene chloride	ND	ug/L	1.0	0.24	1		12/27/12 17:35	75-09-2	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.086	1		12/27/12 17:35	79-34-5	
Toluene	ND	ug/L	1.0	0.15	1		12/27/12 17:35	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.41	1		12/27/12 17:35	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	110	%	80-120		1		12/27/12 17:35	460-00-4	
Dibromofluoromethane (S)	111	%	80-120		1		12/27/12 17:35	1868-53-7	
1,2-Dichloroethane-d4 (S)	112	%	80-120		1		12/27/12 17:35	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		12/27/12 17:35	2037-26-5	
Preservation pH	1.0		0.10	0.10	1		12/27/12 17:35		
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C									
Total Dissolved Solids	36400	mg/L	5.0	5.0	1		12/24/12 13:10		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0									
Chloride	397	mg/L	20.0	10.0	20		12/27/12 21:30	16887-00-6	
Fluoride	ND	mg/L	0.20	0.069	1		12/27/12 21:13	16984-48-8	
Sulfate	28500	mg/L	2000	118	2000		12/27/12 21:47	14808-79-8	

## ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

**Sample:** GW-075035-121912-CM-MW-5      **Lab ID:** 60135913005      Collected: 12/19/12 14:00      Received: 12/21/12 11:15      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									
Boron, Dissolved	1550	ug/L	200	3.6	2	12/26/12 15:45	01/02/13 14:16	7440-42-8	
Iron, Dissolved	2150	ug/L	100	34.4	2	12/26/12 15:45	01/02/13 14:16	7439-89-6	
Manganese, Dissolved	1060	ug/L	10.0	1.2	2	12/26/12 15:45	01/02/13 14:16	7439-96-5	
<b>8270 MSSV PAH by SIM</b>									
Analytical Method: EPA 8270C by SIM    Preparation Method: EPA 3510C									
Naphthalene	ND	ug/L	0.50	0.057	1	12/26/12 00:00	12/27/12 15:46	91-20-3	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	81	%	40-120		1	12/26/12 00:00	12/27/12 15:46	321-60-8	
Terphenyl-d14 (S)	93	%	43-122		1	12/26/12 00:00	12/27/12 15:46	1718-51-0	
<b>8260 MSV</b>									
Analytical Method: EPA 5030B/8260									
Benzene	861	ug/L	20.0	2.0	20		12/27/12 17:49	71-43-2	
Ethylbenzene	43.6	ug/L	20.0	4.6	20		12/27/12 17:49	100-41-4	
Methylene chloride	ND	ug/L	20.0	4.8	20		12/27/12 17:49	75-09-2	
1,1,2,2-Tetrachloroethane	ND	ug/L	20.0	1.7	20		12/27/12 17:49	79-34-5	
Toluene	ND	ug/L	20.0	3.0	20		12/27/12 17:49	108-88-3	
Xylene (Total)	ND	ug/L	60.0	8.2	20		12/27/12 17:49	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	106	%	80-120		20		12/27/12 17:49	460-00-4	
Dibromofluoromethane (S)	108	%	80-120		20		12/27/12 17:49	1868-53-7	
1,2-Dichloroethane-d4 (S)	100	%	80-120		20		12/27/12 17:49	17060-07-0	
Toluene-d8 (S)	99	%	80-120		20		12/27/12 17:49	2037-26-5	
Preservation pH	1.0		0.10	0.10	20		12/27/12 17:49		
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C									
Total Dissolved Solids	12000	mg/L	5.0	5.0	1		12/24/12 13:10		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0									
Chloride	230	mg/L	20.0	10.0	20		12/27/12 23:10	16887-00-6	
Fluoride	ND	mg/L	0.20	0.069	1		12/27/12 22:53	16984-48-8	
Sulfate	7090	mg/L	1000	59.0	1000		12/27/12 22:03	14808-79-8	

### ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

**Sample:** GW-075035-121912-CM-MW-6      **Lab ID:** 60135913006      Collected: 12/19/12 12:10      Received: 12/21/12 11:15      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									
Boron, Dissolved	687	ug/L	200	3.6	2	12/26/12 15:45	01/02/13 14:19	7440-42-8	
Iron, Dissolved	ND	ug/L	100	34.4	2	12/26/12 15:45	01/02/13 14:19	7439-89-6	
Manganese, Dissolved	2340	ug/L	10.0	1.2	2	12/26/12 15:45	01/02/13 14:19	7439-96-5	
<b>8270 MSSV PAH by SIM</b>									
Analytical Method: EPA 8270C by SIM    Preparation Method: EPA 3510C									
Naphthalene	2.3	ug/L	0.50	0.057	1	12/26/12 00:00	12/27/12 16:05	91-20-3	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	69	%	40-120		1	12/26/12 00:00	12/27/12 16:05	321-60-8	
Terphenyl-d14 (S)	72	%	43-122		1	12/26/12 00:00	12/27/12 16:05	1718-51-0	
<b>8260 MSV</b>									
Analytical Method: EPA 5030B/8260									
Benzene	21.4	ug/L	10.0	0.98	10		12/27/12 18:03	71-43-2	
Ethylbenzene	180	ug/L	10.0	2.3	10		12/27/12 18:03	100-41-4	
Methylene chloride	ND	ug/L	10.0	2.4	10		12/27/12 18:03	75-09-2	
1,1,2,2-Tetrachloroethane	ND	ug/L	10.0	0.86	10		12/27/12 18:03	79-34-5	
Toluene	ND	ug/L	10.0	1.5	10		12/27/12 18:03	108-88-3	
Xylene (Total)	3300	ug/L	30.0	4.1	10		12/27/12 18:03	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	101	%	80-120		10		12/27/12 18:03	460-00-4	
Dibromofluoromethane (S)	102	%	80-120		10		12/27/12 18:03	1868-53-7	
1,2-Dichloroethane-d4 (S)	100	%	80-120		10		12/27/12 18:03	17060-07-0	
Toluene-d8 (S)	97	%	80-120		10		12/27/12 18:03	2037-26-5	
Preservation pH	1.0		0.10	0.10	10		12/27/12 18:03		
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C									
Total Dissolved Solids	34600	mg/L	5.0	5.0	1		12/24/12 13:11		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0									
Chloride	392	mg/L	20.0	10.0	20		12/27/12 23:44	16887-00-6	
Fluoride	ND	mg/L	0.20	0.069	1		12/27/12 23:27	16984-48-8	
Sulfate	27300	mg/L	2000	118	2000		12/28/12 00:00	14808-79-8	

## ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

**Sample:** GW-075035-121912-CM-MW-7      **Lab ID:** 60135913007      Collected: 12/19/12 14:30      Received: 12/21/12 11:15      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									
Boron, Dissolved	803	ug/L	200	3.6	2	12/26/12 15:45	01/02/13 14:21	7440-42-8	
Iron, Dissolved	779	ug/L	100	34.4	2	12/26/12 15:45	01/02/13 14:21	7439-89-6	
Manganese, Dissolved	2420	ug/L	10.0	1.2	2	12/26/12 15:45	01/02/13 14:21	7439-96-5	
<b>8270 MSSV PAH by SIM</b>									
Analytical Method: EPA 8270C by SIM    Preparation Method: EPA 3510C									
Naphthalene	ND	ug/L	0.50	0.057	1	12/26/12 00:00	12/27/12 16:24	91-20-3	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	76	%	40-120		1	12/26/12 00:00	12/27/12 16:24	321-60-8	
Terphenyl-d14 (S)	91	%	43-122		1	12/26/12 00:00	12/27/12 16:24	1718-51-0	
<b>8260 MSV</b>									
Analytical Method: EPA 5030B/8260									
Benzene	1.0	ug/L	1.0	0.098	1		12/28/12 10:44	71-43-2	
Ethylbenzene	39.7	ug/L	1.0	0.23	1		12/28/12 10:44	100-41-4	
Methylene chloride	ND	ug/L	1.0	0.24	1		12/28/12 10:44	75-09-2	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.086	1		12/28/12 10:44	79-34-5	
Toluene	ND	ug/L	1.0	0.15	1		12/28/12 10:44	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.41	1		12/28/12 10:44	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	102	%	80-120		1		12/28/12 10:44	460-00-4	
Dibromofluoromethane (S)	102	%	80-120		1		12/28/12 10:44	1868-53-7	
1,2-Dichloroethane-d4 (S)	107	%	80-120		1		12/28/12 10:44	17060-07-0	
Toluene-d8 (S)	95	%	80-120		1		12/28/12 10:44	2037-26-5	
Preservation pH	1.0		0.10	0.10	1		12/28/12 10:44		
<b>2540C Total Dissolved Solids</b>									
Analytical Method: SM 2540C									
Total Dissolved Solids	13800	mg/L	5.0	5.0	1		12/24/12 13:11		
<b>300.0 IC Anions 28 Days</b>									
Analytical Method: EPA 300.0									
Chloride	124	mg/L	20.0	10.0	20		12/28/12 00:34	16887-00-6	
Fluoride	0.84	mg/L	0.20	0.069	1		12/28/12 00:17	16984-48-8	
Sulfate	10300	mg/L	2000	118	2000		12/28/12 00:50	14808-79-8	

## ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

**Sample:** GW-075035-121912-CM-DUP    **Lab ID:** 60135913008    Collected: 12/19/12 12:15    Received: 12/21/12 11:15    Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>									
Analytical Method: EPA 5030B/8260									
Benzene	21.9	ug/L	10.0	0.98	10		12/27/12 18:32	71-43-2	
Ethylbenzene	198	ug/L	10.0	2.3	10		12/27/12 18:32	100-41-4	
Toluene	ND	ug/L	10.0	1.5	10		12/27/12 18:32	108-88-3	
Xylene (Total)	3530	ug/L	30.0	4.1	10		12/27/12 18:32	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	104	%	80-120		10		12/27/12 18:32	460-00-4	
Dibromofluoromethane (S)	102	%	80-120		10		12/27/12 18:32	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	80-120		10		12/27/12 18:32	17060-07-0	
Toluene-d8 (S)	102	%	80-120		10		12/27/12 18:32	2037-26-5	
Preservation pH	1.0		0.10	0.10	10		12/27/12 18:32		



### QUALITY CONTROL DATA

Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

QC Batch: MSV/51043 Analysis Method: EPA 5030B/8260  
 QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge  
 Associated Lab Samples: 60135913002, 60135913003, 60135913004, 60135913005, 60135913006, 60135913008

METHOD BLANK: 1120012 Matrix: Water

Associated Lab Samples: 60135913002, 60135913003, 60135913004, 60135913005, 60135913006, 60135913008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	12/27/12 15:53	
Benzene	ug/L	ND	1.0	12/27/12 15:53	
Ethylbenzene	ug/L	ND	1.0	12/27/12 15:53	
Methylene chloride	ug/L	ND	1.0	12/27/12 15:53	
Toluene	ug/L	ND	1.0	12/27/12 15:53	
Xylene (Total)	ug/L	ND	3.0	12/27/12 15:53	
1,2-Dichloroethane-d4 (S)	%	94	80-120	12/27/12 15:53	
4-Bromofluorobenzene (S)	%	102	80-120	12/27/12 15:53	
Dibromofluoromethane (S)	%	104	80-120	12/27/12 15:53	
Toluene-d8 (S)	%	100	80-120	12/27/12 15:53	

LABORATORY CONTROL SAMPLE: 1120013

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	19.1	96	71-121	
Benzene	ug/L	20	21.1	106	74-123	
Ethylbenzene	ug/L	20	21.0	105	76-123	
Methylene chloride	ug/L	20	16.9	85	72-127	
Toluene	ug/L	20	20.2	101	75-123	
Xylene (Total)	ug/L	60	64.8	108	76-123	
1,2-Dichloroethane-d4 (S)	%			102	80-120	
4-Bromofluorobenzene (S)	%			102	80-120	
Dibromofluoromethane (S)	%			106	80-120	
Toluene-d8 (S)	%			101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1120014 1120015

Parameter	Units	60135732012		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual	
1,1,2,2-Tetrachloroethane	ug/L	<0.086	20	20	17.7	18.5	89	93	59-131	4	29		
Benzene	ug/L	<0.098	20	20	20.8	21.1	104	106	40-155	2	45		
Ethylbenzene	ug/L	<0.23	20	20	20.1	21.3	101	107	40-158	6	48		
Methylene chloride	ug/L	<0.24	20	20	16.8	17.4	84	87	60-137	3	28		
Toluene	ug/L	<0.15	20	20	19.3	20.4	97	102	42-151	5	46		
Xylene (Total)	ug/L	<0.41	60	60	60.7	63.5	101	106	40-151	5	45		
1,2-Dichloroethane-d4 (S)	%						99	96	80-120				
4-Bromofluorobenzene (S)	%						102	99	80-120				
Dibromofluoromethane (S)	%						107	103	80-120				
Toluene-d8 (S)	%						99	101	80-120				
Preservation pH		1.0			1.0	1.0					0		

Date: 01/07/2013 03:09 PM

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

QC Batch: WET/38967

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 60135913001, 60135913002, 60135913003, 60135913004, 60135913005, 60135913006, 60135913007

METHOD BLANK: 1119313

Matrix: Water

Associated Lab Samples: 60135913001, 60135913002, 60135913003, 60135913004, 60135913005, 60135913006, 60135913007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	12/24/12 13:05	

SAMPLE DUPLICATE: 1119314

Parameter	Units	60135846001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1590	1560	2	17	

