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

API# 30-045-08934 NMOCD# 3R-429

Prepared for: ConocoPhillips Company Risk Management and Remediation

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### TABLE OF CONTENTS

1.0	INTRO	DUCTION	1
	1.1	SITE BACKGROUND	1
2.0	GROU	NDWATER MONITORING SUMMARY, SAMPLING	
	METH	ODOLOGY AND RESULTS	4
	2.1	GROUNDWATER MONITORING SUMMARY	4
	2.2	GROUNDWATER SAMPLING METHODOLOGY	4
	2.3	SEPTEMBER AND DECEMBER 2011 GROUNDWATER	
		MONITORING RESULTS	5
3.0	CONC	LUSIONS AND RECOMMENDATIONS	12

### LIST OF FIGURES

- FIGURE 1 SITE VICINITY MAP
- FIGURE 2 SITE DETAIL MAP
- FIGURE 3 GENERALIZED GEOLOGIC CROSS SECTION A A'
- FIGURE 4 GENERALIZED GEOLOGIC CROSS SECTION B B'
- FIGURE 5 MARCH 2012 POTENTIOMETRIC SURFACE MAP
- FIGURE 6 JUNE 2012 POTENTIOMETRIC SURFACE MAP
- FIGURE 7 SEPTEMBER 2012 POTENTIOMETRIC SURFACE MAP
- FIGURE 8 DECEMBER 2012 POTENTIOMETRIC SURFACE MAP
- FIGURE 9 MARCH 2012 GROUNDWATER BENZENE CONCENTRATION MAP
- FIGURE 10 JUNE 2012 GROUNDWATER BENZENE CONCENTRATION MAP
- FIGURE 11 SEPTEMBER 2012 GROUNDWATER BENZENE CONCENTRATION MAP
- FIGURE 12 DECEMBER 2012 GROUNDWATER BENZENE CONCENTRATION MAP
- FIGURE 13 PROPOSED UP-GRADIENT MONITOR WELL LOCATION MAP

### LIST OF TABLES

- TABLE 1SITE HISTORY TIMELINE
- TABLE 2
   GROUNDWATER ANALYTICAL RESULTS SUMMARY
- TABLE 3MONITOR WELL SPECIFICATIONS AND GROUNDWATERELEVATION SUMMARY

### LIST OF APPENDICES

### APPENDIX A GROUNDWATER SAMPLING FIELD FORMS

### APPENDIX B GROUNDWATER LABORATORY ANALYTICAL REPORTS

### 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 <u>SITE BACKGROUND</u>

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 <u>GROUNDWATER SAMPLING METHODOLOGY</u>

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

### <u>Benzene</u>

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.

### <u>Toluene</u>

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.

### <u>Xylenes</u>

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.

### <u>Naphthalene</u>

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.

### <u>Sulfate</u>

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.

### <u>Chloride</u>

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.

### <u>Fluoride</u>

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

### <u>Benzene</u>

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.

### <u>Toluene</u>

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.

### <u>Xylenes</u>

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.

### <u>Naphthalene</u>

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.

### <u>Sulfate</u>

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.

### <u>Chloride</u>

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

### <u>Benzene</u>

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.

### <u>Toluene</u>

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.

### <u>Xylenes</u>

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.

### <u>Naphthalene</u>

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.

### <u>Dissolved Manganese</u>

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.

### <u>Sulfate</u>

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.

### <u>Chloride</u>

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.

### <u>Fluoride</u>

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

### <u>Benzene</u>

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.

### <u>Toluene</u>

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.

### <u>Xylenes</u>

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.

### <u>Sulfate</u>

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.

### <u>Chloride</u>

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 <u>CONCLUSIONS AND RECOMMENDATIONS</u>

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* 

075035-95(003)GN-DL005 JAN 18/2012



### Figure 2

SITE DETAIL MAP MARTIN 34 No. 2 GAS WELL REMEDIATION SITE SAN JUAN COUNTY, NEW MEXICO *ConocoPhillips Company* 









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



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



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



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



Figure 9

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



Figure 10

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

075035-95(003)GN-DL003 AUG 10/2012



Figure 11

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

075035-95(003)GN-DL003 JUN 6/2013



Figure 12

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

075035-95(003)GN-DL003 MAR 7/2013



### Figure 13

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



### 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 vicinity of the former tank while regrading the area. ConocoPhillips obtained samples of the soil following notification from 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	Deliniation of Impacts	Tetra Tech supervised the installation of three soil borings using a direct-push Geoprobe <sup>®</sup> 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 managanese, 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	Deliniation of Impacts	JR Drilling, under CRA supervision, advanced four soil borings using a direct-push Geoprobe® rig to further deliniate impacts.					

### 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		A 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.					

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

							Xylenes	1,1,2,2-	Methylene					Boron	Iron	Manganese	Total Dissolved
Well			Sample	Benzene	Ethylbenzene	Toluene	(total)	Tetrachloroethane	chloride	Naphthalene	Chloride	Fluoride	Sulfate	(dissolved)	(dissolved)	(dissolved)	Solids (TDS)
ID	Sample ID	Date	Type	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(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
	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
MM 1	GW-075036-121311-CB-DUP	12/13/2011	(Duplicate)	4.31	0.812	4.98	9.57	-				1					
10100-1	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	.0456	268	< 4.0	13100				24100
	GW-075035-122012-CM-MW-1	12/20/2012	e (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
	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							
MW-2	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-075035-060/12-CB-MW-2	0/05/2012	(orig)	0.207	0.219	< 0.005	0.0443	< 0.005	< 0.005	0.0238	400	< 0.2	20100	0.847	4.79	3.88	28000
	GW-075035-092512-CM-WW-2	9/25/2012	(Duplicate)	0.127	0.181	< 0.005	0.0408	< 0.005	0.0076	0.0585	382	< 4.0	19900	1.020	0.915	2.30	31100
	CW 075035 121912 CM MW 2	12/10/2012	(Duplicate)	0.142	0.131	< 0.02	0.0350	< 0.005	< 0.005	<0.0005	422	<0.2	22200	1.040	1 200	1 990	22200
	CW 075035-072711 CEM 005	7/27/2012	(orig)	< 0.001	< 0.001	< 0.003	< 0.001	< 0.003	< 0.003	<0.0003	423	27	17600	0.976	0.495	1.560	29200
	GW-075035-093011-CM-005	9/30/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.001	< 0.001	< 0.01 / < 0.0120	399	< 2.0	19500	0.970	< 0.05	3.74	25200
	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	0.914	1.02	0.776	20000
MW-3	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
	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
MW-4	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
	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
MW-5	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	.0772	< 0.02	< 0.06	< 0.02	.0289	< 0.2	202	< 4.0	6800				11600
	GW-075035-121912-CM-MW-5	12/19/2012	e (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
	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							
MW-6	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
	GW-0/5035-121912-CM-MW-6	12/19/2012	(orig)	0.0214	0.180	< 0.01	3.30	<0.01	<0.01	0.0023	392	<0.2	27300	0.687	<0.1	2.340	34600
	GW-0/5035-121912-CM-DUP	12/19/2012	(Duplicate)	0.0219	0.198	<0.01	3.53						17000				
1	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
NAM 7	GW-0/2022-2812-CD-MW-/	5/8/2012	(orig)	0.0186	0.337	< 0.005	< 0.015	< 0.005	< 0.005	< 0.05	307	< 4.0	20600	0.840	0.612	4.05	28400
MW-7	GW-0/2025-060/12-CD-MW-7	0/7/2012	(orig)	0.0122	0.333	< 0.005	< 0.015	< 0.005	< 0.005	<0.05	300	< 0.20	25900	0.824	1.250	3.14	35700
	CW 075035 121012 CM MW 7	12/10/2012	(orig)	0.0109	0.420	< 0.005	< 0.015	< 0.003	< 0.003	<0.0001	124	< 4.0	19500	0.895	0.779	4.080	30500
H	NMWOCC Crown dw-1 0	12/19/2012	(ong)	0.001	0.0397	0.001	N0.003	0.001	NU.UU1	<0.0003	250	0.04	10300	0.803	0.779	2.420	1000
	NMWQCC Groundwater Qu	anty Standar	as	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)

 <0.001 = Below laboratory detection limit of 0.001 mg/L</td>

 Bold = concentrations that exceed the NMWQCC groundwater quality standard

### 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
			03.00	7/27/2011	40.45	52.64
		31 - 41	95.09	9/30/2011	40.23	52.86
				12/13/2011	39.23	54.05
MW-1	41			3/7/2012	39.09	54.19
			93.28	6/6/2012	39.12	54.16
				9/24/2012	39.30	53.98
				12/19/2012	39.11	54.17
			87.45	7/27/2011	37.68	49.77
				9/30/2011	37.68	49.77
				12/13/2011	37.51	50.08
MW-2	41.5	31.5 - 41.5	87.59	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
			87.19 87.32	7/27/2011	36.95	50.24
				9/30/2011	36.98	50.21
				12/13/2011	36.70	50.62
MW-3	46	31 - 46		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
			00.(2	7/27/2011	44.37	55.26
			99.63	9/30/2011	44.40	55.23
	53	38 - 53	99.82	12/13/2011	44.18	55.64
MW-4				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
				12/13/2011	47.61	50.66
				3/7/2012	45.61	52.66
MW-5	48.5	38.5 - 48.5	98.27	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
				12/13/2011	41.01	53.79
MW-6 59.				3/7/2012	40.91	53.89
	59.0	44-59	94.8	6/6/2012	41.00	53.80
				9/24/2012	41.07	53.73
				12/19/2012	40.87	53.93
				12/13/2011	40.49	46.00
MW-7				3/7/2012	40.33	46.16
	51.5	36.5-51.5	86.49	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