SAMPLE DUPLICATE: 1119315

Parameter	Units	60135908002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	280	272	3	17	

### QUALITY CONTROL DATA

Project: 075035 MARTIN 34 NO. 2  
Pace Project No.: 60135913

QC Batch: WETA/23021 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 60135913001, 60135913003, 60135913004, 60135913005, 60135913006, 60135913007

METHOD BLANK: 1119918 Matrix: Water  
Associated Lab Samples: 60135913001, 60135913003, 60135913004, 60135913005, 60135913006, 60135913007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	12/27/12 10:34	
Fluoride	mg/L	ND	0.20	12/27/12 10:34	
Sulfate	mg/L	ND	1.0	12/27/12 10:34	

LABORATORY CONTROL SAMPLE: 1119919

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.3	106	90-110	
Fluoride	mg/L	2.5	2.7	108	90-110	
Sulfate	mg/L	5	5.1	102	90-110	

MATRIX SPIKE SAMPLE: 1119920

Parameter	Units	60135798014 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	1180	500	1660	96	64-118	
Fluoride	mg/L	ND	2.5	2.6	97	75-110	
Sulfate	mg/L	168	50	208	79	61-119	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1119921 1119922

Parameter	Units	60135848001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	433	250	250	679	677	98	97	64-118	0	12	
Fluoride	mg/L	1.9	2.5	2.5	4.9	5.0	120	122	75-110	1	10	M1
Sulfate	mg/L	370	250	250	602	601	93	92	61-119	0	10	

### QUALITY CONTROL DATA

Project: 075035 MARTIN 34 NO. 2  
Pace Project No.: 60135913

QC Batch: WETA/23044 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Associated Lab Samples: 60135913002

METHOD BLANK: 1120439 Matrix: Water  
Associated Lab Samples: 60135913002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	12/28/12 11:17	
Fluoride	mg/L	ND	0.20	12/28/12 11:17	
Sulfate	mg/L	ND	1.0	12/28/12 11:17	

LABORATORY CONTROL SAMPLE: 1120440

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.9	99	90-110	
Fluoride	mg/L	2.5	2.4	96	90-110	
Sulfate	mg/L	5	5.0	101	90-110	

MATRIX SPIKE SAMPLE: 1120441

Parameter	Units	60135935001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	169	50	217	95	64-118	
Fluoride	mg/L	ND	25	25.6	102	75-110	
Sulfate	mg/L	727	250	939	85	61-119	

MATRIX SPIKE SAMPLE: 1120442

Parameter	Units	60136047001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	317	250	544	91	64-118	
Fluoride	mg/L	ND	125	117	93	75-110	
Sulfate	mg/L	69.6	250	305	94	61-119	

## QUALIFIERS

Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

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### 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.

PRL - Pace Reporting Limit.

RL - Reporting 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.

TNI - The NELAC Institute.

### SAMPLE QUALIFIERS

Sample: 60135913001

[1] Client did not receive appropriate containers for method 8270, aliquot was taken from unpreserved plastic for Naphthalene by 8270.

Sample: 60135913002

[1] Client did not receive appropriate containers for method 8270, aliquot was taken from unpreserved plastic for Naphthalene by 8270.

Sample: 60135913003

[1] Client did not receive appropriate containers for method 8270, aliquot was taken from unpreserved plastic for Naphthalene by 8270.

Sample: 60135913004

[1] Client did not receive appropriate containers for method 8270, aliquot was taken from unpreserved plastic for Naphthalene by 8270.

Sample: 60135913005

[1] Client did not receive appropriate containers for method 8270, aliquot was taken from unpreserved plastic for Naphthalene by 8270.

Sample: 60135913006

[1] Client did not receive appropriate containers for method 8270, aliquot was taken from unpreserved plastic for Naphthalene by 8270.

Sample: 60135913007

[1] Client did not receive appropriate containers for method 8270, aliquot was taken from unpreserved plastic for Naphthalene by 8270.