ATE/PROJECT NAME	: Martin	34 No. 2 26:20:18: MIL	JOB# <u>075</u>	135	<u> </u>
SAMPLE IL	<u>(40.0.00</u>	DJODIT CD MIN			
B. T.L. PURGE DATE (MM DD YY)	3.8.12 SAMPLE DATE (MM DD YY)	WELL PURGING INFORM	MATION WATER VOL. IN CASIN (GALLONS)	G ACTUAL VG	A OL. PURGED LONS)
PURGING EQUIPMENTDED	ICATED Y N	KGING AND SAMPLING E	SAMPLING E	OUIPMENTDEDIC	CATER Y N
~~~~~~	(CIRCLE ONE)			2011 1111 11111111111111111111111111111	(CIRCLE ONE)
PURGING DEVICE	A - SUBMERSIBLE PUMP         B - PERISTALTIC PUMP         C - BLADDER PUMP	D - GAS LIFT PUMP G - B. E - PURGE PUMP H - W F - DIPPER BOTTLE X - O	AILER X VATERRA® THER X	= PURGING DEVICE OT = SAMPLING DEVICE OT	HER (SPECIFY)
PURGING MATERIAL	A - TEFLON	D - PVC	x	=	
SAMPLING MATERIAL	B - STAINLESS STEEL C - POLYPROPYLENE	E - POLYETHYLENE X - OTHER	х	PURGING MATERIAL	OTHER (SPECIFY)
PURGE TUBING	A - TEFLON B - TYGON	D - POLYPROPYLENE G - CO E - POLYETHYLENE TI	OMBINATION X EFLON/POLYPROPYLENE	PURGE TUBING OTHE	R (SPECIFY)
SAMPLING TUBING	C-ROPE	F - SILICONE X - O	THER X	=	· · ·
FILTERING DEVICES 0.45	A - IN-LINE DISPOSA	BLE B - PRESSURE	C - VACUUM	SAMPLING TUBING O	THER (SPECIFY)
		FIELD MEASUREMEN	ITS		
DEPTH TO WATER	L 39 09	(feet) WELL	ELEVATION	93_28	(feet)
WELL DEPTH <b>TEMPERATURE</b>	рн 40.05	(feet) GROUNDWATE TDS COND	R ELEVATION	S4 OS ORP	(feet) VOLUME
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)
(°C)	्र (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)
SAMPLE APPEARANCE: $S_{0}$ WEATHER CONDITIONS: SPECIFIC COMMENTS: .96 x .16 = 163 x KWELL DRY LEA I ASSERT: WA I CERTIFY THAT SAMPLING PRO 3.8.12	Aly cloudy odor: EMPERATURE <u>~45°</u> 3 - 0.90 ANY (N. 3. 1) ALY	FIELD COMMENTS	S DR: <u>gay</u> SH PRECIPITATION PRECIPITATION PRECIPITATION SHORE SHORE SHOR	EEN Y/N	

WELL SAMPLING FIELD INFORMATION FORM
TEPROJECT NAME: MORTA 39 No. 1. JOB# 015034
SAMPLE ID: GW. 015035. 412 CB. MW-Z WELL# MW-Z
3.9.11     3.9.2     Well Purging information       Purge date (MM dd YY)     Sample date (MM dd YY)     Sample date (MM dd YY)     Sample time (24 Hour)     Mater vol. in casing (Gallons)     1.5
PURGING EQUIPMENTDEDICATED Y N (CIRCLE ONE) CIRCLE ONE) CIRCLE ONE)
PURGING DEVICE       Image: A - SUBMERSIBLE PUMP       D - GAS LIFT PUMP       G - BAILER       X=         B - PERISTALTIC PUMP       E - PURGE PUMP       H - WATERRA®       PURGING DEVICE OTHER (SPECIFY)         SAMPLING DEVICE       Image: C - BLADDER PUMP       F - DIPPER BOTTLE       X - OTHER       X=
SAMPLING DEVICE OTHER (SPECIFY) PURGING MATERIAL A - TEFLON D - PVC SAMPLING MATERIAL A - TEFLON D - PVC SAMPLING MATERIAL C - POLYPROPYLENE C - POLYPROPYLE
PURGE TUBING     A - TEFLON     D - POLYPROPYLENE     G - COMBINATION     X=       B - TYGON     E - POLYETHYLENE     TEFLON/POLYPROPYLENE     PURGE TUBING OTHER (SPECIFY)
SAMPLING TUBING C - ROPE F - SILICONE X - OTHER X= SAMPLING TUBING TUBING OTHER (SPECIFY) FILTERING DEVICES 0.45 A - IN-LINE DISPOSABLE B - PRESSURE C - VACUUM
FIELD MEASUREMENTS
DEPTH TO WATER 57.36 (feet) WELL ELEVATION 87.59 (feet)
$\begin{array}{c c c c c c c c c c c c c c c c c c c $
(°C)         (std)         (g/L)         (μS/cm)         (mV)         (gal)           (°C)         (std)         (g/L)         (μS/cm)         (mV)         (gal)
FIELD COMMENTS         SAMPLE APPEARANCE:       DACK PUNDUDOR:       FIELD COMMENTS         WEATHER CONDITIONS:       TEMPERATURE       35       WINDY Y/N       N       PRECIPITATION Y/N (IF Y TYPE)       N         SPECIFIC COMMENTS:       GALUAR       35       WINDY Y/N       N       PRECIPITATION Y/N (IF Y TYPE)       N         GALUAR       YA       YA       YA       YA       YA       YA       YA         ICERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS       A       YA       YA       YA
<u>3.8.1/2 CASSE BOWN</u> DATE PRINT SIGNATURE

1

	WELL SAMPLIN	G FIELD IN	FORMATION	FORM	
 _TE/PROIECT NAM	ne: Martha B	ANO. 2	IOB#	1,15035	
SAMPLE	ID: GW.076065	· 3812.(B. 1	HAB WELL#	M	W-3
BURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WELL PURGING IN SAMPLE TH (24 HOUR	NFORMATION	13 IN CASING CN(S) ACTUAL VG (GAL	5 DL PURGED LONS)
PURCING FOUIPMENT	FDICATED N	GING AND SAMPI	LING EQUIPMENT	PUNC FOUIPMENT DEDIC	ATED N
I OKGING EQUI MENT	(CIRCLE ONE)		JAIN	I EING EQUII MENTDEDK	(CIRCLE ONE)
PURGING DEVICE	A - SUBMERSIBLE PUMP B - PERISTALTIC PUMP	D - GAS LIFT PUMP E - PURGE PUMP	G - BAILER H - WATERRA®	X= <u> PURGING DEVICE OTF</u>	HER (SPECIFY)
SAMPLING DEVICE	C-BLADDER PUMP	F - DIPPER BOTTLE	X - OTHER	X= SAMPLING DEVICE OT	THER (SPECIFY)
PURGING MATERIAL	A - TEFLON B - STAINLESS STEEL	D - PVC E - POLYETHYLENE		X= PURGING MATERIAL	OTHER (SPECIFY)
SAMPLING MATERIAL	C - POLYPROPYLENE	X - OTHER		X= SAMPLING MATERIAI	OTHER (SPECIFY)
PURGE TUBING	A - TEFLON B - TYGON	D - POLYPROPYLENE E - POLYETHYLENE	G - COMBINATION TEFLON/POLYPROPYLEN	X= IE PURGE TUBING OTHE	R (SPECIFY)
SAMPLING TUBING	C - ROPE	F - SILICONE	X - OTHER	X=	
FILTERING DEVICES 0.45	A - IN-LINE DISPOSAB	LE B - PRESSUR	E C - VACUUM	SAMPLING TUBING O	THER (SPECIFY)
ļ		FIELD MEASU	REMENTS	<b>A</b>	
DEPTH TO WATE	$ \begin{array}{c c} R & 56 & 57 \\ \hline 1 & 45 & 51 \\ \hline \end{array} $	(feet) (feet) GROUN	WELL ELEVATION	87 32	(feet)
TEMPERATURE		rds - 77 (au)	CONDUCTIVITY	ORP	
14.91 (°C)	1 . 46 (std)	· (g/L)	21913 (µS/cm)	-17.1 (mV)	$4 \cdot 0$ (gal)
15.06 (C)	. 57 (std)	7. 63 (g/L)	21997 (µS/cm)	. O (mV)	4.5 (gal)
(°C)	(std)	(g/L)	(μS/cm)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)
SAMPLE APPEARANCE: WEATHER CONDITIONS:	Silly (Cloudy odor: TEMPERATURE AO	FIELD COM	COLOR: H. by Market PRE	SHEEN Y/NNC	) <u></u>
SPECIFIC COMMENTS:	43, 32 4. 29		· · · · · · · · · · · · · · · · · · ·		
<b>_</b>					
I CERTIFY THAT SAMPLING	PROCEDURES WERE IN ACCORDANCE V	VITH APPLICABLE CRA	PROTOCOLS	1	
<u>3.8.12</u>	CASSIC DOM PRINT		CMATURE		

W	VELL SAMPLING FIELD INFORMATION FORM
.TE/PROJECT NAME: SAMPLE ID:	Martin 3A.W., 2 JOB# <u>D75235</u> GW.035035.3812.CB.MW-A WELL# MUJ-A
PURGE DATE (MM DD YY) PURGING EQUIPMENTDEDICA	WELL PURGING INFORMATION SAMPLE DATE (MM DD YY) WELL PURGING INFORMATION SAMPLE TIME (24 HOUR) PURGING AND SAMPLING EQUIPMENT ATED (Y) N (CIRCLE ONE) WATER VOL IN CASING (GALLONS) ACTUAL VOL. PURGED (GALLONS) ACTUAL VOL. PURGED (GALLONS) MATER VOL IN CASING (GALLONS) ACTUAL VOL. PURGED (GALLONS) N (CIRCLE ONE) (CIRCLE ONE)
PURGING DEVICE	A - SUBMERSIBLE PUMP       D - GAS LIFT PUMP       G - BAILER       X=         B - PERISTALTIC PUMP       E - PURGE PUMP       H - WATERRA®       PURGING DEVICE OTHER (SPECIFY)         C - BLADDER PUMP       F - DIPPER BOTTLE       X - OTHER       X=         SAMPLING DEVICE OTHER (SPECIFY)       X=       SAMPLING DEVICE OTHER (SPECIFY)
PURGING MATERIAL	A - TEFLON     D - PVC     X=       B - STAINLESS STEEL     E - POLYETHYLENE     PURGING MATERIAL OTHER (SPECIFY)       C - POLYPROPYLENE     X - OTHER     X=       SAMPLING MATERIAL OTHER (SPECIFY)     X=
PURGE TUBING	A - TEFLON       D - POLYPROPYLENE       G - COMBINATION       X=         B - TYGON       E - POLYETHYLENE       TEFLON/POLYPROPYLENE       PURGE TUBING OTHER (SPECIFY)         C - ROPE       F - SILICONE       X - OTHER       X=         SAMPLING TUBING OTHER (SPECIFY)       X - OTHER       X=
FILTERING DEVICES 0.45	A - IN-LINE DISPOSABLE B - PRESSURE C - VACUUM
DEPTH TO WATER	FIELD MEASUREMENTS
Well Depth TEMPERATURE A, A, C C C C C C C C C C C C C C C C C C C C C C C C C C C C C C C C C C C C C C C C C C C C C C C C C C C	$\begin{array}{c c c c c c c c c c c c c c c c c c c $
SAMPLE APPEARANCE: WEATHER CONDITIONS: TEM SPECIFIC COMMENTS: 11.2331.105.000	PERATURE <u>40</u> WINDY Y/N <u>N</u> PRECIPITATION Y/N (IF Y TYPE) <u>N</u> <u>3</u> <u>5-3</u>
I CERTIFY THAT SAMPLING PROCE	EDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS CASSIC BUILT PRINT SIGNATURE SIGNATURE

φ

	WELL SAMPLIN	G FIELD INFOR	MATION FOR	M	
.TE/PROJECT NAMI SAMPLE II	E: Martin 34 D: LIW:075035-8	NO-2 312.CB. MW-5	job# <u>0750</u> well# <u>MW</u> -	35 5	
PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASIN (GALLONS)	G ACTUAL VO	L. PURGED ONS)
PURGING EQUIPMENTDEI	DICATED (Y) N (CIRCLE ONE)	COILVO AIVD SAMI EILVO EQ	SAMPLING E	QUIPMENTDEDIC.	ATED Y N (CIRCLE ONE)
PURGING DEVICE SAMPLING DEVICE	A - SUBMERSIBLE PUMP         B - PERISTALTIC PUMP         C - BLADDER PUMP	D - GAS LIFT PUMP G - BAJ E - PURGE PUMP H - WA F - DIPPER BOTTLE X - OTH	LER X: .TERRA® .ER X:	PURGING DEVICE OTH	ER (SPECIFY)
PURGING MATERIAL SAMPLING MATERIAL	A - TEFLON B - STAINLESS STEEL C - POLYPROPYLENE	D - PVC E - POLYETHYLENE X - OTHER	X: X:	= PURGING MATERIAL O	THER (SPECIFY)
PURGE TUBING	A - TEFLON B - TYGON C - ROPE	D - POLYPROPYLENE G - COJ E - POLYETHYLENE TEF F - SILICONE X - OTH	MBINATION X= LON/POLYPROPYLENE IER X=	SAMPLING MATERIAL ( PURGE TUBING OTHER SAMPLING TUBING OT	OTHER (SPECIFY) (SPECIFY) HER (SPECIFY)
FILTERING DEVICES 0.45	A - IN-LINE DISPOSAE	LE B - PRESSURE C	- VACUUM		
DEPTH TO WATER WELL DEPTH TEMPERATURE [5.93](°C) [(°C) [(°C) [(°C) [(°C)]	PH 7.58 (std) 7. (std) (std) (std) (std) (std)	(feet) WELL E (feet) GROUNDWATER TDS CONDU 565 (g/L) 936 (g/L) (g/L) (g/L) (g/L)	LEVATION ELEVATION CTIVITY(μS/cm) (μS/cm) (μS/cm)	9827 5266 ORP 731.2 (mV) (mV) (mV) (mV) (mV)	(feet) VOLUME , 7.5 (gal) (gal) (gal) (gal) (gal) (gal)
SAMPLE APPEARANCE:	clev- ODOR:	FIELD COMMENTS	stinger Shi	ENY AN	
weather conditions: $\frac{1}{58}$	remperature <u>~50°</u> y3~ (.15)	WINDY YA	PRECIPITATIO	DN Y/Ø (IF Y TYPE)	
1 CERTIFY THAT SAMPLING PR	0.3 gallous on 3 0.3 gallous on 3 S. OCEDURES WERE TO ACCORDANCE V	7.12.17 did 3.12 before well	sy	vell voyld ban 23" water, (	dry. d/cetel
	C. 06.98 Y (1035) PRINT	SIGNATURE			

	WELL SAMPLING FIELD INFORMATION FO	NDM
1	M di C A di O	
.TE/PROJECT NAM	$\mathbf{TE:} \qquad \mathbf{W} = \mathbf{W} + \mathbf{N} - \mathbf{D} + \mathbf{N} - \mathbf{D} + \mathbf{D} $	<u>965</u>
SAMPLE	ID: <u>AW 07,5035 3812(B. MW</u> QWELL# <u>MU</u>	N-le
PURGE DATE (MM DD YY)	3.8.12     WELL PURGING INFORMATION     2.72       SAMPLE DATE     SAMPLE TIME     WATER VOL. IN CA       (MM DD YY)     (24 HOUR)     (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
	PURGING AND SAMPLING EQUIPMENT	$\sim$
PURGING EQUIPMENTD.	EDICATED Y N SAMPLIN (CIRCLE ONE)	G EQUIPMENTDEDICATED(Y/N (CIRCLE ONE)
PURGING DEVICE	A - SUBMERSIBLE PUMP D - GAS LIFT PUMP G - BAILER	χ=
SAMPLING DEVICE	C - BLADDER PUMP F - DIPPER BOTTLE X - OTHER	PURGING DEVICE OTHER (SPECIFY) X=
PURGING MATERIAL	A - TEFLON D - PVC	- X=
SAMPLING MATERIAL	B - STAINLESS STEEL E - POLYETHYLENE C - POLYPROPYLENE X - OTHER	PURGING MATERIAL OTHER (SPECIFY)
PURGE TUBING	A - TEFLON D - POLYPROPYLENE G - COMBINATION B TYCON E POLYPROPYLENE TEFLON/POLYPROPYLENE	X=
SAMPLING TUBING	C-ROPE F-SILICONE X-OTHER	X=SAMPLING TUBING OTHER (SPECIFY)
FILTERING DEVICES 0.45	A - IN-LINE DISPOSABLE B - PRESSURE C - VACUUM	(, , , , , , , , , , , , , , , , , , ,
	FIELD MEASUREMENTS	
DEPTH TO WATEF	R 46 91 (feet) WELL ELEVATION	94 80 (feet)
TEMPERATURE	pH TDS CONDUCTIVITY	ORP VOLUME
5.73 (°C)	8,04 (std) 2(.33 (g/L) 27007 (µS/cm)	-378.8 (mV) 7.50 (gal)
[5.76 (°C)	8.04 (std) 21.34 (g/L) 27034 (µS/cm)	-379.3 (mV) 8.00 (gal)
[13.84 (°C)	7.96 (std) 2(.35 (g/L) 27099 (µS/cm)	-383.8 (mV) 8.50 (gal)
(°C)	(std) (g/L) (µS/cm)	(mV) (gal)
(°C)	(std) (g/L) (µS/cm)	(mV) (gal)
SAMPLE APPEARANCE: WEATHER CONDITIONS: SPECIFIC COMMENTS:	FIELD COMMENTS <u>black</u> odor: <u>bydroca-box</u> color: <u>black</u> TEMPERATURE <u>~45</u> WINDY Y/Ø PRECIPIT/	sheen (yn <i>spit<u>ty</u>, diseantinuars</i> ation y/ () of y type)
1.0.0X.10 -2.	1642- (0.1-1	
	Dep @ 1/45	
I CERTIFY THAT SAMPLING P 3.8.12	PROGEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS	
DATE	PRINT SIGNATURE	

	WELL SAMPLING FIELD INFORMATION FORM	
.TE/PROJECT NAME	: <u>Martin 39 No. 2</u> JOB# 075035 : <u>Gw.015035.3812.CB.MW7</u> Well# <u>MW-7</u>	
PURGE DATE (MM DD YY)	WELL PURGING INFORMATION SAMPLE DATE (MM DD YY) WELL PURGING INFORMATION SAMPLE TIME (MM DD YY) WATER VOL. IN CASING (GALLONS) PURGING AND SAMPLING EQUIPMENT SAMPLING FOLIPMENT SAMPLING FOLIPMENT SAMPLING FOLIPMENT SAMPLING FOLIPMENT	
PURGING DEVICE	Image: Construction of the second	
PURGING MATERIAL	E       A - TEFLON       D - PVC       X=         B - STAINLESS STEEL       E - POLYETHYLENE       PURGING MATERIAL OTHER (SPECIFY)         C - POLYPROPYLENE       X - OTHER       X=         SAMPLING MATERIAL OTHER (SPECIFY)       X=	
PURGE TUBING	L       A - TEFLON       D - POLYPROPYLENE       G - COMBINATION       X=         L       B - TYGON       E - POLYETHYLENE       TEFLON/POLYPROPYLENE       PURGE TUBING OTHER (SPECIFY)         C - ROPE       F - SILICONE       X - OTHER       X=         J/A       A - INLUME DISPOSABLE       B - PRESSURE       C - VACUUM	
DEPTH TO WATER WELL DEPTH TEMPERATURE 5.27 (°C) 5.39 (°C) 5.39 (°C) c	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	gal) gal) gal) gal) gal)
SAMPLE APPEARANCE: $5 \frac{1}{9} \frac{1}{9}$ WEATHER CONDITIONS: T SPECIFIC COMMENTS: $1 \frac{1}{9} $	Held Comments         Held Color:       Held Color:         EMPERATURE       ~ 40°         WINDY Y/N       PRECIPITATION Y/QIF Y TYPE)         Held Color:       Held Sheen Y/O         PRECIPITATION Y/QIF Y TYPE)	

v	VELL SAMPLI	NG FIELD INFOI	RMATION FO	RM	
TE/PROIECT NAME:	N. La	241/2	IOB# (37.4	5035	
SAMPLE ID:	GW-075035.	060712-CB-MW.	WELL#	W-1	
<b>6.6.1</b> PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WELL PURGING INFORM	IATION U_36 WATER VOL. IN CAS (GALLONS) OUIPMENT		3 X DL, PURGED LONS)
PURGING EQUIPMENTDEDIC	CATED 💋 N (CIRCLE ONE)		SAMPLING	EQUIPMENTDEDIC	CATED 🗭 N (CIRCLE ONE)
PURGING DEVICE	A - SUBMERSIBLE PUM B - PERISTALTIC PUMP C - BLADDER PUMP	P D - GAS LIFT PUMP G - B. E - PURGE PUMP H - W F - DIPPER BOTTLE X - O	AILER /ATERRA® IHER	X= PURGING DEVICE OTH X= SAMPLING DEVICE OT	IER (SPECIFY)
PURGING MATERIAL	E A - TEFLON B - STAINLESS STEEL C - POLYPROPYLENE	D - PVC E - POLYETHYLENE X - OTHER		X= PURGING MATERIAL C X=	THER (SPECIFY)
PURGE TUBING	C A - TEFLON B - TYGON C - ROPE	D - POLYPROPYLENE G - CC E - POLYETHYLENE TH F - SILICONE X - OT	OMBINATION SFLON/POLYPROPYLENE THER	X= SAMPLING MATERIAL PURGE TUBING OTHEI X= SAMPLING TUBING OT	CIHER (SPECIFY)
FILTERING DEVICES 0.45	A - IN-LINE DISPC	SABLE B - PRESSURE	C - VACUUM	SAMPLING FUBING OF	TIER (SFECIFT)
DEPTH TO WATER WELL DEPTH TEMPERATURE (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) (	$\begin{array}{c c} 39 \\ 41 \\ 3 \\ pH \\ (std) \\ 0 \\ closed $	PIELD MEASUREMEP         2	ELEVATION $ $ R ELEVATION $ $ UCTIVITY $ $ $ (\mu S/cm)  $ $ (\mu$	93       28         54       16         ORP       (mV)         (mV)       (mV)         me       in ω	(feet) (feet) VOLUME (gal) (gal) (gal) (gal) (gal) (gal) (gal)
<u>6.7.12</u> DATE	PRINT HOES	Signatur	<u>е</u>		

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.TE/PROJECT NAME:	Martin	n 34 No. 2	JOB#	075035	
SAMPLE ID:	GW-075035-06	0612- CB-MW-2	WELL#	MW-Z	
b.6.17 PURGE DATE (MM DD YY)	6.6.(2 SAMPLE DATE (MM DD YY) PUI	WELL PURGING INFORM	ATION ATION WATER VOL. II (GALLO QUIPMENT	N CASING ACTUAL V NS) (GAL	OL. PURGED LONS)
PURGING EQUIPMENTDEDICAT	ED 🗭 N (CIRCLE ONE)		SAMP	LING EQUIPMENTDEDIG	CATED 🔗 N (CIRCLE ONE)
PURGING DEVICE G	A - SUBMERSIBLE PUMP B - PERISTALTIC PUMP C - BLADDER PUMP	D - GAS LIFT PUMP G - BA E - PURGE PUMP H - W. F - DIPPER BOTTLE X - OT	ILER ATERRA® HER	X= PURGING DEVICE OT	HER (SPECIFY)
PURGING MATERIAL	A - TEFLON B - STAINLESS STEEL C - POLYPROPYLENE	D - PVC E - POLYETHYLENE X - OTHER		X= PURGING MATERIAL X=	THER (SPECIFY)
PURGE TUBING	A - TEFLON B - TYGON C - ROPE	D - POLYPROPYLENE G - CC E - POLYETHYLENE TE F - SILICONE X - OT	MBINATION FLON/POLYPROPYLENE HER	X= PURGE TUBING OTHE X=	L OTHER (SPECIFY)
FILTERING DEVICES 0.45	A - IN-LINE DISPOSA	BLE B - PRESSURE C	- VACUUM	SAMPLING TUBING O	THER (SPECIFY)
DEPTH TO WATER UNCLOSED DEPTH TO WATER UNCLIDENTH UNCLIDENTH UNCLIDENTH UNCLIDENTS: UNCLID	35 46 9H 9Z (std) 17 7Z (std) 17 69 (std) 17 (std) 17 (std) 17 (std) 000R: RATURE 90 JRES WEIE IN ACCORDANCE V	(feet)       WELL I         (feet)       GROUNDWATER         TDS       CONDU         82       (g/L)       225         62       (g/L)       225         65       (g/L)       225         67       (g/L)       56         68       (g/L)       56         70       (g/L)       56         71       (g/L)       56         72       (g/L)       56         73       (g/L)       56	SLEVATION	87 59 52 13 ORP -2855 (mV) -791.7 (mV) -791.7 (mV) -786.9 (mV) (mV) (mV) SHEEN Y/O IPITATION Y/OFY TYPE)	(feet) (feet) VOLUME 3.0 (ge 3.0 (ge (ge (ge (ge

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, <b>r</b> ana	WELL SAMPLING FIELD INFORMATION FORM
TE/PROJECT NAN	E: <u>Ma-f-n 34 No. 2</u> JOB# 075035 D: <u>Gwo7.5035-060712-CB-Mb</u> -3 WELL# <u>MW-3</u>
<b>G·7·17</b> PURGE DATE (MM DD YY) PURGING EQUIPMENTD	WELL PURGING INFORMATION WELL PURGING INFORMATION (4,5) SAMPLE DATE (MM DD YY) (24 HOUR) (GALLONS) ACTUAL VOL. PURGED (GALLONS) (GALLONS) PURGING AND SAMPLING EQUIPMENT EDICATED (7) N SAMPLING EQUIPMENTDEDICATED (7) N
PURGING DEVICE SAMPLING DEVICE PURGING MATERIAL SAMPLING MATERIAL	(CIRCLE ONE)       (CIRCLE ONE)         (CIRCLE ONE)       (CIRCLE ONE)         A - SUBMERSIBLE PUMP       D - GAS LIFT PUMP       G - BAILER       X=         B - PERISTALTIC PUMP       E - PURGE PUMP       H - WATERRA®       PURGING DEVICE OTHER (SPECIFY)         C - BLADDER PUMP       F - DIPPER BOTTLE       X - OTHER       X=         G       A - TEFLON       D - PVC       X=         B - STAINLESS STEEL       E - POLYETHYLENE       PURGING MATERIAL OTHER (SPECIFY)         C - POLYPROPYLENE       X - OTHER       X=
PURGE TUBING SAMPLING TUBING FILTERING DEVICES 0.45	C       A - TEFLON       D - POLYPROPYLENE       G - COMBINATION       X=         B - TYGON       E - POLYETHYLENE       TEFLON/POLYPROPYLENE       Y=         C - ROPE       F - SILICONE       X - OTHER       X=         A - IN-LINE DISPOSABLE       B - PRESSURE       C - VACUUM       X=
DEPTH TO WATE WELL DEPTH TEMPERATURE 5.99 (°C) 5.99 (°C) 5.30 (°C) (°C) (°C)	FIELD MEASUREMENTS         R       FIELD MEASUREMENTS         R       7.5       (feet)       WELL ELEVATION       87.32       (feet)         pH       TDS       CONDUCTIVITY       ORP       VOLUME         7.55       (std)       8.70       (g/L)       2.3 / 6.7       (µS/cm)       -7.6       (mV)       3.5       (gal)         7.66       (std)       8.34       (g/L)       2.3 5 5 3       (µS/cm)       10.5       (mV)       4.6       (gal)         (std)       (g/L)       (µS/cm)       (µS/cm)       (mV)       (gal)         (std)       (g/L)       (µS/cm)       (mV)       (gal)
SAMPLE APPEARANCE: WEATHER CONDITIONS: SPECIFIC COMMENTS: U.L.	FIELD COMMENTS         COLOR: milkybrown_SHEEN Y/O         TEMPERATUREOO

.TE/PROJECT NAM SAMPLE I	E: <u>Martin 3</u> D: Gw <u>-075035-0706</u>	34 No. 2. 12-CB-MW-4	JOB# WELL#	075030 MW-4	5	
6.7.12 PURGE DATE (MM DD YY)	ム・フ・ノス SAMPLE DATE (MM DD YY)	WELL PURGING INFORMATION	ON WATER V( (GA PMENT	, 9 4 DL IN CASING LLONS)	ACTUAL VOL, PUR( (GALLONS)	GED
PURGING EQUIPMENTDE	EDICATED 🖒 N (CIRCLE ONE)	~	SA	AMPLING EQUIPMEN	√TDEDICATED ( (CIRC	🕜 N LE ONE)
PURGING DEVICE SAMPLING DEVICE PURGING MATERIAL	G       A - SUBMERSIBLE PUMP         B - PERISTALTIC PUMP         G       C - BLADDER PUMP	D - GAS LIFT PUMP G - BAILER E - PURGE PUMP H - WATER F - DIPPER BOTTLE X - OTHER D - PVC	RA®	X= PURGIN X= SAMPLI X=	IG DEVICE OTHER (SPE	CIFY) 'ECIFY)
SAMPLING MATERIAL	B - STAINLESS STEEL C - POLYPROPYLENE	E - POLYETHYLENE X - OTHER		PURGIN X=	iG MATERIAL OTHER (S	SPECIFY)
PURGE TUBING SAMPLING TUBING FILTERING DEVICES 0.45	C A - TEFLON B - TYGON C - ROPE	D - POLYPROPYLENE G - COMBIN E - POLYETHYLENE TEFLON F - SILICONE X - OTHER BLE B - PRESSURE C - VA	NATION I/POLYPROPYI CUUM	X= LENE PURGE X= SAMPLI	TUBING OTHER (SPECI	FY) 'ECIFY)
	<u>han an a</u>	FIELD MEASUREMENTS				
DEPTH TO WATER WELL DEPTH TEMPERATURE [6,67](°C) [6,78](°C) [6,78](°C) [(°C)	9H         7.67         7.61         (std)         7.61         (std)         7.61         (std)         7.61         (std)         1.65         (std)         1.65         (std)         1.65         (std)         1.65         (std)	(feet) WELL ELEV   (feet) GROUNDWATER ELE TDS CONDUCTT 2. 0 √ (g/L) 2857 // (g/L) 2845 √ (√ (g/L) 2937 ( (g/L) (g/L) (g/L) (g/L)	ATION [ VATION ] VITY (μS/c (μS/c (μS/c	99 55 ORP m) 21.0 m) -48;9 m)57.9 m) _	82 (feet) 73 (feet) vo (mV) (mV) (mV) (mV)	LUME 5 (ga 5,5 (ga 5,5 (ga (ga (ga (ga (ga
AMPLE APPEARANCE: VEATHER CONDITIONS: PECIFIC COMMENTS: 5.83	5.HyOdor: Temperature 290°	FIELD COMMENTS	<u>]+. L-ou</u>	SHEEN Y/N PRECIPITATION Y/N (I	 F Y TYPE)	

	WELL SAMPLI	NG FIELD INFO	RMATION FO	RM	
I .TE/PROJECT NAM	IE: Martu	34. 12.7	JOB# 07	5035	
SAMPLE	ID: GW-075935-060	0712-CB-MW-5	WELL# _MG	0-5	
		WELL PURGING INFORM	IATION		
16.6.17	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 CAS (GALLONS)	SING ACTUAL VOL. PURGED (GALLONS)	-
	P	URGING AND SAMPLING E	QUIPMENT	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
PURGING EQUIPMENTD	EDICATED (Y) N (CIRCLE ONE)		SAMPLING	EQUIPMENTDEDICATED (Y) (CIRCLE C	N DNE)
PURGING DEVICE	A - SUBMERSIBLE PUMI	P D - GAS LIFT PUMP G - B.	AILER	χ=	
SAMPLING DEVICE	B - PERISTALTIC PUMP	E - PURGE PUMP H - W	VATERRA® THER	PURGING DEVICE OTHER (SPECIFY	0
STATE BUILD DE VICE		· Jarmoorna A-O		SAMPLING DEVICE OTHER (SPECIF	7Y)
PURGING MATERIAL	E A-TEFLON	D - PVC		X=	
	B - STAINLESS STEEL	E - POLYETHYLENE		PURGING MATERIAL OTHER (SPEC	CIFY)
SAMPLING MATERIAL	C - POLYPROPYLENE	X - OTHER		X= SAMPLING MATERIAL OTHER (SPE	CIFY
PURGETUBING	C A-TEFLON	D - POLYPROPYLENE G - O	OMBINATION	X=	xii i)
	B - TYGON	E - POLYETHYLENE	EFLON/POLYPROPYLENE	PURGE TUBING OTHER (SPECIFY)	
SAMPLING TUBING	C - ROPE	F - SILICONE X - O	THER	χ=	
FILTERING DEVICES 0.45	A _ IN-LINE DISPOS	GABLE B - PRESSURE	C - VACUUM	SAMPLING TUBING OTHER (SPECIF	FY)
, , , , , , , , , , , , , , , , , , ,		FIELD MEASUREMEN	VTS		
DEPTH TO WATE	al un Lo	C (feet) WELL	ELEVATION	98 271 (feet)	
WELL DEPTH		S (feet) GROUNDWATE	R ELEVATION	53 67 (feet)	
TEMPERATURE	nH	TDS COND			ME
(°C)	(std)	(g/L)	(uS/cm)		/gal
		(a/I)	(us/m)	(mV)	(ao1
(C)		(8/ 1-)	(µ3/cm)	(mv) [	
(°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	5		
SAMPLE APPEARANCE:	<u>Clear</u> ODO	R: None COLO	DR: <u>Clear</u> s	SHEEN Y 🔊 🕺 📈	
WEATHER CONDITIONS:	TEMPERATURE <u>~90°</u>	WINDY Y/N	N PRECIPITA'	TION Y/N (IF Y TYPE)	
SPECIFIC COMMENTS:					
1.98					
Riti	A 77		.12		<u> </u>
Deilea c	vy e LiL	2 gallons on 6.6			<b>,</b>
No Param	der's recorded du	e to poor recha.	-c e		
I CERTIFY THAT SAMPLING I	PROCEDURES WERE IN ACCORDANC	E WITH APPLICABLE CRA PROTOCO	) DIS		
6.7.12	Jason Hous	- mild			
DATE	PRINT	SIGNATUR	E		
		$\bigcirc$			

.TE/PROJECT NAME:	Martin	34 No. 2	JOB#	075035	
SAMPLE ID:	GW-075035-06	0612-CB-MW-1	WELL#	MW-6	
PURGE DATE (MM DD YY)	GiGiR	WELL PURGING INFO SAMPLE TIME (24 HOUR) URGING AND SAMPLIN	DRMATION WATER VG GEQUIPMENT SA	DI. IN CASING ACTUAL LLONS) (GA	, S VOL. PURGED LLONS) ICATED Ø N
PURGING DEVICE	(CIRCLE ONE) A - SUBMERSIBLE PUMP B - PERISTALTIC PUMP C - BLADDER PUMP	D - GAS LIFT PUMP E - PURGE PUMP F - DIPPER BOTTLE	G - BAILER H - WATERRA® X - OTHER	X= PURGING DEVICE O X= SAMPLING DEVICE O	(CIRCLE ONE)
PURGING MATERIAL	A - TEFLON B - STAINLESS STEEL C - POLYPROPYLENE	D - PVC E - POLYETHYLENE X - OTHER		X= PURGING MATERIAI X= SAMPLING MATERIA	OTHER (SPECIFY)
PURGE TUBING	A - TEFLON B - TYGON C - ROPE	D - FOLYPROPYLENE E - POLYETHYLENE F - SILICONE ABLE B - PRESSURE	G - COMBINATION TEFLON/POLYPROPYI X - OTHER C - VACUUM	X= PURGE TUBING OTH X= SAMPLING TUBING O	ER (SPECIFY)
DEPTH TO WATER $\$ WELL DEPTH $\$ TEMPERATURE $\$ $\$ $\$ $\$ $\$ $\$ $\$ $\$ $\$ $\$ $\$	$\begin{array}{c c} & & & & & & \\ & & & & & & \\ & & & & & $	FIELD MEASURE	MENTS ELL ELEVATION [ ATER ELEVATION [ DNDUCTIVITY CO30 (µ5/0 B37 (µ5/0 (µ5/0 (µ5/0 (µ5/0 (µ5/0 NTS COLOR: [] (µ5/0 1 1 1 1 1 1 1 1 1 1 1 1 1	94 80 53 80 ORP Cm) 5739 (mV) cm) 7381.6 (mV) cm) 73897.6 (mV) cm) (mV) cm) (mV) cm) (mV) SHEEN Y/€ PRECIPITATION Y/€ Y TYPE)	(feet) (feet) VOLUME 7.5 (gai 8.0 (gai (gai
I CERTIFY THAT SAMPLING PROCED	URES WERE IN ACCORDANCE	WITH APPLICABLE CRAPPO	крсенд	,	

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	WELL SAMPLING FIELD INFORMATION FORM	
, .TE/PROJECT NAM	IE: Martin 34 Noz JOB# 07.5035	
SAMPLE I	D: GU-075035-0607/2-CB-MW-7 WELL# ANN-7	
6-7.12 PURGE DATE (MM DD YY)	WELL PURGING INFORMATION 6.7.12 SAMPLE DATE SAMPLE TIME WATER VOL. IN CASING ACTUAL VOL. PURGED (MM DD YY) (24 HOUR) (GALLONS) (GALLONS) PLUE CINIC AND SAMPLING FOLLIPMENT	
PURGING EQUIPMENTDE	EDICATED N SAMPLING EQUIPMENTDEDICATED 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	C - BLADDER PUMP     F - DIPPER BOTTLE     X - OTHER     X=       SAMPLING DEVICE OTHER (SPECIFY)	
PURGING MATERIAL SAMPLING MATERIAL	C     A - TEFLON     D - PVC     X=       B - STAINLESS STEEL     E - POLYETHYLENE     PURGING MATERIAL OTHER (SPECIFY)       E     C - POLYPROPYLENE     X - OTHER	
PURGE TUBING	A - TEFLON       D - POLYPROPYLENE       G - COMBINATION       X=         B - TYCON       F - POLYPROPYLENE       TEFLON/POLYPROPYLENE       PURGE TURING OTHER (SPECIEV)	
SAMPLING TUBING	C     C - ROPE     F - SILICONE     X - OTHER     X =       SAMPLING TUBING OTHER (SPECIFY)	
FILTERING DEVICES 0.45	A - IN-LINE DISPOSABLE B - PRESSURE C - VACUUM	
DEPTH TO WATER WELL DEPTH TEMPERATURE [5.79](°C) [5.67](°C) [5.63](°C) [(°C)	FIELD MEASUREMENTS         R $40$ (feet)       WELL ELEVATION $86$ $49$ (feet)         FIELD MEASUREMENTS       WELL ELEVATION $86$ $49$ (feet)         FIELD MEASUREMENTS $86$ $49$ (feet)         FIELD MEASUREMENTS $96$ $94$ (feet)         FIELD MEASUREMENTS $96$ $49$ (feet) $52$ $655$ (feet) $96$ $96$ $96$ $96$ $96$ $96$ $96$ $96$ $96$ $96$ $96$ $96$ $96$ $96$ $96$ $96$ $96$ $96$ $96$ $96$ $96$ $96$ $96$ $96$ $96$ $96$ $96$ $96$ <th colspa="&lt;/td"></th>	
SAMPLE APPEARANCE: SW WEATHER CONDITIONS: SPECIFIC COMMENTS: 5.89 ICERTIFY THAT SAMPLING P 6.7.12 DATE	<th< td=""></th<>	

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WELL SAMPLING FIELD INFORMATION FORM			
ITE/PROJECT NAM	е: <u>Martin 34 No. 2</u> јов# <u>075035</u> D: <u>GW-075035-097512-ст-</u> тичени# <u>MW-1</u>		
PURGE DATE (MM DD YY)	WELL PURGING INFORMATION ACTUAL VOL. PURGED SAMPLE DATE (MM DD YY) BUILCINIC AND SAMPLE TIME (MM DD YY) C24 HOUR) C24 HOUR) C24 HOUR C24 HOUR) C24 HOUR C24	-	
PURGING EQUIPMENTDI	EDICATED Y N SAMPLING EQUIPMENTDEDICATED Y N (CIRCLE ONE) (CIRCLE ONE)		
PURGING DEVICE SAMPLING DEVICE	A - SUBMERSIBLE PUMP       D - GAS LIFT PUMP       G - BAILER       X=         B - PERISTALTIC PUMP       E - PURGE PUMP       H - WATERRA®       PURGING DEVICE OTHER (SPECIFY)         C - BLADDER PUMP       F - DIPPER BOTTLE       X - OTHER       X=		
PURGING MATERIAL	A - TEFLON D - PVC X= B - STAINLESS STEEL E - POLYETHYLENE PURGING MATERIAL OTHER (SPECIFY) C - POLYETHYLENE PURGING MATERIAL OTHER (SPECIFY)		
SAMPLING MATERIAL PURGE TUBING	C - POLYPROPYLENE     X - OTHER     X=       A - TEFLON     D - POLYPROPYLENE     G - COMBINATION     X=		
SAMPLING TUBING	C-ROPE F-SILICONE X-OTHER X-OTHER X-OTHER (SPECIFY)		
FILTERING DEVICES 0.45 DEPTH TO WATER WELL DEPTH TEMPERATURE	A - IN-LINE DISPOSABLE     B - PRESSURE     C - VACUUM     G 5     The model is a constraint of the model is		
	(std)         (g/L)         (μS/cm)         (mV)         (gal)           (std)         (g/L)         (μS/cm)         (mV)         (gal)		
(°C)	(std)         (g/L)         (μS/cm)         (mV)         (gal)           (std)         (g/L)         (μS/cm)         (mV)         (gal)		
SAMPLE APPEARANCE: WEATHER CONDITIONS: SPECIFIC COMMENTS:	COUCH ODE STONG DIO COLOR: CLARK GRAY SHEEVY) IPM Slight Spotty of TEMPERATURE 60° 75°/60° INDOVN Strong Wind Drog PRECIPITATION YN (IF Y TYPE) hond rainy 9-24-12 - Dry (w, 75 oral COS	Kortung	
1.26×3= 3.	76 Sampled on 9.25.12		
P 9008 X 3 = I CERTITY THAT SAMPLING PI 9725 12 DATE	= 1024 NO PANANCES CONCEPTO OUE 70 100 VO)W COCEDURIS WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLD UND MALUUE WISHNE VIEWS REINT SIGNATURE	ne	

WELL SAMPLING FIELD INFORMATION FORM	
ite/project NAME: Martin 34 No.2 job# 075035 SAMPLE ID: GW-075035-092512- (M-MW-7 WELL# MM-2	
9:25:12     9:25:12     9:25:12     Well purcing information     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 DEVICE       A - SUBMERSIBLE PUMP       D - GAS LIFT PUMP       G - BAILER       X=         B - PERISTALTIC PUMP       E - PURGE PUMP       H - WATERRA®       PURGING DEVICE OTHER (SPECIFY)         SAMPLING DEVICE       C - BLADDER PUMP       F - DIPPER BOTTLE       X - OTHER       X=         SAMPLING DEVICE       SAMPLING DEVICE OTHER (SPECIFY)       X - OTHER       X=	
PURGING MATERIAL       A - TEFLON       D - PVC       X=         B - STAINLESS STEEL       E - POLYETHYLENE       PURGING MATERIAL OTHER (SPECIFY)         SAMPLING MATERIAL       C - POLYPROPYLENE       X - OTHER       X=	
PURGE TUBING       A - TEFLON       D - POLYPROPYLENE       G - COMBINATION       X=         B - TYGON       E - POLYETHYLENE       TEFLON/POLYPROPYLENE       Y=         SAMPLING TUBING       C - ROPE       F - SILICONE       X - OTHER       X=	
FILTERING DEVICES 0.45 A - IN-LINE DISPOSABLE B - PRESSURE C - VACUUM 45 For metals only	
FIELD MEASUREMENTS       DEPTH TO WATER     87 59 (feet)       WELL DEPTH     40     65     (feet)     GROUNDWATER ELEVATION     44 99     (feet)	AME
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	108.3
16.29       1.52       (std)       19.70       (g/L)       2.5277       (µS/cm)       -301.7       (mV)       2.25       (gal)         (°C)       (std)       (g/L)       (µS/cm)       (mV)       (gal)	10.42
(°C)     (std)     (g/L)     (µS/cm)     (mV)     (gal)       SAMPLE APPEARANCE:     ODOR:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     0000:     000:     000:     000:     000:	
$0.49 \times 3 = 1.46$ Dualizado (a) 900	
I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLA I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLA 25/12 DATE PRINT DATE PRINT	

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TE/PROJECT NAM	IE: Mart	m 34 No. 7	7 јов#0	75035	
SAMPLE	1D: GW-8750	35-092512-0	<u>m-mu-zwell#</u>	NW-3	
9-25-12 PURGE DATE (MM DD YY)	<b>9.25.12</b> SAMPLE DATE (MM DD YY)	WELL PURGING IN SAMPLE TT (24 HOUR URGING AND SAMPL	VFORMATION ME WATER VOL. IN (GALLOI) LING EQUIPMENT	5 V CASING NS) U CASING V CASINA	
RGING EQUIPMENTD	EDICATEE Y N (CIRCLE ONE)		SAMPI	LING EQUIPMENTDEDICATED Y	N NE)
IRGING DEVICE	A - SUBMERSIBLE PUMF B - PERISTALTIC PUMP C - BLADDER PUMP	D - GAS LIFT PUMP E - PURGE PUMP F - DIPPER BOTTLE	G - BAILER H - WATERRA® X - OTHER	X= PURGING DEVICE OTHER (SPECIFY) X=	
RGING MATERIAL	A-TEFLON	D - PVC		SAMPLING DEVICE OTHER (SPECIFY X=	0
MPLING MATERIAL	B - STAINLESS STEEL C - POLYPROPYLENE	E - POLYETHYLENE X - OTHER		PURGING MATERIAL OTHER (SPECI	FY)
RGE TUBING MPLING TUBING	A - TEFLON B - TYGON C - ROPE	D - POLYPROPYLENE E - POLYETHYLENE F - SILICONE	G - COMBINATION TEFLON/POLYPROPYLENE X - OTHER	X= PURGE TUBING OTHER (SPECIFY) X= SAMPLING TUBING OTHER (SPECIFY)	
TERING DEVICES 0.45	A - IN-LINE DISPOS	ABLE B - PRESSUR	e c-vacuum 45	for metals only	
DEPTH TO WATE WELL DEPTH TEMPERATURE 0.02 (°C) 0.02 (°C)	PH PH 7.54 (std) 7.40 (std) 7.40 (std) (std) (std) (std) (std) (std) 0000 TEMPERATURE	FIELD MEASU         (feet)         (feet)         TDS         9.67         (g/L)         9.00         (g/L)         (g/L)	REMENTS         WELL ELEVATION         DWATER ELEVATION         CONDUCTIVITY         2 57 44         (μS/cm)         24 50 8         (μS/cm)         241 99         (μS/cm)         (μS/cm)         (μS/cm)         (μS/cm)         MENTS         COLOR:         19/1 - b60         MCG724         PRECI	87 37 (feet) 50 57 (feet) 0RP VOLUM - [0].4 (mV) 3.75 - 70.9 (mV) 3.75 - 70.9 (mV) 4.25 (mV) 4.55 (mV)	E (gal) (gal) (gal) (gal) (gal)
CIFIC COMMENTS:	1.2				— — — —

	WELL SAMPLING FIELD INFORMATION FORM	
( .TE/PROJECT NAN SAMPLE	ие: <u>Martin 34 No. 2</u> јов# <u>075035</u> 10: <u>GW-075035-092512-CM-<b>G</b>W-4Well# <u>MW-4</u></u>	
9.25.12 PURGE DATE (MM DD YY)	9:25:12       WELL PURGING INFORMATION       193       4.5         SAMPLE DATE (MM DD YY)       SAMPLE TIME (24 HOUR)       WATER VOL IN CASING (GALLONS)       ACTUAL VOL PURGED (GALLONS)	
PURGING EQUIPMENTI	PURGING AND SAMPLING EQUIPMENT DEDICATED Y N SAMPLING EQUIPMENTDEDICATED N (CIRCLE ONE)	
PURGING DEVICE SAMPLING DEVICE	A - SUBMERSIBLE PUMP       D - GAS LIFT PUMP       G - BAILER       X=         B - PERISTALTIC PUMP       E - PURGE PUMP       H - WATERRA®       PURGING DEVICE OTHER (SPECIFY)         C - BLADDER PUMP       F - DIPPER BOTTLE       X - OTHER       X=	
PURGING MATERIAL SAMPLING MATERIAL	A - TEFLON       D - PVC       X=       ////////////////////////////////////	
PURGE TUBING	A - TEFLON       D - POLYPROPYLENE       G - COMBINATION       X=         B - TYGON       E - POLYETHYLENE       TEFLON/POLYPROPYLENE       PURGE TUBING OTHER (SPECIFY)         C       POPE       F. SULCONK       X - OTHER	
FILTERING DEVICES 0.45	A - IN-LINE DISPOSABLE B - PRESSURE C - VACUUM , 45 for metals only	
DEPTH TO WATE WELL DEPT	R $44$ $25$ (feet)WELL ELEVATION $99$ $82$ (feet)H $55$ $95$ (feet)GROUNDWATER ELEVATION $55$ $57$ (feet)	Da 4
темрегатиге <b>6.33</b> (°С)	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	(03.5 (7.11
<b>Ke, 41</b> (°C) (°C)	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	7.30
(°C)	(std) (g/L) (μS/cm) (mV) (gal)	
SAMPLE APPEARANCE: WEATHER CONDITIONS: SPECIFIC COMMENTS:	<u>CLOUCLY</u> ODOR: <u>Slight bio</u> color: <u>Light Gray</u> Sheen vin TEMPERATURE <u>650</u> WINDYNN <u>breezy</u> PRECIPITATION VINTE Y TYPE)	
1.8313=	5.49	
I CERTIFYTHAT SAMPLING	PROCEEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS	

1. W

<i>A</i>	WELL SAMPLING FIELD INFORMATION FORM	
I	ne: Martin 34 No.2 JOB# 075035	
SAMPLE	ID: GUD-075035-092512-CM-MW-5WELL# MW-5	
PURGE DATE (MM DD YY)	9:25:12     WELL PURGING INFORMATION     0:55       SAMPLE DATE (MM DD YY)     1315     0:55       (MM DD YY)     (24 HOUR)     WATER VOL. IN CASING (GALLONS)     ACTUAL VOL. PURGED (GALLONS)	
PURGING EQUIPMENT	PURGING AND SAMPLING EQUIPMENT	
	(CIRCLE ONE) (CIRCLE ONE)	
PURGING DEVICE	A - SUBMERSIBLE PUMP D - GAS LIFT PUMP G - BAILER X= B - PERISTALTIC PUMP E - PURGE PUMP H - WATERRA® PURGING DEVICE OTHER (SPECIFY)	
SAMPLING DEVICE	C - BLADDER PUMP F - DIPPER BOTTLE X - OTHER X - OTHER X =	
PURGING MATERIAL	A - TEFLON D - PVC X=	
SAMPLING MATERIAL	$ \begin{array}{c} \hline \\ \hline $	
PURGE TUBING	A - TEFLON D - POLYPROPYLENE G - COMBINATION X=	
SAMPLING TUBING	$ \begin{array}{c} & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & $	
FILTERING DEVICES 0.45	A-IN-LINE DISPOSABLE B-PRESSURE C-VACUUM 45 mi (10) for wetals on	Y
	FIELD MEASUREMENTS	(
DEPTH TO WATE	$R = \frac{44}{60}$ (feet) WELL ELEVATION = $\frac{48}{27}$ (feet)	
WELL DEPT.	H $(feet)$ GROUNDWATER ELEVATION $5367$ (feet)	De
16.34 (°C)	$\begin{array}{c c} & & & \\ \hline 1,08 \\ \hline 1,08 \\ \hline (std) \\ \hline 1,007 \\ \hline (g/L) \\ \hline 1,007 \\ \hline (g/L) \\ \hline 1,007 \\ \hline (\mu S/cm) \\ \hline -115.9 \\ \hline (mV) \\ \hline 2.0 \\ \hline (g/L) \\ $	al)
1 6.33 (C)	17.07 (std) $9.376$ (g/L) $120.39$ (µS/cm) $-123.8$ (mV) $2.75$ (gr	al)
1637 (c)	7.09 (std) $9.382$ (g/L) $2052$ (µS/cm) $-124.3$ (mV) $2.5$ (gr	al)
(°C)	(g/L) (µS/cm) (mV) (g/L)	al)
(°C)	(std)(g/L)(μS/cm)(mV)(ga	+l)
SAMPLE APPEARANCE: WEATHER CONDITIONS:	TEMPERATURE ODOR: DIO COLOR: COLOR: COLOR: SHEEN (N) WIND (VN) DICE 254 PRECIPITATION Y(N (IF Y TYPE)	
SPECIFIC COMMENTS:		
0,58 ×3=	1.73	
i certify that sampling	procedures were in accordance with applicable craprotocols of the providence of the	7
DATE	PRINT PRINT FILL SIGNATURE	
	$\sim$	

· ·	WELL CAMPLING FIELD INFORMATION FORM	
	WELL SAMPLING FIELD INFORMATION FORM	
<i>⊾TE/PROJECT NAM</i>	ME: Martin 34 No. 2 JOB# 075035	
SAMPLE	11D: (	
9.25.12	9.25.12 Well PURGING INFORMATION 2.84 8.75	
PURGE DATE (MM DD YY)	SAMPLE DATESAMPLE TIMEWATER VOL. IN CASINGACTUAL VOL. PURGED(MM DD YY)(24 HOUR)(GALLONS)(GALLONS)	
PURGING EQUIPMENTI	PURGING AND SAMPLING EQUIPMENT DEDICATED Y N SAMPLING EQUIPMENTDEDICATED Y N (CIRCLE ONE) (CIRCLE ONE)	
PURGING DEVICE	A - SUBMERSIBLE PUMP D - GAS LIFT PUMP G - BAILER X=	
SAMPLING DEVICE	C - BLADDER PUMP F - DIPPER BOTTLE X - OTHER X=	
PURGING MATERIAL	A - TEFLON     D - PVC     X=	
SAMPLING MATERIAL	E     STAINLESS STEEL     E - POLYETHYLENE     PURGING MATERIAL OTHER (SPECIFY)       C - POLYPROPYLENE     X - OTHER     X=	
PURGE TUBING	A - TEFLON     D - POLYPROPYLENE     G - COMBINATION     X=	
SAMPLING TUBING	B - TYGON     E - POLYETHYLENE     TEFLON/POLYPROPYLENE     PURGE TUBING OTHER (SPECIFY)       C - ROPE     F - SILICONE     X - OTHER     X=	
FILTERING DEVICES 0.45	A - IN-LINE DISPOSABLE B - PRESSURE C - VACUUM . 45 Au WETALS ONLY	
	FIELD MEASUREMENTS $411$ $80$	
DEPTH TO WATE	Image: Sign of the second s	0
TEMPERATURE	$\frac{1}{701} \frac{1}{100} \frac{1}{52} \frac{1}{100} \frac{1}{$	10
1/5.96 (9)	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	29%
15.9 Zec)	8,10 (std) 22.52 (g/L) 28642 (µS/cm) -378.3 (mV) 8.75 (gal)	1. <i>5</i> 8
(°C)	(std) (g/L) (µS/cm) (mV) (gal)	
(°C)	(std) (g/L) (µS/cm) (mV) (gal)	
SAMPLE APPEARANCE: WEATHER CONDITIONS: SPECIFIC COMMENTS:	<u>CLONALY</u> ODOR: <u>Strangbio</u> COLOR: <u>CLARK GRAY</u> SHEER XIV WYY Slight Spolk discurd TEMPERATURE <u>65</u> WINDY IN (IF Y TYPE) <u>Slight Fain</u>	hness
1,94×3=9;	53	
	$\wedge$	
i certify that satipling	PROCEEDURES WERE IN A GORDANCE WITH APPLICABLE CRA PROTOCOLOR AND	
· · · · · · · · · · · · · · · · · · ·		

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	$\mathbf{V}$	WELL SAMPLING FIELD INFORMATION FORM	
(	TE/PROJECT NAME:	Martin 34 No. 2 JOB# 075035-	
	SAMPLE ID:	: <u>SW-015035-012512-LIN.MW-77</u> ELL# <u>IV [W] - 1</u>	
	9 · 25, 17 PURGE DATE (MM DD YY)	Well PURGING INFORMATION       1,95         Sample date       12,20         (MM dd YY)       (24 HOUR)         (24 HOUR)       (Gallons)	
		PURGING AND SAMPLING EQUIPMENT	
	PURGING EQUIPMENTDEDIC	(CIRCLE ONE) (CIRCLE ONE)	
	PURGING DEVICE	A - SUBMERSIBLE PUMP     D - GAS LIFT PUMP     G - BAILER     X=       B - PERISTALTIC PUMP     E - PURGE PUMP     H - WATERRA®     PURGING DEVICE OTHER (SPECIFY)	
	SAMPLING DEVICE	C - BLADDER PUMP F - DIPPER BOTTLE X - OTHER X=	
	PURGING MATERIAL	A - TEFLON D - FVC X=	
	SAMPLING MATERIAL	C-POLYPROPYLENE X-OTHER X-OTHE	
	PURGE TUBING	A - TEFLON D - POLYPROPYLENE G - COMBINATION X= B - TYGON E - POLYETHYLENE TEFLON/POLYPROPYLENE PURGE TUBING OTHER (SPECIFY)	
	SAMPLING TUBING	C - ROPE F - SILICONE X - OTHER X=	
	FILTERING DEVICES 0.45	A-IN-LINE DISPOSABLE B-PRESSURE C-VACUUM . 45 for metals cm/y	
		FIELD MEASUREMENTS	
(	DEPTH TO WATER WELL DEPTH	$\begin{bmatrix} 7.0 & 42 \\ 52 & 65 \end{bmatrix}$ (feet) WELL ELEVATION $\begin{bmatrix} 86 & 49 \\ 46 & 04 \end{bmatrix}$ (feet) (feet)	i) n
	TEMPERATURE	7.34 (std) 14.38 (g/L) 18373 (uS/cm) 46.6 (m) 5.5 VOLUME	13.21
	<u>Ke.18</u> (C)	7-3 (std) 5.95 (g/L) 20432 (µS/cm) 555.6 (mV, 36.0 (gal)	7.40
	(C)	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	4.94
	(°C)	(std) (g/L) (µS/cm) (mV) (gal)	
	SAMPLE APPEARANCE: WEATHER CONDITIONS: TEN SPECIFIC COMMENTS:	FIELD COMMENTS 	
	1.95×3= 5,8	o/	
	1. 1.		
	I CERTIFY THAT SAMPLING PROC 25 2 DATE	CEDURES WERE IN ACTION OF THE APPLICABLE CRA PROTOCOLS	

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1. 1. 1.

v	VELL SAMPLIN	G FIELD INF	ORMATION FOI	RM
	(X M. d.	011 11-0	0.78	THOE
SITE/PROJECT NAME:	<u>DVIQUTIVI</u>	34 NO C	JOB# ()/4	VD
SAMPLE ID:	- (JU-075035-1	22012-CIVI- MW	$\frac{1}{1}$ well# $\underline{MU}$	(#)
12 11 91 12 FURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WELL PURCING INFO SAMPLE TIME (24 HOUR)	RMATION 1030 0:3136 WATER VOL. IN CASI (GALLONS)	NG ACTUAL VOL. PURGED (GALLONS)
PURGING EQUIPMENTDEDIC	CATED (Y) N (CIRCLE ONE)	GING AND SAMPLIN	SAMPLING	EQUIPMENTDEDICATEDY N (CIRCLE ONE)
PURGING DEVICE	A - SUBMERSIBLE PUMP	D - GAS LIFT PUMP	G - BAILER	
SAMPLING DEVICE	C - BLADDER PUMP	F - DIPPER BOTTLE	A - WATERRAG X - OTHER	Yorging Device OTHER (SPECIFY)
				SAMPLING DEVICE OTHER (SPECIFY)
PURGING MATERIAL	A - TEFLON B - STAINLESS STEEL	D - PVC E - POLYETHYLENE		Y= PURGING MATERIAL OTHER (SPECIFY)
SAMPLING MATERIAL	C - POLYPROPYLENE	X - OTHER		X=
PURGE TUBING	A - TEFLON	D - POLYPROPYLENE	G - COMBINATION	SAMPLING MATERIAL OTHER (SPECIFY)
SAMPLING TUBING	B - TYGON C - ROPE	E - POLYETHYLENE F - SILICONE	TEFLON/POLYPROPYLENE X - OTHER	PURGE TUBING OTHER (SPECIFY) X=
FILTERING DEVICES 0.45	A - IN-LINE DISPOSA	BLE B - PRESSURE	C - VACUUM	SAMPLING TUBING OTHER (SPECIFY)
		FIELD MEASURE	MENTS	<b>1</b>
DEPTH TO WATER	39 11	(feet) W	TELL ELEVATION	3 28 (feet)
WELL DEPTH	41 07	7 (feet) GROUND	WATER ELEVATION 5	4 17 (feet)
TEMPERATURE	pH	TDS CC	ONDUCTIVITY	ORP VOLUME
	(sta)	(g/L) [	(µ5/cm)	
	(std)	(g/L)	(μs/cm)	(mV) [(gai)
	(std)	(g/L)	(µs/cm)	
	(std)	(g/L)	(µ\$/cm)	
	(std)	(g/ L)	(µ5/ cm)	(mv) [(gai)
SAMPLE APPEARANCE: WEATHER CONDITIONS: TE SPECIFIC COMMENTS:	MPERATURE 200	MACIDICAL LON WINDY Y/N	COLOR: CLO <u>M K GYOU</u> S PRECIPITA'	
0,3136×3=	0.9408	- completer	t @ 1030 cm	12/20/12
No	paramilers de	e to tau v	otume and sto	w recharge of
I CERTIFY THAT SAMPLING PRO $\frac{12}{20}$	redures were in accordance	WITH APPLICABLE CRA PRO		V
DATE (, (	PRINT '	SIGN	ATURE'	

τ	VELL SAMPLING FIELD INFORMATION FORM
'	$AA \downarrow 211 AL a area$
TTE/PROJECT NAME:	$\frac{11}{1000000000000000000000000000000000$
SAMPLE ID:	GW-015035-121912-011-1110-2 WELL# MW 2
PURGE DATE (MM DD YY)	WELL PURGING INFORMATION WELL PURGING INFORMATION U2.30 SAMPLE DATE (MM DD YY) (24 HOUR) WELL PURGING INFORMATION (34 HOUR) (34 HOUR)
PURGING EQUIPMENTDEDI	$\begin{array}{c} \text{FORGING AND SAMIFLING EQUIPMENT}\\ \text{CATED}  \widehat{Y}  N \\ \end{array}$
	(CIRCLE ONE) (CIRCLE ONE)
PURGING DEVICE	A - SUBMERSIBLE PUMP D - GAS LIFT PUMP G - BAILER X= B - PERISTALTIC PUMP E - PURGE PUMP H - WATERRA® PURGING DEVICE OTHER (SPECIFY)
SAMPLING DEVICE	C - BLADDER PUMP F - DIPPER BOTTLE X - OTHER X = SAMPLING DEVICE OTHER (SPECIFY)
PURGING MATERIAL	A - TEFLON     D - PVC     X=       B - STAINLESS STEEL     E - POLYETHYLENE     PURGING MATERIAL OTHER (SPECIFY)
SAMPLING MATERIAL	C - POLYPROPYLENE X - OTHER X - OTHER X =
PURGE TUBING	A - TEFLON     D - POLYPROPYLENE     G - COMBINATION     X=       B - TYGON     E - POLYETHYLENE     TEFLON/POLYPROPYLENE     PURGE TUBING OTHER (SPECIFY)
SAMPLING TUBING	$C - ROPE \qquad F - SILICONE \qquad X - OTHER \qquad X = $
FILTERING DEVICES 0.45	A - IN-LINE DISPOSABLE B - PRESSURE C - VACUUM
DEPTH TO WATER	FIELD MEASUREMENTS 37 28 (feet) WELL ELEVATION 87 59 (feet) 40 67 (feet) GPOLINDWATER ELEVATION 50 31 (feet)
TEMPERATURE	pH TDS CONDUCTIVITY ORP VOLUME
<u>4.56</u> (°C)	7,66 (std) 20,73 (g/L) 25504 (µS/cm) 720,4 (mV) 1,5 (ga
<b>14.87</b> (°C)	7,65 (std) 76,83 (g/L) 25904 (µS/cm) -289.7 (mV) 2.0 (ga
(°C)	(std) (g/L) (µS/cm) (mV) (ga
(°C)	(std) (g/L) (µS/cm) (mV) (gal
(°C)	(std) (g/L) (µS/cm) (mV) (ga
SAMPLE APPEARANCE: <u>c</u> WEATHER CONDITIONS: TI SPECIFIC COMMENTS:	FIELD COMMENTS       ODOR: Slight hydricaliga       ODOR: Slight hydricaliga       COLOR: Gray/brain       SHEEN Y/B       IND       PRECIPITATION Y/B/IF Y TYPE)
0.542 × 3 =	1,627
12/19/12 c	ALEJONGS WERE IN ALCONDAINCE WITH AFFLICADLE CHA PROJUCIOLS - 0.56 m 1 1055 - PRINT

x.

	WELL SAMPLING FIELD INFORMATION FORM		
 `'!TE/PROJECT NAM	ие: <u>Манял 34 No. 2</u> јов# <u>075035</u>		
	ID: (10-075035-121912-CM-MW-3 WELL#		
12/19/12 JURGE DATE (MM DD YY)	WELL PURGING INFORMATION 12/19/12- SAMPLE DATE SAMPLE TIME WATER VOL. IN CASING (GALLONS) (MM DD YY) (24 HOUR) HIC FOLUMATION (GALLONS) (GALLONS)		
PURGING EQUIPMENTD	EDICATED Y) N SAMPLING EQUIPMENT		
PURGING DEVICE	A - SUBMERSIBLE PUMP D - GAS LIFT PUMP G - BAILER X=		
SAMPLING DEVICE	B - PERISTALTIC PUMP       E - PURGE PUMP       H - WATERKAGE       PURGING DEVICE OTHER (SPECIFY)         C - BLADDER PUMP       F - DIPPER BOTTLE       X - OTHER       X=         SAMPLING DEVICE OTHER (SPECIFY)       SAMPLING DEVICE OTHER (SPECIFY)		
PURGING MATERIAL	A - TEFLON D - PVC X=		
SAMPLING MATERIAL	B - STAINLESS STEEL E - POLYETHYLENE PURGING MATERIAL OTHER (SPECIFY) C - POLYPROPYLENE X - OTHER X - OTHER X - OTHER (SPECIFY)		
PURGE TUBING	A - TEFLON D - POLYPROPYLENE G - COMBINATION X= B - TYGON E - POLYETHYLENE TEFLON/POLYPROPYLENE PURGE TUBING OTHER (SPECIFY)		
SAMPLING TUBING	C - ROPE F - SILICONE X - OTHER X=		
FILTERING DEVICES 0.45	A - IN-LINE DISPOSABLE B - PRESSURE C - VACUUM		
	FIELD MEASUREMENTS $(2, 2, 2)$		
DEPTH TO WATE	$R = \frac{50.48}{100} \text{ (feet)} \qquad \text{WELL ELEVATION} = \frac{8.4}{50} \frac{3}{84} \text{ (feet)}$		
	pH TDS CONDUCTIVITY ORP VOLUME		
13.86 (0)	7.73 (std) $21.13$ (g/L) $25735$ (µS/cm) $195.0$ (mV) $3.15$ (gal)		
14,66 (°C)	$15/(std) 20.28 (g/L) 24937 (\mu S/cm) -135.7 (mV) 4.25 (gal)$		
	$\begin{array}{c c c c c c c c c c c c c c c c c c c $		
	(std) (g/L) (µS/cm) (mV) (gal)		
SAMPLE APPEARANCE: WEATHER CONDITIONS: SPECIFIC COMMENTS: SPECIFIC COMMENTS: SPECI			
1.462 ×3 = 4.39			
· · · · · · · · · · · · · · · · · · ·			
I CERTIENT THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRAPROTOCOLS			
L V L			

WELL SAMPLING FIELD INFORMATION FORM			
AAA QUAA Q			
SITE/PROJECT NAM	и: <u>Манти 34 NOZ</u> JOB# <u>075035</u>		
SAMPLE	ID: 610-015035-19-1912-(M-MW-4 WELL# MW-4		
PURGE DATE (MM DD YY)	WELL PURGING INFORMATION SAMPLE DATE (MM DD YY) WELL PURGING INFORMATION SAMPLE TIME (24 HOUR) SAMPLE TIME (24 HOUR) SAMPLE TIME (24 HOUR) SAMPLE TIME (24 HOUR) SAMPLE DATE (24 HOUR) SAMPLE DATE (34 HOUR) SAMPLE DATE (3		
PURGING EQUIPMENTD	EDICATED Y N SAMPLING EQUIPMENT		
PURGING DEVICE	A - SUBMERSIBLE PUMP D - GAS LIFT PUMP G - BAILER X=		
SAMPLING DEVICE	B - PERISTALTIC PUMP       E - PURGE PUMP       H - WATERRA®       PURGING DEVICE OTHER (SPECIFY)         C - BLADDER PUMP       F - DIPPER BOTTLE       X - OTHER       X=		
DUDCING MATTERIAT	SAMPLING DEVICE OTHER (SPECIFY)		
FURGING MATERIAL	B - STAINLESS STEEL E - POLYETHYLENE PURGING MATERIAL OTHER (SPECIFY)		
SAMPLING MATERIAL	C - POLYPROPYLENE X - OTHER X - OTHER X - OTHER (SPECIFY)		
PURGE TUBING	A - TEFLON D - POLYPROPYLENE G - COMBINATION X=		
SAMPLING TUBING	B - TYGON     E - POLYETHYLENE     THEFON/FOLTPROFILENE     PURGE TUBING OTHER (SPECIFY)       C - ROPE     F - SILICONE     X - OTHER     X=		
FILTERING DEVICES 0.45	SAMPLING TUBING OTHER (SPECIFY) A - IN-LINE DISPOSABLE B - PRESSURE C - VACUUM		
	FIELD MEASUREMENTS $49$		
DEPTH TO WATE	$R \qquad freet \qquad WELL ELEVATION \qquad l \qquad l \qquad 0.00 \qquad (feet) \qquad H \qquad 0.00 \qquad (feet) \qquad$		
TEMPERATURE	pH         TDS         CONDUCTIVITY         ORP         VOLUME		
14,65 (°C)	7.85 (std) $23.92$ (g/L) $29534$ (µS/cm) $-248.1$ (mV) $45$ (gr		
<u>[5.0]</u> (°C)	$[-7.17] (std) [-23, 9] (g/L) = 2986 [ (\mu S/cm) [-2/8, 7] (mV) [5.6] (ge$		
(°C)	(std) (g/L) (µS/cm) (mV) (g/L)		
(°C)	[(std) [(g/L) [(μS/cm) [(mV) [(g/L])] (g/L) [(g/L) [(mV) [(mV) [(mV) []] (g/L) []] (g/L) [(mV) []] (g/L) [(mV) []] (g/L) []] (g/L) [(mV) []] (g/L) []] (g/L) [(mV) []] (g/L) (g/L) []] (g/L) []] (g/L) []] (g/L) []] (g/L) []] (g/L) (g/L) (g/L) []] (g/L) (g		
(°C)	(std)(g/L)(μS/cm)(mV)(ga		
SAMPLE APPEARANCE:	FIELD COMMENTS ODOR: COLOR: SHEEN Y/N		
WEATHER CONDITIONS:	TEMPERATURE WINDY Y/N PRECIPITATION Y/N (IF Y TYPE)		
SPECIFIC COMMENTS;			
(798×3=	5.40		
I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS			
DATE U 1/U	PRINT 102 SIGNATURE		

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UTE/PROJECT NAM	TTE/PROJECT NAME: Martin 34 No.2 JOB# 975035			
SAMPLE	ID: GU-075035-12412-AM. MW-3well#			
PURGE DATE (MM DD YY)	WELL PURGING INFORMATION 12/19/12 SAMPLE DATE (MM DD YY) (24 HOUR) (24 HOUR) (24 HOUR) (34LIONS) (34LIONS) (34LIONS) (34LIONS)			
PURGING EQUIPMENTD	EDICATED Y N SAMPLING EQUIPMENTDEDICATED Y N (CIRCLE ONE)			
PURGING DEVICE	A - SUBMERSIBLE PUMP D - GAS LIFT PUMP G - BAILER X=			
SAMPLING DEVICE	C - BLADDER PUMP F - DIPPER BOTTLE X - OTHER X - THE X			
PURGING MATERIAL	SAMPLING DEVICE OTHER (SPECIFY)			
SAMPLING MATERIAL	B - STAINLESS STEEL     E - POLYETHYLENE     PURGING MATERIAL OTHER (SPECIFY)       C - POLYPROPYLENE     X - OTHER     X=			
	SAMPLING MATERIAL OTHER (SPECIFY)			
CANDLING TURING	A - TEFLON     D - FOETFROFTLENE     G - COMBINATION     X -       B - TYGON     E - POLYETHYLENE     TEFLON/POLYPROPYLENE     PURGE TUBING OTHER (SPECIFY)			
SAMPLING TUBING	SAMPLING TUBING OTHER (SPECIFY)			
FILTERING DEVICES 0.45	A - IN-LINE DISPOSABLE B - PRESSURE C - VACUUM			
DEPTH TO WATE	DEPTH TO WATER 4543 (feet) WELL ELEVATION 98 27 (feet)			
TEMPERATURE	PH TDS CONDUCTIVITY ORP VOLUME			
14 .6U(°C)	$\frac{1}{\sqrt{5}} \frac{1}{\sqrt{6}} \frac{1}{\sqrt{6}$			
14,14 (rc)	$\begin{bmatrix} 7.47 \\ (std) \\ \hline 7.47 \\ (std) \\ \hline 10.47 \\ (g/L) \\ \hline 12.6 \\ \hline 82 \\ (uS/cm) \\ \hline -271 \\ (0) \\ (mV) \\ \hline 1.47 \\ (mV) \\ \hline 1.47 \\ (gal) \\ (gal) \\ \hline 12.6 \\ \hline 82 \\ (uS/cm) \\ \hline -271 \\ (0) \\ (mV) \\ \hline 1.47 \\ (mV) \\ \hline 1.47 \\ (gal) \\ (gal) \\ \hline 1.47 \\ (gal) \\ (gal) \\ \hline 1.47 \\ (gal) \\ (gal) \\ \hline 1.47 \\ (gal) \\ (gal) \\ \hline 1.47 \\ (gal) \\ (gal$			
(°C)	(std) (g/L) (µS/cm) (mV) (gal)			
(°C)	(std) (g/L) (µS/cm) (mV) (gal)			
SAMPLE APPEARANCE: WEATHER CONDITIONS: SPECIFIC COMMENTS: SPECIFIC COMMENTS: SPEC				
(7)4432X2=1,33				
I CERTIFY THAT SAMPLING PROCEDURES WHRE IN ACCORDANCE WITH APPLICABLE CRA PROTOGOLS				
DATE PRINT SIGNATURE				

	WELL SAMPLING FIELD INFORMATION FC	DRM	
) ITF/PROIFCT NAM	TE Martin 34 No.2 IOB# (	115725	
SAMPLE I	D: $GW - 015035 - 121912 - (M - WW) - 6$ Well#	MAN-6	
12.19.12 DURGE DATE (MM DD YY)	Image: Sample date (MM dd YY)     Well PURGENG INFORMATION 272       Sample time (24 HOUR)     Image: Sample time (24 HOUR)	SING ACTUAL VOL. PURGED (GALLONS)	
PURGING EQUIPMENTD	PURGING AND SAMPLING EQUIPMENT EDICATED Y N (CIRCLE ONE)	G EQUIPMENTDEDICATED Y N (CIRCLE ONE)	
PURGING DEVICE	A - SUBMERSIBLE PUMP D - GAS LIFT PUMP G - BAILER B - PERISTALTIC PUMP E - PURGE PUMP H - WATERRA®	X=	
SAMPLING DEVICE	C - BLADDER PUMP F - DIPPER BOTTLE X - OTHER	X=	
PURGING MATERIAL	A - TEFLON D - PVC B - STAINLESS STEEL E - POLYETHYLENE	X= PURGING MATERIAL OTHER (SPECIFY)	
SAMPLING MATERIAL		X= SAMPLING MATERIAL OTHER (SPECIFY)	
PURGE TUBING	A - TEFLON D - POLYPROPYLENE G - COMBINATION B - TYGON E - POLYETHYLENE TEFLON/POLYPROPYLENE	X≕ PURGE TUBING OTHER (SPECIFY)	
FILTERING DEVICES 0.45	A - IN-LINE DISPOSABLE B - PRESSURE C - VACUUM	SAMPLING TUBING OTHER (SPECIFY)	
	FIELD MEASUREMENTS		
DEPTH TO WATE	R (feet) WELL ELEVATION	(feet)	
WELL DEPTH	I 57 67 (feet) GROUNDWATER ELEVATION	<u>53 93</u> (feet)	
$\begin{array}{c} \text{TEMPERATURE} \\ 3.77 \\ 3.95 \\ 0.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\$	$\begin{array}{c} p_{H} \\ 7.97 \\ 7.97 \\ 7.14 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1.97 \\ 1$	$\begin{array}{c c} & \text{ORP} & \text{VOLUME} \\ \hline -342.9 & \text{(mV)} & 7.25 & \text{(gal)} \\ \hline -342.9 & \text{(mV)} & 7.75 & \text{(gal)} \\ \hline 342.5 & \text{(mV)} & 8.25 & \text{(gal)} \\ \hline 342.5 & \text{(mV)} & 8.25 & \text{(gal)} \\ \hline 342.5 & \text{(mV)} & 8.25 & \text{(gal)} \\ \hline 342.5 & \text{(mV)} & 8.25 & \text{(gal)} \\ \hline 342.5 & \text{(mV)} & 8.25 & \text{(gal)} \\ \hline 342.5 & \text{(mV)} & 8.25 & \text{(gal)} \\ \hline 342.5 & \text{(gal)} \\ \hline 342.5$	
	(g/L) (µS/cm)	(mV) (gal)	
(°C)	(g/L) (µS/cm)	(mV) (gal)	
SAMPLE APPEARANCE: WEATHER CONDITIONS: SPECIFIC COMMENTS:	FIELD COMMENTS ODOR: NYUVI Q 1/200 COLOR: AUX GNUY TEMPERATURE 300 WINDY Y/N YES JPRECIPIT		
2,72,43=8	3.16 Puplicate @ 1215		
I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS 12/19/12 0350 0355 DATE SIGNATURE			

	WELL CAMPLING FIELD INFORMATION FORM			
TE/PROJECT NAM	E: Martin 34 No. 2 JOB# ()75035			
SAMPLE I	D: GW-05735-121912-CM-MW-7 WELL# MW-7			
PURGEDATE (MM DD YY)	WELL PURGINGINFORMATION SAMPLE DATE SAMPLE TIME WATER VOL. IN CASING (MM DD YY) (24 HOUR) (GALLONS) (GALLONS)			
PURGING EQUIPMENTDE	DICATED V N (CIRCLE ONE) N (CIRCLE ONE) N N (CIRCLE ONE) N (CIRCLE ONE)			
PURGING DEVICE	A - SUBMERSIBLE PUMP D - GAS LIFT PUMP G - BAILER X=			
SAMPLING DEVICE	C-BLADDER PUMP E- PORGE PUMP H- WATERKAGE PURGING DEVICE OTHER (SPECIFY) C-BLADDER PUMP F- DIPPER BOTTLE X-OTHER X=			
PURGING MATERIAL	SAMPLING DEVICE OTHER (SPECIFY) X=			
SAMPLING MATERIAL	B-STAINLESS STEEL E-POLYETHYLENE PURGING MATERIAL OTHER (SPECIFY) C-POLYPROPYLENE X-OTHER X=			
	SAMPLING MATERIAL OTHER (SPECIFY)			
PURGE TUBING	A - TEFLON D - POLYPROPYLENE G - COMBINATION X= B - TYGON E - POLYETHYLENE TEFLON/POLYPROPYLENE PURGE TUBING OTHER (SPECIFY)			
SAMPLING TUBING	C - ROPE F - SILICONE X - OTHER X=			
FILTERING DEVICES 0.45	A - IN-LINE DISPOSABLE B - PRESSURE C - VACUUM			
	FIELD MEASUREMENTS $\nabla \mathcal{C}  \mathcal{C}  \mathcal{C}  \mathcal{C}$			
DEPTH TO WATER	(feet) WELL ELEVATION (feet)			
WELL DEPTH	5  31  (feet)  GROUNDWATER ELEVATION  46  33  (feet)			
	pH TDS CONDUCTIVITY ORP VOLUME			
(C)	[1,5] (std) [9,72] (g/L) [2,26490 (uS/cm) [-75] (5,72) (gal) (ga			
[4,55 (°C)	$[1:5] (std) [0 - 2] (g/L) [4] [9645] (\mu S/cm) [60] (mV) [60] (gal)$	<i>Ŋ</i>		
[4, 15](C)	$[1,55] (std) [14,(0)] (g/L) [7744] (\mu S/cm) - gg_{0} 5 (mV) [6,75] (gal)$			
(°C)	(std) (g/L) (µS/cm) (mV) (gal)			
(°C)	(std) (g/L) (µS/cm) (mV) (gal)			
	FIELD COMMENTS	1		
SAMPLE APPEARANCE:	ODOR:COLOR:SHEEN Y/N			
WEATHER CONDITIONS: SPECIFIC COMMENTS:	TEMPERATURE     WINDY Y/N     PRECIPITATION Y/N (IF Y TYPE)			
1.88×3 = 5	s 64			
I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS				
		-		

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APPENDIX B

# GROUNDWATER LABORATORY ANALYTICAL REPORTS



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

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 Fracy.

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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Page 1 of 31



### 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

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Page 2 of 31



## 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

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Page 3 of 31



## SAMPLE ANALYTE COUNT

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

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60117039001		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**

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Page 4 of 31



### **PROJECT NARRATIVE**

Project: MARTIN 34 NO 2

Pace Project No.: 60117039

#### Method: EPA 6010

Description:6010 MET ICP, DissolvedClient:COP Conestoga-Rovers & Associates, Inc. NMDate: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:

## **REPORT OF LABORATORY ANALYSIS**

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Project: MARTIN 34 NO 2

Pace Project No.: 60117039

### Method: EPA 8270 by SIM

Description:8270 MSSV PAH by SIMClient:COP Conestoga-Rovers & Associates, Inc. NMDate: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**

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Page 6 of 31



Project: MARTIN 34 NO 2

Pace Project No.: 60117039

### Method: EPA 5030B/8260

Description:8260 MSVClient:COP Conestoga-Rovers & Associates, Inc. NMDate: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:

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Page 7 of 31



Project: MARTIN 34 NO 2

Pace Project No.: 60117039

# Method: EPA 5030B/8260 Description: 8260 MSV

 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**

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Page 8 of 31



Project: MARTIN 34 NO 2

Pace Project No.: 60117039

### Method: SM 2540C

Description:2540C Total Dissolved SolidsClient:COP Conestoga-Rovers & Associates, Inc. NMDate: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**

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Page 9 of 31



Project: MARTIN 34 NO 2

Pace Project No.: 60117039

### Method: EPA 300.0

Description:300.0 IC Anions 28 DaysClient:COP Conestoga-Rovers & Associates, Inc. NMDate: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



Project: MARTIN 34 NO 2

Pace Project No.: 60117039

Sample: GW-075085-3812-CB-MW-1	Lab ID: 6	0117039001	Collected:	03/08/1	2 10:40	Received: 03	/10/12 09:00 N	latrix: Water	
Parameters	Results	Units	Report	Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical N	lethod: EPA 60	010 Preparati	ion Meth	hod: EPA	A 3010			
Boron, Dissolved	1100	ug/L		500	5	03/14/12 16:35	03/20/12 13:27	7440-42-8	
Iron, Dissolved	7340	ug/L		250	5	03/14/12 16:35	03/20/12 13:27	7439-89-6	
Manganese, Dissolved	3480	ug/L		25.0	5	03/14/12 16:35	03/20/12 13:27	7439-96-5	
8260 MSV	Analytical N	lethod: EPA 50	030B/8260						
Benzene	5100	ug/L		100	100		03/16/12 21:22	71-43-2	
Ethylbenzene	669	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	2490	ug/L		100	100		03/16/12 21:22	108-88-3	
Xylene (Total)	9080	ug/L		300	100		03/16/12 21:22	1330-20-7	
Surrogates		-							
4-Bromofluorobenzene (S)	100	%	8	37-113	100		03/16/12 21:22	460-00-4	
Dibromofluoromethane (S)	106	%	8	36-112	100		03/16/12 21:22	1868-53-7	
1,2-Dichloroethane-d4 (S)	105	%	8	32-119	100		03/16/12 21:22	17060-07-0	
Toluene-d8 (S)	98	%	ę	90-110	100		03/16/12 21:22	2037-26-5	
Preservation pH	1.0			0.10	100		03/16/12 21:22		

# **REPORT OF LABORATORY ANALYSIS**

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Page 11 of 31



Project: MARTIN 34 NO 2

Pace Project No.: 60117039

Sample: GW-075085-3812-CB-MW-2	Lab ID: 60	117039002	Collected: 03/08	/12 09:50	0 Received: 03	/10/12 09:00 N	latrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Me	thod: EPA 60	010 Preparation Me	ethod: EP	PA 3010			
Boron, Dissolved	<b>922</b> u	g/L	500	5	03/14/12 16:35	03/20/12 13:31	7440-42-8	
Iron, Dissolved	ND u	g/L	50.0	1	03/14/12 16:35	03/20/12 12:54	7439-89-6	
Manganese, Dissolved	<b>3760</b> u	g/L	25.0	5	03/14/12 16:35	03/20/12 13:31	7439-96-5	
8270 MSSV PAH by SIM	Analytical Me	thod: EPA 82	270 by SIM Prepara	ation Met	hod: EPA 3510			
Naphthalene <i>Surrogates</i>	ND u	g/L	0.50	1	03/20/12 00:00	03/22/12 03:38	91-20-3	
Nitrobenzene-d5 (S)	111 %	, D	42-112	1	03/20/12 00:00	03/22/12 03:38	4165-60-0	
2-Fluorobiphenyl (S)	76 %	, D	44-115	1	03/20/12 00:00	03/22/12 03:38	321-60-8	
Terphenyl-d14 (S)	98 %	, D	46-131	1	03/20/12 00:00	03/22/12 03:38	1718-51-0	
8260 MSV	Analytical Me	thod: EPA 50	030B/8260					
Benzene	<b>295</b> u	g/L	5.0	5		03/16/12 21:37	71-43-2	
Ethylbenzene	<b>221</b> u	g/L	5.0	5		03/16/12 21:37	100-41-4	
Methylene chloride	ND u	g/L	5.0	5		03/16/12 21:37	75-09-2	
Naphthalene	<b>74.0</b> u	g/L	50.0	5		03/16/12 21:37	91-20-3	
1,1,2,2-Tetrachloroethane	ND u	g/L	5.0	5		03/16/12 21:37	79-34-5	
Toluene	ND u	g/L	5.0	5		03/16/12 21:37	108-88-3	
Xylene (Total)	<b>64.7</b> u	g/L	15.0	5		03/16/12 21:37	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	100 %	, D	87-113	5		03/16/12 21:37	460-00-4	
Dibromofluoromethane (S)	106 %	þ	86-112	5		03/16/12 21:37	1868-53-7	
1,2-Dichloroethane-d4 (S)	109 %	D	82-119	5		03/16/12 21:37	17060-07-0	
Toluene-d8 (S)	101 %	, D	90-110	5		03/16/12 21:37	2037-26-5	
Preservation pH	1.0		0.10	5		03/16/12 21:37		
2540C Total Dissolved Solids	Analytical Me	thod: SM 25	40C					
Total Dissolved Solids	<b>30200</b> m	ng/L	5.0	1		03/15/12 10:33		
300.0 IC Anions 28 Days	Analytical Me	thod: EPA 30	0.00					
Chloride	<b>398</b> m	ng/L	50.0	50		03/27/12 12:54	16887-00-6	
Fluoride	ND m	ng/L	10.0	50		03/27/12 12:54	16984-48-8	D3
Sulfate	<b>23200</b> m	ng/L	2000	2000		03/28/12 08:29	14808-79-8	

# **REPORT OF LABORATORY ANALYSIS**

Page 12 of 31

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Pace Package 12 of 35



Project: MARTIN 34 NO 2

Pace Project No.: 60117039

Sample: GW-075085-3812-CB-MW-3	Lab ID: 60117	7039003	Collected: 03/08/	12 10:45	6 Received: 03	/10/12 09:00 N	latrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
6010 MET ICP, Dissolved	Analytical Metho	od: EPA 60	010 Preparation Met	hod: EP	A 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		
8270 MSSV PAH by SIM	Analytical Metho	od: EPA 82	270 by SIM Preparat	tion Metl	hod: EPA 3510				
Naphthalene Surrogates	ND ug/L	_	0.50	1	03/14/12 00:00	03/15/12 11:28	91-20-3		
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		
8260 MSV	Analytical Metho	lytical 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		
Surrogates									
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	1.0		0.10	1		03/16/12 21:51			
2540C Total Dissolved Solids	Analytical Metho	od: SM 25	40C						
Total Dissolved Solids	<b>30500</b> mg/	Ľ	5.0	1		03/15/12 10:33			
300.0 IC Anions 28 Days	Analytical Metho	od: EPA 30	0.00						
Chloride	<b>456</b> mg/	Ľ	50.0	50		03/27/12 13:27	16887-00-6		
Fluoride	ND mg/	Ľ	10.0	50		03/27/12 13:27	16984-48-8	D3	
Sulfate	21500 mg/	Ľ	2000	2000		03/27/12 13:43	14808-79-8		

# **REPORT OF LABORATORY ANALYSIS**

Page 13 of 31



Project: MARTIN 34 NO 2

Pace Project No.: 60117039

Sample: GW-075085-3812-CB-MW-4	Lab ID: 6011	7039004	Collected: 03/08	/12 12:00	0 Received: 03	/10/12 09:00 N	latrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Meth	od: EPA 60	010 Preparation Me	thod: EP	A 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	
8270 MSSV PAH by SIM	Analytical Methe	od: EPA 82	270 by SIM Prepara	tion Met	hod: EPA 3510			
Naphthalene <i>Surrogates</i>	<b>1.1</b> ug/	L	0.50	1	03/14/12 00:00	03/15/12 11:49	91-20-3	
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	
8260 MSV	Analytical Methe	od: EPA 50	030B/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	
Surrogates								
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	1.0		0.10	1		03/19/12 18:07		
2540C Total Dissolved Solids	Analytical Mether	od: SM 25	40C					
Total Dissolved Solids	<b>38400</b> mg	/L	5.0	1		03/15/12 10:33		
300.0 IC Anions 28 Days	Analytical Methe	od: EPA 30	0.0					
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	

# **REPORT OF LABORATORY ANALYSIS**

Page 14 of 31



Project: MARTIN 34 NO 2

Pace Project No.: 60117039

Sample: GW-075085-3812-CB-MW-5	Lab ID: 60117039005	Collected: 03/08/1	2 12:40	Received: 0	3/10/12 09:00 N	latrix: Water	
Parameters	Results Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA	5030B/8260					
Benzene	<b>1200</b> ug/L	20.0	20		03/19/12 18:23	71-43-2	
Ethylbenzene	62.8 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)	61.3 ug/L	3.0	1		03/16/12 22:21	1330-20-7	
Surrogates							
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	1.0	0.10	1		03/16/12 22:21		
2540C Total Dissolved Solids	Analytical Method: SM 2	540C					
Total Dissolved Solids	<b>8520</b> mg/L	5.0	1		03/15/12 10:33		
300.0 IC Anions 28 Days	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	

# **REPORT OF LABORATORY ANALYSIS**

Page 15 of 31



Project: MARTIN 34 NO 2

Pace Project No.: 60117039

Sample: GW-075085-3812-CB-MW-6	Lab ID: 6011	7039006	Collected: 03/08/	12 11:40	Received: 03	/10/12 09:00 N	latrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Meth	od: EPA 60	010 Preparation Met	hod: EP	A 3010			
Boron, Dissolved	<b>622</b> ug/	۲L	500	5	03/14/12 16:35	03/20/12 13:42	7440-42-8	
Iron, Dissolved	ND ug/	۲L	50.0	1	03/14/12 16:35	03/20/12 13:13	7439-89-6	
Manganese, Dissolved	<b>2530</b> ug/	۲L	25.0	5	03/14/12 16:35	03/20/12 13:42	7439-96-5	
8270 MSSV PAH by SIM	Analytical Meth	od: EPA 82	270 by SIM Preparat	tion Met	hod: EPA 3510			
Naphthalene Surrogates	<b>23.4</b> ug/	۲L	5.0	10	03/14/12 00:00	03/15/12 16:02	91-20-3	
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	
8260 MSV	Analytical Meth	od: EPA 50	)30B/8260					
Benzene	<b>43.2</b> ug/	۲L	10.0	10		03/16/12 22:35	71-43-2	
Ethylbenzene	<b>190</b> ug/	۲L	10.0	10		03/16/12 22:35	100-41-4	
Methylene chloride	ND ug/	۲L	10.0	10		03/16/12 22:35	75-09-2	
Naphthalene	ND ug/	۲L	100	10		03/16/12 22:35	91-20-3	
1,1,2,2-Tetrachloroethane	ND ug/	۲L	10.0	10		03/16/12 22:35	79-34-5	
Toluene	ND ug/	۲L	10.0	10		03/16/12 22:35	108-88-3	
Xylene (Total)	<b>3320</b> ug/	۲L	30.0	10		03/16/12 22:35	1330-20-7	
Surrogates								
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	1.0		0.10	10		03/16/12 22:35		
2540C Total Dissolved Solids	Analytical Meth	od: SM 25	40C					
Total Dissolved Solids	<b>37500</b> mg	/L	5.0	1		03/15/12 10:33		
300.0 IC Anions 28 Days	Analytical Meth	od: EPA 30	0.0					
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	

# **REPORT OF LABORATORY ANALYSIS**

Page 16 of 31



Project: MARTIN 34 NO 2

Pace Project No.: 60117039

Sample: GW-075085-3812-CB-MW-7	Lab ID: 6011	7039007	Collected: 03/08/	12 09:55	6 Received: 03	/10/12 09:00 N	latrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Methe	od: EPA 60	010 Preparation Me	thod: EP	A 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	
8270 MSSV PAH by SIM	Analytical Methe	od: EPA 82	270 by SIM Prepara	tion Met	hod: EPA 3510			
Naphthalene <i>Surrogates</i>	<b>5.9</b> ug/	L	0.50	1	03/14/12 00:00	03/15/12 12:31	91-20-3	
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	
8260 MSV	Analytical Methe	od: EPA 50	030B/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	
Surrogates								
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	1.0		0.10	5		03/19/12 18:38		
2540C Total Dissolved Solids	Analytical Mether	od: SM 25	40C					
Total Dissolved Solids	<b>28400</b> mg	/L	5.0	1		03/15/12 16:14		
300.0 IC Anions 28 Days	Analytical Mether	od: EPA 30	0.00					
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	

# **REPORT OF LABORATORY ANALYSIS**

Page 17 of 31

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Pace Package 17 of 35



Project: MARTIN 34 NO 2

Pace Project No.: 60117039

Sample: GW-075085-3812-CB-DUP	Lab ID: 60	117039008	Collected:	03/08/1	2 11:45	Received: 0	3/10/12 09:00 N	latrix: Water	
Parameters	Results	Units	Report	Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Me	thod: EPA 50	30B/8260						
Benzene	ND u	g/L		50.0	50		03/16/12 23:05	71-43-2	
Ethylbenzene	<b>199</b> u	g/L		50.0	50		03/16/12 23:05	100-41-4	
Methylene chloride	ND u	g/L		50.0	50		03/16/12 23:05	75-09-2	
Naphthalene	ND u	g/L		500	50		03/16/12 23:05	91-20-3	
1,1,2,2-Tetrachloroethane	ND u	g/L		50.0	50		03/16/12 23:05	79-34-5	
Toluene	ND u	g/L		50.0	50		03/16/12 23:05	108-88-3	
Xylene (Total)	<b>3610</b> u	g/L		150	50		03/16/12 23:05	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102 %	6	8	37-113	50		03/16/12 23:05	460-00-4	D3
Dibromofluoromethane (S)	103 %	6	8	6-112	50		03/16/12 23:05	1868-53-7	
1,2-Dichloroethane-d4 (S)	109 %	6	8	82-119	50		03/16/12 23:05	17060-07-0	
Toluene-d8 (S)	99 %	6	9	0-110	50		03/16/12 23:05	2037-26-5	
Preservation pH	1.0			0.10	50		03/16/12 23:05		

# **REPORT OF LABORATORY ANALYSIS**

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Page 18 of 31



# Project: MARTIN 34 NO 2

# Pace Project No.: 60117039

Sample: TRIP BLANK	Lab ID: 601	17039009	Collected: (	03/08/1	2 00:00	Received: 03	3/10/12 09:00 N	latrix: Water	
Parameters	Results	Units	Report I	Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Meth	nod: EPA 50	030B/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	
Surrogates									
4-Bromofluorobenzene (S)	98 %		8	7-113	1		03/16/12 23:20	460-00-4	
Dibromofluoromethane (S)	101 %		8	6-112	1		03/16/12 23:20	1868-53-7	
1,2-Dichloroethane-d4 (S)	107 %		8	2-119	1		03/16/12 23:20	17060-07-0	
Toluene-d8 (S)	101 %		90	0-110	1		03/16/12 23:20	2037-26-5	
Preservation pH	1.0			0.10	1		03/16/12 23:20		

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Page 19 of 31



Project:	MARTIN 3	4 NO 2											
Pace Project No.:	60117039												
QC Batch:	MPRP/17	7310		Analysi	s Method:	E	PA 6010						
QC Batch Method:	EPA 301	D		Analysi	s Descript	ion: 60	010 MET Dis	ssolved					
Associated Lab Sar	mples: 60	117039001, 60 <sup>-</sup>	117039002	, 601170390	03, 60117	039004, 60	117039006,	60117039	9007				
METHOD BLANK:	965102			Μ	latrix: Wat	er							
Associated Lab Sar	mples: 60	117039001, 60 <sup>-</sup>	117039002	, 601170390	03, 60117	039004, 60	)117039006,	60117039	9007				
				Blank	R	eporting							
Parar	neter	ι	Jnits	Result		Limit	Analyz	ed	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, Dissol	ved	ug/L			ND	5.0	03/20/12	11:47					
LABORATORY CO		/PLE: 96510;	3										
			-	Spike	LCS		LCS	% Re	c				
Parar	neter	ι	Jnits	Conc.	Resu	lt	% Rec	Limits	s Qi	ualifiers			
Boron, Dissolved		ug/L		1000		968	97	80	)-120		-		
Iron, Dissolved		ug/L		10000	1	0000	100	80	)-120				
Manganese, Dissol	ved	ug/L		1000		1000	100	80	)-120				
MATRIX SPIKE & N	ATRIX SPI	KE DUPLICATE	: 96510	4		965105							
				MS	MSD								
		601 <sup>-</sup>	17005001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parame	ter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Boron, Dissolved		ug/L	135	1000	1000	1070	1070	93	94	75-125	0	20	
Iron. Dissolved		ua/L	40.9J	10000	10000	10800	10800	107	107	75-125	0	20	

1000

1810

1820

86

87 75-125

0 20

Date: 03/29/2012 04:46 PM

Manganese, Dissolved

ug/L

955

1000

# **REPORT OF LABORATORY ANALYSIS**

Page 20 of 31



Project: MARTIN 34 NO 2

Pace Project No.: 60117039

QC Batch:	MSV/4	4271	Analysis Method:	EPA 5030B/8260
QC Batch Method:	EPA 50	30B/8260	Analysis Description:	8260 MSV Water 10 mL Purge
Associated Lab Samp	oles: 6	60117039001, 60117039002, 601	17039003, 60117039005,	60117039006, 60117039008, 60117039009
METHOD BLANK: 9	966515		Matrix: Water	

Associated Lab Samples: 60117039001, 60117039002, 60117039003, 60117039005, 60117039006, 60117039008, 60117039009

		Blank	Reporting		
Parameter	Units	Result	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: 966518 966517 MSD MS 60117231002 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. % Rec % Rec RPD RPD Qual Conc. Result Result Limits 1,1,2,2-Tetrachloroethane 26 ug/L ND 20 20 24.1 24.1 119 119 48-137 0 Benzene ug/L 156 20 20 209 194 265 192 58-139 7 21 M1 Ethylbenzene 93.3 20 20 104 56-138 0 ug/L 114 114 105 19 Methylene chloride 20 20.4 89 12 ug/L ND 20 18.1 101 44-133 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) 101 60 60 158 159 96 98 52-146 19 ug/L 1 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**

Page 21 of 31



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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 966517 966518											
	601	17231002	MS Spike	MSD Spike	MS	MSD	MS	MSD	% Rec	Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD RPD	Qual
Dibromofluoromethane (S)	%						101	98	86-112		
Toluene-d8 (S)	%						97	100	90-110		
Preservation pH		1.0			1.0	1.0				0	

Date: 03/29/2012 04:46 PM

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Page 22 of 31



Project: MARTIN 34 NO 2

Pace Project No.: 60117039

QC Batch:	MSV/44319
QC Batch Method:	EPA 5030B/8260

Analysis Method: Analysis Description:

EPA 5030B/8260 8260 MSV Water 10 mL Purge

Associated Lab Samples: 60117039004, 60117039005, 60117039007

METHOD BLANK: 967913		Matrix:	Water		
Associated Lab Samples:	60117039004, 60117039005,	60117039007			
		Blank	Reporting		
Parameter	Units	Result	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: 967916 967915 MS MSD 60117035001 Spike Spike MS MSD MS Parameter Units Result Conc. Result % Rec Conc. Result 1,1,2,2-Tetrachloroethane ND 20 ug/L 20 18.1 18.5 90 Benzene 20.4 ND 20 20 21.0 105 ua/L

Benzene	ug/L	ND	20	20	21.0	20.4	105	102	58-139	3	21
Ethylbenzene	ug/L	1.8	20	20	23.1	23.4	106	108	56-138	1	19
Methylene chloride	ug/L	ND	20	20	19.3	19.2	97	96	44-133	1	27
Naphthalene	ug/L	ND	20	20	16.3	17.8	82	89	26-159	8	34
Toluene	ug/L	ND	20	20	21.2	20.9	106	105	59-140	1	19
Xylene (Total)	ug/L	20.1	60	60	82.4	81.8	104	103	52-146	1	19
1,2-Dichloroethane-d4 (S)	%						91	92	82-119		
4-Bromofluorobenzene (S)	%						93	98	87-113		

Date: 03/29/2012 04:46 PM

# **REPORT OF LABORATORY ANALYSIS**

Page 23 of 31

Max

Qual

RPD RPD

2 26

MSD

% Rec

92

% Rec

Limits

48-137



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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 967915 967916											
	601	17035001	MS Spike	MSD Spike	MS	MSD	MS	MSD	% Rec	Max	¢
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD RPI	Qual
Dibromofluoromethane (S)	%						98	99	86-112		
Toluene-d8 (S)	%						101	102	90-110		
Preservation pH		1.0			1.0	1.0				0	

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# **REPORT OF LABORATORY ANALYSIS**

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Page 24 of 31



EPA 8270 by SIM

8270 Water PAH by SIM MSSV

Project: MARTIN 34 NO 2

Pace Project No.: 60117039

QC Batch:	OEXT/32389
QC Batch Method:	EPA 3510

Associated Lab Samples:

Analysis Method:

Analysis Description:

60117039002, 60117039003, 60117039004, 60117039006, 60117039007

 METHOD BLANK:
 964749
 Matrix:
 Water

 Associated Lab Samples:
 60117039002, 60117039003, 60117039004, 60117039006, 60117039007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Naphthalene		ND	0.50	03/15/12 10:25	
2-Fluorobiphenyl (S)	%	82	44-115	03/15/12 10:25	
Nitrobenzene-d5 (S)	%	66	42-112	03/15/12 10:25	
Terphenyl-d14 (S)	%	114	46-131	03/15/12 10:25	

### LABORATORY CONTROL SAMPLE: 964750

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Naphthalene	ug/L	1	0.81	81	41-112	
2-Fluorobiphenyl (S)	%			78	44-115	
Nitrobenzene-d5 (S)	%			64	42-112	
Terphenyl-d14 (S)	%			97	46-131	

# **REPORT OF LABORATORY ANALYSIS**

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Page 25 of 31



Project: MARTIN 34 NC	)2						
OC Batch: OEXT/32465		Analysis M	ethod:	EPA 8270 by S	IM		
QC Batch Method: EPA 3510		Analysis D	escription.	8270 Water PA	H by SIM MSS	V	
Associated Lab Samples: 601170					•		
METHOD BLANK: 968066		Matri	x: Water				
Associated Lab Samples: 601170	39002						
Parameter	Units	Blank Result	Reporting Limit	Analyze	d Quali	fiers	
Naphthalene	ua/L	N	0.5	50 03/22/12 02	2:56		
2-Fluorobiphenyl (S)	%	83	3 44-1	5 03/22/12 02	2:56		
Nitrobenzene-d5 (S)	%	80	) 42-1 <sup>-</sup>	2 03/22/12 02	2:56		
Terphenyl-d14 (S)	%	99	9 46-13	31 03/22/12 02	2:56		
LABORATORY CONTROL SAMPLE	. 968067						
		Spike	LCS	LCS	% Rec		
Parameter	Units	Conc.	Result	% 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		

Date: 03/29/2012 04:46 PM

# **REPORT OF LABORATORY ANALYSIS**

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Project:	MARTIN 34 NO	2							
Pace Project No.:	60117039								
QC Batch:	WET/34000		Analysis Meth	od: SN	/ 2540C				
QC Batch Method:	SM 2540C		Analysis Desc	ription: 25	2540C Total Dissolved Solids				
Associated Lab Sar	mples: 6011703	39002, 6011703900	03, 60117039004, 60	117039005, 60	117039006				
METHOD BLANK:	965602		Matrix:	Water					
Associated Lab Sar	mples: 6011703	9002, 6011703900	03, 60117039004, 60 <sup>-</sup>	117039005, 60	117039006				
			Blank	Reporting					
Parar	neter	Units	Result	Limit	Analyzed	Qualifiers			
Total Dissolved Soli	ds	mg/L	ND	5.0	03/15/12 10:31		_		
SAMPLE DUPLICA	TE: 965603								
			60117274001	Dup		Max			
Parar	neter	Units	Result	Result	RPD	RPD	Qualifiers		
Total Dissolved Soli	ds	mg/L	636	599	6	17			
SAMPLE DUPLICA	TE: 965604								
			60116775003	Dup		Max			
Parar	neter	Units	Result	Result	RPD	RPD	Qualifiers		
Total Dissolved Soli	ds	mg/L	1000	1100	10	17			

# **REPORT OF LABORATORY ANALYSIS**

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Page 27 of 31



Project:	MARTIN 34 NO 2						
Pace Project No.:	60117039						
QC Batch:	WET/34008		Analysis Met	hod: SI	M 2540C		
QC Batch Method:	SM 2540C		Analysis Des	cription: 25	540C Total Dissolve	d Solids	
Associated Lab Sar	nples: 60117039	9007					
METHOD BLANK:	966010		Matrix:	Water			
Associated Lab Sar	nples: 60117039	9007					
			Blank	Reporting			
Parar	neter	Units	Result	Limit	Analyzed	Qualifiers	
Total Dissolved Soli	ds	mg/L	ND	5.0	03/15/12 16:13		_
SAMPLE DUPLICA	TE: 966011						
			60117039007	Dup		Max	
Parar	Operation       MAXTIN 34 NO 2         Ince Project No.:       60117039         C Batch:       WET/34008         C Batch:       WET/34008         C Batch:       WET/34008         C Batch:       SM 2540C         S Batch Method:       SM 2540C         C Batch:       SM 2540C         C Batch Method:       SM 2540C         S Batch Method:       SM 2540C         Sociated Lab Samples:       60117039007         ETHOD BLANK:       966010         Matrix:       Water         sociated Lab Samples:       60117039007         Blank       Reporting         Result       Limit         Analyzed       Qualifiers         MPLE DUPLICATE:       966011         MPLE DUPLICATE:       966011         MPLE       Units         Goutine result       60117039007         Result       RPD         Max       RPD         Qualifiers       Qualifiers         Max       RPD         Qualifiers       28400         24300       16       17						
Total Dissolved Soli	ds	mg/L	28400	24300	16	17	

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Page 28 of 31



Project:	MARTIN 34	NO 2											
Pace Project No.:	60117039												
QC Batch:	WETA/1962	23		Analys	is Method	: E	PA 300.0						
QC Batch Method:	EPA 300.0			Analys	is Descrip	tion: 3	00.0 IC Anic	ons					
Associated Lab Sar	nples: 6011	7039002, 602	17039003	60117039	004, 60117	7039005, 6	0117039006	, 60117039	007				
METHOD BLANK:	971834			Ν	Aatrix: Wa	iter							
Associated Lab Sar	mples: 6011	7039002, 602	17039003	60117039	004, 60117	7039005, 6	0117039006	, 60117039	007				
				Blank	K F	Reporting							
Parar	neter	l	Jnits	Resu	t	Limit	Analyz	zed	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 COI	NTROL SAMP	LE: 9/103	)	Coilco		~		0/ Dec					
Parar	neter	ι	Jnits	Conc.	Resi	s ult	% Rec	Limits	, Qı	ualifiers			
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 SA	MPI E.	971836	3										
		071000	,	601172	20001	Sniko	MS	M	IC I	% Rec			
Parar	neter	ι	Jnits	Res	ult	Conc.	Result	% F	Rec	Limits		Qualif	iers
Chloride		ma/l			14.5		39	9.4	99	64-	 118		
Fluoride		ma/L			ND	12.5	12	2.0	92	75-	110		
Sulfate		mg/L			205	100	3	10	105	61-	119		
MATRIX SPIKE & M	ATRIX SPIKE	DUPLICATE	: 97183	7		971838							
				MS	MSD					_			
_		6011	7231002	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	<u> </u>
Parame	ter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	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	

# **REPORT OF LABORATORY ANALYSIS**

Page 29 of 31



# 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.

# **REPORT OF LABORATORY ANALYSIS**

Page 30 of 31



# 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		

# **REPORT OF LABORATORY ANALYSIS**

Page 31 of 31



# CHAIN-OF-CUSTODY / Analytical Request Document The Chain-of-Custody is a LEGAI. DOCUMENT. All relevant fields must be completed accurately.

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Section A Required Clien	t Information:	Section B Required Project Infom	nation:		Section (	C ormation:							Page		o		
Company:	COP CRA NM	Report To: Christine	Mathews		Attention:	ENFO	SC			<b></b>				╞			1
Address:	6121 Indian School Rd NE, Ste 200	Copy To: Kelly Blai	nchard, Angela Bown		Company	Vame:				RE	SULATO	RY AGEN	5				
	Albequerque, NM 87110				Addres:s:						NPDES	L GR(	.WM GNNC	IER T	DRINKINC	WATER	
Email To:	cmathews@craworld.corn	Purchase Order No.:			Pace Quote Reference:						UST	L RCF	۲٩ ۲۹	×	OTHER	NMOCI	5
Phone: (505	)884-0672 Fax: (505)884-4932	Project Name Mart	in 34 No. 2		Pace Projec Manager	<sup>4</sup> Alice	Tracy	1		Sit	e Locatio						
Requested Du	e Date/TAT: standard	Project Number 075(	335		Pace P:ofile	# 5341,	7				STATE						717.
									Reques	ed Anal	ysis Filte	red (Y/N)					$\overline{N}$
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*8260 VOCs: B	TEX, N, Methylene Chloride, 1,1,2,2,-												54	~	7	۲ ۲	
Tetrach Date: Tetrach	ue																
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32 of 35	Important Note: By signing this form you are accepting F	ace's NET 30 day paymen	t terms and agreeing to late char	ges of 1.5% per month f	or any invoice	s not paid witt	hin 30 days.			•			F-ALL	Q-020rev.	38, 12-Oct-2	2007	

Pace Analytical Sample Condit	tion Upon Receipt -	- ESI Tech Spe	CS	
Client Name: <u>Cop</u> C	2.A	Project #	#:QON7	039
Courier: Fed Ex $\Box$ UPS $\Box$ USPS $\Box$ Client $\Box$ $\langle \mathcal{C}   \mathcal{C} \langle \mathcal{C} \rangle \langle \mathcal{C} \rangle \rangle$	Commercial  Pace	e 🗌 Other 🗆	[	Dptional Proj Due Date: 3/22
Prototly Seel or Ocelar/Box Procents Vos Z				Toj Marrie.
Custody Seal on Cooler/Box Present: Tes D No	$\square$ Seals Intact: $\square$		Other 1	DIC
Thermometer line di (T-191) / T-194			$\frac{1}{2}$	cooling process has beguin
Cooler Temperature: $\frac{48/2.8}{}$	(circle o	none 🗆 Sampi ne)	Date and initials contents:	of person examining $73 - 70^{-12}$
Temperature should be above freezing to 6°C			7	
Chain of Custody present:		•	······································	
Chain of Custody filled out:	1 Yes 1 No 1 N/A 2	•	••••••••••••••••••••••••••••••••••••••	· · · · · · · · · · · · · · · · · · ·
Chain of Custody relinquished:		•		
Sampler name & signature on COC:	ZYes No N/A 4	•		
Samples arrived within holding time:	Yes No N/A 5	•	·	
Short Hold Time analyses (<72hr):	□Yes ZÎNo □N/A 6	·		
Rush Turn Around Time requested:	□Yes ZNO □N/A 7	•		
Sufficient volume:	Yes INO IN/A 8			
Correct containers used:	ZYes DNo DN/A			
-Pace containers used:	ZYes No N/A 9			
Containers intact:	Yes No N/A 1	0. 🖌		
Unpreserved 5035A soils frozen w/in 48hrs?	□Yes □No ØN/A 1	1.		
Filtered volume received for dissolved tests?	□Yes □No / N/A 1	2.		
Sample labels match COC:	Yes No N/A			
-Includes date/time/ID/analyses Matrix:	WT 1	3.	<u> </u>	
All containers needing preservation have been checked.	ZYes DNo DN/A	nw-z-m	W-7 BU.C	3/14/1 2.0 1/41
All containers needing preservation are found to be in compliance with EPA recommendation. Exceptions VOA coliform, TOC, O&G, WI-DRO (water),		4. Added 2.5 ml	HNUZ to each Lot # of	added
Trip Blank present:			preserve	(JU V)
Pace Trip Blank lot # (if purchased): 02312-3		5.		
Headspace in VOA vials ( >6mm):		<u></u>	<u></u>	u <del>na</del> i un
Project sampled in USDA Regulated Area:	1 YesNoN/A 1	6. 7. List State:		h
Client Notification/ Resolution:       Copy         Person Contacted:       I         Comments/ Resolution:       I/2         Puscing:       Puscing:	COC to Client? Y / (N Date/Time: Uples W high pH	Field Data F	Required? Y // Temp Log: when unpact recheck sam	N Record start and finish time king cooler, if >20 min, uple temps. $\frac{2}{3}$ (/3c) Start:
Project Manager Review:	D	Pate: 3/2/2	End: //4	D End: 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).

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

From:	"Bown, Angela" <abown@craworld.com></abown@craworld.com>
To:	"Alice Tracy" <alice.tracy@pacelabs.com>, "Mathews, Christine" <cmathews< th=""></cmathews<></alice.tracy@pacelabs.com>
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 <u>alice.tracy@pacelabs.com</u> <u>www.pacelabs.com</u> The email and documents accompanying this transmission contain confidential information belonging to the sender who is legally privileged. The information is intended only for the use of the individual(s) or entity(ies) named herein. If you are not the intended recipient, you are hereby notified that any disclosure, copying distribution or the taking of any action in reliance on the contents of this information is strictly prohibited. If you have received this in error, please immediately notify us by telephone (1.888.990.PACE) to arrange for return of the original documents.

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

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 Flanazan

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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Page 1 of 31



# CERTIFICATIONS

Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

### **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**

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Page 2 of 31



# 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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Page 3 of 31



# SAMPLE ANALYTE COUNT

 Project:
 Martin 34 No. 2 (075035)

 Pace Project No.:
 60122981

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

# **REPORT OF LABORATORY ANALYSIS**

Page 4 of 31



Project: Martin 34 No. 2 (075035)

# Pace Project No.: 60122981

## Method: EPA 6010

Description:6010 MET ICP, DissolvedClient:COP Conestoga-Rovers & Associates, Inc. NMDate: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**

Page 5 of 31



Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

Method:EPA 6010Description:6010 MET ICP, DissolvedClient:COP Conestoga-Rovers & Associates, Inc. NMDate: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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Page 6 of 31


Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

# Method: EPA 8270C by SIM

Description:8270 MSSV PAH by SIMClient:COP Conestoga-Rovers & Associates, Inc. NMDate: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**

Page 7 of 31



Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

# Method: EPA 8270C by SIM

Description:8270 MSSV PAH by SIMClient:COP Conestoga-Rovers & Associates, Inc. NMDate:June 21, 2012

# **Duplicate Sample:**

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

# Additional Comments:

# **REPORT OF LABORATORY ANALYSIS**

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Page 8 of 31



Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

### Method: EPA 5030B/8260

Description:8260 MSVClient:COP Conestoga-Rovers & Associates, Inc. NMDate: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**

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Page 9 of 31



Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

# Method: SM 2540C

Description:2540C Total Dissolved SolidsClient:COP Conestoga-Rovers & Associates, Inc. NMDate: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:

# **REPORT OF LABORATORY ANALYSIS**

Page 10 of 31



Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

# Method: EPA 300.0

Description:300.0 IC Anions 28 DaysClient:COP Conestoga-Rovers & Associates, Inc. NMDate: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.

# **REPORT OF LABORATORY ANALYSIS**

Page 11 of 31



Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

Sample: GW075035-060712-CB-MW- 1	Lab ID: 60	122981001	Collected: 06/07/	12 15:00	0 Received: 06	5/08/12 08:45 N	latrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Me	thod: EPA 60	010 Preparation Met	hod: EF	PA 3010			
Boron, Dissolved	<b>1000</b> u	ıg/L	100	1	06/15/12 15:55	06/18/12 12:27	7440-42-8	
Iron, Dissolved	<b>5980</b> u	ıg/L	50.0	1	06/15/12 15:55	06/18/12 12:27	7439-89-6	
Manganese, Dissolved	<b>2090</b> u	ıg/L	5.0	1	06/15/12 15:55	06/18/12 12:27	7439-96-5	В
8270 MSSV PAH by SIM	Analytical Me	thod: EPA 82	270C by SIM Prepar	ation M	ethod: EPA 35100	>		
Naphthalene <i>Surrogates</i>	<b>22.0</b> u	ıg/L	2.5	5	06/13/12 00:00	06/20/12 13:10	91-20-3	
Nitrobenzene-d5 (S)	149 %	6	42-120	1	06/13/12 00:00	06/19/12 19:39	4165-60-0	S0
2-Fluorobiphenyl (S)	57 %	6	44-120	1	06/13/12 00:00	06/19/12 19:39	321-60-8	
Terphenyl-d14 (S)	91 %	6	46-131	1	06/13/12 00:00	06/19/12 19:39	1718-51-0	
8260 MSV	Analytical Me	thod: EPA 50	030B/8260					
Benzene	<b>3000</b> u	ıg/L	100	100		06/13/12 12:56	71-43-2	
Ethylbenzene	<b>300</b> u	ıg/L	100	100		06/13/12 12:56	100-41-4	
Methylene chloride	ND u	ıg/L	100	100		06/13/12 12:56	75-09-2	
Naphthalene	ND u	ıg/L	1000	100		06/13/12 12:56	91-20-3	
1,1,2,2-Tetrachloroethane	ND u	ıg/L	100	100		06/13/12 12:56	79-34-5	
Toluene	<b>3830</b> u	ıg/L	100	100		06/13/12 12:56	108-88-3	
Xylene (Total)	<b>4050</b> u	ıg/L	300	100		06/13/12 12:56	1330-20-7	
Surrogates	400.0		07.440	400		00/10/10 10 50	100.00.1	
4-Bromofluorobenzene (S)	103 %	6	87-113	100		06/13/12 12:56	460-00-4	
Dibromofluoromethane (S)	97 %	6	86-112	100		06/13/12 12:56	1868-53-7	
1,2-Dichloroethane-d4 (S)	102 9	6	82-119	100		06/13/12 12:56	17060-07-0	
Diverse at the set of	98 %	<b>6</b>	90-110	100		06/13/12 12:56	2037-26-5	
Preservation pH	1.0		0.10	100		06/13/12 12:56		
2540C Total Dissolved Solids	Analytical Me	thod: SM 254	40C					
Total Dissolved Solids	<b>25000</b> n	ng/L	5.0	1		06/14/12 10:40		
300.0 IC Anions 28 Days	Analytical Me	thod: EPA 30	0.0					
Chloride	<b>285</b> n	ng/L	50.0	50		06/19/12 14:32	16887-00-6	
Fluoride	ND n	ng/L	0.20	1		06/18/12 17:23	16984-48-8	
Sulfate	<b>14100</b> n	ng/L	2000	2000		06/19/12 14:47	14808-79-8	

# **REPORT OF LABORATORY ANALYSIS**

Page 12 of 31



Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

Sample: GW075035-060712-CB-MW- 2	Lab ID: 601	22981002	Collected: 06/06/	12 18:30	) Received: 06	/08/12 08:45 N	latrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Met	hod: EPA 60	10 Preparation Met	hod: EP	A 3010			
Boron, Dissolved	<b>847</b> ug	g/L	100	1	06/15/12 15:55	06/18/12 12:30	7440-42-8	
Iron, Dissolved	<b>4790</b> ug	g/L	50.0	1	06/15/12 15:55	06/18/12 12:30	7439-89-6	
Manganese, Dissolved	<b>3880</b> ug	g/L	5.0	1	06/15/12 15:55	06/18/12 12:30	7439-96-5	В
8270 MSSV PAH by SIM	Analytical Met	hod: EPA 82	70C by SIM Prepar	ation Me	ethod: EPA 35100	;		
Naphthalene <i>Surrogates</i>	<b>23.8</b> ug	g/L	2.5	5	06/13/12 00:00	06/20/12 13:25	91-20-3	
Nitrobenzene-d5 (S)	121 %	1	42-120	1	06/13/12 00:00	06/19/12 19:55	4165-60-0	S0
2-Fluorobiphenyl (S)	61 %	1	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	
8260 MSV	Analytical Met	hod: EPA 50	30B/8260					
Benzene	<b>207</b> ug	g/L	5.0	5		06/13/12 13:10	71-43-2	
Ethylbenzene	<b>219</b> ug	g/L	5.0	5		06/13/12 13:10	100-41-4	
Methylene chloride	ND ug	g/L	5.0	5		06/13/12 13:10	75-09-2	
Naphthalene	<b>61.1</b> ug	g/L	50.0	5		06/13/12 13:10	91-20-3	
1,1,2,2-Tetrachloroethane	ND ug	g/L	5.0	5		06/13/12 13:10	79-34-5	
Toluene	ND ug	g/L	5.0	5		06/13/12 13:10	108-88-3	
Xylene (Total)	<b>44.3</b> ug	g/L	15.0	5		06/13/12 13:10	1330-20-7	
Surrogates				_				
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	
Ioluene-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		
2540C Total Dissolved Solids	Analytical Met	hod: SM 254	10C					
Total Dissolved Solids	<b>28000</b> m	g/L	5.0	1		06/13/12 09:50		
300.0 IC Anions 28 Days	Analytical Met	hod: EPA 30	0.0					
Chloride	<b>400</b> m	g/L	50.0	50		06/19/12 15:03	16887-00-6	
Fluoride	ND m	g/L	0.20	1		06/18/12 17:38	16984-48-8	
Sulfate	<b>26100</b> m	g/L	2000	2000		06/19/12 15:18	14808-79-8	

# **REPORT OF LABORATORY ANALYSIS**

Page 13 of 31



Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

Sample: GW075035-060712-CB-MW- 3	Lab ID: 601	22981003	Collected: 06/07/	12 14:00	) Received: 06	5/08/12 08:45 N	latrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Met	hod: EPA 601	0 Preparation Met	hod: EP	A 3010			
Boron, Dissolved	<b>889</b> ug	ı/L	100	1	06/15/12 15:55	06/18/12 12:32	7440-42-8	
Iron, Dissolved	ND ug	J/L	50.0	1	06/15/12 15:55	06/18/12 12:32	7439-89-6	
Manganese, Dissolved	<b>2020</b> ug	J/L	5.0	1	06/15/12 15:55	06/18/12 12:32	7439-96-5	В
8270 MSSV PAH by SIM	Analytical Met	hod: EPA 827	OC by SIM Prepar	ation Me	ethod: EPA 35100	>		
Naphthalene <i>Surrogates</i>	ND ug	J/L	0.50	1	06/13/12 00:00	06/19/12 20:10	91-20-3	
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	
8260 MSV	Analytical Met	hod: EPA 503	0B/8260					
Benzene	ND ug	J/L	1.0	1		06/13/12 13:25	71-43-2	
Ethylbenzene	ND ug	J/L	1.0	1		06/13/12 13:25	100-41-4	
Methylene chloride	ND ug	ı∕L	1.0	1		06/13/12 13:25	75-09-2	
Naphthalene	ND ug	ı∕L	10.0	1		06/13/12 13:25	91-20-3	
1,1,2,2-Tetrachloroethane	ND ug	ı∕L	1.0	1		06/13/12 13:25	79-34-5	
Toluene	ND ug	ı∕L	1.0	1		06/13/12 13:25	108-88-3	
Xylene (Total)	ND ug	J/L	3.0	1		06/13/12 13:25	1330-20-7	
Surrogates	400.0/		07.440			00/40/40 40 05	100.00.1	
4-Bromofluorobenzene (S)	106 %		87-113	1		06/13/12 13:25	460-00-4	
Dibromotiuorometnane (S)	102 %		86-112	1		06/13/12 13:25	1868-53-7	
Taluana da (S)	110 %		82-119	1		06/13/12 13:25	17060-07-0	
Dresservation pH	97 %		90-110	1		06/13/12 13:25	2037-20-5	
	1.0		0.10	I		00/13/12 13.23		
2540C Total Dissolved Solids	Analytical Met	hod: SM 2540	C					
Total Dissolved Solids	<b>34100</b> m	g/L	5.0	1		06/14/12 10:40		
300.0 IC Anions 28 Days	Analytical Met	hod: EPA 300	0.0					
Chloride	<b>431</b> m	g/L	50.0	50		06/19/12 15:34	16887-00-6	
Fluoride	ND m	g/L	0.20	1		06/18/12 17:54	16984-48-8	
Sulfate	<b>23300</b> m	g/L	2000	2000		06/19/12 16:04	14808-79-8	

# **REPORT OF LABORATORY ANALYSIS**

Page 14 of 31



Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

Sample: GW075035-060712-CB-MW- 4	Lab ID: 6012	2981004	Collected: 06/07/	12 14:45	5 Received: 06	/08/12 08:45 N	latrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Meth	od: EPA 60′	10 Preparation Met	hod: EP	A 3010			
Boron, Dissolved	<b>558</b> ug/	L	100	1	06/15/12 15:55	06/18/12 12:34	7440-42-8	
Iron, Dissolved	<b>983</b> ug/	L	50.0	1	06/15/12 15:55	06/18/12 12:34	7439-89-6	
Manganese, Dissolved	<b>5250</b> ug/	L	5.0	1	06/15/12 15:55	06/18/12 12:34	7439-96-5	В
8270 MSSV PAH by SIM	Analytical Methe	od: EPA 827	70C by SIM Prepar	ation Me	ethod: EPA 35100	;		
Naphthalene <i>Surrogates</i>	<b>0.79</b> ug/	L	0.50	1	06/13/12 00:00	06/19/12 20:26	91-20-3	
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	
8260 MSV	Analytical Mether	od: EPA 503	30B/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	
Surrogates	447 0/		07 110	4		06/12/12 12:20	460.00.4	80
A-BIOMONUOIODENZENE (S)	10/ 9/		07-113	1		06/13/12 13:39	400-00-4	30
1.2 Dichloroothono d4 (S)	104 %		92 110	1		06/13/12 13:39	1000-00-7	
Toluene-d8 (S)	08 %		90-110	1		06/13/12 13:39	2037-26-5	
Preservation pH	1.0		0.10	1		06/13/12 13:39	2007-20-0	
2540C Total Dissolved Solids	Analytical Methe	od: SM 254	0C					
Total Dissolved Solids	<b>40300</b> mg	/L	5.0	1		06/14/12 10:40		
300.0 IC Anions 28 Days	Analytical Mether	od: EPA 300	0.0					
Chloride	<b>378</b> mg	/L	50.0	50		06/19/12 17:06	16887-00-6	
Fluoride	<b>1.4</b> mg	/L	0.20	1		06/18/12 18:09	16984-48-8	
Sulfate	<b>28400</b> mg	/L	2000	2000		06/19/12 17:22	14808-79-8	

# **REPORT OF LABORATORY ANALYSIS**

Page 15 of 31



Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

Sample: GW075035-060712-CB-MW- 5	Lab ID: 601	22981005	Collected: 06/07/	12 15:20	0 Received: 06	i/08/12 08:45 N	latrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM	Analytical Met	hod: EPA 82	270C by SIM Prepar	ation M	ethod: EPA 35100	)		
Naphthalene <i>Surrogates</i>	ND ug	J/L	0.50	1	06/13/12 00:00	06/19/12 20:41	91-20-3	
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	
8260 MSV	Analytical Met	hod: EPA 50	)30B/8260					
Benzene	<b>1030</b> ug	J/L	20.0	20		06/13/12 13:53	71-43-2	
Ethylbenzene	ND ug	J/L	20.0	20		06/13/12 13:53	100-41-4	
Methylene chloride	ND ug	J/L	20.0	20		06/13/12 13:53	75-09-2	
Naphthalene	ND ug	ı∕L	200	20		06/13/12 13:53	91-20-3	
1,1,2,2-Tetrachloroethane	ND ug	ı∕L	20.0	20		06/13/12 13:53	79-34-5	
Toluene	ND ug	ı∕L	20.0	20		06/13/12 13:53	108-88-3	
Xylene (Total)	ND ug	J/L	60.0	20		06/13/12 13:53	1330-20-7	
Surrogates								
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		
2540C Total Dissolved Solids	Analytical Met	hod: SM 254	40C					
Total Dissolved Solids	<b>13900</b> m	g/L	5.0	1		06/14/12 10:41		
300.0 IC Anions 28 Days	Analytical Met	hod: EPA 30	0.0					
Chloride	<b>219</b> m	g/L	50.0	50		06/19/12 17:37	16887-00-6	
Fluoride	<b>0.69</b> m	g/L	0.20	1		06/18/12 18:24	16984-48-8	
Sulfate	<b>8010</b> m	g/L	2000	2000		06/19/12 17:52	14808-79-8	

# **REPORT OF LABORATORY ANALYSIS**

Page 16 of 31



Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

Sample: GW075035-060712-CB-MW- 6	Lab ID: 6012	2981006	Collected: 06/07/	12 18:00	) Received: 06	5/08/12 08:45 N	latrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Meth	od: EPA 601	0 Preparation Met	hod: EP	A 3010			
Boron, Dissolved	<b>572</b> ug/	Ľ	100	1	06/15/12 15:55	06/18/12 12:37	7440-42-8	
Iron, Dissolved	ND ug/	Ľ	50.0	1	06/15/12 15:55	06/18/12 12:37	7439-89-6	
Manganese, Dissolved	<b>2010</b> ug/	Ľ	5.0	1	06/15/12 15:55	06/18/12 12:37	7439-96-5	В
8270 MSSV PAH by SIM	Analytical Meth	od: EPA 827	70C by SIM Prepar	ation Me	ethod: EPA 35100	>		
Naphthalene <i>Surrogates</i>	<b>34.0</b> ug/	Ľ	2.5	5	06/14/12 00:00	06/20/12 13:40	91-20-3	
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	
8260 MSV	Analytical Meth	od: EPA 503	30B/8260					
Benzene	<b>25.5</b> ug/	Ľ	10.0	10		06/13/12 14:08	71-43-2	
Ethylbenzene	<b>181</b> ug/	Ľ	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)	<b>3160</b> ug/	L	30.0	10		06/13/12 14:08	1330-20-7	
Surrogates						/ /		
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	
Ioluene-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		
2540C Total Dissolved Solids	Analytical Meth	od: SM 254	0C					
Total Dissolved Solids	<b>40600</b> mg	/L	5.0	1		06/14/12 10:41		
300.0 IC Anions 28 Days	Analytical Meth	od: EPA 300	0.0					
Chloride	<b>326</b> mg	/L	50.0	50		06/19/12 18:08	16887-00-6	
Fluoride	<b>0.84</b> mg	/L	0.20	1		06/18/12 18:40	16984-48-8	
Sulfate	<b>26800</b> mg	/L	2000	2000		06/19/12 18:23	14808-79-8	

# **REPORT OF LABORATORY ANALYSIS**

Page 17 of 31



Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

Sample: GW075035-060712-CB-MW- 7	Lab ID: 60122	2981007	Collected: 06/07/	12 14:15	5 Received: 06	/08/12 08:45 N	latrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Metho	od: EPA 601	0 Preparation Met	hod: EP	A 3010			
Boron, Dissolved	<b>824</b> ug/L	_	100	1	06/15/12 15:55	06/18/12 12:39	7440-42-8	
Iron, Dissolved	<b>866</b> ug/L	_	50.0	1	06/15/12 15:55	06/18/12 12:39	7439-89-6	
Manganese, Dissolved	<b>3140</b> ug/L	-	5.0	1	06/15/12 15:55	06/18/12 12:39	7439-96-5	В
8270 MSSV PAH by SIM	Analytical Metho	od: EPA 827	0C by SIM Prepar	ation Me	ethod: EPA 35100	)		
Naphthalene <i>Surrogates</i>	<b>4.2</b> ug/L	-	0.50	1	06/14/12 00:00	06/19/12 21:43	91-20-3	
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	
8260 MSV	Analytical Metho	od: EPA 503	0B/8260					
Benzene	<b>12.2</b> ug/L	_	5.0	5		06/13/12 14:22	71-43-2	
Ethylbenzene	<b>333</b> 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) <i>Surrogates</i>	ND ug/L	-	15.0	5		06/13/12 14:22	1330-20-7	
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		
2540C Total Dissolved Solids	Analytical Metho	od: SM 2540	C					
Total Dissolved Solids	<b>35700</b> mg/	L	5.0	1		06/14/12 10:41		
300.0 IC Anions 28 Days	Analytical Metho	od: EPA 300	0.0					
Chloride	<b>300</b> 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	

# **REPORT OF LABORATORY ANALYSIS**

Page 18 of 31



Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

Sample: GW075035-060712-CB-DUP	Lab ID:	60122981008	Collected: 06/07/2	2 18:10	Received: 0	06/08/12 08:45 M	latrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical	Method: EPA 50	030B/8260					
Benzene	24.7	<b>7</b> ug/L	5.0	5		06/13/12 14:36	71-43-2	
Ethylbenzene	178	<b>B</b> ug/L	5.0	5		06/13/12 14:36	100-41-4	
Methylene chloride	NE	) ug/L	5.0	5		06/13/12 14:36	75-09-2	
Naphthalene	NE	) ug/L	50.0	5		06/13/12 14:36	91-20-3	
1,1,2,2-Tetrachloroethane	NE	) ug/L	5.0	5		06/13/12 14:36	79-34-5	
Toluene	NE	) ug/L	5.0	5		06/13/12 14:36	108-88-3	
Xylene (Total)	3220	0 ug/L	30.0	10		06/15/12 17:45	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	102	2 %	87-113	5		06/13/12 14:36	460-00-4	
Dibromofluoromethane (S)	102	2 %	86-112	5		06/13/12 14:36	1868-53-7	
1,2-Dichloroethane-d4 (S)	103	3 %	82-119	5		06/13/12 14:36	17060-07-0	
Toluene-d8 (S)	95	5 %	90-110	5		06/13/12 14:36	2037-26-5	
Preservation pH	1.0	D	0.10	5		06/13/12 14:36		

# **REPORT OF LABORATORY ANALYSIS**

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Page 19 of 31



Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

Sample: TRIP BLANK	Lab ID: 601	22981009	Collected: 06/07/	12 08:00	Received: 06	/08/12 08:45 N	latrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Met	hod: EPA 50	030B/8260					
Benzene	ND ug	J/L	1.0	1		06/13/12 14:51	71-43-2	
Ethylbenzene	ND ug	J/L	1.0	1		06/13/12 14:51	100-41-4	
Methylene chloride	ND ug	J/L	1.0	1		06/13/12 14:51	75-09-2	
Naphthalene	ND ug	J/L	10.0	1		06/13/12 14:51	91-20-3	
1,1,2,2-Tetrachloroethane	ND ug	J/L	1.0	1		06/13/12 14:51	79-34-5	
Toluene	ND ug	J/L	1.0	1		06/13/12 14:51	108-88-3	
Xylene (Total)	ND ug	J/L	3.0	1		06/15/12 17:59	1330-20-7	
Surrogates								
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	1.0		0.10	1		06/13/12 14:51		

# **REPORT OF LABORATORY ANALYSIS**

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Page 20 of 31



Project: Martin 34 No. 2 (075035)

EPA 3010

Pace Project No.: 60122981

QC Batch Method:

QC Batch: MPRP/18387

Analysis Method:

Analysis Description: 6010 MET Dissolved

EPA 6010

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 S	61		1014962									
			MS	MSD								
	6012	2912001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
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	

# **REPORT OF LABORATORY ANALYSIS**

Page 21 of 31



Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

QC Batch:	MSV/46290	Analysis Method:	EPA 5030B/8260
QC Batch Method:	EPA 5030B/8260	Analysis Description:	8260 MSV Water 10 mL Purge
Associated Lab Samp	bles: 60122981001, 60122981002, 6 60122981008, 60122981009	60122981003, 60122981004	, 60122981005, 60122981006, 60122981007,

# METHOD BLANK: 1013184

Matrix: Water

# Associated Lab Samples: 60122981001, 60122981002, 60122981003, 60122981004, 60122981005, 60122981006, 60122981007, 60122981008, 60122981009

	Blank	Reporting		
Units Result		Limit	Analyzed	Qualifiers
ug/L	ND	1.0	06/13/12 09:49	
ug/L	ND	1.0	06/13/12 09:49	
ug/L	ND	1.0	06/13/12 09:49	
ug/L	ND	1.0	06/13/12 09:49	
ug/L	ND	10.0	06/13/12 09:49	
ug/L	ND	1.0	06/13/12 09:49	
ug/L	ND	3.0	06/13/12 09:49	
%	100	82-119	06/13/12 09:49	
%	101	87-113	06/13/12 09:49	
%	103	86-112	06/13/12 09:49	
%	100	90-110	06/13/12 09:49	
	Units ug/L ug/L ug/L ug/L ug/L ug/L ug/L % % % %	Blank         Result         ND           ug/L         ND         ND           %         100         %           %         100         %	Blank         Reporting           Units         Result         Limit           ug/L         ND         1.0           ug/L         ND         3.0           %         100         82-119           %         103         86-112           %         100         90-110	Blank         Reporting           Units         Result         Limit         Analyzed           ug/L         ND         1.0         06/13/12 09:49           ug/L         ND         3.0         06/13/12 09:49           %         100         82-119         06/13/12 09:49           %         101         87-113         06/13/12 09:49           %         103         86-112         06/13/12 09:49           %         100         90-110         06/13/12 09:49

# LABORATORY CONTROL SAMPLE: 1013185

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	23.4	117	78-124	
Benzene	ug/L	20	22.8	114	82-117	
Ethylbenzene	ug/L	20	22.2	111	79-121	
Methylene chloride	ug/L	20	21.6	108	75-118	
Naphthalene	ug/L	20	23.8	119	66-133	
Toluene	ug/L	20	23.0	115	80-120	
Xylene (Total)	ug/L	60	67.2	112	75-120	
1,2-Dichloroethane-d4 (S)	%			105	82-119	
4-Bromofluorobenzene (S)	%			103	87-113	
Dibromofluoromethane (S)	%			101	86-112	
Toluene-d8 (S)	%			99	90-110	

# **REPORT OF LABORATORY ANALYSIS**

Page 22 of 31



Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

QC Batch:	MSV/46	380	Analysis Met	hod: E	PA 5030B/8260	
QC Batch Method:	EPA 503	80B/8260	Analysis Des	cription: 8	260 MSV Water 10	mL Purge
Associated Lab San	nples: 6	0122981008, 60122981009				
METHOD BLANK:	1014747		Matrix:	Water		
Associated Lab San	nples: 6	0122981008, 60122981009				
			Blank	Reporting		
Paran	neter	Units	Result	Limit	Analyzed	Qualifiers
Xylene (Total)		ug/L	ND	3.0	0 06/15/12 16:48	
1,2-Dichloroethane-	d4 (S)	%	99	82-119	06/15/12 16:48	
4-Bromofluorobenze	ene (S)	%	104	87-113	3 06/15/12 16:48	
Dibromofluorometha	ane (S)	%	102	86-112	2 06/15/12 16:48	
Toluono de (S)		%	99	90-110	06/15/12 16:48	

# LABORATORY CONTROL SAMPLE: 1014748

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	60	66.5	111	75-120	
1,2-Dichloroethane-d4 (S)	%			103	82-119	
4-Bromofluorobenzene (S)	%			102	87-113	
Dibromofluoromethane (S)	%			107	86-112	
Toluene-d8 (S)	%			100	90-110	

# **REPORT OF LABORATORY ANALYSIS**

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Page 23 of 31



Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

Associated Lab Samples:

METHOD BLANK: 1013026

QC Batch:	OEXT/33549
QC Batch Method:	EPA 3510C

Analysis Method: Analysis Description:

510C Analysis Description: 8270 Water PAH by SIM MSSV 60122981001, 60122981002, 60122981003, 60122981004, 60122981005

Matrix: Water

EPA 8270C by SIM

Associated Lab Samples: 60122981001, 60122981002, 60122981003, 60122981004, 60122981005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Naphthalene	ug/L		0.50	06/19/12 17:35	
2-Fluorobiphenyl (S)	%	78	44-120	06/19/12 17:35	
Nitrobenzene-d5 (S)	%	77	42-120	06/19/12 17:35	
Terphenyl-d14 (S)	%	105	46-131	06/19/12 17:35	

# LABORATORY CONTROL SAMPLE: 1013027

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Naphthalene	ug/L	10	7.6	76	41-112	
2-Fluorobiphenyl (S)	%			75	44-120	
Nitrobenzene-d5 (S)	%			77	42-120	
Terphenyl-d14 (S)	%			88	46-131	

# **REPORT OF LABORATORY ANALYSIS**

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Page 24 of 31



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 Des	cription: 8	8270 Water PAH by SIM MSSV		
Associated Lab Sam	ples: 60122981	006, 60122981007					
METHOD BLANK:	1013750		Matrix:	Water			
Associated Lab Sam	ples: 60122981	006, 60122981007					
			Blank	Reporting			
Param	eter	Units	Result Limit		Analyzed	Qualifiers	
Naphthalene		ug/L	ND	0.50	0 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 CON	TROL SAMPLE:	1013751					

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

# **REPORT OF LABORATORY ANALYSIS**

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Page 25 of 31



Project: Martin 34 No. 2 (075035) Pace Project No.: 60122981 QC Batch: WET/35515 Analysis Method: SM 2540C QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids Associated Lab Samples: 60122981002 METHOD BLANK: 1013090 Matrix: Water Associated Lab Samples: 60122981002 Reporting Blank Parameter Result Limit Analyzed Qualifiers Units **Total Dissolved Solids** ND 5.0 06/13/12 09:47 mg/L SAMPLE DUPLICATE: 1013091 60122870017 Dup Max Parameter Units Result Result RPD RPD Qualifiers **Total Dissolved Solids** 2230 mg/L 2200 1 17 SAMPLE DUPLICATE: 1013092 60122948004 Dup Max RPD RPD Qualifiers Parameter Units Result Result Total Dissolved Solids 8270 0 17 8240 mg/L

# **REPORT OF LABORATORY ANALYSIS**

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Page 26 of 31



Project:	Martin 34 No. 2	(075035)						
Pace Project No.:	60122981							
QC Batch:	WET/35540	T/35540		nod: SM	A 2540C			
QC Batch Method:	SM 2540C		Analysis Desc	cription: 25	40C Total Dissolve	ed Solids		
Associated Lab San	nples: 6012298	31001, 6012298100	3, 60122981004, 60	0122981005, 60	0122981006, 60122	2981007		
METHOD BLANK:	1013789		Matrix:	Water				
Associated Lab San	nples: 6012298	31001, 6012298100	3, 60122981004, 60	0122981005, 60	0122981006, 60122	2981007		
			Blank	Reporting				
Paran	Parameter		Result	Limit	Analyzed	Qualifiers		
Total Dissolved Soli	ds	mg/L	ND	5.0	06/14/12 10:37			
SAMPLE DUPLICA	TE: 1013790							
			60122816001	Dup		Max		
Paran	neter	Units	Result	Result	RPD	RPD	Qualifiers	
Total Dissolved Soli	ds	mg/L	375	379	1	17		
SAMPLE DUPLICA	TE: 1013791							
			60122898002	Dup		Max		
Paran	neter	Units	Result	Result	RPD	RPD	Qualifiers	
Total Dissolved Soli	ds	mg/L	2350	2300	2	17		

Date: 06/21/2012 09:03 AM

# **REPORT OF LABORATORY ANALYSIS**

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Page 27 of 31



Project: Martin	34 No. 2 (075035)										
Pace Project No.: 60122	981										
QC Batch: WET	A/20584	Analys	is Method:	EI	PA 300.0						
QC Batch Method: EPA	300.0	Analysi	is Descriptio	on: 30	0.0 IC Anio	ns					
Associated Lab Samples:	60122981001, 6012298100	2, 60122981	003, 601229	981004, 6	0122981005	5, 60122981	006, 6012	2981007			
METHOD BLANK: 10161	93	N	latrix: Wate	er							
Associated Lab Samples:	60122981001, 6012298100	2, 60122981	003, 601229	981004, 6	0122981005	5, 60122981	006, 6012	2981007			
		Blank	Re	porting							
Parameter	Units	Result	t I	Limit	Analyz	ed C	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: 10172	35	N	Aatrix: Wate	٩r							
Associated Lab Samples:	60122981001 6012298100	2 60122981	003 601229	981004 6	0122981005	60122981	006 6012	2981007			
	00122001001, 0012200100	Blank	Re	portina	0122001000	, 00122001	000, 0012	2001007			
Parameter	Units	Result	t l	Limit	Analyz	ed C	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										
		Spike	LCS		LCS	% Rec					
Parameter	Units	Conc.	Result	:	% Rec	Limits	Qı	ualifiers	_		
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										
		Spike	LCS		LCS	% Rec					
Parameter	Units	Conc.	Result	:	% Rec	Limits	Qu	ualifiers			
Chloride	mg/L	5		4.8	95	90-	110		-		
Sulfate	mg/L	5		5.0	99	90-	110				
MATRIX SPIKE & MATRIX	SPIKE DUPLICATE: 1016	195		1016196							
		MS	MSD					_			
Parameter	60122892004 Units Result	Spike Conc	Spike Conc	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride				12.2			 	 64_110		12	
Fluoride	mg/L 0.74	2.5	2.5	3.4	3.2	33 107	97	75-110	28	10	
Sulfate	mg/L 96.5	50	50	147	149	102	104	61-119	1	10	

Date: 06/21/2012 09:03 AM

# **REPORT OF LABORATORY ANALYSIS**

Page 28 of 31



 Project:
 Martin 34 No. 2 (075035)

 Pace Project No.:
 60122981

MATRIX SPIKE SAMPLE:	1016197						
		60122981003	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% 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	

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# **REPORT OF LABORATORY ANALYSIS**

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Page 29 of 31



# QUALIFIERS

Project: Martin 34 No. 2 (075035)

Pace Project No.: 60122981

### 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.

# **REPORT OF LABORATORY ANALYSIS**

Page 30 of 31



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

Date: 06/21/2012 09:03 AM

# **REPORT OF LABORATORY ANALYSIS**

Page 31 of 31

	tion Illnow Doccin		
www.pacelabs.com		t – ESI Tech Spe	
Client Name: <u>(OP C</u>	RA NM	Project	#: 60122981
Courier: Fed Ex UPS USPS Client	Commercial 🗆 🛛 P	ace 🗆 Other 🗆	Optional Proi Due Date:
Tracking #: <u>\$993 900) 6600</u>	Pace Shipping Label 1	Used? Yes 🗆 No	Proj Name: Marti 34
Custody Seal on Cooler/Box Present: Yes A No	o □ Seals intact:	res 🗹 No 🗆	
Packing Material: Bubble Wrap D Bubble B	ags 🗹 🛛 🛛 Foam	🗹 🛛 None 🗆	Other D ZAC
Thermometer Used: $\frac{(-19)^{7}}{(-1)^{7}}$ T-194 Cooler Temperature: $\frac{(-19)^{7}}{(-1)^{7}}$	Fype of Ice: War BI (circl	ue None 🗆 Samp e one)	les received on ice, cooling process has begun. Date and initials of person examining
Temperature should be above freezing to 6°C			contents: $\int \frac{24}{5} \frac{5}{7} \frac{4}{7} \frac{1}{7} \frac{1}{7}$
Chain of Custody present:	Yes No N/A	1.	
Chain of Custody filled out:		2.	
Chain of Custody relinquished:		3.	
Sampler name & signature on COC:	Yes No N/A	4.	
Samples arrived within holding time:		5.	
Short Hold Time analyses (<72hr):		6.	
Rush Turn Around Time requested:		7.	
Sufficient volume:	Yes DNO DN/A	8.	
Correct containers used:	ŹYes ⊡No □N/A		
-Pace containers used:		9.	
Containers intact:		10.	
Unpreserved 5035A soils frozen w/in 48hrs?		11.	
Filtered volume received for dissolved tests?		12.	
Sample labels match COC:	Yes No N/A		
-Includes date/time/ID/analyses Matrix:	WT	13.	
All containers needing preservation have been checked.		Added 25	of HNOS to MW-1 BP3N
All containers needing preservation are found to be in compliance with EPA recommendation. Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water),		In tal P# 6-0 14. Initial when	Lot # of added 12624
Phenolics Trip Blank present:		completed	preservative / CCC /
Pace Trin Blank lot # (if nurchased): $0 \subset 21 \setminus 2 \subset 3$		15	
Headspace in VOA vials ( >6mm):		10.	
· · · · · · · · · · · · · · · · · · ·		16	
Project sampled in USDA Regulated Area:	□Yes □No <b>□</b> N/A	17. List State:	
Client Notification/ Resolution: Copy	COC to Client? Y	N Field Data R	Required? Y / N
Person Contacted:	Date/Time:	<u> </u>	<b>Temp Log</b> : Record start and finish times when unpacking cooler, if >20 min
Comments/ Resolution:			recheck sample temps.
		ž	Start: /625 Start:
M		- Intilin.	End: /6 40 End:
Project Manager Review:		Date:	[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).

,

Pace Analytical No. 

# CHAIN-OF-CUSTODY / Analytical Request Document The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Secti	an A and Cliant Information:	Section B Remitred Protect Information:		Sec	tion C ice Informatio	ï						L	Page:	لانعتمين	of	
Comp		Report To: Christine Mathews		Atter	ntion: El	VFOS						1				
Addre	<ul> <li>6121 Indian School Rd NE, Ste 200</li> </ul>	Copy To: Kelly Blanchard, Angela	a Bown	Com	pany Name:					REGUL	ATORY-4	GENCY				
	Albequerque, NM 87110			Add	ess:					L NPI	ES 🕅	GROUNI	) WATER	Ц Ц	M SNING M	ATER
Email	<sup>ro:</sup> <u>cmathews@craworld.com</u>	Purchase Order No.:		Pace Refe	Quote rence:		1			LSN L	SL.	RCRA			HER	
Phone	(505)884-0672 Fax: (505)884-4932 F	Project Name: Martin 34 No. 2		Pace	Project Al	ice Tracy				Site Lo	ation					
Requ	sted Due Date/TAT: standard F	Project Number: 075035		Pace	Profile #: 53	341, 7				S	ATE:	NN	<u>    </u> 			
								Requ	ested /	Inalysis	Filtered	(N/N)				
	Section D Valid Matrix Cov Recuired Client Information MATRIX	vdes Dieft CC	DLLECTED		P L	eservatives	<b>1</b> № /A									
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	- Important Note: By signing this form you are accepting F	Pace's NET 30 day payment terms and agreeir	ng to late charges of 1.5% p	er month for any	invoices not pa	aid within 30 days.							=-ALL-Q-03	20rev.08,	2-Oct-200	2

- 55



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

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 Flanazan

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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Page 1 of 26



# CERTIFICATIONS

Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

### 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

# **REPORT OF LABORATORY ANALYSIS**

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Page 2 of 26



# 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

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Page 3 of 26



# SAMPLE ANALYTE COUNT

Project: 075035 MARTIN 34 NO 2

Pace Project No .:	60129930
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Lab ID	Sample ID	Method	Analysts	Analytes Reported
60129930001 GW-	 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
		EPA 300.0	AJM	3
60129930003	GW-075035-092512-CM-MW-2	EPA 6010	JGP, TDS	3
		EPA 8270C by SIM	BRM	4
		EPA 5030B/8260	PRG	12
		SM 2540C	FJF	1
		EPA 300.0	AJM	3
60129930004 GW	GW-075035-092512-CM-MW-4	EPA 6010	JGP, TDS	3
		EPA 8270C by SIM	BRM	4
		EPA 5030B/8260	PRG	12
		SM 2540C	FJF	1
		EPA 300.0	AJM	3
60129930005 G	GW-075035-092512-CM-MW-3	EPA 6010	JGP, TDS	3
		EPA 8270C by SIM	BRM	4
		EPA 5030B/8260	PRG	12
		SM 2540C	FJF	1
		EPA 300.0	AJM	3
60129930006	GW-075035-092512-CM-MW-7	EPA 6010	JGP, TDS	3
		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 8270C by SIM	BRM	4
		EPA 5030B/8260	PRG	12
		SM 2540C	FJF	1
		EPA 300.0	AJM	3
60129930008	GW-075035-092512-CM-MW-DUP	EPA 5030B/8260	PRG	9
60129930009	TB-075035-092512-CM-MW-001	EPA 5030B/8260	PRG	9

# **REPORT OF LABORATORY ANALYSIS**

Page 4 of 26



Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

### Method: EPA 6010

Description:6010 MET ICP, DissolvedClient:COP Conestoga-Rovers & Associates, Inc. NMDate: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**

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Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

# Method: EPA 8270C by SIM

Description:8270 MSSV PAH by SIMClient:COP Conestoga-Rovers & Associates, Inc. NMDate: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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Page 6 of 26



Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

### Method: EPA 5030B/8260

Description:8260 MSVClient:COP Conestoga-Rovers & Associates, Inc. NMDate: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**

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Page 7 of 26



Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

### Method: SM 2540C

Description:2540C Total Dissolved SolidsClient:COP Conestoga-Rovers & Associates, Inc. NMDate: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:

# **REPORT OF LABORATORY ANALYSIS**

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Page 8 of 26



Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

# Method: EPA 300.0

Description:300.0 IC Anions 28 DaysClient:COP Conestoga-Rovers & Associates, Inc. NMDate: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**

Page 9 of 26


## Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

Sample: GW-075035-092512-CM- MW-1	Lab ID: 601	Lab ID: 60129930001		Collected: 09/25/12 08:55		/27/12 08:20 N	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM	Analytical Meth	nod: EPA 8	270C by SIM Prepar	ation M	ethod: EPA 35100	;		
Naphthalene <i>Surrogates</i>	<b>45.6</b> ug	/L	2.5	5	10/02/12 00:00	10/05/12 15:33	91-20-3	
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	
8260 MSV	Analytical Meth	nod: EPA 5	030B/8260					
Benzene	<b>5040</b> ug	/L	100	100		10/02/12 23:45	71-43-2	
Ethylbenzene	<b>626</b> 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	<b>1660</b> ug	/L	100	100		10/02/12 23:45	108-88-3	
Xylene (Total)	<b>8850</b> ug	/L	300	100		10/02/12 23:45	1330-20-7	
Surrogates	400.0/		00 400	400		40/00/40 00.45	400 00 4	
4-Bromoliuorobenzene (S)	100 %		80-120	100		10/02/12 23:45	400-00-4	
1 2 Diplomotiuoromethane (5)	97 %		80-120	100		10/02/12 23:45	1000-03-7	
Taluana de (S)	101 %		80.120	100		10/02/12 23:45	2027.26.5	
Preservation pH	101 %		0.10	100		10/02/12 23:45	2037-20-3	
2540C Total Dissolved Solids	Analytical Meth	nod: SM 25	40C					
Total Dissolved Solids	<b>24100</b> mg	g/L	5.0	1		10/01/12 15:44		
300.0 IC Anions 28 Days	Analytical Meth	nod: EPA 3	00.0					
Chloride	<b>268</b> mg	g/L	20.0	20		10/06/12 16:00	16887-00-6	
Fluoride	ND mg	g/L	4.0	20		10/06/12 16:00	16984-48-8	D3
Sulfate	<b>13100</b> mg	- g/L	2000	2000		10/06/12 16:17	14808-79-8	

# **REPORT OF LABORATORY ANALYSIS**

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## Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

Sample: GW-075035-092512-CM- MW-6	Lab ID: 6012	29930002	Collected: 09/25/	12 09:20	) Received: 09	/27/12 08:20 N	latrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Meth	od: EPA 60	10 Preparation Met	hod: EP	A 3010			
Boron, Dissolved	<b>656</b> ug/	۲L	500	5	10/02/12 10:45	10/07/12 14:33	7440-42-8	M1
Iron, Dissolved	ND ug/	۲L	50.0	1	10/02/12 10:45	10/05/12 12:27	7439-89-6	
Manganese, Dissolved	<b>2190</b> ug/	۲L	25.0	5	10/02/12 10:45	10/07/12 14:33	7439-96-5	M1
8270 MSSV PAH by SIM	Analytical Meth	od: EPA 82	70C by SIM Prepar	ation Me	ethod: EPA 35100	>		
Naphthalene <i>Surrogates</i>	<b>23.7</b> ug/	Ĺ	2.5	5	10/02/12 00:00	10/04/12 15:02	91-20-3	
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	
8260 MSV	Analytical Meth	od: EPA 50	30B/8260					
Benzene	<b>21.8</b> ug/	۲L	10.0	10		10/03/12 00:00	71-43-2	
Ethylbenzene	<b>166</b> ug/	۲L	10.0	10		10/03/12 00:00	100-41-4	
Methylene chloride	ND ug/	Ľ	10.0	10		10/03/12 00:00	75-09-2	
Naphthalene	ND ug/	Ľ	100	10		10/03/12 00:00	91-20-3	
1,1,2,2-Tetrachloroethane	ND ug/	Ľ	10.0	10		10/03/12 00:00	79-34-5	
Toluene	ND ug/	Ľ	10.0	10		10/03/12 00:00	108-88-3	
Xylene (Total)	<b>2920</b> ug/	Ľ	30.0	10		10/03/12 00:00	1330-20-7	
Surrogates								
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	
Ioluene-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		
2540C Total Dissolved Solids	Analytical Meth	od: SM 254	40C					
Total Dissolved Solids	<b>37800</b> mg	/L	5.0	1		10/01/12 15:45		
300.0 IC Anions 28 Days	Analytical Meth	od: EPA 30	0.0					
Chloride	<b>345</b> 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	<b>25500</b> mg	/L	2000	2000		10/06/12 16:52	14808-79-8	

# **REPORT OF LABORATORY ANALYSIS**

Page 11 of 26



## Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

Sample: GW-075035-092512-CM- MW-2	Lab ID: 6012	9930003	Collected: 09/25/	12 09:45	5 Received: 09	/27/12 08:20 N	latrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Metho	od: EPA 60	10 Preparation Met	hod: EP	A 3010			
Boron, Dissolved	<b>1020</b> ug/l	L	500	5	10/02/12 10:45	10/07/12 14:25	7440-42-8	
Iron, Dissolved	<b>913</b> ug/l	L	50.0	1	10/02/12 10:45	10/05/12 12:31	7439-89-6	
Manganese, Dissolved	<b>2300</b> ug/l	L	25.0	5	10/02/12 10:45	10/07/12 14:25	7439-96-5	
8270 MSSV PAH by SIM	Analytical Metho	od: EPA 82	70C by SIM Prepar	ation Me	ethod: EPA 35100	;		
Naphthalene <i>Surrogates</i>	<b>58.3</b> ug/l	L	2.5	5	10/02/12 00:00	10/09/12 13:19	91-20-3	
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	
8260 MSV	Analytical Metho	od: EPA 50	30B/8260					
Benzene	<b>127</b> ug/l	L	5.0	5		10/03/12 00:14	71-43-2	
Ethylbenzene	<b>161</b> ug/l	L	5.0	5		10/03/12 00:14	100-41-4	
Methylene chloride	<b>7.6</b> ug/l	L	5.0	5		10/03/12 00:14	75-09-2	
Naphthalene	<b>56.6</b> ug/l	L	50.0	5		10/03/12 00:14	91-20-3	
1,1,2,2-Tetrachloroethane	ND ug/l	L	5.0	5		10/03/12 00:14	79-34-5	
Toluene	ND ug/l	L	5.0	5		10/03/12 00:14	108-88-3	
Xylene (Total)	<b>40.8</b> ug/l	L	15.0	5		10/03/12 00:14	1330-20-7	
Surrogates				_				
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	
Ioluene-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		
2540C Total Dissolved Solids	Analytical Metho	od: SM 254	0C					
Total Dissolved Solids	<b>31100</b> mg/	′L	5.0	1		10/01/12 15:45		
300.0 IC Anions 28 Days	Analytical Metho	od: EPA 30	0.0					
Chloride	<b>382</b> 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	<b>19900</b> mg/	′L	2000	2000		10/06/12 17:27	14808-79-8	

# **REPORT OF LABORATORY ANALYSIS**

Page 12 of 26



## Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

Sample: GW-075035-092512-CM- MW-4	Lab ID: 60129	9930004	Collected: 09/25/	12 11:10	Received: 09	/27/12 08:20 N		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Metho	od: EPA 60	10 Preparation Met	hod: EP	A 3010			
Boron, Dissolved	<b>704</b> ug/L	-	500	5	10/02/12 10:45	10/07/12 14:27	7440-42-8	
Iron, Dissolved	<b>1020</b> ug/L	-	50.0	1	10/02/12 10:45	10/05/12 12:34	7439-89-6	
Manganese, Dissolved	<b>5170</b> ug/L	-	25.0	5	10/02/12 10:45	10/07/12 14:27	7439-96-5	
8270 MSSV PAH by SIM	Analytical Metho	od: EPA 82	70C by SIM Prepar	ation Me	ethod: EPA 35100	>		
Naphthalene <i>Surrogates</i>	<b>1.8</b> ug/L	-	0.50	1	10/02/12 00:00	10/04/12 00:43	91-20-3	
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	
8260 MSV	Analytical Metho	od: EPA 50	30B/8260					
Benzene	<b>1.1</b> 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	
Surrogates								
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	
Ioluene-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		
2540C Total Dissolved Solids	Analytical Metho	od: SM 254	10C					
Total Dissolved Solids	<b>38900</b> mg/l	L	5.0	1		10/01/12 15:46		
300.0 IC Anions 28 Days	Analytical Metho	od: EPA 30	0.0					
Chloride	<b>347</b> mg/l	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	<b>25600</b> mg/l	L	2000	2000		10/06/12 18:02	14808-79-8	

# **REPORT OF LABORATORY ANALYSIS**

Page 13 of 26



## 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: Wate								
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
6010 MET ICP, Dissolved	Analytical Metho	od: EPA 60	10 Preparation Met	hod: EP	A 3010				
Boron, Dissolved	<b>986</b> 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	<b>497</b> ug/L	-	25.0	5	10/02/12 10:45	10/07/12 14:29	7439-96-5		
8270 MSSV PAH by SIM	Analytical Metho	od: EPA 82	70C by SIM Prepar	ation Me	ethod: EPA 3510C	;			
Naphthalene <i>Surrogates</i>	<b>0.67</b> ug/L	-	0.50	1	10/02/12 00:00	10/04/12 01:01	91-20-3		
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		
8260 MSV	Analytical Metho	od: EPA 50	30B/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		
Surrogates									
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		
Ioluene-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			
2540C Total Dissolved Solids	Analytical Metho	od: SM 254	40C						
Total Dissolved Solids	<b>30000</b> mg/	L	5.0	1		10/01/12 15:46			
300.0 IC Anions 28 Days	Analytical Metho	od: EPA 30	0.0						
Chloride	<b>468</b> 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		

# **REPORT OF LABORATORY ANALYSIS**

Page 14 of 26



## Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

Sample: GW-075035-092512-CM- MW-7	Lab ID: 60129	9930006	Collected: 09/25/	12 12:20	) Received: 09	/27/12 08:20 N	latrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Metho	od: EPA 60	10 Preparation Met	hod: EP	A 3010			
Boron, Dissolved	<b>895</b> ug/L	-	500	5	10/02/12 10:45	10/07/12 14:31	7440-42-8	
Iron, Dissolved	<b>1250</b> ug/L	-	50.0	1	10/02/12 10:45	10/05/12 12:42	7439-89-6	
Manganese, Dissolved	<b>4080</b> ug/L	-	25.0	5	10/02/12 10:45	10/07/12 14:31	7439-96-5	
8270 MSSV PAH by SIM	Analytical Metho	od: EPA 82	70C by SIM Prepar	ation Me	ethod: EPA 35100	;		
Naphthalene <i>Surrogates</i>	<b>6.1</b> ug/L		0.50	1	10/02/12 00:00	10/04/12 01:18	91-20-3	
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	
8260 MSV	Analytical Metho	od: EPA 50	30B/8260					
Benzene	<b>10.9</b> ug/L	-	5.0	5		10/03/12 00:58	71-43-2	
Ethylbenzene	<b>426</b> 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	
Surrogates				_				
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	
Ioluene-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		
2540C Total Dissolved Solids	Analytical Metho	od: SM 254	10C					
Total Dissolved Solids	<b>30500</b> mg/	L	5.0	1		10/01/12 15:46		
300.0 IC Anions 28 Days	Analytical Metho	od: EPA 30	0.0					
Chloride	<b>266</b> 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	<b>19500</b> mg/	L	2000	2000		10/06/12 19:46	14808-79-8	

# **REPORT OF LABORATORY ANALYSIS**

Page 15 of 26



## Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

Sample: GW-075035-092512-CM- MW-5	Lab ID: 601	29930007	Collected: 09/25/	12 13:18	5 Received: 09	ived: 09/27/12 08:20 Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8270 MSSV PAH by SIM	Analytical Met	hod: EPA 82	270C by SIM Prepar	ation M	ethod: EPA 35100	;			
Naphthalene <i>Surrogates</i>	ND ug	J∕L	0.50	1	10/02/12 00:00	10/04/12 01:35	91-20-3		
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		
8260 MSV	Analytical Met	hod: EPA 50	030B/8260						
Benzene	<b>1040</b> ug	J/L	20.0	20		10/03/12 01:13	71-43-2		
Ethylbenzene	<b>77.2</b> ug	J/L	20.0	20		10/03/12 01:13	100-41-4		
Methylene chloride	<b>28.9</b> ug	ı∕L	20.0	20		10/03/12 01:13	75-09-2		
Naphthalene	ND ug	J/L	200	20		10/03/12 01:13	91-20-3		
1,1,2,2-Tetrachloroethane	ND ug	ı∕L	20.0	20		10/03/12 01:13	79-34-5		
Toluene	ND ug	ı∕L	20.0	20		10/03/12 01:13	108-88-3		
Xylene (Total)	ND ug	J/L	60.0	20		10/03/12 01:13	1330-20-7		
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	1.0		0.10	20		10/03/12 01:13			
2540C Total Dissolved Solids	Analytical Metl	hod: SM 25	40C						
Total Dissolved Solids	<b>11600</b> mg	g/L	5.0	1		10/01/12 15:46			
300.0 IC Anions 28 Days	Analytical Met	hod: EPA 30	0.0						
Chloride	<b>202</b> mg	g/L	20.0	20		10/06/12 20:04	16887-00-6		
Fluoride	ND m	g/L	4.0	20		10/06/12 20:04	16984-48-8	D3	
Sulfate	6800 m	g/L	1000	1000		10/06/12 20:21	14808-79-8		

## **REPORT OF LABORATORY ANALYSIS**

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Page 16 of 26



## Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

Sample: GW-075035-092512-CM- MW-DUP	Lab ID: 60129930	008 Collected: 09/25/1	2 09:50	Received: 09	9/27/12 08:20 N	latrix: Water	
Parameters	Results U	nits Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: E	PA 5030B/8260					
Benzene	<b>142</b> ug/L	2.0	2		10/03/12 18:11	71-43-2	
Ethylbenzene	<b>181</b> 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)	<b>35.6</b> ug/L	6.0	2		10/03/12 18:11	1330-20-7	
Surrogates							
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		

# **REPORT OF LABORATORY ANALYSIS**

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Page 17 of 26



## Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

Sample: TB-075035-092512-CM- MW-001	Lab ID: 6012993000	9 Collected: 09/25/12	2 00:00	Received: 0	9/27/12 08:20 M	atrix: Water	
Parameters	Results Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	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	
Surrogates							
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	1.0	0.10	1		10/03/12 01:42		

# **REPORT OF LABORATORY ANALYSIS**

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Page 18 of 26



Project: 075035 MARTIN 34 NO 2

EPA 3010

Pace Project No.: 60129930

QC Batch: MPRP/19736

QC Batch Method:

Analysis Method:

Analysis Description: 6010 MET Dissolved

EPA 6010

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

METHOD BLANK: 10711	89	Matrix: Water										
Associated Lab Samples: 60129930002, 60129930003, 60129930004, 60129930005, 60129930006												
Blank Reporting												
Parameter	Units	Result	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	91		1071192									
			MS	MSD								
	6012	9930002	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
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

# **REPORT OF LABORATORY ANALYSIS**

Page 19 of 26



Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

QC Batch: MSV/48910 QC Batch Method: EPA 5030B/8260 Associated Lab Samples:

METHOD BLANK: 1071334

Analysis Method:

Analysis Description:

8260 MSV Water 10 mL Purge 60129930001, 60129930002, 60129930003, 60129930004, 60129930005, 60129930006, 60129930007,

EPA 5030B/8260

60129930009

Matrix: Water

60129930001, 60129930002, 60129930003, 60129930004, 60129930005, 60129930006, 60129930007, Associated Lab Samples: 60129930009 .

		Blank	Reporting		
Parameter	Units	Result	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	

## **REPORT OF LABORATORY ANALYSIS**

Page 20 of 26



Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

4-Bromofluorobenzene (S)

Dibromofluoromethane (S)

Toluene-d8 (S)

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

80-120

80-120

80-120

10/03/12 16:27

10/03/12 16:27

10/03/12 16:27

106

103

96

## 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	

## **REPORT OF LABORATORY ANALYSIS**

Page 21 of 26



Project: 075035 MARTIN 34 NO 2

Pace Project No.: 60129930

QC Batch:	OEXT/35302	Analysis Method:	EPA 8270C by SIM	
QC Batch Method:	EPA 3510C	Analysis Description:	8270 Water PAH by SIM MSSV	
Associated Lab Samp	oles: 60129930001, 601	29930002, 60129930003, 60129930004	, 60129930005, 60129930006, 60129930007	
METHOD BLANK: 1	1071107	Matrix: Water		

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

		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
Naphthalene	ug/L	ND	0.50	10/03/12 19:58	
2-Fluorobiphenyl (S)	%	85	40-120	10/03/12 19:58	
Nitrobenzene-d5 (S)	%	86	28-140	10/03/12 19:58	
Terphenyl-d14 (S)	%	86	43-122	10/03/12 19:58	

## LABORATORY CONTROL SAMPLE: 1071108

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Naphthalene	ug/L		6.6	66	41-120	
2-Fluorobiphenyl (S)	%			69	40-120	
Nitrobenzene-d5 (S)	%			72	28-140	
Terphenyl-d14 (S)	%			67	43-122	

## **REPORT OF LABORATORY ANALYSIS**

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Page 22 of 26



Project:	075035 MARTIN	34 NO 2					
Pace Project No.:	60129930						
QC Batch:	WET/37440		Analysis Meth	nod: S	M 2540C		
QC Batch Method:	SM 2540C		Analysis Desc	cription: 2	540C Total Dissolve	d Solids	
Associated Lab Sar	nples: 60129930	0001, 6012993000	2, 60129930003, 60	0129930004, 6	0129930005, 60129	9930006, 6012	9930007
METHOD BLANK:	1070930		Matrix:	Water			
Associated Lab Sar	nples: 60129930	0001, 6012993000	2, 60129930003, 60 Blank	0129930004, 6 Reporting	0129930005, 60129	9930006, 6012	9930007
Paran	neter	Units	Result	Limit	Analyzed	Qualifiers	
Total Dissolved Soli	ds	mg/L	ND	5.0	10/01/12 15:44		_
SAMPLE DUPLICA	TE: 1070931						
			60129930001	Dup		Max	
Paran	neter	Units	Result	Result	RPD	RPD	Qualifiers
Total Dissolved Soli	ds	mg/L	24100	24300	1	17	

# **REPORT OF LABORATORY ANALYSIS**

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Page 23 of 26



Project:	075035 MA	RTIN 34 NO 2											
Pace Project No.:	60129930												
QC Batch:	WETA/219	911		Analys	is Method:	E	PA 300.0						
QC Batch Method:	EPA 300.0	)		Analys	is Descript	ion: 3	00.0 IC Anio	ns					
Associated Lab Sar	mples: 601	29930001, 60	129930002	, 60129930	003, 60129	9930004, 6	0129930005	5, 6012993	80006, 6012	29930007			
METHOD BLANK:	1074834			Ν	Aatrix: Wa	ter							
Associated Lab Sar	mples: 601	29930001, 60	129930002	, 60129930	003, 6012	9930004, 6	0129930005	5, 6012993	80006, 6012	29930007			
Para	neter	ι	Jnits	Blank Resul	t R	eporting Limit	Analyz	ed	Qualifiers				
Chloride Fluoride		mg/L mg/L			ND ND	1.0 0.20	10/06/12 10/06/12	13:41 13:41					
LABORATORY CO	NTROL SAM	PLE: 10748	35										
				Spike	LCS	5	LCS	% Re	С				
Parar	meter	ι	Jnits	Conc.	Resu	lt	% Rec	Limits	s Q	ualifiers			
Chloride		mg/L		5		4.8	97	90	D-110		-		
Fluoride		mg/L		2.5		2.4	96	90	D-110				
MATRIX SPIKE & M	MATRIX SPIK	E DUPLICATE	: 10738	27		1073828							
				MS	MSD								
		6012	29763001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parame	ter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Fluoride		mg/L	ND	25	25	24.2	23.8	97	95	75-110	2	10	

Date: 10/10/2012 08:54 AM

# **REPORT OF LABORATORY ANALYSIS**

Page 24 of 26



## 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.

## **REPORT OF LABORATORY ANALYSIS**

Page 25 of 26



# 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		

# **REPORT OF LABORATORY ANALYSIS**

Page 26 of 26

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# CHAIN-OF-CUSTODY / Analytical Request Document The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

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Section / Required	A Client Information	Section B Required Project Information:	Section C Invoice: Information	Ĕ	:əb	of	
Company:	COF CRA NM	Report To Christine Mathews	Attention ENFOS	]			
Address:	6121 Indian School Rd NE, Ste 200	Copy To. Kelly Blanchard, Angela Bown	Company Name:	REGULATORY AGENCY			
	Albequerque, NM 87110		Address	F NPDES F GROUND W	ATER F	DRINKING WA	TER
Email To:	cmathews@craworld.com	Purchase Order No.:	Pace Cuore Reference	L UST F RCRA	L	OTHER _	
Phone	505)884-0672 Fax (505)884-4932	Project Name: Martin 34 No. 2	Pare Firblect Atice Flanagan Manager	Site Location			
Requester	d Due Date/TAT: standard	Project Number: 075035	Pace Frofile # 5341, 7	STATE:			
			Requested	Analysis Filtered (Y/N)			
	Section D Valid Matrix Co tequired Client Information MATRIX	odes (c)	Preservatives				
	DRINKING WATER WATER WASTE WASTE PRODUCT SOLLSOLID OIL	WW WW WW WW WW WW WW WW WW WW WW WW WW	ss COLLECTION	8 'ul	(N\Y) 9I	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~
#W311	SamPLE ID AR (A-Z 0-9 /,-) OTHER Sample IDs MUST BE UNIQUE TISSUE	Ф К Р К ) ЭСОО ХІЯТАМ О) ЭСТТРРЕ (О Н Н МН МН	The second secon	300.0 Flouride Dissolved Fe, <i>N</i> TDS TDS		UL Project No. I	ab I.D.
-	SIII.07565-092512-1M- MW	- 11/2 9.25.12 09:55			2AGHU	3DG9H	101
2	514-07535-012512-CM-MW	-6 WT6 925. RO920	XXXX I XXXX		(-	18131	N3. CC2
m	340 -6 25035- 092572- Cm- MW	-2 WT6 725.2 (1945	XXXX XXXXX				Z
4	411-075035-092512-CM-MW	-4 INT 6 9.25.12 110	XXXX I XXX I XXXX	XXX			40
5	11-075055-02572-CM-ML	1-3 101 6 925.72 130	XXXX I XXXX				S3
9	- 075035-092512-CM- M	W-7 WT 6 9.2512 1220	XXXX X X X X X X X X X X X X X X X X X	XXX		$\checkmark$	ab
7 2	- m- m2-2122-01-20-00-00-00-00-00-00-00-00-00-00-00-00-	W-5 WT 6 9.2512 1315		X	>		10)
8	2W-075035-092512-CM-D	UP WT 6 9.25.120950	X	×	30	GaH	65
on	TB-075035-092612-CM-1	001 MT .	3 ×	×	-	N	(rd
10					-		
12		(					
	ADDITIONAL COMMENTS	V TREUNQUISHED BY (AFFILIATION D	ATE TIME ACCEPTED BY AFFILIATION	DATE TIME	SAMI	PLE CONDITIONS	
		7-19 HAY TWO WAY AND WAY	26.12 (3730 45 Cml ( ) 1	3/22/12 0500 1.5	X	X	٢
*8260-00	Cs BTEX, N. Methylene Chloride, 1,1,2,2,-				/		
Tetraction	bethane						
Ра							
cka		SAMPLER NAME AND SK	GNATURE OF I LOA II	Э.	() 1 OU	belse (N\	losin
age	:50	PRINT Name of SA	WPLER AND STATING LITUTE WILL	ui qme	ce (X/I	Z (bot Y) Teloc	l səlqr (N/Y)
27		SIGNATURE of SA	WPLFF: () WUTUUL N/ 1/01 WUGUN:	1 7102.h	। अध	sn)	Sar
of 2	"Important Note. By signing this form you are accepting P	Pace's NET 30 day payment terms and agreeing to late charges of 1.5% pa	er month/or any it-voices not paid within 30 days	F-AL	LL-Q-020rev.	38, 12-Oct-2007	

28

Prove Analyticalia	tion Upon Possin	t ESI Tach Space	
Www.pacelabs.com	ion Upon Receip	E – ESI Tech Spec	
Client Name: COPCKA N	1	Project #:	101 4930
Courier: Fed Ex 🗹 UPS 🗆 USPS 🗆 Client 🗆	Commercial 🗆 🛛 P	ace  Other	Optional Proj Due Date: 1/(c
Fracking #: 800182004868	Pace Shipping Label	Used? Yes 🖆 No 🛙	Proj Name: 1019
Custody Seal on Cooler/Box Present: Yes 🗹 No	Seals intact:	res 🗹 No 🗆	1
Packing Material: Bubble Wrap  Bubble E	lags 🗹 🛛 🛛 Foam	None 🗆	Other ZPLC
Thermometer Used: (1-191) / T-194	Type of Ice: Wet B	lue None 🗆 Samples	received on ice, cooling process has begun
Cooler Temperature: 1.5	(circ	le one)	ate and initials of person examining
Temperature should be above freezing to 6°C		C	
Chain of Custody present:	Yes No NA	1	
Chain of Custody filled out:	Tres DNO DN/A	2.	
Chain of Custody relinguished:		3.	
Sampler name & signature on COC:		4.	
Samples arrived within holding time:		5.	
Short Hold Time analyses (<72hr):		6	
Buch Turn Around Time requested:		7	
Rush Tum Around Time requested.		8	
Sufficient volume:		0.	
Correct containers used:			
-Pace containers used:		9	
Containers intact:		10.	
Unpreserved 5035A soils frozen w/in 48hrs?		11	
Filtered volume received for dissolved tests?		12.	
Sample labels match COC:	Yes No N/A		
-Includes date/time/ID/analyses Matrix:		13.	
All containers needing preservation have been checked.		÷	
All containers needing preservation are found to be in		14.	
Exceptions: (VOA) coliform, TOC, O&G, WI-DRO (water),		Initial when	Lot # of added
Trip Blank present:		completed	processation
Pace Trip Blank lot # (if purchased): 080612-3		15.	
Headspace in VOA vials ( >6mm):			
		16	
And the second			h-
Project sampled in USDA Regulated Area:		17. List State:	<i>w</i>
Client Notification/ Resolution: Copy	COC to Client? Y /	N Field Data Re	quired? Y / N
Person Contacted	Date/Time:	$\cup$	Temp Log: Record start and finish time when unpacking cooler, if >20 min, recheck sample temps.
		1	Start: 164 5 Start:
		and	End: 1700 End:
Project Manager Review:		Date:	Temp: Temp:
Note: Whenever there is a discrepancy affecting North Ca (i.e. out of hold, incorrect preservative, out of temp, incorr	rolina compliance sample ect containers).	es, a copy of this form will	be sent to the NCDENR Certification Office



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

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 Flanazan

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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Page 1 of 28



## 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

**REPORT OF LABORATORY ANALYSIS** 

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Page 2 of 28



## SAMPLE SUMMARY

 Project:
 075035
 MARTIN 34 NO. 2

 Pace Project No.:
 60135913

**Date Collected** Lab ID Sample ID Matrix **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 12/19/12 12:30 Water 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 GW-075035-121912-CM-MW-5 12/19/12 14:00 60135913005 Water 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 12/19/12 14:30 Water 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**

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Page 3 of 28



## 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
ô0135913005	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**

Page 4 of 28



Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

#### Method: EPA 6010

Description:6010 MET ICP, DissolvedClient:COP Conestoga-Rovers & Associates, Inc. NMDate: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



Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

## Method: EPA 8270C by SIM

Description:8270 MSSV PAH by SIMClient:COP Conestoga-Rovers & Associates, Inc. NMDate: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**

Page 6 of 28



Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

#### Method: EPA 5030B/8260

Description:8260 MSVClient:COP Conestoga-Rovers & Associates, Inc. NMDate: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**

Page 7 of 28



Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

#### Method: SM 2540C

Description:2540C Total Dissolved SolidsClient:COP Conestoga-Rovers & Associates, Inc. NMDate: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**

Page 8 of 28



Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

#### Method: EPA 300.0

Description:300.0 IC Anions 28 DaysClient:COP Conestoga-Rovers & Associates, Inc. NMDate: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**

Page 9 of 28



## Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

Sample: GW-075035-122012-CM- MW-1	Lab ID:	60135913001	Collected	l: 12/20/12	2 10:30	30 Received: 12/21/12 11:15 Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual		
6010 MET ICP, Dissolved	Analytical	Method: EPA 6	6010 Prepar	ation Meth	od: EPA	3010					
Boron, Dissolved	<b>1230</b> u	g/L	100	1.8	1	12/26/12 15:45	01/02/13 13:50	7440-42-8			
Iron, Dissolved	<b>1250</b> u	g/L	50.0	17.2	1	12/26/12 15:45	01/02/13 13:50	7439-89-6			
Manganese, Dissolved	<b>886</b> u	g/L	5.0	0.60	1	12/26/12 15:45	01/02/13 13:50	7439-96-5			
8270 MSSV PAH by SIM	Analytical	lytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C									
Naphthalene <i>Surrogates</i>	<b>1.2</b> u	g/L	0.50	0.057	1	12/26/12 00:00	12/27/12 16:44	91-20-3			
2-Fluorobiphenyl (S)	46 %	6	40-120		1	12/26/12 00:00	12/27/12 16:44	321-60-8			
Terphenyl-d14 (S)	72 %	6	43-122		1	12/26/12 00:00	12/27/12 16:44	1718-51-0			
8260 MSV	Analytical	Analytical Method: EPA 5030B/8260									
Benzene	<b>3960</b> u	g/L	50.0	4.9	50		12/27/12 21:54	71-43-2			
Ethylbenzene	<b>336</b> u	g/L	50.0	11.5	50		12/27/12 21:54	100-41-4			
Methylene chloride	ND u	g/L	50.0	12.0	50		12/27/12 21:54	75-09-2			
1,1,2,2-Tetrachloroethane	ND u	g/L	50.0	4.3	50		12/27/12 21:54	79-34-5			
Toluene	<b>2570</b> u	g/L	50.0	7.5	50		12/27/12 21:54	108-88-3			
Xylene (Total)	<b>6450</b> u	g/L	150	20.5	50		12/27/12 21:54	1330-20-7			
Surrogates											
4-Bromofluorobenzene (S)	102 %	6	80-120		50		12/27/12 21:54	460-00-4			
Dibromofluoromethane (S)	103 %	6	80-120		50		12/27/12 21:54	1868-53-7			
1,2-Dichloroethane-d4 (S)	97 %	6	80-120		50		12/27/12 21:54	17060-07-0			
Toluene-d8 (S)	100 %	6	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				
2540C Total Dissolved Solids	Analytical	Method: SM 2	540C								
Total Dissolved Solids	<b>23100</b> m	ng/L	5.0	5.0	1		12/24/12 13:11				
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	300.0								
Chloride	<b>301</b> m	ng/L	20.0	10.0	20		12/27/12 18:22	16887-00-6			
Fluoride	ND m	ng/L	0.20	0.069	1		12/27/12 18:05	16984-48-8			
Sulfate	<b>15300</b> m	na/L	1000	59.0	1000		12/27/12 18:39	14808-79-8			

# **REPORT OF LABORATORY ANALYSIS**

Page 10 of 28



## 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 Ma	atrix: Water	Water		
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual		
6010 MET ICP, Dissolved	Analytica	I Method: EPA 6	6010 Prepar	ation Meth	od: EPA	A 3010					
Boron, Dissolved	<b>1040</b> u	ug/L	300	5.4	3	12/26/12 15:45	01/03/13 10:54	7440-42-8			
Iron, Dissolved	<b>1200</b> u	ug/L	50.0	17.2	1	12/26/12 15:45	01/02/13 13:57	7439-89-6			
Manganese, Dissolved	<b>1980</b> (	ug/L	15.0	1.8	3	12/26/12 15:45	01/03/13 10:54	7439-96-5			
8270 MSSV PAH by SIM	Analytica	alytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C									
Naphthalene <i>Surrogates</i>	ND (	ug/L	0.50	0.057	1	12/26/12 00:00	12/27/12 14:48	91-20-3			
2-Fluorobiphenyl (S)	71 9	%	40-120		1	12/26/12 00:00	12/27/12 14:48	321-60-8			
Terphenyl-d14 (S)	71 9	%	43-122		1	12/26/12 00:00	12/27/12 14:48	1718-51-0			
8260 MSV	Analytica	I Method: EPA 5	5030B/8260								
Benzene	<b>202</b> (	ug/L	5.0	0.49	5		12/27/12 17:06	71-43-2			
Ethylbenzene	<b>281</b> (	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 u	ug/L	5.0	0.75	5		12/27/12 17:06	108-88-3			
Xylene (Total)	<b>81.1</b> (	ug/L	15.0	2.0	5		12/27/12 17:06	1330-20-7			
Surrogates											
4-Bromofluorobenzene (S)	104 °	%	80-120		5		12/27/12 17:06	460-00-4			
Dibromofluoromethane (S)	105 9	%	80-120		5		12/27/12 17:06	1868-53-7			
1,2-Dichloroethane-d4 (S)	99 9	%	80-120		5		12/27/12 17:06	17060-07-0			
Toluene-d8 (S)	95 9	%	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				
2540C Total Dissolved Solids	Analytica	I Method: SM 2	540C								
Total Dissolved Solids	<b>33200</b> I	ng/L	5.0	5.0	1		12/24/12 13:09				
300.0 IC Anions 28 Days	Analytica	I Method: EPA 3	300.0								
Chloride	<b>423</b> r	ng/L	50.0	25.0	50		12/28/12 13:48	16887-00-6			
Fluoride	ND i	ng/L	0.20	0.069	1		12/28/12 13:31	16984-48-8			
Sulfate	22300 I	ng/L	2000	118	2000		12/28/12 14:04	14808-79-8			

# **REPORT OF LABORATORY ANALYSIS**

Page 11 of 28



## 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/	atrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual		
6010 MET ICP, Dissolved	Analytical	Method: EPA 6	6010 Prepa	ration Meth	od: EP/	A 3010					
Boron, Dissolved	<b>1030</b> u	ıg/L	200	3.6	2	12/26/12 15:45	01/02/13 14:12	7440-42-8			
Iron, Dissolved	<b>152</b> u	ıg/L	100	34.4	2	12/26/12 15:45	01/02/13 14:12	7439-89-6			
Manganese, Dissolved	<b>547</b> u	ıg/L	10.0	1.2	2	12/26/12 15:45	01/02/13 14:12	7439-96-5			
8270 MSSV PAH by SIM	Analytical	lytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C									
Naphthalene <i>Surrogates</i>	ND u	ıg/L	0.50	0.057	1	12/26/12 00:00	12/27/12 15:07	91-20-3			
2-Fluorobiphenyl (S)	71 %	6	40-120		1	12/26/12 00:00	12/27/12 15:07	321-60-8			
Terphenyl-d14 (S)	69 %	6	43-122		1	12/26/12 00:00	12/27/12 15:07	1718-51-0			
8260 MSV	Analytical	Analytical Method: EPA 5030B/8260									
Benzene	ND u	ıg/L	1.0	0.098	1		12/27/12 17:20	71-43-2			
Ethylbenzene	ND u	ıg/L	1.0	0.23	1		12/27/12 17:20	100-41-4			
Methylene chloride	ND u	ıg/L	1.0	0.24	1		12/27/12 17:20	75-09-2			
1,1,2,2-Tetrachloroethane	ND u	ıg/L	1.0	0.086	1		12/27/12 17:20	79-34-5			
Toluene	ND u	ıg/L	1.0	0.15	1		12/27/12 17:20	108-88-3			
Xylene (Total)	ND u	ıg/L	3.0	0.41	1		12/27/12 17:20	1330-20-7			
Surrogates											
4-Bromofluorobenzene (S)	103 %	6	80-120		1		12/27/12 17:20	460-00-4			
Dibromofluoromethane (S)	108 %	6	80-120		1		12/27/12 17:20	1868-53-7			
1,2-Dichloroethane-d4 (S)	104 %	6	80-120		1		12/27/12 17:20	17060-07-0			
Toluene-d8 (S)	97 %	6	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				
2540C Total Dissolved Solids	Analytical	Method: SM 2	540C								
Total Dissolved Solids	<b>30600</b> n	ng/L	5.0	5.0	1		12/24/12 13:09				
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	300.0								
Chloride	<b>458</b> n	ng/L	50.0	25.0	50		12/27/12 20:40	16887-00-6			
Fluoride	ND n	ng/L	0.20	0.069	1		12/27/12 20:23	16984-48-8			
Sulfate	<b>21400</b> n	ng/L	2000	118	2000		12/27/12 20:57	14808-79-8			

# **REPORT OF LABORATORY ANALYSIS**

Page 12 of 28



## Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

Sample: GW-075035-121912-CM- MW-4	Lab ID:	60135913004	Collected	d: 12/19/1	2 14:00	Received: 12/	atrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual		
6010 MET ICP, Dissolved	Analytical	Method: EPA	6010 Prepa	ration Meth	od: EP/	A 3010					
Boron, Dissolved	<b>808</b> u	ıg/L	200	3.6	2	12/26/12 15:45	01/02/13 14:14	7440-42-8			
Iron, Dissolved	<b>782</b> U	ıg/L	100	34.4	2	12/26/12 15:45	01/02/13 14:14	7439-89-6			
Manganese, Dissolved	<b>4840</b> U	ıg/L	10.0	1.2	2	12/26/12 15:45	01/02/13 14:14	7439-96-5			
8270 MSSV PAH by SIM	Analytical	lytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C									
Naphthalene <i>Surrogates</i>	ND u	ıg/L	0.50	0.057	1	12/26/12 00:00	12/27/12 15:26	91-20-3			
2-Fluorobiphenyl (S)	80 %	6	40-120		1	12/26/12 00:00	12/27/12 15:26	321-60-8			
Terphenyl-d14 (S)	81 %	6	43-122		1	12/26/12 00:00	12/27/12 15:26	1718-51-0			
8260 MSV	Analytical	Method: EPA	5030B/8260								
Benzene	<b>1.1</b> u	ıg/L	1.0	0.098	1		12/27/12 17:35	71-43-2			
Ethylbenzene	ND u	ıg/L	1.0	0.23	1		12/27/12 17:35	100-41-4			
Methylene chloride	ND u	ıg/L	1.0	0.24	1		12/27/12 17:35	75-09-2			
1,1,2,2-Tetrachloroethane	ND u	ıg/L	1.0	0.086	1		12/27/12 17:35	79-34-5			
Toluene	ND u	ıg/L	1.0	0.15	1		12/27/12 17:35	108-88-3			
Xylene (Total)	ND u	ıg/L	3.0	0.41	1		12/27/12 17:35	1330-20-7			
Surrogates											
4-Bromofluorobenzene (S)	110 %	6	80-120		1		12/27/12 17:35	460-00-4			
Dibromofluoromethane (S)	111 9	6	80-120		1		12/27/12 17:35	1868-53-7			
1,2-Dichloroethane-d4 (S)	112 %	6	80-120		1		12/27/12 17:35	17060-07-0			
Toluene-d8 (S)	100 %	6	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				
2540C Total Dissolved Solids	Analytical	Method: SM 2	540C								
Total Dissolved Solids	<b>36400</b> n	ng/L	5.0	5.0	1		12/24/12 13:10				
300.0 IC Anions 28 Days	Analytical	Method: EPA	300.0								
Chloride	<b>397</b> n	ng/L	20.0	10.0	20		12/27/12 21:30	16887-00-6			
Fluoride	ND n	ng/L	0.20	0.069	1		12/27/12 21:13	16984-48-8			
Sulfate	<b>28500</b> n	ng/L	2000	118	2000		12/27/12 21:47	14808-79-8			

# **REPORT OF LABORATORY ANALYSIS**

Page 13 of 28



## Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

Sample: GW-075035-121912-CM- MW-5	Lab ID:	60135913005	Collected	d: 12/19/1	2 14:00	Received: 12/	atrix: Water	er		
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
6010 MET ICP, Dissolved	Analytical	Method: EPA 6	6010 Prepa	ration Meth	od: EPA	A 3010				
Boron, Dissolved	<b>1550</b> u	g/L	200	3.6	2	12/26/12 15:45	01/02/13 14:16	7440-42-8		
Iron, Dissolved	<b>2150</b> u	g/L	100	34.4	2	12/26/12 15:45	01/02/13 14:16	7439-89-6		
Manganese, Dissolved	<b>1060</b> u	g/L	10.0	1.2	2	12/26/12 15:45	01/02/13 14:16	7439-96-5		
8270 MSSV PAH by SIM	Analytical	lytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C								
Naphthalene <i>Surrogates</i>	ND u	g/L	0.50	0.057	1	12/26/12 00:00	12/27/12 15:46	91-20-3		
2-Fluorobiphenyl (S)	81 %	, 0	40-120		1	12/26/12 00:00	12/27/12 15:46	321-60-8		
Terphenyl-d14 (S)	93 %	, 0	43-122		1	12/26/12 00:00	12/27/12 15:46	1718-51-0		
8260 MSV	Analytical	Analytical Method: EPA 5030B/8260								
Benzene	<b>861</b> u	g/L	20.0	2.0	20		12/27/12 17:49	71-43-2		
Ethylbenzene	<b>43.6</b> u	g/L	20.0	4.6	20		12/27/12 17:49	100-41-4		
Methylene chloride	ND u	g/L	20.0	4.8	20		12/27/12 17:49	75-09-2		
1,1,2,2-Tetrachloroethane	ND u	g/L	20.0	1.7	20		12/27/12 17:49	79-34-5		
Toluene	ND u	g/L	20.0	3.0	20		12/27/12 17:49	108-88-3		
Xylene (Total)	ND u	g/L	60.0	8.2	20		12/27/12 17:49	1330-20-7		
Surrogates										
4-Bromofluorobenzene (S)	106 %	0	80-120		20		12/27/12 17:49	460-00-4		
Dibromofluoromethane (S)	108 %	, 0	80-120		20		12/27/12 17:49	1868-53-7		
1,2-Dichloroethane-d4 (S)	100 %	0	80-120		20		12/27/12 17:49	17060-07-0		
Toluene-d8 (S)	99 %	0	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			
2540C Total Dissolved Solids	Analytical	Method: SM 2	540C							
Total Dissolved Solids	<b>12000</b> m	ng/L	5.0	5.0	1		12/24/12 13:10			
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	300.0							
Chloride	<b>230</b> m	ng/L	20.0	10.0	20		12/27/12 23:10	16887-00-6		
Fluoride	ND m	ng/L	0.20	0.069	1		12/27/12 22:53	16984-48-8		
Sulfate	<b>7090</b> m	na/L	1000	59.0	1000		12/27/12 22:03	14808-79-8		

# **REPORT OF LABORATORY ANALYSIS**

Page 14 of 28



## 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:							atrix: Water	ix: Water		
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual		
6010 MET ICP, Dissolved	Analytical	Method: EPA 6	010 Prepa	ration Meth	od: EP/	A 3010					
Boron, Dissolved	<b>687</b> u	g/L	200	3.6	2	12/26/12 15:45	01/02/13 14:19	7440-42-8			
Iron, Dissolved	ND u	g/L	100	34.4	2	12/26/12 15:45	01/02/13 14:19	7439-89-6			
Manganese, Dissolved	<b>2340</b> u	g/L	10.0	1.2	2	12/26/12 15:45	01/02/13 14:19	7439-96-5			
8270 MSSV PAH by SIM	Analytical	lytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C									
Naphthalene <i>Surrogates</i>	<b>2.3</b> u	g/L	0.50	0.057	1	12/26/12 00:00	12/27/12 16:05	91-20-3			
2-Fluorobiphenyl (S)	69 %	, D	40-120		1	12/26/12 00:00	12/27/12 16:05	321-60-8			
Terphenyl-d14 (S)	72 %	, D	43-122		1	12/26/12 00:00	12/27/12 16:05	1718-51-0			
8260 MSV	Analytical	Analytical Method: EPA 5030B/8260									
Benzene	<b>21.4</b> u	g/L	10.0	0.98	10		12/27/12 18:03	71-43-2			
Ethylbenzene	<b>180</b> u	g/L	10.0	2.3	10		12/27/12 18:03	100-41-4			
Methylene chloride	ND u	g/L	10.0	2.4	10		12/27/12 18:03	75-09-2			
1,1,2,2-Tetrachloroethane	ND u	g/L	10.0	0.86	10		12/27/12 18:03	79-34-5			
Toluene	ND u	g/L	10.0	1.5	10		12/27/12 18:03	108-88-3			
Xylene (Total)	<b>3300</b> u	g/L	30.0	4.1	10		12/27/12 18:03	1330-20-7			
Surrogates											
4-Bromofluorobenzene (S)	101 %	, D	80-120		10		12/27/12 18:03	460-00-4			
Dibromofluoromethane (S)	102 %	, D	80-120		10		12/27/12 18:03	1868-53-7			
1,2-Dichloroethane-d4 (S)	100 %	, D	80-120		10		12/27/12 18:03	17060-07-0			
Toluene-d8 (S)	97 %	, D	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				
2540C Total Dissolved Solids	Analytical	Method: SM 2	540C								
Total Dissolved Solids	<b>34600</b> m	ng/L	5.0	5.0	1		12/24/12 13:11				
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	800.0								
Chloride	<b>392</b> m	ng/L	20.0	10.0	20		12/27/12 23:44	16887-00-6			
Fluoride	ND m	ng/L	0.20	0.069	1		12/27/12 23:27	16984-48-8			
Sulfate	<b>27300</b> m	ng/L	2000	118	2000		12/28/12 00:00	14808-79-8			

## **REPORT OF LABORATORY ANALYSIS**

Page 15 of 28



## Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

Sample: GW-075035-121912-CM- MW-7	Lab ID:	60135913007	Collected	Collected: 12/19/12 14:30			0 Received: 12/21/12 11:15 Mat				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual		
6010 MET ICP, Dissolved	Analytical	Method: EPA 6	6010 Prepa	ration Meth	od: EP/	A 3010					
Boron, Dissolved	<b>803</b> u	g/L	200	3.6	2	12/26/12 15:45	01/02/13 14:21	7440-42-8			
Iron, Dissolved	<b>779</b> u	g/L	100	34.4	2	12/26/12 15:45	01/02/13 14:21	7439-89-6			
Manganese, Dissolved	<b>2420</b> u	g/L	10.0	1.2	2	12/26/12 15:45	01/02/13 14:21	7439-96-5			
8270 MSSV PAH by SIM	Analytical	alytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C									
Naphthalene <i>Surrogates</i>	ND u	g/L	0.50	0.057	1	12/26/12 00:00	12/27/12 16:24	91-20-3			
2-Fluorobiphenyl (S)	76 %	6	40-120		1	12/26/12 00:00	12/27/12 16:24	321-60-8			
Terphenyl-d14 (S)	91 %	6	43-122		1	12/26/12 00:00	12/27/12 16:24	1718-51-0			
8260 MSV	Analytical	Method: EPA 5	5030B/8260								
Benzene	<b>1.0</b> u	g/L	1.0	0.098	1		12/28/12 10:44	71-43-2			
Ethylbenzene	<b>39.7</b> u	g/L	1.0	0.23	1		12/28/12 10:44	100-41-4			
Methylene chloride	ND u	g/L	1.0	0.24	1		12/28/12 10:44	75-09-2			
1,1,2,2-Tetrachloroethane	ND u	g/L	1.0	0.086	1		12/28/12 10:44	79-34-5			
Toluene	ND u	g/L	1.0	0.15	1		12/28/12 10:44	108-88-3			
Xylene (Total)	ND u	g/L	3.0	0.41	1		12/28/12 10:44	1330-20-7			
Surrogates											
4-Bromofluorobenzene (S)	102 %	6	80-120		1		12/28/12 10:44	460-00-4			
Dibromofluoromethane (S)	102 %	6	80-120		1		12/28/12 10:44	1868-53-7			
1,2-Dichloroethane-d4 (S)	107 %	6	80-120		1		12/28/12 10:44	17060-07-0			
Toluene-d8 (S)	95 %	6	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				
2540C Total Dissolved Solids	Analytical	Method: SM 2	540C								
Total Dissolved Solids	<b>13800</b> m	ng/L	5.0	5.0	1		12/24/12 13:11				
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	300.0								
Chloride	<b>124</b> m	ng/L	20.0	10.0	20		12/28/12 00:34	16887-00-6			
Fluoride	<b>0.84</b> m	ng/L	0.20	0.069	1		12/28/12 00:17	16984-48-8			
Sulfate	<b>10300</b> m	ng/L	2000	118	2000		12/28/12 00:50	14808-79-8			

# **REPORT OF LABORATORY ANALYSIS**

Page 16 of 28



Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

Sample: GW-075035-121912-CM- DUP	Lab ID: 6013	5913008 Collecte	Collected: 12/19/12 12:15		Received: 12/21/12 11:15 Ma		trix: Water	
		Report						
Parameters	Results Ur	nits Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Methe	od: EPA 5030B/8260						
Benzene	<b>21.9</b> ug/L	10.0	0.98	10		12/27/12 18:32	71-43-2	
Ethylbenzene	<b>198</b> 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)	<b>3530</b> ug/L	30.0	4.1	10		12/27/12 18:32	1330-20-7	
Surrogates								
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		

# **REPORT OF LABORATORY ANALYSIS**

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Page 17 of 28


Project: 075035 MARTIN 34 NO. 2

EPA 3010

Pace Project No.: 60135913

QC Batch: MPRP/20997

METHOD BLANK: 1119697

QC Batch Method:

Analysis Method:

Analysis Description:

EPA 6010

6010 MET Dissolved

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

Matrix: Water

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

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	01/02/13 13:46	
Iron, Dissolved	ug/L	ND	50.0	01/02/13 13:46	
Manganese, Dissolved	ug/L	ND	5.0	01/02/13 13:46	

#### LABORATORY CONTROL SAMPLE: 1119698

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	974	97	80-120	
Iron, Dissolved	ug/L	10000	9980	100	80-120	
Manganese, Dissolved	ug/L	1000	991	99	80-120	

MATRIX SPIKE & MATRIX S	99		1119700									
			MS	MSD								
	6013	35913001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Boron, Dissolved	ug/L	1230	1000	1000	2280	2260	105	103	75-125	1	20	
Iron, Dissolved	ug/L	1250	10000	10000	10900	10800	96	96	75-125	1	20	
Manganese, Dissolved	ug/L	886	1000	1000	1810	1790	92	91	75-125	1	20	

### **REPORT OF LABORATORY ANALYSIS**

Page 18 of 28



Matrix: Water

Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

METHOD BLANK: 1120012

QC Batch:	MSV/	51043	Analysis	Method:	EPA 5030B/8260	
QC Batch Method:	EPA 5	030B/8260	Analysis	Description:	8260 MSV Water 10 mL I	Purge
Associated Lab Samp	les:	60135913002, 60135913003,	601359130	04, 60135913005	, 60135913006, 60135913	8008

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

		Blank	Reporting		
Parameter	Units	Result	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

		Spike	LCS	LCS	% Rec	0 117
Parameter		Conc	Result	% 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												
			MS	MSD								
	60	135732012	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	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**

Page 19 of 28



Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

QC Batch: MS	SV/51049		Analysis Met	hod: El	PA 5030B/8260		
QC Batch Method: EF	A 5030B/8260		Analysis Des	cription: 82	260 MSV Water 10	mL Purge	
Associated Lab Samples	60135913001						
METHOD BLANK: 1120111			Matrix:	Water			
Associated Lab Samples	60135913001						
			Blank	Reporting			
Parameter Unit		Units	Result	Limit	Analyzed	Qualifiers	
1,1,2,2-Tetrachloroethane	e ug/L		ND	1.0	12/27/12 21:40		
Benzene	ug/L		ND	1.0	12/27/12 21:40		
Ethylbenzene	ug/L		ND	1.0	12/27/12 21:40		
Methylene chloride	ug/L		ND	1.0	12/27/12 21:40		
Toluene	ug/L		ND	1.0	12/27/12 21:40		
Xylene (Total)	ug/L		ND	3.0	12/27/12 21:40		
1,2-Dichloroethane-d4 (S	5) %		101	80-120	12/27/12 21:40		
4-Bromofluorobenzene (S	S) %		101	80-120	12/27/12 21:40		
Dibromofluoromethane (S	S) %		101	80-120	12/27/12 21:40		
Toluene-d8 (S)	%		102	80-120	12/27/12 21:40		

#### LABORATORY CONTROL SAMPLE: 1120112

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	20.1	100	71-121	
Benzene	ug/L	20	20.9	104	74-123	
Ethylbenzene	ug/L	20	21.5	107	76-123	
Methylene chloride	ug/L	20	17.3	86	72-127	
Toluene	ug/L	20	20.8	104	75-123	
Xylene (Total)	ug/L	60	65.6	109	76-123	
1,2-Dichloroethane-d4 (S)	%			98	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Dibromofluoromethane (S)	%			105	80-120	
Toluene-d8 (S)	%			103	80-120	

# **REPORT OF LABORATORY ANALYSIS**

Page 20 of 28



Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

QC Batch:	MSV/51062		Analysis Met	hod: El	PA 5030B/8260		
QC Batch Method:	EPA 5030B/8260		Analysis Des	cription: 82	260 MSV Water 10	mL Purge	
Associated Lab Sample	es: 60135913007						
METHOD BLANK: 1120421			Matrix:	Water			
Associated Lab Sample	es: 60135913007						
			Blank	Reporting			
Parameter Units		Units	Result	Limit	Analyzed	Qualifiers	
1,1,2,2-Tetrachloroetha	ane ug/L		ND	1.0	12/28/12 10:15		
Benzene	ug/L		ND	1.0	12/28/12 10:15		
Ethylbenzene	ug/L		ND	1.0	12/28/12 10:15		
Methylene chloride	ug/L		ND	1.0	12/28/12 10:15		
Toluene	ug/L		ND	1.0	12/28/12 10:15		
Xylene (Total)	ug/L		ND	3.0	12/28/12 10:15		
1,2-Dichloroethane-d4	(S) %		98	80-120	12/28/12 10:15		
4-Bromofluorobenzene	e (S) %		102	80-120	12/28/12 10:15		
Dibromofluoromethane	e (S) %		100	80-120	12/28/12 10:15		
Toluene-d8 (S)	%		100	80-120	12/28/12 10:15		

#### LABORATORY CONTROL SAMPLE: 1120422

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L		21.1	106	71-121	
Benzene	ug/L	20	20.8	104	74-123	
Ethylbenzene	ug/L	20	21.5	107	76-123	
Methylene chloride	ug/L	20	18.0	90	72-127	
Toluene	ug/L	20	20.8	104	75-123	
Xylene (Total)	ug/L	60	65.2	109	76-123	
1,2-Dichloroethane-d4 (S)	%			96	80-120	
4-Bromofluorobenzene (S)	%			104	80-120	
Dibromofluoromethane (S)	%			107	80-120	
Toluene-d8 (S)	%			102	80-120	

# **REPORT OF LABORATORY ANALYSIS**

Page 21 of 28



Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

QC Batch:	OEXT/36601		Analysis	Method:	E	EPA 8270C by SIM				
QC Batch Method:	EPA 3510C		Analysis Description:				AH by SII	M MSSV	/	
Associated Lab Samp	oles: 60135913	001, 60135913002,	6013591300	3, 601359	13004, 6	0135913005	, 601359	13006, 6	60135913007	
METHOD BLANK: 1	119449		Mat	rix: Water	r					
Associated Lab Samp	oles: 60135913	001, 60135913002,	6013591300	3, 601359	13004, 6	0135913005	, 601359	13006, 6	60135913007	
			Blank	Rep	orting					
Parame	eter	Units	Result	L	imit	Analyze	ed	Qualifi	ers	
Naphthalene		ug/L	1	ND	0.50	12/27/12 1	14:09			
2-Fluorobiphenyl (S)		%		74	40-120	12/27/12 1	14:09			
Terphenyl-d14 (S)		%		64	43-122	12/27/12 1	14:09			
LABORATORY CONT	TROL SAMPLE:	1119450								
			Spike	LCS		LCS	% Re	ЭC		
Parame	eter	Units	Conc.	Result		% Rec	Limit	S	Qualifiers	
Naphthalene		ug/L	10		6.7	67	4	1-120		
2-Fluorobiphenyl (S)		%				76	4	0-120		
Terphenyl-d14 (S)		%				69	4	3-122		

# **REPORT OF LABORATORY ANALYSIS**

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Page 22 of 28



Project:	075035 MARTI	N 34 NO. 2						
Pace Project No.:	60135913							
QC Batch:	WET/38967		Analysis Meth	od: SN	M 2540C			
QC Batch Method:	SM 2540C		Analysis Desc	ription: 25	40C Total Dissolve	d Solids		
Associated Lab Sam	ples: 601359 <sup>-</sup>	13001, 6013591300	02, 60135913003, 60	135913004, 60	0135913005, 60135	5913006, 6013	5913007	
METHOD BLANK:	1119313		Matrix: \	Nater				
Associated Lab Sam	ples: 601359 <sup>-</sup>	13001, 6013591300	02, 60135913003, 60	135913004, 60	0135913005, 60135	5913006, 6013	5913007	
			Blank	Reporting				
Param	neter	Units	Result	Limit	Analyzed	Qualifiers		
Total Dissolved Solid	ls	mg/L	ND	5.0	12/24/12 13:05			
SAMPLE DUPLICAT	E: 1119314							
			60135846001	Dup		Max		
Param	eter	Units	Result	Result	RPD	RPD	Qualifiers	
Total Dissolved Solid	ls	mg/L	1590	1560	2	17		
SAMPLE DUPLICAT	E: 1119315							
			60135908002	Dup		Max		
Param	eter	Units	Result	Result	RPD	RPD	Qualifiers	
Total Dissolved Solid	ls	mg/L		272	3	17		

# **REPORT OF LABORATORY ANALYSIS**

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Page 23 of 28



Project: 075035 MARTIN 34 NO. 2

EPA 300.0

Pace Project No.: 60135913

QC Batch: WETA/23021

Associated Lab Samples:

METHOD BLANK: 1119918

QC Batch Method:

021

Analysis Description: 300.0 IC Anions

60135913001, 60135913003, 60135913004, 60135913005, 60135913006, 60135913007

EPA 300.0

Matrix: Water

Analysis Method:

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						
	6	0135798014	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% 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 S	PIKE DUPLICATE:	111992	21		1119922							
			MS	MSD								
	6013	5848001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	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	

## **REPORT OF LABORATORY ANALYSIS**

Page 24 of 28



Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913							
QC Batch: WETA/2304	4	Analysis Metl	hod: I	EPA 300.0			
QC Batch Method: EPA 300.0		Analysis Des	cription:	300.0 IC Anions			
Associated Lab Samples: 6013	5913002						
METHOD BLANK: 1120439		Matrix:	Water				
Associated Lab Samples: 6013	5913002						
		Blank	Reporting				
Parameter	Units	Result	Limit	Analyzed	Qualifier	S	
Chloride	mg/L	ND	1.	0 12/28/12 11:	17		
Fluoride	mg/L	ND	0.2	0 12/28/12 11:	17		
Sulfate	mg/L	ND	1.0	0 12/28/12 11:	17		
LABORATORY CONTROL SAMP	LE: 1120440						
		Spike	LCS	LCS	% Rec		
Parameter	Units	Conc. F	Result	% Rec	Limits	Qualifiers	
Chloride	mg/L	5	4.9	99	90-110	<u> </u>	
Fluoride	mg/L	2.5	2.4	96	90-110		
Sulfate	mg/L	5	5.0	101	90-110		
MATRIX SPIKE SAMPLE:	1120441						
		60135935001	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Chloride	mg/L		59 50	217	95	64-118	
Fluoride	mg/L	N	D 25	25.6	102	75-110	
Sulfate	mg/L	72	27 250	939	85	61-119	
MATRIX SPIKE SAMPLE:	1120442						
		60136047001	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Chloride	mg/L	31	7 250	544	91	64-118	
Fluoride	mg/L	N	D 125	117	93	75-110	

Sulfate

# **REPORT OF LABORATORY ANALYSIS**

69.6

250

305

94

61-119

mg/L

Page 25 of 28



## QUALIFIERS

Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

#### 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

[1]

[1]

#### Sample: 60135913001

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

Sample: 60135913002

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

Sample: 60135913003

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.

#### **REPORT OF LABORATORY ANALYSIS**

Page 26 of 28



## QUALIFIERS

Project: 075035 MARTIN 34 NO. 2

Pace Project No.: 60135913

#### **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.

# **REPORT OF LABORATORY ANALYSIS**

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Page 27 of 28



# 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		

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# **REPORT OF LABORATORY ANALYSIS**

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Page 28 of 28



Project Manager Review:

KKA

# Sample Condition Upon Receipt ESI Tech Spec Client

Sample Condition WWW pacelabs com ESI Tech Sp	bec Client	eipt	60135913	
Client Name: COP CRA NM				Optional
Courier: Fed Ex 🗹 UPS 🗆 USPS 🗆 Client	Commercial 🗆	Pac	e 🗆 Other 🗆	Proj Due Date: 1/4
Tracking #: 8001 8200 4824 P	ace Shipping La	abel Us	ed? Yes 🗹 No 🗆	Proj Name:
Custody Seal on Cooler/Box Present: Yes v No	Seals intac	ct: Ye	s 🗹 No 🗆	
Packing Material: Bubble Wrap  Bubble Bag	js⊡ F	oam 🗹	None 🗆 Ot	her MZPLC
Thermometer Used:/ T-194 Ty	pe of Ice: 🛛 🕅	Blue	None Samples rec	eived on ice, cooling process has begun.
Cooler Temperature: <u>3 · 7</u>		(circle d	Date a	nd initials of person examining
Temperature should be above freezing to 6°C			conten	
Chain of Custody present:	VYes No D	∃N/A 1	•	
Chain of Custody filled out:	VYes DNO D	]N/A 2		
Chain of Custody relinguished:	□Yes □No [	∃N/A 3		
Sampler name & signature on COC:	Yes No [		k	
Samples arrived within holding time:	Elves DNo D		5	
Short Hold Time analyses (<72hr):	TYes No [		3.	
Rush Turn Around Time requested:	TYes No [		7.	
Sufficient volume:	Yes No (		3.	
		□N/A		
Correct containers used.			2	
Pace containers used:			10	
Containers intact:			10.	
Unpreserved 5035A soils frozen w/in 48hrs?			11. 	
Filtered volume received for dissolved tests?	MYes No	LZIN/A	12.	
Sample labels match COC:	IllYes ∐No I	LIN/A		
Includes date/time/ID/analyses Matrix:			13.	
All containers needing preservation have been checked.	Yes No	□n/A		
All containers needing preservation are found to be in compliance with EPA recommendation	Yes No	□n/a	14.	
Exceptions: OA, coliform, TOC, O&G, WI-DRO (water),	ALVES TINO		Initial when	Lot # of added
Phenolics Trip Blank present:			completed	preservative
	LIYes MUNO		15 No trio blanks	in coaler
Headspace in VOA vials ( >6mm):			10 No http bland	
			10	
		4	16.	
Project sampled in USDA Regulated Area:		L'IN/A	17. List State:	
Client Notification/ Resolution: Copy C	OC to Client?	Y /(1	Field Data Requir	red? Y / N
Person Contacted: (MASHM MAHUWS: D	ate/Time:	nt	11/17/11/11	Temp Log: Record start and finish times when unpacking cooler, if >20 min, recheck sample temps
Comments/ Resolution:	allalen Ou	host	HUNDY DAMINAND	Start: 1230 Start:
Fun twint with p. volume pr DE 10 Bully	PT WAR FILL	(Carris	unu Unstuart	End: 1235 End:

Date:

WO#:60135913

Temp

Temp

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document The Chain-of-Custody is a LEGAL DOCUMENT All relevant fields must be completed accurately.

Зв. 200         Солов (мой высовий)         Солов (мой высовий) <th< th=""><th>Chonol Rd NR, Ste 200 Gen<sup>1</sup> Gen<sup>1</sup> (Alije Blanchard, Angele Bown Town 67110 Town 671100 Town 671100 Town 671100 Town 671100 Town 671100 Town 671100 Town 6711</th></th<>	Chonol Rd NR, Ste 200 Gen <sup>1</sup> Gen <sup>1</sup> (Alije Blanchard, Angele Bown Town 67110 Town 671100 Town 671100 Town 671100 Town 671100 Town 671100 Town 671100 Town 6711
Contract	Риспеле         Совенко:         Распеле         Распеле         Г. П.
Полование         <	Purpose Methods:     Propert Nume: Martin 34 No. 2     Terme Conter Propert Nume: Propert Nume: Martin 34 No. 2     Terme Conter Propert Nume: Propert Nume: Martin 34 No. 2     Terme Conter Propert Nume: Propert Num: Propert Nume: Propert Num: Propert Propert
402         Total Minu Mu 2         Team Main Main Mu 2         Team Main Mu 2         Team Main Main Main Mu 2         Team Main Main Main Mu 2         Team Main Main Mu 2         Team Main Main Main Mu 2         Team Main Main Main Main Main Main Main Main	4332         Proper Name         Martin 34 No. 2         Proper Name         Martin 34 No. 2         Resultation         State
Total Line         Contract of the contract on	Proper Number:         OT30035         Parter Number:         COLLECTED         Proper Number:
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