## QUALIFIERS

Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

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### BATCH QUALIFIERS

Batch: MSV/51049

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

Batch: MSV/51062

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

### ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60135913001	GW-075035-122012-CM-MW-1	EPA 3010	MPRP/20997	EPA 6010	ICP/17000
60135913002	GW-075035-121912-CM-MW-2	EPA 3010	MPRP/20997	EPA 6010	ICP/17000
60135913003	GW-075035-121912-CM-MW-3	EPA 3010	MPRP/20997	EPA 6010	ICP/17000
60135913004	GW-075035-121912-CM-MW-4	EPA 3010	MPRP/20997	EPA 6010	ICP/17000
60135913005	GW-075035-121912-CM-MW-5	EPA 3010	MPRP/20997	EPA 6010	ICP/17000
60135913006	GW-075035-121912-CM-MW-6	EPA 3010	MPRP/20997	EPA 6010	ICP/17000
60135913007	GW-075035-121912-CM-MW-7	EPA 3010	MPRP/20997	EPA 6010	ICP/17000
60135913001	GW-075035-122012-CM-MW-1	EPA 3510C	OEXT/36601	EPA 8270C by SIM	MSSV/11565
60135913002	GW-075035-121912-CM-MW-2	EPA 3510C	OEXT/36601	EPA 8270C by SIM	MSSV/11565
60135913003	GW-075035-121912-CM-MW-3	EPA 3510C	OEXT/36601	EPA 8270C by SIM	MSSV/11565
60135913004	GW-075035-121912-CM-MW-4	EPA 3510C	OEXT/36601	EPA 8270C by SIM	MSSV/11565
60135913005	GW-075035-121912-CM-MW-5	EPA 3510C	OEXT/36601	EPA 8270C by SIM	MSSV/11565
60135913006	GW-075035-121912-CM-MW-6	EPA 3510C	OEXT/36601	EPA 8270C by SIM	MSSV/11565
60135913007	GW-075035-121912-CM-MW-7	EPA 3510C	OEXT/36601	EPA 8270C by SIM	MSSV/11565
60135913001	GW-075035-122012-CM-MW-1	EPA 5030B/8260	MSV/51049		
60135913002	GW-075035-121912-CM-MW-2	EPA 5030B/8260	MSV/51043		
60135913003	GW-075035-121912-CM-MW-3	EPA 5030B/8260	MSV/51043		
60135913004	GW-075035-121912-CM-MW-4	EPA 5030B/8260	MSV/51043		
60135913005	GW-075035-121912-CM-MW-5	EPA 5030B/8260	MSV/51043		
60135913006	GW-075035-121912-CM-MW-6	EPA 5030B/8260	MSV/51043		
60135913007	GW-075035-121912-CM-MW-7	EPA 5030B/8260	MSV/51062		
60135913008	GW-075035-121912-CM-DUP	EPA 5030B/8260	MSV/51043		
60135913001	GW-075035-122012-CM-MW-1	SM 2540C	WET/38967		
60135913002	GW-075035-121912-CM-MW-2	SM 2540C	WET/38967		
60135913003	GW-075035-121912-CM-MW-3	SM 2540C	WET/38967		
60135913004	GW-075035-121912-CM-MW-4	SM 2540C	WET/38967		
60135913005	GW-075035-121912-CM-MW-5	SM 2540C	WET/38967		
60135913006	GW-075035-121912-CM-MW-6	SM 2540C	WET/38967		
60135913007	GW-075035-121912-CM-MW-7	SM 2540C	WET/38967		
60135913001	GW-075035-122012-CM-MW-1	EPA 300.0	WETA/23021		
60135913002	GW-075035-121912-CM-MW-2	EPA 300.0	WETA/23044		
60135913003	GW-075035-121912-CM-MW-3	EPA 300.0	WETA/23021		
60135913004	GW-075035-121912-CM-MW-4	EPA 300.0	WETA/23021		
60135913005	GW-075035-121912-CM-MW-5	EPA 300.0	WETA/23021		
60135913006	GW-075035-121912-CM-MW-6	EPA 300.0	WETA/23021		
60135913007	GW-075035-121912-CM-MW-7	EPA 300.0	WETA/23021		

WO#: 60135913



60135913



Sample Condition Upon Receipt  
ESI Tech Spec Client

Client Name: COPCRA NM

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other

Tracking #: 8001 8200 4824 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  ZPLC

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

Cooler Temperature: 3.7

Optional
Proj Due Date: 1/4
Proj Name:

Date and initials of person examining contents: 12/21/12 BA
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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 type="checkbox"/> Yes <input checked="" 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	9.	
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 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: WT		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	Lot # of added preservative
Trip Blank present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15. No trip blanks in cooler.	
Pace Trip Blank lot # (if purchased):			
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:	

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

Person Contacted: Christine Mathews Date/Time: 12/21/12  
Comments/ Resolution: Per client - no trip blank sent 12/21/12  
Run 100ml unp.p. volume for B270 Naphthalen flag container comment

Project Manager Review: AAF Date: 12/21/12

Temp Log: Record start and finish times when unpacking cooler, if >20 min, recheck sample temps.	
Start: 1230	Start:
End: 1235	End:
Temp:	Temp:

