3R – 429

2013 AGWMR

08 / 22 / 2014

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ConocoPhillips

Mr. Glenn von Gonten
New Mexico Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

August 22, 2014

Re: NMOCD Case No. 3R-429, 2013 Annual Groundwater Monitoring Report

Dear Mr. von Gonten:

Enclosed is the 2013 Annual Groundwater Monitoring Report for the Martin 34 No. 2 site. This report, prepared by Conestoga-Rovers & Associates (CRA), contains the results of groundwater monitoring from March, June, September, and December 2013.

Please let me know if you have any questions.

Sincerely,

David C. Hathaway, P.E.

Enc

CONESTOGA-ROVERS & ASSOCIATES

www.CRAworld.com

Report

2013 Annual Groundwater Monitoring Report

ConocoPhillips Martin 34 No. 2
San Juan County, New Mexico
API# 30-045-08934
NMOCD# 3R-429

Prepared for: ConocoPhillips Company

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

August 2014 • 075035 • Report No. 4

Partners in Sustainability

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Section 1.0 Introduction

ConocoPhillips Company (ConocoPhillips) retained Conestoga-Rovers & Associates (CRA) to conduct site characterization and soil and groundwater remediation at the San Juan 29-7 Unit 37 natural gas well (Site). The Site is located within Unit Letter N, Section 12, Township 29N, Range 7W, Rio Arriba County, New Mexico (Latitude: 36.73552° N; Longitude: -107.52488° W) (**Figure 1**). This report summarizes the remediation status and groundwater data that were collected in 2013 and early 2014.

Site characterization activities were conducted at the Site in 2010 and 2011 to delineate soil and groundwater impacted by a release that occurred from an above-ground condensate tank. The site characterization indicated hydrocarbon impacts from the release that exceeded New Mexico Water Quality Control Commission (NMWQCC) standards, including benzene, toluene and total xylenes in groundwater and total benzene, toluene, ethylbenzene, and xylenes (BTEX), and total petroleum hydrocarbons (TPH) in the vadose zone soil. Soil impacts were delineated in the area of the release to a maximum depth of approximately 110 feet-below ground surface (ft-bgs) or to the top of groundwater. Groundwater was impacted in the immediate area of the release and extended to approximately 60 feet down-gradient from the release. A total of 18 soil borings and eight (8) monitor wells have been utilized to characterize subsurface soil and groundwater conditions (**Figure 2**). Soil and groundwater impacts were treated in 2012 with a chemical oxidant at the Site.

1.1 Site History

The Site is located on land owned by Mr. Richard Hodgson and the surface is leased by ConocoPhillips. The well is currently operated by Burlington Resources Oil and Gas Company LP, a wholly owned subsidiary of ConocoPhillips. A Site detail map is included as **Figure 2**.

ConocoPhillips discovered a leaking inspection plate gasket on the above-ground condensate tank on August 26, 2010. Approximately 23 barrels (bbls) of condensate were released and fully contained within the berm; however, no liquids were recovered. The release was immediately reported to the New Mexico Oil Conservation Division (NMOCD) with a C-141 Release Notification and Corrective Action form, filed by ConocoPhillips on September 16, 2010.

1.2 Site Setting

The Site is located in Rio Arriba County, New Mexico, on privately owned ranch land. The elevation at the Site is approximately 6,292 feet above mean sea level (amsl). The Tertiary-aged San Jose Formation crops out as sandstone bluffs visible to the north and south of the Site and locally reaching an elevation of approximately 6,652 feet amsl.

Subsurface soils at the Site consist primarily of silts inter-bedded with fine sands and clays. Groundwater is located at approximately 110 ft-bgs and locally flows towards the south-southwest.

Regional groundwater flow is unknown, but, likely according to the United States Geological Survey Delgadita Mesa, NM topographic map, if groundwater flow mimics topography, it trends south/southeast.

An Environmental Data Resources (EDR) report on the subject property identified the Gould Pass National Wetland Inventory within a one mile radius of the Site. According to the EDR radius map included in the report, the largest section of the Wetland Inventory is located upgradient of the Site.

1.3 Summary of Previous Investigations

Following the discovery of the release of condensate from the above-ground tank at the site, approximately 5,100 cubic yards (yd^3) of soil was excavated from the area below the former tank location between September 24, 2010 and January 3, 2011. The excavation measured approximately 70 ft by 120 ft by 30 ft deep (**Figure 2**). The horizontal and vertical extent of the hydrocarbon-impacted area was not determined at that time. For practical and safety reasons and due to limitations posed by surface structures, the southern extent of the excavation and the vertical extent of the excavation were halted at approximately 30 ft-bgs. At completion of the excavation approximately 3,444 yards of hydrocarbon impacted soil had been removed and transported to the Industrial Ecosystems, Incorporated landfarm located in Aztec, New Mexico. The excavation was subsequently back filled with clean soil.

To further delineate vertical impacts of the release, Tetra Tech Inc. sampled subsurface soils in the impacted area and in close proximity to the release point (soil boring B-1) between January 12 and 14, 2011 (Pre-treatment Soil Boring B-1, **Figure 2**). Impacts were noted in the soil above the NMOCD recommended field screening level for organic vapors (100 ppm) from 30 ft-bgs to the total depth of the soil boring at 129.5 ft-bgs All analytical results for soil samples collected from B-1 were below the recommended NMOCD remediation action levels with the exception of the sample collected from 30 to 32 ft-bgs that had a total BTEX concentration and total TPH concentration which exceed the NMOCD recommended action limits for total BTEX and TPH at 50 mg/kg, and 100 mg/kg, respectively .

Analytical results from the groundwater sample collected from the open borehole, B-1, indicated BTEX in groundwater above the NMWQCC standard. Between February 28 and March 4, 2011, Tetra Tech advanced two additional soil borings, B-2 and B-3, in or near the center of the previously excavated area (Pre-treatment Soil Boring B-2 and B-3, **Figure 2**) and installed four soil borings/monitor wells (MW-1 through MW-4) at the Site.

Field screening of B-2 soil samples indicated soil impacts above the NMOCD field screening action level of 100 ppm. The total BTEX concentration of 122.5 mg/kg also exceeded the NMOCD action level from 45 to 47 ft-bgs in boring B-2.

Field screening of soil samples collected from B-3 showed no signs of hydrocarbon impacts to a total depth of 57 ft-bgs No samples were collected for laboratory analysis from B-3 since no hydrocarbon impacts were observed during field screening activities and groundwater was not encountered.

Due to the elevated organic vapors encountered in B-2, Monitor Well MW-1 was installed approximately 20 ft south of B-2. The analytical results for this well from the March 2011 groundwater sampling event indicated that only benzene was detected above the NMWQCC standard at a concentration of 0.066 mg/L. Three additional monitor wells, MW-2, MW-3, and MW-4, were installed at the Site (**Figure 2**). One monitor well (MW-4) was installed up-gradient of the release and two monitor wells (MW-2 and MW-3) were installed down-gradient of the release. None of these monitor wells showed any detection of hydrocarbon constituents above the NMWQCC groundwater quality standards.

To further evaluate Site conditions and to delineate areas of remediation, 11 borings were advanced and four monitor wells were installed by CRA at the Site from September 2011 to October 2011 (**Figure 2**). Monitor wells were installed within the release area, MW-1 and MW-8, upgradient of the release area, MW-4 and MW-7, and MW-2, MW-3, MW-5 and MW-6 down gradient of the area..

Field screening of soil samples and laboratory results indicated impacts (organic vapors > 100 ppm) in the immediate area of the release to depths ranging from 40 ft-bgs to 110 ft-bgs. Soil analytical results indicated Total BTEX and TPH above the NMOCD recommended action levels in four of the borings, B-4, B-5/MW-8, and B-8, which are located within the excavation area and one boring, B-10, located approximately 10 feet south of the excavation. In addition, soil boring B-6/MW-6 located approximately 60 feet southeast of the excavation indicated the TPH concentration above the NMOCD recommended action limit.

During this portion of the Site characterization, groundwater was encountered at approximately 110 ft-bgs, which is consistent with groundwater levels encountered during previous phases of the site characterization. The groundwater flow direction was determined to be towards the south-southwest. The analytical results for groundwater indicated that the benzene concentrations exceeded the NMWQCC standard at three locations (MW-1, MW-6 and MW-8). Toluene and total xylenes concentrations exceeded the standards at one location (MW-8).

For in-situ site remediation activities, CRA retained DeepEarth Technologies, Inc. (DTI) to implement the *Cool-Ox*™ Technology, a patented in-situ process that uses a solution of calcium peroxide that generates a slow release of hydrogen peroxide and facilitates the oxidation of petroleum hydrocarbons.

From December 2011 to February 2012, the *Cool-Ox*™ solution was injected in the area shown in **Figure 2**. DTI utilized a direct push technology (DPT) drill rig supported by DTI's mixing and injection trailer (the Deep-Shot-Rig™) to advance temporary 1.5-inch diameter injection points.

Approximately 52,889 gallons were used to inject the solution into the subsurface soil and groundwater using 93 injection points on 8-foot spacings in an approximate area of 5,950 ft^2 (70 ft x 85 ft) to treat approximately 8,815 yd^3 of impacted soil. The solution was primarily injected into the subsurface from the bottom of the injection point to approximately 30 ft-bgs. In addition to groundwater treatment using the direct-push rig, the solution was directly injected into groundwater Monitor Wells MW-1, MW-6, MW-7 and MW-8 with approximately 8,000 gallons of solution.

To evaluate the effectiveness of the *Cool-Ox*™ treatment, subsurface soil and groundwater conditions were analyzed at the Site after the treatment. Groundwater samples were collected and analyzed on a quarterly basis (February 2012, June 2012, September 2012 and January 2013). The subsurface soil was sampled in the area of the *Cool-Ox*™ treatment by advancing five (5) soil borings in August 2012.

A more thorough discussion of the *Cool-Ox*™ treatment site activities can be found in the April 2013 CRA *Subsurface Remediation and Annual Groundwater Monitoring Report*.

Section 2.0 Monitoring Well Installation

During the September 2012 sampling event, the casing in Monitor Well MW-8 was noted to be deformed (likely due to subsidence of fill material), preventing sampling with a 1.5-inch polyethylene bailer. A 0.5-inch polyethylene bailer was utilized, but removal of three volumes of groundwater could not be achieved. Sampling was attempted again during the January 2013 sampling event with the same outcome. Due to this damage, likely caused by the settling of fill material in the former excavation area, CRA discontinued sampling of this well.

A Well Plugging Plan of Operations for MW-8 was submitted by CRA to the New Mexico Office of the State Engineer (NMOSE) on July 2, 2013 and approved on July 11, 2013. On July, 16, 2013, National Exploration, Wells, and Pumps (National EWP) plugged and abandoned MW-8. Monitor Well MW-8 was plugged and abandoned with a cement-bentonite grout via tremmie pipe, filling the well from the bottom to the top. Surface completion materials were removed and disposed of as non-hazardous solid waste.

A replacement well, MW-8R was subsequently installed by National EWP adjacent to the location of MW-8. A separate boring log therefore was not generated for replacement Monitor Well MW-8R. MW-8R was installed to a total depth of 120 feet bgs. The well was constructed of 2-inch diameter, schedule 40, flush-joint, PVC casing and screen. The monitoring well consists of a 0.5-foot long, threaded PVC bottom plug and 15 feet of flush-joint, threaded, factory-slotted (0.010-inch) well screen. The annular space around the well screen was filled with 10/20 gradation silica sand to approximately two feet above the well screen, followed by approximately three feet of 3/8-inch bentonite chips. A cement/bentonite grout was placed from the top of the bentonite chips to ground surface. The

wellhead is protected with a flush-mount completion set within a 24-inch by 24-inch by 4-inch thick concrete pad.

Soil cuttings were field screened for volatile organic compounds (VOCs) using the heated headspace method. At approximately 32 ft-bgs, photoionization detector readings were greater than 100 parts per million (ppm). From this point on, cuttings generated during monitoring well installation were placed in properly labeled 55-gallon drums. A waste characterization sample was collected as required for waste disposal. Analytical results from the waste characterization soil sample are included in **Appendix A**.

Seven 55-gallon drums of hydrocarbon impacted soil cuttings were transported to the Envirotech, Inc. Soil Remediation Facility #2 on September 10, 2013. Waste disposal documentation is included as **Appendix B**.

2.1 Soil Analytical Results

A confirmation soil sample was collected at a depth of approximately 107 feet bgs from MW-8R drill cuttings. The sample was placed in laboratory-supplied containers, labeled, placed on ice, and transported under chain of custody documentation to Pace Analytical (Pace) of Lenexa, Kansas. The sample was analyzed for total petroleum hydrocarbons (TPH) diesel and gasoline range organics (DRO/GRO) by EPA method 8015B, BTEX by EPA method 8260, and pH by EPA method 9045.

The sample returned TPH-GRO analytical results of 382 mg/kg, TPH-DRO of 124 mg/kg, a toluene concentration of 0.314 mg/kg, an ethylbenzene concentration of 0.453 mg/kg, and a concentration of 9.6 mg/kg for xylenes. The sample was below laboratory detection limits for benzene. Laboratory analytical reports for the confirmation soil sampling can be found in **Appendix A**.

Section 3.0 Groundwater Monitoring Summary

Groundwater sampling events were conducted at the Site on March 26, June 11, 2013, and September 10, 2013, and on January 7, 2014. Prior to collection of groundwater samples from monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, and MW-8R, depth to groundwater in each well was measured using an oil/water interface probe (**Table 1**). Groundwater potentiometric surface maps for these monitoring events are presented as **Figures 3, 4, 5,** and **6**, respectively. CRA groundwater sampling field forms are included as **Appendix C**. Groundwater elevation data collected from MW-1 are somewhat anomalous likely due to this well's location near the center of the formerly excavated and backfilled area. Some subsidence in this area may have therefore affected the previously surveyed casing elevation. Generally, groundwater was encountered across the Site at approximately 108 feet bgs. The groundwater potentiometric surface elevations have been consistent with little variability by season and throughout the history of monitoring the wells at the Site.

For all of these monitoring periods, the groundwater flow at the site was towards the south-southwest and the average groundwater gradient across the Site was 0.014 feet per foot, consistent with historical results.

3.1 Groundwater Monitoring Methodology

During monitoring events, at least three well volumes were purged from Site Monitor Wells with a Monsoon™ submersible pump prior to sampling. Purge water generated during purging of Site monitor wells was placed in the on-Site produced water tank. Groundwater samples were placed in laboratory prepared bottles, packed on ice, and shipped under chain-of-custody documentation to Pace Analytical Services, Inc. of Lenexa, KS.

Groundwater samples were analyzed for the presence of BTEX by EPA method 8260, dissolved manganese and selenium by EPA method 6010, nitrate (as nitrogen) by EPA method 353.2, sulfate by EPA method 300.0, total dissolved solids (TDS) by method SM 2540C, and heterotrophic plate count (HPC) by method SM 9215B. A summary of analytical results is presented in **Table 1**. Completed groundwater laboratory analytical results are presented in **Appendix D**.

3.2 Groundwater Monitoring Analytical 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.

A groundwater hydrocarbon concentration map and a groundwater inorganic concentration map are included as **Figures 7** and **8**, respectively. A groundwater field parameters map displaying pH, oxidation-reduction potential (ORP) and dissolved oxygen (DO) is included as **Figure 9**. Groundwater analytical results are discussed below.

March 2013

- **BTEX:** The NMWQCC domestic water supply groundwater quality standards for benzene, toluene, ethylbenzene, and xylene are 0.01 mg/L, 0.75 mg/L, 0.75 mg/L, and 0.62 mg/L, respectively. All groundwater sampling results from the March 2013 event were below NMWQCC standards for BTEX. MW-8 was not sampled during this event due to a deformed well casing.
- **Dissolved Manganese:** The NMWQCC domestic water supply groundwater quality standard for dissolved manganese is 0.2 mg/L. Monitoring Wells MW-1, MW-3, MW-5, and MW-6 exceeded this standard with analytical results of 0.49 mg/L, 1.83 mg/L, 0.356 mg/L, and 0.282 mg/L, respectively.

- **Dissolved Selenium:** The NMWQCC domestic water supply groundwater quality standard for dissolved selenium is 0.05 mg/L. Monitoring Wells MW-1, MW-2, and MW-6 exceeded this standard with analytical results of 0.079 mg/L, 0.0728 mg/L, and 0.0602 mg/L, respectively.
- **Nitrate (as Nitrogen):** The NMWQCC domestic water supply groundwater quality standard for nitrate is 10 mg/L. Monitoring Wells MW-1, MW-2, and MW-6 exceeded this standard with analytical results of 37.0 mg/L, 43.3 mg/L, and 30.9 mg/L, respectively.
- **Sulfate:** The NMWQCC domestic water supply groundwater quality standard for sulfate is 600 mg/L. Monitoring Wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, and MW-7 exceeded this standard with analytical results of 1,000 mg/L, 1,200 mg/L, 1,080 mg/L, 1,200 mg/L, 1,700 mg/L, 945 mg/L, and 1,730 mg/L, respectively.
- **TDS:** The NMWQCC domestic water supply groundwater quality standard for TDS is 1,000 mg/L. Monitoring Wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, and MW-7 exceeded this standard with analytical results of 1,980 mg/L, 1,930 mg/L, 2,030 mg/L, 1,950 mg/L, 2,370 mg/L, 1,740 mg/L, and 3,050 mg/L, respectively.

June 2013

- **BTEX:** All groundwater sample results were below NMWQCC standards for BTEX during the June 2013 sampling event. MW-8 was not sampled during this event due to a deformed well casing.
- **Dissolved Manganese:** Monitoring Wells MW-1, MW-3, MW-5, and MW-6 exceeded the standard with analytical results of 0.52 mg/L, 1.75 mg/L, 0.609 mg/L, and 0.328 mg/L, respectively.
- **Dissolved Selenium:** Monitoring Wells MW-1, MW-2, and MW-6 exceeded the standard with analytical results of 0.056 mg/L, 0.0666 mg/L, and 0.0621 mg/L, respectively.
- **Nitrate (as Nitrogen):** Monitoring Wells MW-1, MW-2, MW-6, and MW-7 exceeded the standard with analytical results of 31.1 mg/L, 40.6 mg/L, 27.6 mg/L, and 18.7 mg/L, respectively.
- **Sulfate:** Monitoring Wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, and MW-7 exceeded the standard with analytical results of 1,050 mg/L, 1,230 mg/L, 1,110 mg/L, 1,260 mg/L, 1,630 mg/L, 946 mg/L, and 1,700 mg/L, respectively.

September 2013

- **BTEX:** Monitoring well MW-8R exceeded the NMWQCC standard for benzene with an analytical result of 0.01 mg/L.
- **Dissolved Manganese:** Monitoring Wells MW-3, MW-5, MW-6, and MW-8R exceeded the standard with analytical results of 1.70 mg/L, 0.368 mg/L, 0.299 mg/L and 0.395 mg/L, respectively.
- **Dissolved Selenium:** Monitoring Well MW-2 exceeded the standard with an analytical result of 0.0657 mg/L.

- **Nitrate (as Nitrogen):** Monitoring Wells MW-1, MW-2, MW-6, MW-7, and MW-8R exceeded the standard with analytical results of 18.7 mg/L, 35.6 mg/L, 22.7 mg/L, 31.4 mg/L, and 38.6 mg/L, respectively.
- **Sulfate:** Monitoring Wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, and MW-8R exceeded the standard with analytical results of 1,130 mg/L, 1,200 mg/L, 1,120 mg/L, 1,180 mg/L, 1,640 mg/L, 929 mg/L, 1,740 mg/L, and 1,230 mg/L, respectively.
- **TDS:** Monitoring Wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, and MW-8R exceeded the standard with analytical results of 2,090 mg/L, 2,210 mg/L, 1,910 mg/L, 2,090 mg/L, 2,540 mg/L, 1,710 mg/L, 3,080 mg/L, and 2,430 mg/L, respectively.

January 2014

- **BTEX:** Monitoring well MW-8R exceeded the NMWQCC standards for benzene and xylenes with analytical results of 0.179 mg/L, and 0.690, respectively.
- **Dissolved Manganese:** Monitoring Wells MW-3, MW-5, MW-6, MW-7, and MW-8R exceeded the standard with analytical results of 1.77 mg/L, 0.396 mg/L, 0.268 mg/L, 0.452 mg/L, and 0.255 mg/L, respectively.
- **Dissolved Selenium:** Monitoring Well MW-2 exceeded the standard with an analytical result of 0.0745 mg/L.
- **Nitrate (as Nitrogen):** Monitoring Wells MW-1, MW-2, MW-6, MW-7, and MW-8R exceeded the standard with analytical results of 22.5 mg/L, 33.5 mg/L, 19.5 mg/L, 28.5 mg/L, and 28.3 mg/L, respectively.
- **Sulfate:** Monitoring Wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, and MW-8R exceeded the standard with analytical results of 1,040 mg/L, 1,300 mg/L, 1,180 mg/L, 1,350 mg/L, 1,740 mg/L, 984 mg/L, 1,950 mg/L, and 1,360 mg/L, respectively.
- **TDS:** Monitoring Wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, and MW-8R exceeded the standard with analytical results of 1,990 mg/L, 2,390 mg/L, 1,970 mg/L, 1,960 mg/L, 2,770 mg/L, 2,060 mg/L, 3,320 mg/L, and 2,900 mg/L, respectively.

Section 4.0 Conclusions and Recommendations

The groundwater samples collected prior to subsurface treatment with *Cool-Ox*™ showed detections of benzene, toluene and xylenes above the NMWQCC standards at Monitor Wells MW-1, MW-6 and MW-8. The *Cool-Ox*™ treatment has evidently attenuated the BTEX concentrations previously detected in groundwater of Monitor Wells MW-1 and MW-6.

Post-treatment groundwater sample results from MW-8, however, indicated concentrations of benzene, toluene and xylenes above the NMWQCC standards. Samples collected from replacement Monitor Well MW-8R show concentrations of benzene and xylenes again above NMWQCC standards for these constituents.

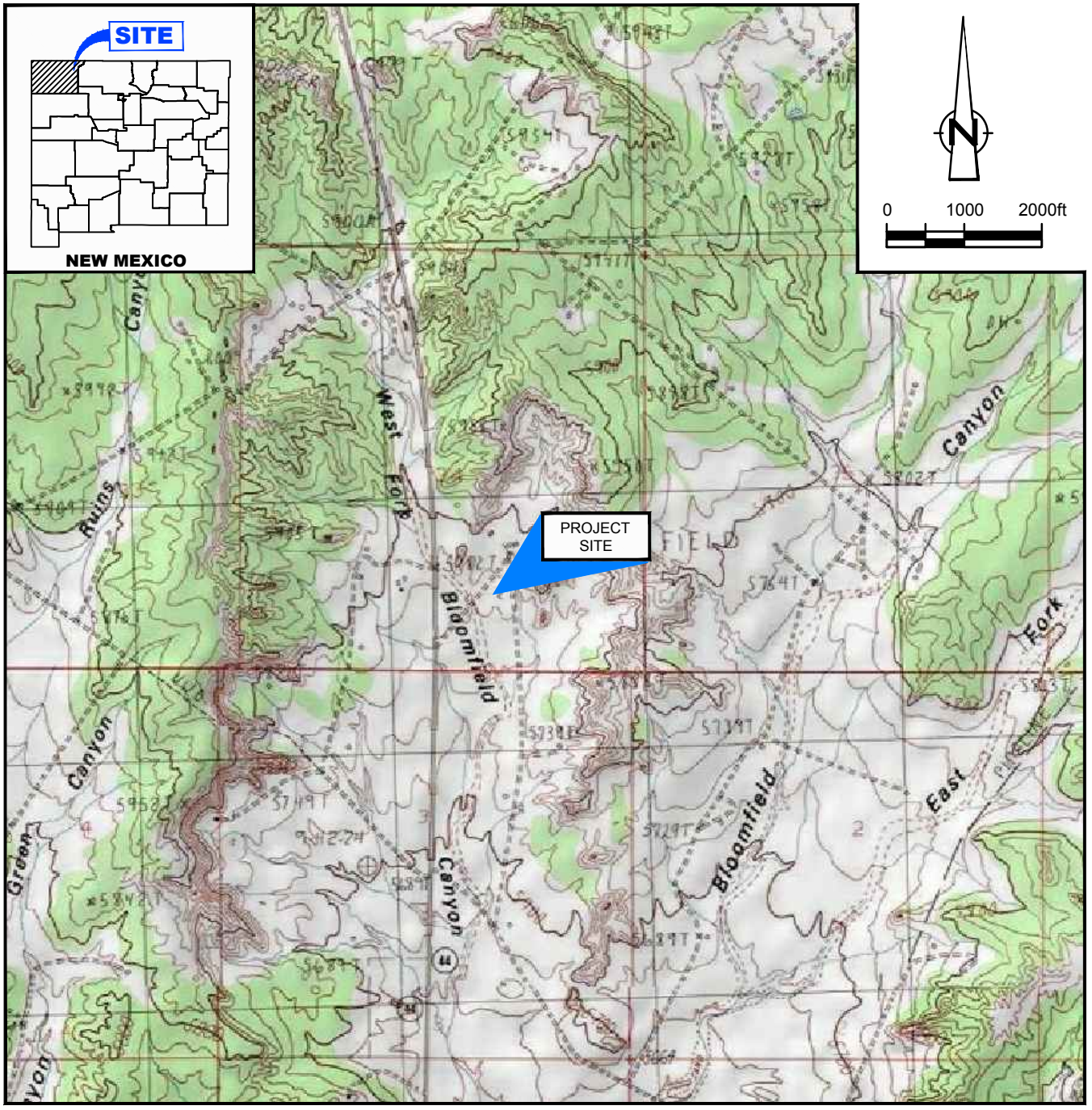
CRA recommends reinjection of *Cool-Ox*™, or similar chemical oxidant, directly into Monitor Well MW-8R to further oxidize and biodegrade hydrocarbons in the vicinity of this monitor well. An injection of *Cool-Ox*™ directly into other Site monitor wells is also recommended to increase aerobic conditions and, in turn, precipitate manganese out of the groundwater. CRA will submit a separate work plan detailing proposed remediation activities for NMOCD approval.

Monitoring Well MW-4 is located upgradient of the hydrocarbon release area, therefore groundwater samples from this well can be considered to represent background conditions. Sulfate and TDS concentrations in groundwater samples collected from this well consistently exceed NMWQCC standards. Sulfate and TDS concentrations in downgradient monitoring wells are within the same order of magnitude as the background concentrations.

CRA will continue to monitor groundwater at the Site on a quarterly basis until BTEX and inorganic constituents are below NMWQCC standards for eight consecutive quarters or background concentrations have been reached.

Monitor Wells MW-1, MW-4 and MW-7, upgradient from MW-8R, have displayed 8 consecutive quarters of BTEX concentrations below the NMWQCC standards and therefore these constituents will not continue to be analyzed in groundwater samples from these wells. Analysis of HPC will also be discontinued in all site wells. Groundwater samples will be collected from all Site monitor wells and analyzed for BTEX (except as noted), dissolved manganese and selenium, sulfate, nitrate, and TDS.

Figures



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

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

Figure 1

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

RE: NAIP Aerial Photograph

Figure 2

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

CRA

075035-95(004)GN-DL002 APR 15/2014

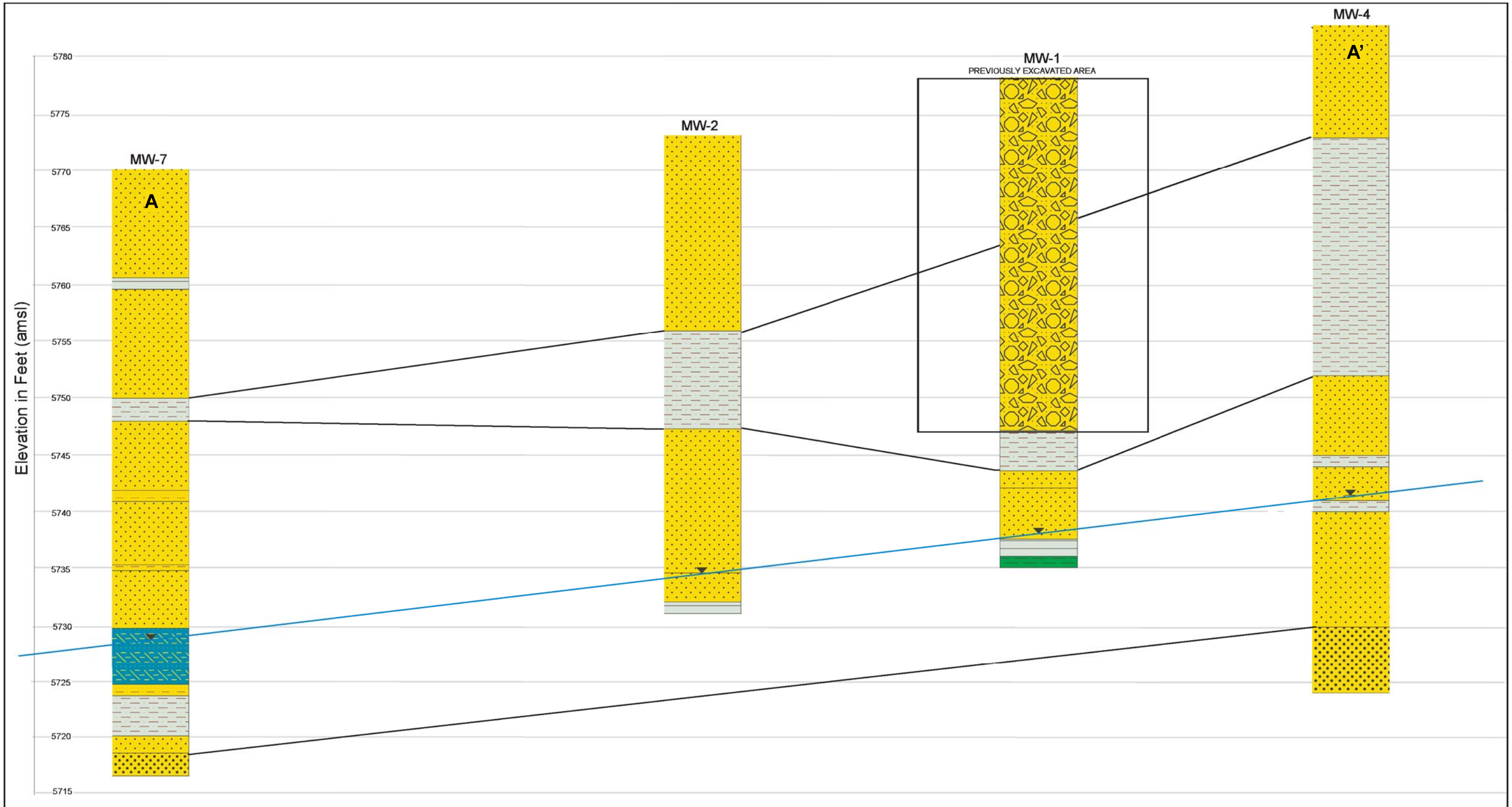


Figure 3
GENERALIZED GEOLOGIC CROSS SECTION A - A'
MARTIN 34 NO. 2 GAS WELL REMEDIATION SITE
SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips company

LEGEND

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

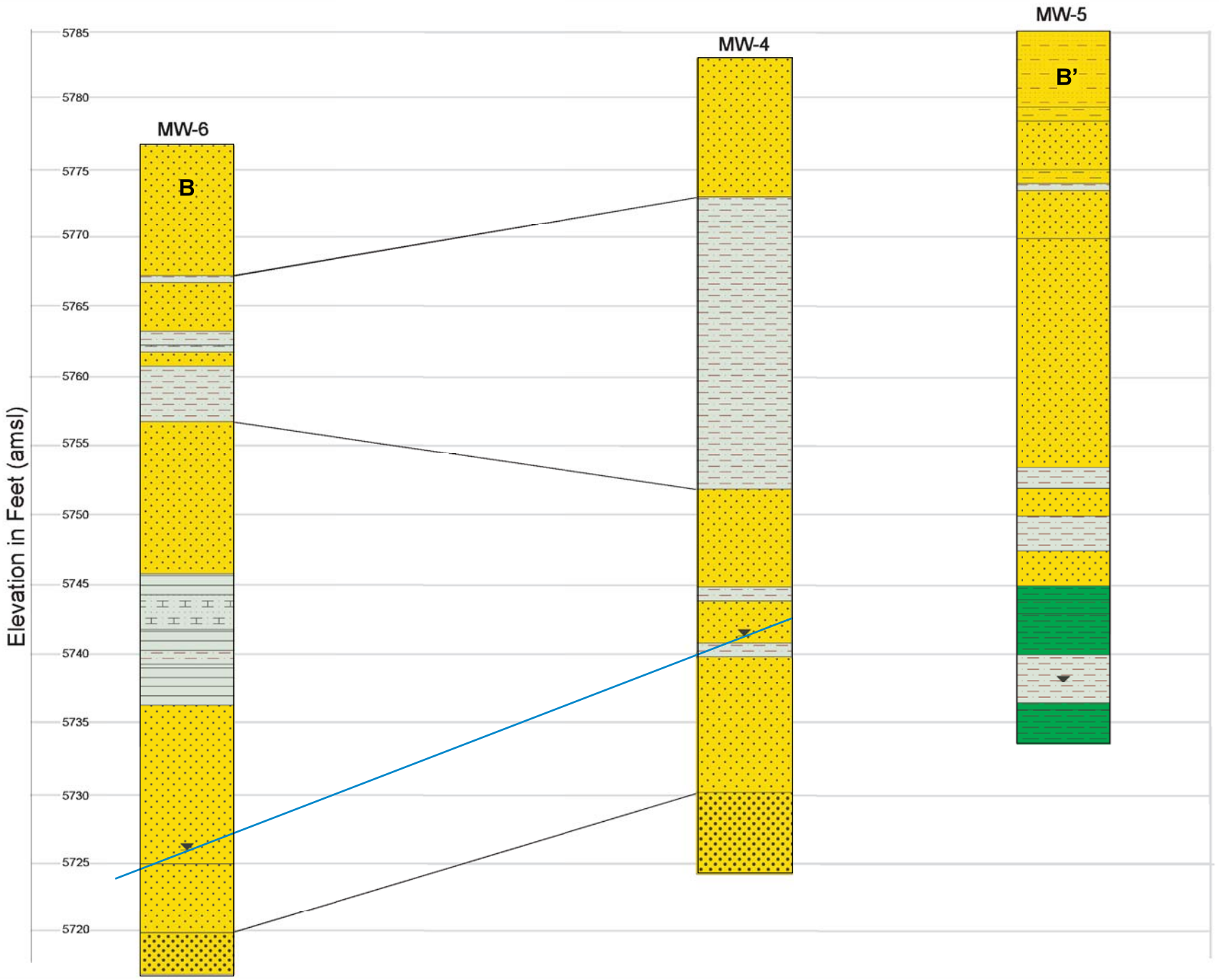


Figure 4
GENERALIZED GEOLOGIC CROSS SECTION B - B'
MARTIN 34 NO. 2 GAS WELL REMEDIATION SITE
SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips company

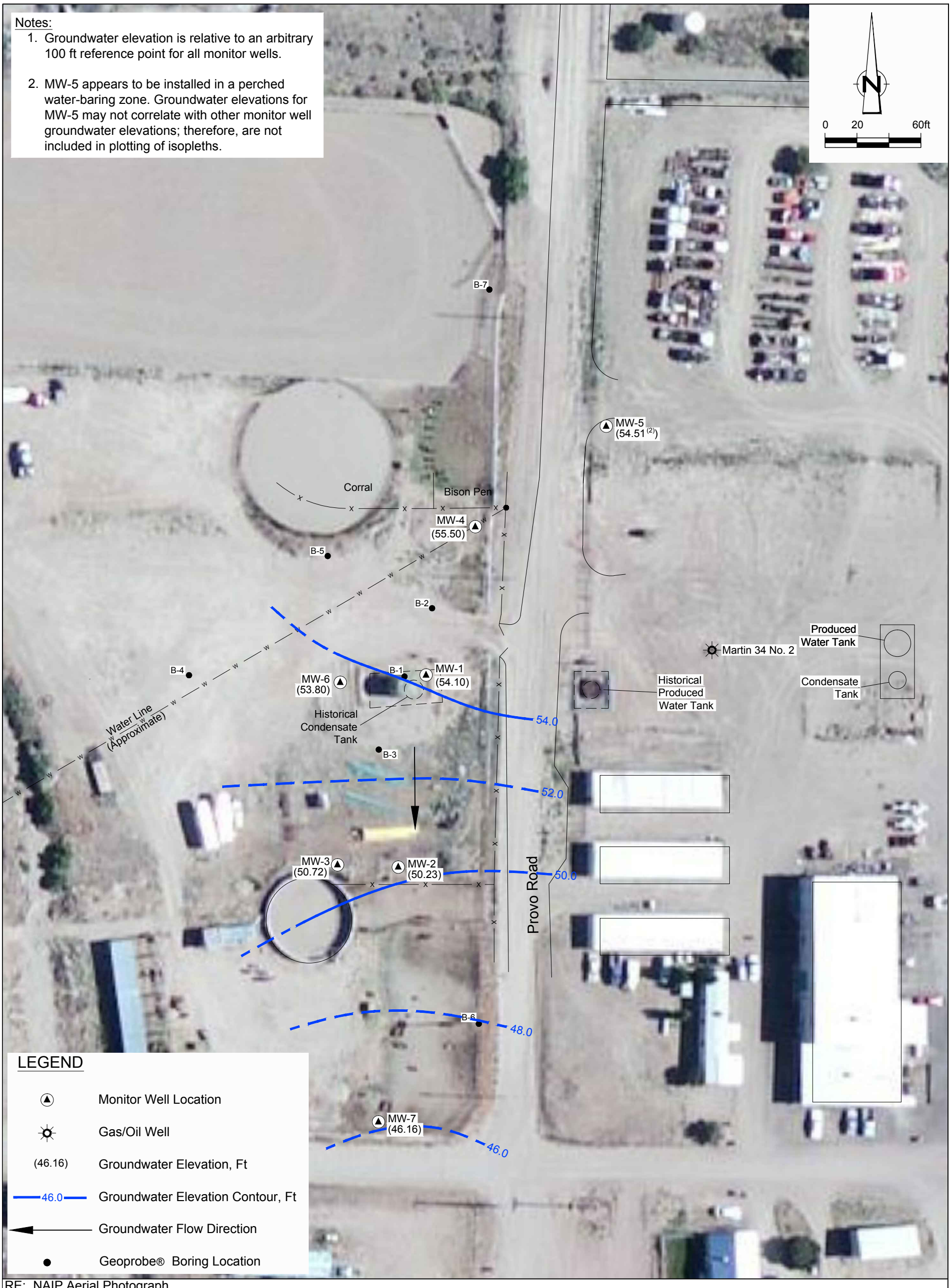
LEGEND

- Sand and Silt
- Sand
- Silt
- Clay
- Shale
- Sandstone
- Groundwater

Notes:

1. Groundwater elevation is relative to an arbitrary 100 ft reference point for all monitor wells.

2. MW-5 appears to be installed in a perched water-baring zone. Groundwater elevations for MW-5 may not correlate with other monitor well groundwater elevations; therefore, are not included in plotting of isopleths.



RE: NAIP Aerial Photograph

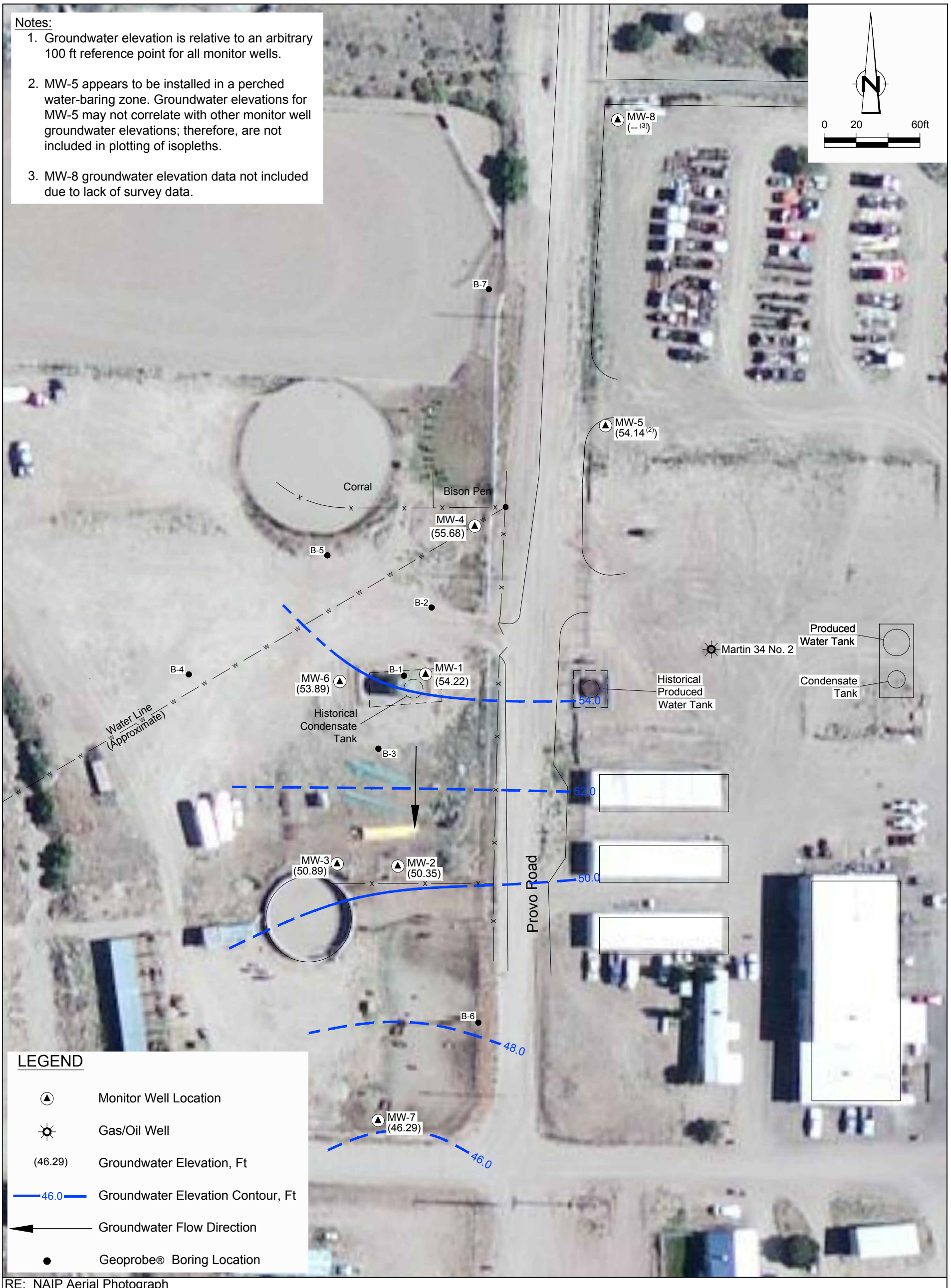
Figure 5

MARCH 2013 GROUNDWATER POTENTIOMETRIC SURFACE MAP
MARTIN 34 No. 2 GAS WELL REMEDIATION SITE
SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

075035-95(004)GN-DL003 APR 15/2014

Notes:

1. Groundwater elevation is relative to an arbitrary 100 ft reference point for all monitor wells.
2. MW-5 appears to be installed in a perched water-baring zone. Groundwater elevations for MW-5 may not correlate with other monitor well groundwater elevations; therefore, are not included in plotting of isopleths.
3. MW-8 groundwater elevation data not included due to lack of survey data.



RE: NAIP Aerial Photograph

Figure 6

JUNE 2013 GROUNDWATER POTENTIOMETRIC SURFACE MAP
MARTIN 34 No. 2 GAS WELL REMEDIATION SITE
SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

075035-95(004)GN-DL003 APR 15/2014

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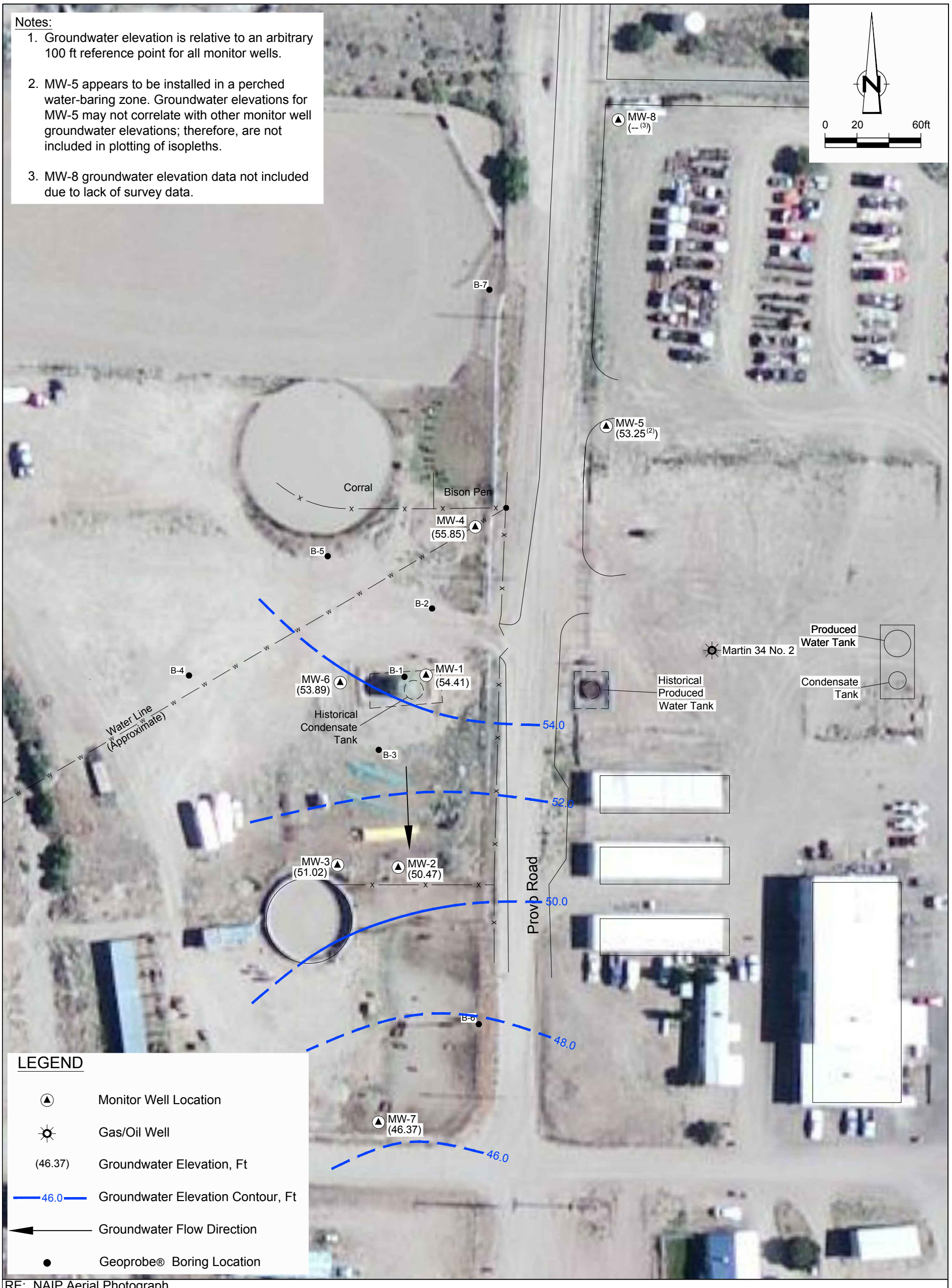


RE: NAIP Aerial Photograph

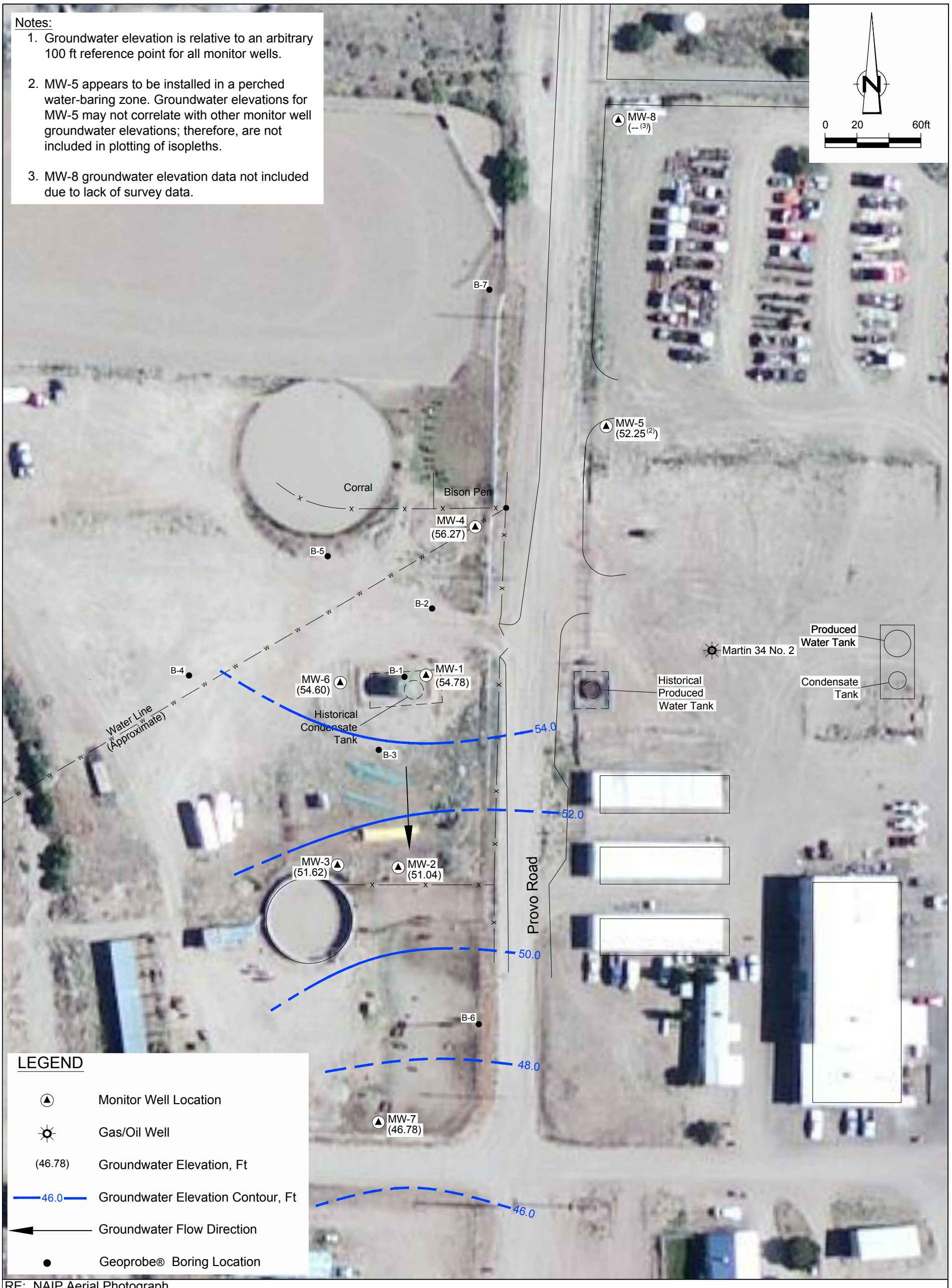
Figure 7

SEPTEMBER 2013 GROUNDWATER POTENTIOMETRIC SURFACE MAP
MARTIN 34 No. 2 GAS WELL REMEDIATION SITE
SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

075035-95(004)GN-DL003 APR 15/2014

Notes:

1. Groundwater elevation is relative to an arbitrary 100 ft reference point for all monitor wells.
2. MW-5 appears to be installed in a perched water-baring zone. Groundwater elevations for MW-5 may not correlate with other monitor well groundwater elevations; therefore, are not included in plotting of isopleths.
3. MW-8 groundwater elevation data not included due to lack of survey data.

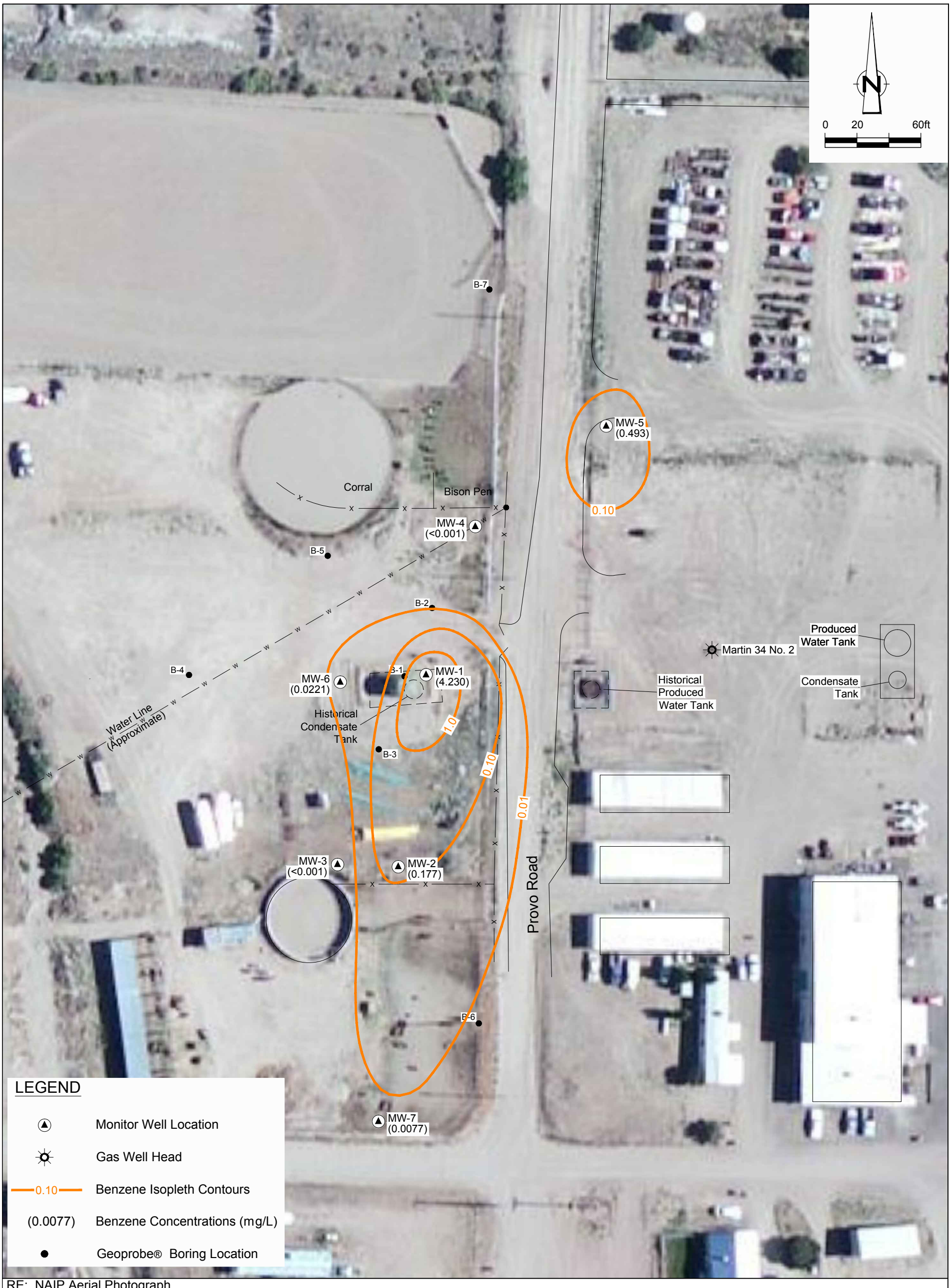


RE: NAIP Aerial Photograph

Figure 8

DECEMBER 2013 GROUNDWATER POTENTIOMETRIC SURFACE MAP
MARTIN 34 No. 2 GAS WELL REMEDIATION SITE
SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

075035-95(004)GN-DL003 APR 15/2014

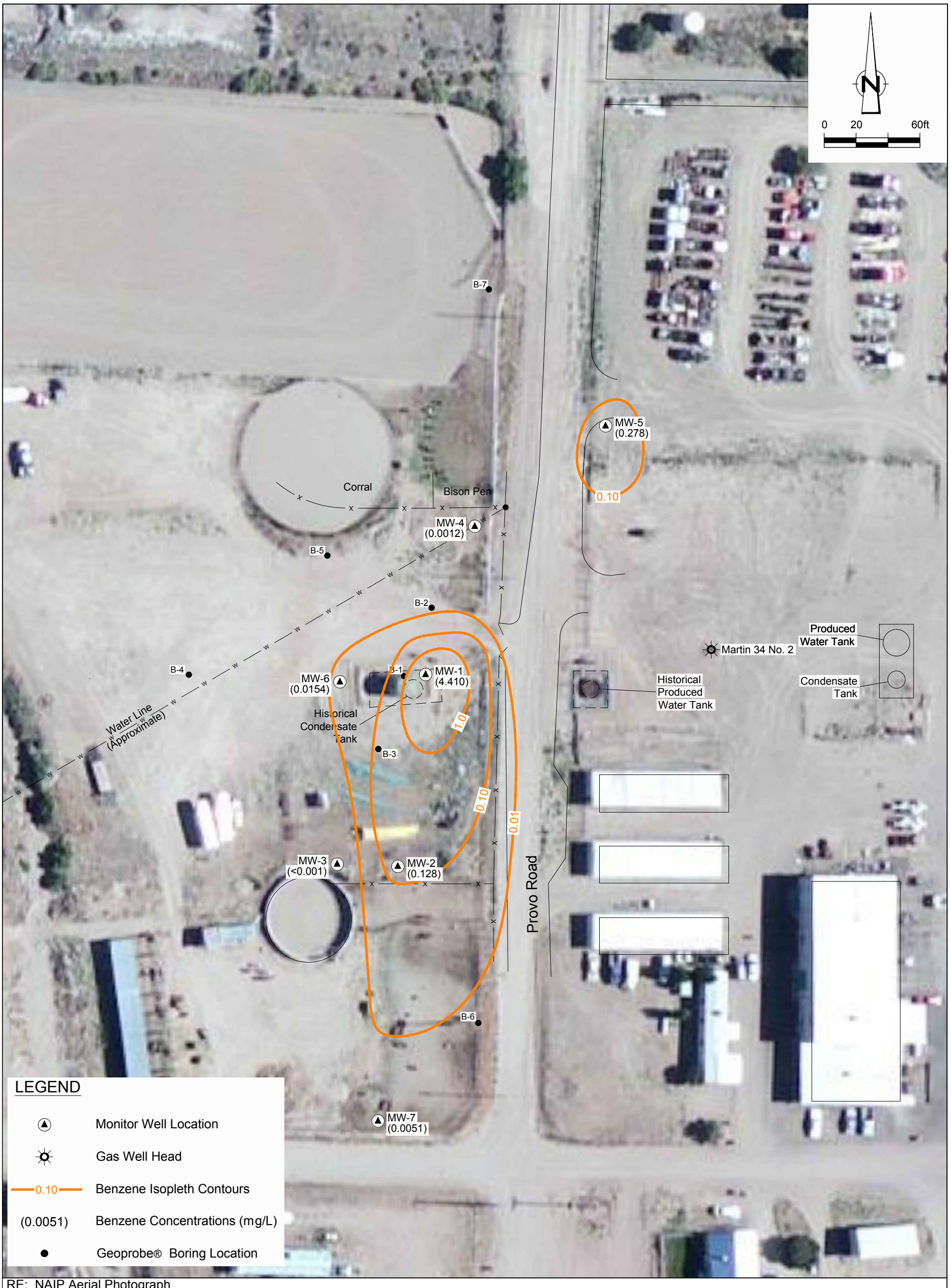


RE: NAIP Aerial Photograph

Figure 9

MARCH 2013 BENZENE CONCENTRATION MAP
MARTIN 34 No. 2 GAS WELL REMEDIATION SITE
SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

075035-95(004)GN-DL004 APR 15/2014

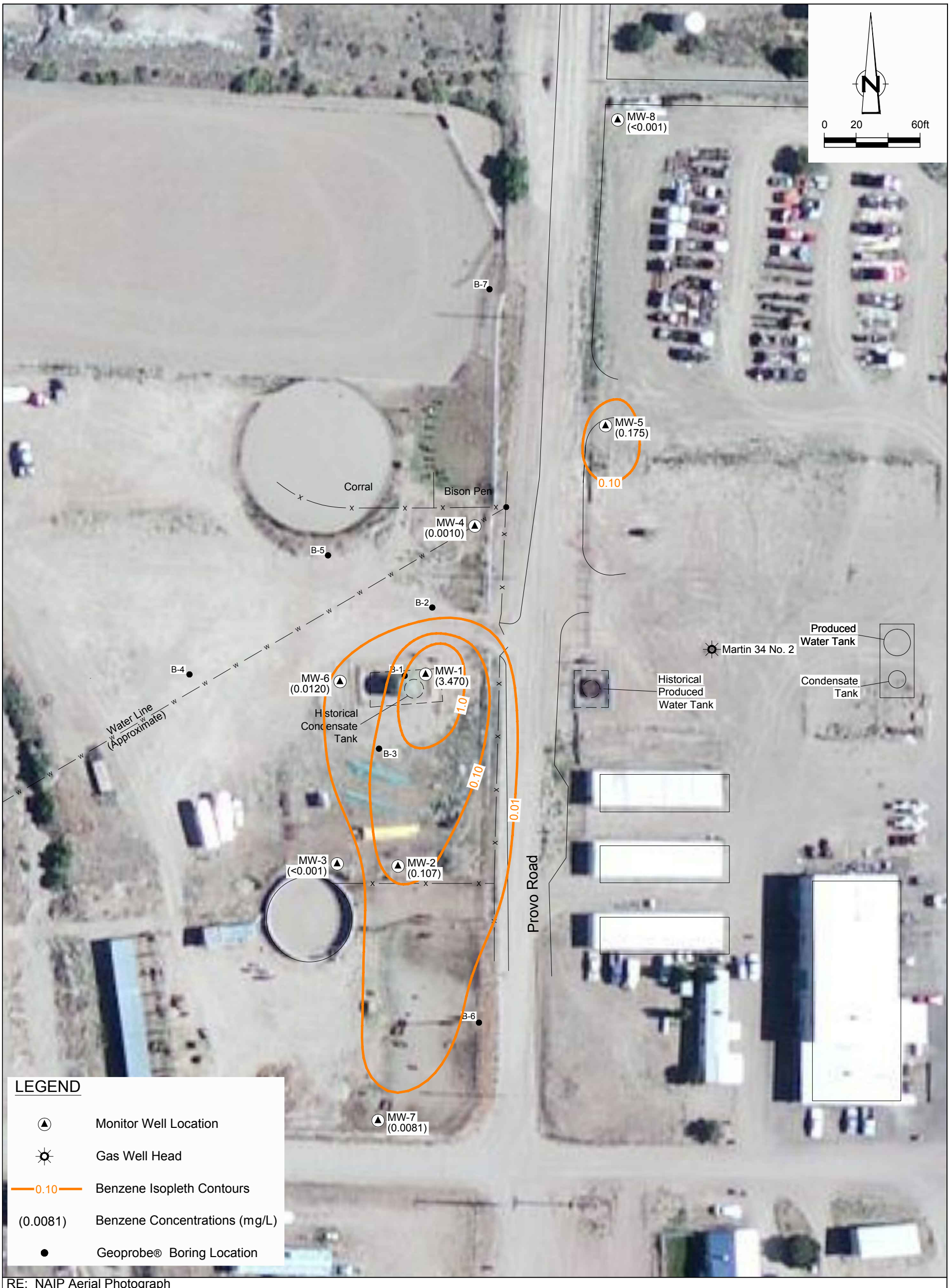


RE: NAIP Aerial Photograph

Figure 10

JUNE 2013 BENZENE CONCENTRATION MAP
MARTIN 34 No. 2 GAS WELL REMEDIATION SITE
SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

075035-95(004)GN-DL004 APR 15/2014

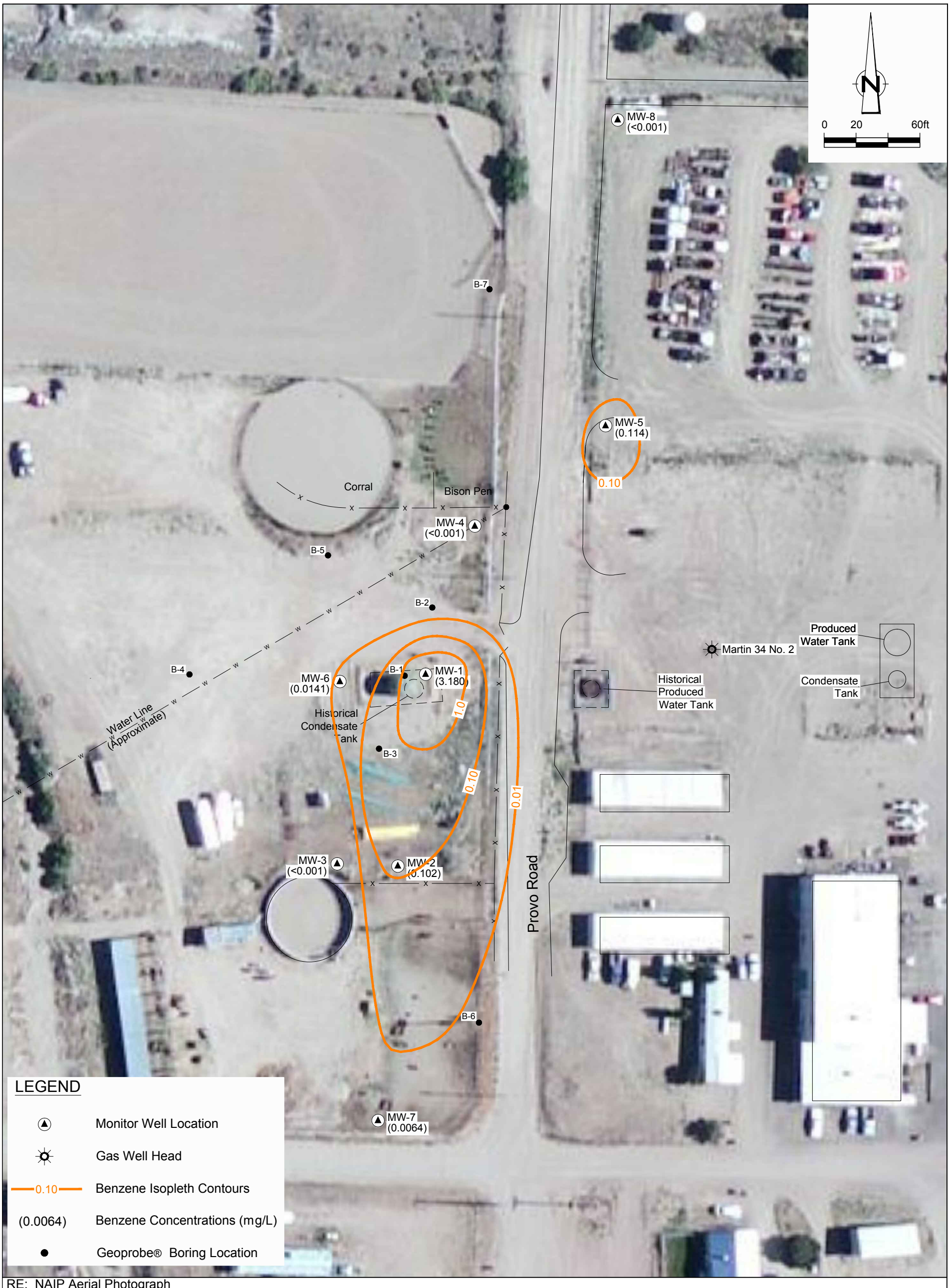


RE: NAIP Aerial Photograph

Figure 11

SEPTEMBER 2013 BENZENE CONCENTRATION MAP
MARTIN 34 No. 2 GAS WELL REMEDIATION SITE
SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

075035-95(004)GN-DL004 APR 15/2014



RE: NAIP Aerial Photograph

Figure 12

DECEMBER 2013 BENZENE CONCENTRATION MAP
MARTIN 34 No. 2 GAS WELL REMEDIATION SITE
SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

075035-95(004)GN-DL004 APR 15/2014

Tables

TABLE 1

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

Date/Time Period	Event/Action	Description/Comments
December 3, 2010	Initial Site Assessment	ConocoPhillips removed the above ground production tank. The landowner subsequently discovered hydrocarbon-stained soil in the vicinity of the former tank while regrading the area. ConocoPhillips obtained samples of the soil following notification from the landowner.
December 6, 2010	Analytical Results	Laboratory analytical results from soil samples collected on December 3, 2010 revealed hydrocarbons in excess of regulatory standards.
January 12 through 24, 2011	Soil Excavation	Excavation of soil and confirmatory sampling was conducted in the location of the former production tank. Brandon Powell of the New Mexico Oil Conservation Division (NMOCD) requested on January 20th 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® 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.

TABLE 1

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

Date/Time Period	Event/Action	Description/Comments
November 28 through December 1, 2011	Monitor Well Installation	CRA supervised the installation of three groundwater monitor wells at the Site. Hydrocarbon impacts to soil were noted during field screening of soil from both MW-5 and MW-6 borings. Laboratory analytical results on soil samples collected from MW-6 were found to contain TPH and BTEX above NMOCD recommended action levels.
December 13, 2011	Quarterly Groundwater Monitoring	CRA conducted quarterly groundwater sampling.
March 8, 2012	Quarterly Groundwater Monitoring	CRA conducted quarterly groundwater sampling.
June 6, 2012	Quarterly Groundwater Monitoring	CRA conducted quarterly groundwater sampling.
September 25, 2012	Quarterly Groundwater Monitoring	CRA conducted quarterly groundwater sampling.
December 19, 2012	Quarterly Groundwater Monitoring	CRA conducted quarterly groundwater sampling.
March 20, 2013	Quarterly Groundwater Monitoring	CRA conducted quarterly groundwater sampling.
June 13, 2013	Quarterly Groundwater Monitoring	CRA conducted quarterly groundwater sampling.
July 18, 2013	Monitor Well Installation	CRA supervised the installation of monitor well MW-8 at the Site.
September 12, 2013	Quarterly Groundwater Monitoring	CRA conducted quarterly groundwater sampling.
December 19, 2013	Quarterly Groundwater Monitoring	CRA conducted quarterly groundwater sampling.

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

Well ID	Sample ID	Date	Sample Type	Benzene (mg/L)	Ethylbenzene (mg/L)	Toluene (mg/L)	Xylenes (total) (mg/L)	1,1,2,2-Tetrachloroethane (mg/L)	Methylene chloride (mg/L)	Naphthalene (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulfate (mg/L)	Boron (dissolved) (mg/L)	Iron (dissolved) (mg/L)	Manganese (dissolved) (mg/L)	Total Dissolved Solids (TDS) (mg/L)
NMWQCC Groundwater Quality Standards				**0.01**	**0.75**	**0.75**	**0.62**	**0.01**	**0.1**	**0.03**	**250**	**1.6**	**600**	**0.75**	**1**	**0.2**	**1000**
B-4	GW-075035-110911-B4	11/9/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.001	< 0.001	< 0.01	12.1	**2.2**	**5610**	**0.96**	< 0.05	0.134	**7030**
B-5	GW-075035-110911-B5	11/9/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.001	0.0012	< 0.01	**509**	**2.2**	**20500**	**0.977**	< 0.05	**5.03**	**26000**
MW-1	GW-075035-072711-CFM-003	7/27/2011	(orig)	**4.46**	**0.782**	**13.3**	**7.85**	< 0.5	**0.667**	< 5	--	--	--	--	--	--	--
	GW-075035-093011-CM-009	9/30/2011	(orig)	**4.47**	**0.772**	**9.48**	**8.33**	< 0.02	< 0.02	< 0.2	**287**	< 2.0	**13300**	**--**	--	--	**21000**
	GW-075036-121311-CB-MW-1	12/13/2011	(orig)	**4.44**	**0.751**	**6.23**	**9.04**	< 0.1	< 0.1	< 1.0	**270**	**2.1**	**12300**	**1.12**	**8.94**	**4.17**	**20700**
	GW-075036-121311-CB-DUP	12/13/2011	(Duplicate)	**4.31**	**0.812**	**4.98**	**9.57**	--	--	--	--	--	--	--	--	--	--
	GW-075035-3812-CB-MW-1	3/8/2012	(orig)	**5.10**	0.669	**2.49**	**9.08**	< 0.1	<0.1	< 1.0	--	--	--	**1.10**	**7.34**	**3.48**	**--**
	GW-075035-060712-CB-MW-1	6/7/2012	(orig)	**3.00**	0.300	**3.83**	**4.05**	< 0.1	<0.1	< 1.0	**285**	< 0.20	**14100**	**1.00**	**5.98**	**2.09**	**25000**
	GW-075035-092512-CM-MW-1	9/25/2012	(orig)	**5.040**	0.626	**1.660**	**8.850**	< 0.1	<0.1	**.0456**	**268**	< 4.0	**13100**	**--**	**--**	**--**	**24100**
	GW-075035-122012-CM-MW-1	12/20/2012	(orig)	**3.960**	0.336	**2.570**	**6.450**	<0.05	<0.05	0.0012	**301**	< 0.20	**15300**	**1.230**	**1.250**	**0.886**	**23100**
	GW-075035-032013-CM-MW-1	3/20/2013	(orig)	**4.230**	0.411	**1.050**	**8.380**	<0.10	<0.10	**0.0438**	**285**	< 0.20	**13600**	**1.210**	0.345	**0.670**	**32200**
	075035-061313-JK-MW1	6/13/2013	(orig)	**4.410**	0.418	**1.640**	**7.220**	<0.10	<0.10	**0.0508**	**289**	< 0.20	**12400**	**1.190**	0.067	**0.507**	**22000**
	GW-075035-091213-CM-MW-1	9/12/2013	(orig)	**3.470**	0.428	**3.020**	**7.900**	<0.10	<0.10	**0.0365**	**296**	<0.20	**12100**	**1.100**	0.46	**0.95**	**31300**
	GW-075035-121713-CM-MW-1	12/17/2013	(orig)	**3.180**	0.297	**5.230**	**6.120**	<0.10	**0.156**	0.0258	**459**	<4.0	**15100**	**1.160**	0.0910	**0.590**	**24300**
MW-2	1	7/27/2011	(orig)	**0.244**	0.152	< 0.01	0.0814	**0.0191**	0.0165	**< 0.112 / < 0.1**	**330**	**2.9**	**17100**	**1.09**	**3.46**	**2.71**	**26600**
	GW-075035-072711-CFM-002	7/27/2011	(Duplicate)	**0.23**	0.143	< 0.005	0.0784	0.0092	0.0096	**0.0535**	--	--	--	--	--	--	--
	GW-075035-093011-CM-007	9/30/2011	(orig)	**0.197**	0.155	< 0.001	0.112	< 0.001	< 0.001	**0.0727**	**328**	**< 2.0**	**19100**	**1.08**	**3.59**	**2.54**	**26000**
	GW-075035-093011-CM-010	9/30/2011	(Duplicate)	**0.258**	0.189	< 0.005	0.113	< 0.005	0.0144	**0.0715**	--	--	--	--	--	--	--
	GW-075036-121311-CB-MW-2	12/13/2011	(orig)	**0.249**	0.199	0.0266	0.143	**< 0.010**	< 0.010	**< 0.10**	**348**	0.75	**16800**	**1.12**	**4.16**	**2.280**	**26600**
	GW-075035-3812-CB-MW-2	3/8/2012	(orig)	**0.295**	0.221	< 0.005	0.0647	< 0.005	< 0.005	**0.074**	**398**	< 0.010	**23200**	**0.922**	< 0.050	**3.76**	**30200**
	GW-075035-060712-CB-MW-2	6/6/2012	(orig)	**0.207**	0.219	< 0.005	0.0443	< 0.005	< 0.005	0.0238	**400**	< 0.2	**26100**	**0.847**	**4.79**	**3.88**	**28000**
	GW-075035-092512-CM-MW-2	9/25/2012	(orig)	**0.127**	0.161	< 0.005	0.0408	< 0.005	0.0076	**0.0583**	**382**	**< 4.0**	**19900**	**1.020**	0.913	**2.30**	**31100**
	GW-075035-092512-CM-DUP	9/25/2012	(Duplicate)	**0.142**	0.181	< 0.02	0.0356	--	--	**--**	**--**	**--**	**--**	**--**	--	**--**	**--**
	GW-075035-121912-CM-MW-2	12/19/2012	(orig)	**0.202**	0.281	< 0.005	0.0811	< 0.005	< 0.005	<0.0005	**423**	<0.2	**22300**	**1.040**	**1.200**	**1.980**	**33200**
	GW-075035-032013-CM-MW-2	3/20/2013	(orig)	**0.177**	0.334	< 0.005	0.084	< 0.005	< 0.005	0.00089	**408**	<0.2	**19100**	**0.981**	**1.180**	**2.210**	**43200**
	075035-061313-JK-MW2	6/13/2013	(orig)	**0.128**	0.232	< 0.005	0.0508	< 0.005	< 0.005	0.0025	**416**	<0.2	**19500**	**0.940**	**1.660**	**3.190**	**18500**
	075035-061313-JK-DUP	6/13/2013	(Duplicate)	**0.141**	0.273	< 0.005	0.0631	< 0.005	< 0.005	**0.0633**	**--**	--	**--**	**--**	**--**	**--**	**--**
	GW-075035-091113-CM-MW-2	9/11/2013	(orig)	**0.107**	0.318	<0.005	0.0619	<0.005	<0.005	0.00097	**450**	<0.2	**18900**	**0.85**	**1.6**	**2.0**	**88400**
	GW-075035-121713-CM-MW-2	12/17/2013	(orig)	**0.102**	0.247	<0.005	0.0632	<0.005	0.0103	**0.0336**	**453**	<4.0	**22400**	**0.791**	**1.450**	**2.430**	**32800**
MW-3	GW-075035-072711-CFM-005	7/27/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.001	< 0.001	< 0.01 / < 0.0128	**437**	**2.7**	**17600**	**0.976**	0.495	**1.1**	**29200**
	GW-075035-093011-CM-006	9/30/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.001	< 0.001	< 0.01	**399**	**< 2.0**	**19500**	**0.914**	< 0.05	**3.74**	**26800**
	GW-075036-121311-CB-MW-3	12/13/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.001	< 0.001	< 0.01	**375**	< 0.20	**17100**	**0.997**	**1.02**	**0.776**	**27500**
	GW-075035-3812-CB-MW-3	3/8/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.001	< 0.001	< 0.01	**456**	**< 10**	**21500**	**0.962**	**4.75**	**4.47**	**30500**
	GW-075035-060712-CB-MW-3	6/7/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.001	< 0.001	< 0.01	**431**	< 0.20	**23300**	**0.889**	< 0.05	**2.02**	**34100**
	GW-075035-092512-CM-MW-3	9/25/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.001	< 0.001	< 0.01	**468**	**< 4.0**	**18900**	**0.986**	< 0.05	**0.497**	**30000**
	GW-075035-121912-CM-MW-3	12/19/2012	(orig)	<0.001	<0.001	<0.001	<0.003	<0.001	<0.001	<0.0005	**458**	<0.2	**21400**	**1.030**	0.152	**0.547**	**30600**
	GW-075035-032013-CM-MW-3	3/20/2013	(orig)	<0.001	<0.001	<0.001	<0.003	<0.001	<0.001	<0.0005	**373**	<0.2	**20400**	**0.936**	0.217	**4.160**	**45600**
	075035-061313-JK-MW3	6/13/2013	(orig)	<0.001	<0.001	<0.001	<0.003	<0.001	<0.001	<0.0005	**377**	<0.2	**18900**	**0.991**	<0.100	**1.250**	**30900**
	GW-075035-091113-CM-MW-3	9/11/2013	(orig)	<0.001	<0.001	<0.001	<0.003	<0.001	<0.001	<0.0005	**403**	<0.2	**18700**	**0.87**	< 0.25	**3.9**	**80500**
	GW-075035-121713-CM-MW-3	12/17/2013	(orig)	<0.001	<0.001	<0.001	<0.003	<0.001	<0.001	<0.0005	**476**	<4.0	**20300**	**0.899**	0.272	**0.0836**	**31600**
MW-4	GW-075035-072711-CFM-004	7/27/2011	(orig)	0.0021	0.0055	0.0054	0.0705	0.0019	< 0.001	< 0.0111 / < 0.01	**435**	**4.3**	**25200**	0.638	0.677	**10.5**	**40200**
	GW-075035-093011-CM-008	9/30/2011	(orig)	0.0027	0.0037	0.0014	0.0815	< 0.001	< 0.001	< 0.01	**449**	**2.8**	**27400**	0.664	**1.13**	**10.8**	**37200**
	GW-075036-121311-CB-MW-4	12/13/2011	(orig)	0.0024	< 0.001	< 0.001	0.0099	< 0.001	< 0.001	< 0.01	**344**	< 0.20	**26900**	0.651	**1.43**	**8.50**	**40700**
	GW-075035-3812-CB-MW-4	3/8/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.001	< 0.001	< 0.01	**377**	**< 10**	**30200**	0.554	**1.04**	**8.28**	**38400**
	GW-075035-060712-CB-MW-4	6/7/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	< 0.001	< 0.001	< 0.01	**378**	1.4	**28400**	0.558	0.983	**5.25**	**40300**
	GW-075035-092512-CM-MW-4	9/25/2012	(orig)	0.0011	< 0.001	< 0.001	< 0.003	< 0.001	< 0.001	< 0.01	**347**	**5.8**	**25600**	0.704	**1.020**	**5.170**	**38900**
	GW-075035-121912-CM-MW-4	12/19/2012	(orig)	0.0011	<0.001	<0.001	<0.003	<0.001	<0.001	<0.0005	**397**	<0.2	**28500**	**0.808**	0.782	**4.840**	**36400**
	GW-075035-032013-CM-MW-4	3/20/2013	(orig)	<0.001	<0.001	<0.001	<0.003	<0.001	<0.001	0.0009	**377**	<0.2	**23600**	0.748	0.836	**3.580**	**63000**
	075035-061313-JK-MW4	6/13/2013	(orig)	0.0012	<0.001	<0.001	<0.003	<0.001	<0.001	<0.0005	**378**	<0.2	**23200**	**0.785**	0.506	**4.080**	**33700**
	GW-075035-091113-CM-MW-4	9/11/2013	(orig)	0.0010	<0.001	<0.001	<0.003	<0.001	<0.001	0.0027	**389**	<0.2	**20800**	**0.73**	0.51	**2.9**	**90900**
	GW-075035-121713-CM-MW-4	12/17/2013	(orig)	<0.001	<0.001	<0.001	<0.003	<0.001	<0.001	0.0021	**394**	**5.1**	**24300**	**0.789**	0.354	**2.720**	**36300**

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

Well ID	Sample ID	Date	Sample Type	Benzene (mg/L)	Ethylbenzene (mg/L)	Toluene (mg/L)	Xylenes (total) (mg/L)	1,1,2,2-Tetrachloroethane (mg/L)	Methylene chloride (mg/L)	Naphthalene (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulfate (mg/L)	Boron (dissolved) (mg/L)	Iron (dissolved) (mg/L)	Manganese (dissolved) (mg/L)	Total Dissolved Solids (TDS) (mg/L)
NMWQCC Groundwater Quality Standards				**0.01**	**0.75**	**0.75**	**0.62**	**0.01**	**0.1**	**0.03**	**250**	**1.6**	**600**	**0.75**	**1**	**0.2**	**1000**
MW-5	GW-075036-121311-CB-MW-5	12/13/2011	(orig)	**0.195**	0.0027	< 0.001	0.0081	< 0.001	< 0.001	< 0.01	--	--	--	--	--	--	--
	GW-075035-3812-CB-MW-5	3/8/2012	(orig)	**1.20**	0.0628	< 0.001	0.0613	< 0.001	< 0.001	< 0.01	187	**< 4.0**	**5810**	--	--	--	**8520**
	GW-075035-060712-CB-MW-5	6/7/2012	(orig)	**1.03**	< 0.02	< 0.02	< 0.06	< 0.02	< 0.02	**< 0.2**	219	0.69	**8010**	--	--	--	**13900**
	GW-075035-092512-CM-MW-5	9/25/2012	(orig)	**1.040**	.0772	< 0.02	< 0.06	< 0.02	.0289	**< 0.2**	202	**< 4.0**	**6800**	--	--	--	**11600**
	GW-075035-121912-CM-MW-5	12/19/2012	(orig)	**0.861**	0.0436	<0.02	<0.06	<0.02	<0.02	<0.0005	230	<0.2	**7090**	**1.550**	**2.150**	**1.060**	**12000**
	GW-075035-032013-CMMW-5	3/20/2013	(orig)	**0.493**	0.0266	<0.005	<0.015	<0.005	<0.005	<0.0005	206	<0.2	**6960**	**2.870**	**6.060**	**2.230**	**11000**
	075035-061313-JK-MW5	6/13/2013	(orig)	**0.278**	0.0146	<0.005	<0.015	<0.005	<0.005	<0.0005	203	<0.2	**7110**	**1.460**	**2.200**	**0.806**	**15100**
	GW-075035-091113-CM-MW-5	9/11/2013	(orig)	**0.175**	0.0103	<0.005	<0.015	<0.005	<0.005	0.00061	228	<0.2	**5400**	**1.4**	0.96	**0.69**	**15100**
	GW-075035-121713-CM-MW-5	12/17/2013	(orig)	**0.114**	0.0069	<0.005	<0.015	<0.005	<0.005	<0.0005	228	<4.0	**7120**	**1.490**	**1.610**	**0.647**	**12000**
MW-6	GW-075036-121311-CB-MW-6	12/13/2011	(orig)	**0.0247**	0.191	< 0.005	**2.650**	< 0.005	< 0.005	< 0.05	**288**	< 0.20	**24900**	0.681	**4.10**	**2.93**	**37800**
	GW-075035-3812-CB-MW-6	3/8/2012	(orig)	**0.0432**	0.190	< 0.01	**3.32**	< 0.01	< 0.01	< 0.10	**369**	**< 10**	**31600**	0.622	< 0.05	**2.53**	**37500**
	GW-075035-3812-CB-DUP	3/8/2012	(Duplicate)	**<0.050**	0.199	< 0.05	**3.61**	**< 0.05**	< 0.05	< 0.5	--	--	--	--	--	--	--
	GW-075035-060712-CB-MW-6	6/7/2012	(orig)	**0.0255**	0.181	< 0.01	**3.16**	< 0.01	< 0.01	**0.034**	**326**	0.84	**26800**	0.572	< 0.05	**2.01**	**40600**
	GW-075035-060712-CB-DUP	6/7/2012	(Duplicate)	**0.0247**	0.178	< 0.005	**3.22**	< 0.005	< 0.005	< 0.05	--	--	--	--	--	--	--
	GW-075035-092512-CM-MW-6	9/25/2012	(orig)	**0.0218**	0.166	< 0.01	**2.92**	< 0.01	< 0.01	0.0237	**345**	**< 4.0**	**25500**	0.656	< 0.05	**2.190**	**37800**
	GW-075035-121912-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-075035-121912-CM-DUP	12/19/2012	(Duplicate)	**0.0219**	0.198	<0.01	**3.53**	**--**	--	--	**--**	**--**	**--**	--	--	**--**	**--**
	GW-075035-032013-CM-MW-6	3/20/2013	(orig)	**0.0221**	0.196	<0.01	**3.45**	<0.01	<0.01	**0.0336**	**380**	<0.2	**23200**	0.642	< 0.05	**2.460**	**70000**
	GW-075035-032013-CM-DUP	3/20/2013	(Duplicate)	**0.0198**	0.200	<0.002	**3.52**	<0.002	<0.002	**0.057**	**--**	--	**--**	--	--	**--**	**--**
	075035-061313-JK-MW6	6/13/2013	(orig)	**0.0154**	0.129	<0.01	**2.03**	<0.01	<0.01	0.019	**396**	<0.2	**23000**	0.666	<0.1	**2.030**	**36000**
	GW-075035-091113-CM-MW-6	9/11/2013	(orig)	**0.0120**	0.125	<0.01	**1.79**	<0.01	<0.01	0.0250	**492**	<0.2	**19600**	0.63	<0.25	**2.0**	**85400**
	GW-075035-091113-CM-DUP	9/11/2013	(Duplicate)	**0.0114**	0.133	<0.001	**1.89**	--	--	--	--	--	--	--	--	--	--
	GW-075035-121713-CM-MW-6	12/17/2013	(orig)	**0.0141**	0.127	<0.01	**1.81**	<0.01	0.0222	**0.0302**	**755**	**4.5**	**23000**	0.653	0.121	**1.860**	**34600**
	GW-075035-121713-CM-DUP	12/17/2013	(Duplicate)	**0.0112**	0.133	<0.01	**1.780**	<0.01	0.0124	--	--	--	--	--	--	--	--
MW-7	GW-075036-121311-CB-MW-7	12/13/2011	(orig)	**0.0196**	0.351	< 0.001	0.0405	< 0.001	< 0.001	**0.0329**	**269**	1.5	**17800**	**0.772**	0.076	**2.28**	**21400**
	GW-075035-3812-CB-MW-7	3/8/2012	(orig)	**0.0186**	0.357	< 0.005	< 0.015	< 0.005	< 0.005	**< 0.05**	**307**	< 4.0	**20600**	**0.840**	0.612	**4.05**	**28400**
	GW-075035-060712-CB-MW-7	6/7/2012	(orig)	**0.0122**	0.333	< 0.005	< 0.015	< 0.005	< 0.005	**<0.05**	**300**	< 0.20	**25900**	**0.824**	0.866	**3.14**	**35700**
	GW-075035-092512-CM-MW-7	9/25/2012	(orig)	**0.0109**	0.426	< 0.005	< 0.015	< 0.005	< 0.005	0.0061	**266**	< 4.0	**19500**	**0.895**	**1.250**	**4.080**	**30500**
	GW-075035-121912-CM-MW-7	12/19/2012	(orig)	0.001	0.0397	<0.001	<0.003	<0.001	<0.001	<0.0005	124	0.84	**10300**	**0.803**	0.779	**2.420**	**13800**
	GW-075035-032013-CM-MW-7	3/20/2013	(orig)	0.0077	0.450	< 0.005	< 0.015	< 0.005	< 0.005	<0.0005	**283**	< 0.20	**21500**	**0.864**	**2.560**	**3.300**	**56000**
	075035-061313-JK-MW7	6/13/2013	(orig)	0.0051	0.188	< 0.005	< 0.015	< 0.005	< 0.005	<0.0005	**258**	< 0.20	**20400**	**0.752**	0.578	**2.460**	**35900**
	GW-075035-091113-CM-MW-7	9/11/2013	(orig)	0.0081	0.468	<0.005	<0.015	<0.005	<0.005	<0.0005	**363**	<0.20	**19300**	**0.80**	**2.6**	**3.2**	**91600**
	GW-075035-121713-CM-MW-7	12/17/2013	(orig)	0.0064	0.185	<0.001	<0.003	<0.001	<0.001	0.0079	**279**	<4.0	**20500**	**0.767**	**3.130**	**2.640**	**28900**
MW-8	GW-075035-091113-CM-MW-8	9/11/2013	(orig)	<0.001	<0.001	<0.001	<0.003	<0.001	<0.001	<0.0005	**309**	<0.20	**10800**	**0.87**	<0.25	**4.6**	**26700**
	GW-075035-121713-CM-MW-8	12/17/2013	(orig)	<0.001	<0.001	<0.001	<0.003	<0.001	<0.001	<0.0005	**465**	<4.0	**14400**	**0.876**	<0.05	**3.440**	**21400**

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
Bold = concentrations that exceed the NMWQCC groundwater quality standard

TABLE 3

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

Well ID	Total Depth 2" PVC Casing (ft bgs)	0.010" Slot Screen Interval (ft bgs)	TOC Elevation* (ft)	Date Measured	Depth to Groundwater (ft below TOC)	Relative Groundwater Elevation
MW-1	41	31 - 41	93.09	7/27/2011	40.45	52.64
				9/30/2011	40.23	52.86
			93.28	12/13/2011	39.23	54.05
				3/7/2012	39.09	54.19
				6/6/2012	39.12	54.16
				9/24/2012	39.30	53.98
				12/19/2012	39.11	54.17
				3/19/2013	39.18	54.10
				6/13/2013	39.06	54.22
				9/12/2013	38.87	54.41
				12/17/2013	38.50	54.78
MW-2	41.5	31.5 - 41.5	87.45	7/27/2011	37.68	49.77
				9/30/2011	37.68	49.77
			87.59	12/13/2011	37.51	50.08
				3/7/2012	37.36	50.23
				6/6/2012	35.46**	52.13**
				9/24/2012	37.60	49.99
				12/19/2012	37.28	50.31
				3/20/2013	37.36	50.23
				6/13/2013	37.24	50.35
				9/11/2013	37.12	50.47
				12/17/2013	36.55	51.04
MW-3	46	31 - 46	87.19	7/27/2011	36.95	50.24
				9/30/2011	36.98	50.21
			87.32	12/13/2011	36.70	50.62
				3/7/2012	36.57	50.75
				6/6/2012	36.67	50.65
				9/24/2012	36.80	50.52
				12/19/2012	36.48	50.84
				3/20/2013	36.60	50.72
				6/13/2013	36.43	50.89
				9/11/2013	36.30	51.02
				12/17/2013	35.70	51.62
MW-4	53	38 - 53	99.63	7/27/2011	44.37	55.26
				9/30/2011	44.40	55.23
			99.82	12/13/2011	44.18	55.64
				3/7/2012	44.09	55.73
				6/6/2012	44.09	55.73
				9/24/2012	44.25	55.57
				12/19/2012	44.16	55.66
				3/20/2013	44.32	55.50
				6/13/2013	44.14	55.68
				9/11/2013	43.97	55.85
				12/17/2013	43.55	56.27

TABLE 3

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

Well ID	Total Depth 2" PVC Casing (ft bgs)	0.010" Slot Screen Interval (ft bgs)	TOC Elevation* (ft)	Date Measured	Depth to Groundwater (ft below TOC)	Relative Groundwater Elevation
MW-5	48.5	38.5 - 48.5	98.27	12/13/2011	47.61	50.66
				3/7/2012	45.61	52.66
				6/6/2012	44.60	53.67
				9/24/2012	44.60	53.67
				12/19/2012	45.43	52.84
				3/20/2013	43.76	54.51
				6/13/2013	44.13	54.14
				9/11/2013	45.02	53.25
				12/17/2013	44.45	53.82
MW-6	59.0	44-59	94.8	12/13/2011	41.01	53.79
				3/7/2012	40.91	53.89
				6/6/2012	41.00	53.80
				9/24/2012	41.07	53.73
				12/19/2012	40.87	53.93
				3/20/2013	41.00	53.80
				6/13/2013	40.91	53.89
				9/11/2013	40.81	53.99
				12/17/2013	40.20	54.60
MW-7	51.5	36.5-51.5	86.49	12/13/2011	40.49	46.00
				3/7/2012	40.33	46.16
				6/6/2012	40.37	46.12
				9/24/2012	40.45	46.04
				12/19/2012	40.14	46.35
				3/20/2013	40.33	46.16
				6/13/2013	40.20	46.29
				9/11/2013	40.12	46.37
				12/17/2013	39.70	46.79
MW-8	55.0	40-55		9/11/2013	42.39	
				12/17/2013	41.80	

ft = Feet
TOC = Top of casing
bgs = below ground surface
* Elevation relative to an arbitrary reference elevation of 100 feet
** Anomalous data point

Appendix A

GROUNDWATER SAMPLING FIELD FORMS

WELL SAMPLING FIELD INFORMATION FORM

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

SAMPLE ID: GW-075035-032013-CM-MW-1 WELL# MW-1

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
3-19-13 ~~3-20-13~~ CM	3-20-13	1005	.314	.75

PURGING AND SAMPLING EQUIPMENT

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

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

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

X= _____ PURGING DEVICE OTHER (SPECIFY)

X= _____ SAMPLING DEVICE OTHER (SPECIFY)

X= _____ PURGING MATERIAL OTHER (SPECIFY)

X= _____ SAMPLING MATERIAL OTHER (SPECIFY)

X= _____ PURGE TUBING OTHER (SPECIFY)

X= _____ SAMPLING TUBING OTHER (SPECIFY)

FIELD MEASUREMENTS

3-19-13

DEPTH TO WATER: 39.18 (feet) WELL ELEVATION: _____ (feet)

WELL DEPTH: 41.14 (feet) GROUNDWATER ELEVATION: _____ (feet)

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

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy ODOR: sulfur/bb COLOR: gray SHEEN Y/N: no

WEATHER CONDITIONS: TEMPERATURE 50° WINDY Y/N: no PRECIPITATION Y/N (IF Y TYPE): no

SPECIFIC COMMENTS:

3/4 gallon purged on 3-19-13. No parameters collected due to low well volume & slow recharge.

DTW on 3-20-13 = 40.05

.314 x 3 = 0.941

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

DATE 3/20/13 PRINT Christine Mathias SIGNATURE Christine Mathias

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: Martin 34 No. 2 JOB# 075835

SAMPLE ID: GW-075835-032013-CM-MW-2 WELL# MW-2

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
3.20.13	3.20.13	1100	.525	1.75

PURGING AND SAMPLING EQUIPMENT

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

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

PURGING DEVICE: G

SAMPLING DEVICE: G

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 OTHER (SPECIFY)

X= ______ SAMPLING DEVICE OTHER (SPECIFY)

PURGING MATERIAL: E

SAMPLING MATERIAL: E

A - TEFLON; B - STAINLESS STEEL; C - POLYPROPYLENE; D - PVC; E - POLYETHYLENE; X - OTHER

X= ______ PURGING MATERIAL OTHER (SPECIFY)

X= ______ SAMPLING MATERIAL OTHER (SPECIFY)

PURGE TUBING: C

SAMPLING TUBING: C

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)

FILTERING DEVICES 0.45: A — A - IN-LINE DISPOSABLE; B - PRESSURE - for metals only

FIELD MEASUREMENTS

DEPTH TO WATER: 37.36 (feet) WELL ELEVATION: ______ (feet)

WELL DEPTH: 40.64 (feet) GROUNDWATER ELEVATION: ______ (feet)

TEMPERATURE (°C)	pH (std)	TDS (g/L)	~~SC~~ SC (µS/cm)	DO (mg/L)	ORP (mV)	VOLUME (gal)
15.28	7.59	15.36	19277	6.63	-246.1	1.25
15.82	7.56	15.31	19424	5.69	-267.9	1.5
15.85	7.54	15.30	19428	5.20	-274.8	1.75

FIELD COMMENTS

SAMPLE APPEARANCE: ~~Hydrocarbon~~ CM cloudy ODOR: ~~Dic~~ CM sulfur/bio odor COLOR: DK Gray SHEEN Y/N: N

WEATHER CONDITIONS: TEMPERATURE 55° WINDY Y/N: no PRECIPITATION Y/N (IF Y TYPE): no

SPECIFIC COMMENTS:

.525 x 3 = 1.574

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

DATE 3/20/13 PRINT Christine Matthews SIGNATURE [signature]

WELL SAMPLING FIELD INFORMATION FORM

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

SAMPLE ID: GW-075035-032013-CM-MW-3 WELL# MW-3

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
3-20-13	3-20-13	1200	1.443	4.5

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER	36.60 (feet)	WELL ELEVATION	(feet)
WELL DEPTH	45.62 (feet)	GROUNDWATER ELEVATION	(feet)

TEMPERATURE	pH	TDS	~~ESC~~ SC	DO	ORP	VOLUME
15.47 (°C)	7.49 (std)	16.10 (g/L)	20254 (µS/cm)	76.69 (mg/L)	-205.3 (mV)	3.5 (gal)
15.60 (°C)	7.53 (std)	14.93 (g/L)	18847 (µS/cm)	30.13 (mg/L)	-175.7 (mV)	4.0 (gal)
15.49 (°C)	7.53 (std)	15.21 (g/L)	19150 (µS/cm)	17.83 (mg/L)	-166.9 (mV)	4.5 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy/silty ODOR: Bio COLOR: BRN/YLW SHEEN Y/N N

WEATHER CONDITIONS: TEMPERATURE 65° WINDY Y/N NO PRECIPITATION Y/N (IF Y TYPE) NO

SPECIFIC COMMENTS:

1.443 x 3 = 4.330

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

DATE 3/20/13 PRINT Christine Mathes SIGNATURE Christine Mathes

WELL SAMPLING FIELD INFORMATION FORM

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

SAMPLE ID: GW-075035-03213-CM-MW-4 WELL# MW-4

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
3-20-13	3-20-13	1235	1.774	5.5

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER 44.32 (feet) WELL ELEVATION (feet)

WELL DEPTH 55.41 (feet) GROUNDWATER ELEVATION (feet)

TEMPERATURE	pH	TDS		DO	ORP	VOLUME
15.85 (°C)	7.51 (std)	17.20 (g/L)	21844 (µS/cm)	5.14 (mg/L)	-136.2 (mV)	4.5 (gal)
15.84 (°C)	7.54 (std)	17.27 (g/L)	21913 (µS/cm)	5.04 (mg/L)	-139.3 (mV)	5.0 (gal)
15.83 (°C)	7.55 (std)	17.21 (g/L)	21838 (µS/cm)	3.95 (mg/L)	-125.9 (mV)	5.5 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy ODOR: slight sulfur COLOR: brown/gray SHEEN Y/N no

WEATHER CONDITIONS: TEMPERATURE 65° WINDY Y/N no PRECIPITATION Y/N (IF Y TYPE) no

SPECIFIC COMMENTS:

1.774 x 3 = 5.323

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

DATE 3/20/13 PRINT Christine Mathews SIGNATURE Christine Mathews

WELL SAMPLING FIELD INFORMATION FORM

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

SAMPLE ID: GW-075035-032013-CIM-MW-5 WELL# MW-5

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
3-20-13	3-20-13	1400	0.709	1.75

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER	43.76 (feet)	WELL ELEVATION	(feet)
WELL DEPTH	48.19 (feet)	GROUNDWATER ELEVATION	(feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
15.88 (°C)	7.25 (std)	9560 (g/L)	9461 (µS/cm)	3.70 (mg/L)	-112.7 (mV)	1.0 (gal)
15.80 (°C)	7.28 (std)	7.440 (g/L)	9436 (µS/cm)	3.10 (mg/L)	-120.2 (mV)	1.5 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	2.0 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy ODOR: none COLOR: Light Brown SHEEN Y/N no

WEATHER CONDITIONS: TEMPERATURE 60° WINDY Y/N no PRECIPITATION Y/N (IF Y TYPE) no

SPECIFIC COMMENTS: well began to bail down @ 1.75 gallons. Will collect 1 sample due to draw down and very slow recharge.

~~0.7~~ 0.709 x 3 = 2.126

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

DATE 3/20/13 PRINT Christine Matteos SIGNATURE Christine Matteos

WELL SAMPLING FIELD INFORMATION FORM

Sample ID: GW-075035-032013-CM-MW-6 JOB# 075035
~~SITE/PROJECT NAME:~~ Martin 34 No. 2
~~SAMPLE ID:~~ WELL# MW-6
Project Name:

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
3-2013	3-2013	1110	2.710	8.25

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER	41.00 (feet)	WELL ELEVATION	(feet)
WELL DEPTH	57.94 (feet)	GROUNDWATER ELEVATION	(feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
15.69 (°C)	7.85 (std)	16.84 (g/L)	21255 (µS/cm)	3.45 (mg/L)	-350.5 (mV)	7.25 (gal)
15.75 (°C)	7.84 (std)	16.51 (g/L)	21292 (µS/cm)	3.17 (mg/L)	-359.7 (mV)	7.75 (gal)
15.70 (°C)	7.94 (std)	16.82 (g/L)	21265 (µS/cm)	2.98 (mg/L)	-359.3 (mV)	8.25 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy ODOR: sulfur/bio COLOR: dark gray SHEEN Y/N very slight spotty
WEATHER CONDITIONS: TEMPERATURE 55° WINDY Y/N no PRECIPITATION Y/N (IF Y TYPE) no
SPECIFIC COMMENTS:

Duplicate collected @ 1115

2.710 X 3 = 8.131

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

DATE 3/20/13 PRINT Christine Matheiss SIGNATURE Christine Matheiss

WELL SAMPLING FIELD INFORMATION FORM

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

SAMPLE ID: GW-075035-032013-CM-MW-7 WELL# MW-7

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
3-20-13	3-20-13	1310	1.690	5.25

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER: 40.33 (feet) WELL ELEVATION: (feet)

WELL DEPTH: 50.89 (feet) GROUNDWATER ELEVATION: (feet)

TEMPERATURE	pH	TDS	CS	DO	ORP	VOLUME
15.51 (°C)	7.40 (std)	11.07 (g/L)	13751 (µS/cm)	55.35 (mg/L)	-79.2 (mV)	4.25 (gal)
15.45 (°C)	7.35 (std)	12.15 (g/L)	15298 (µS/cm)	29.31 (mg/L)	-84.2 (mV)	4.75 (gal)
15.38 (°C)	7.33 (std)	13.55 (g/L)	17160 (µS/cm)	13.52 (mg/L)	-85.5 (mV)	5.25 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: CLOUDY/SILTY ODOR: NONE COLOR: BRN/YLW SHEEN Y/N: NO

WEATHER CONDITIONS: TEMPERATURE 65° WINDY Y/N: No PRECIPITATION Y/N (IF Y TYPE): no

SPECIFIC COMMENTS:

1.690 x 3 = 5.069

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

DATE 3/20/13 PRINT Christine Mathias SIGNATURE

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: MARTIN 34 #2 JOB# 075035

SAMPLE ID: 075035-061313-JK-MW1 WELL# MW 1

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
6-13-13	6-13-13	1230	.30	1.0

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER 39.06 (feet) WELL ELEVATION (feet)

WELL DEPTH 41.04 (feet) GROUNDWATER ELEVATION (feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
20.24 (°C)	7.10 (std)	0.118 (g/L)	176 (µS/cm)	.32 (mg/L)	-259.7 (mV)	1/2 (gal)
18.88 (°C)	7.04 (std)	15.64 (g/L)	2406.8 (µS/cm)	.37 (mg/L)	-328.9 (mV)	5/8 (gal)
18.86 (°C)	7.02 (std)	15.71 (g/L)	2420.9 (µS/cm)	.41 (mg/L)	-338.9 (mV)	3/4 (gal)
18.85 (°C)	7.03 (std)	15.91 (g/L)	2447.6 (µS/cm)	.30 (mg/L)	-352.1 (mV)	7/8 (gal)
18.80 (°C)	7.01 (std)	15.96 (g/L)	2456 (µS/cm)	.31 (mg/L)	-359.9 (mV)	1g (gal)

FIELD COMMENTS

SAMPLE APPEARANCE: SLIGHT ODOR: SLIGHT COLOR: BLACK SHEEN Y/N N

WEATHER CONDITIONS: TEMPERATURE 70° WINDY Y/N N PRECIPITATION Y/N (IF Y TYPE) N

SPECIFIC COMMENTS:

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

DATE PRINT JOSH RICHNER SIGNATURE

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: MARTIN 342 JOB# 075035
SAMPLE ID: 075035-061313-JK-MW2 WELL# MW2

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
6.13.13	6.13.13	1215	.51	1.5

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER 37.24 (feet) WELL ELEVATION (feet)

WELL DEPTH 41.68 (feet) GROUNDWATER ELEVATION (feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
16.30 (°C)	7.60 (std)	20.05 (g/L)	30887 (µS/cm)	1.37 (mg/L)	-280.9 (mV)	.5 (gal)
16.37 (°C)	7.41 (std)	19.96 (g/L)	30700 (µS/cm)	.78 (mg/L)	-275.1 (mV)	1 (gal)
16.38 (°C)	7.41 (std)	19.86 (g/L)	30541 (µS/cm)	.43 (mg/L)	-285.8 (mV)	1.5 (gal)

FIELD COMMENTS

SAMPLE APPEARANCE: ODOR: NO COLOR: black SHEEN Y/N N

WEATHER CONDITIONS: TEMPERATURE 70 WINDY Y/N N PRECIPITATION Y/N (IF Y TYPE) N

SPECIFIC COMMENTS:

DUP COLLECTED

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

DATE PRINT JOSH KINCAID SIGNATURE

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: MARTIN 34-2 JOB# 075035
SAMPLE ID: 075035-061313-SR-MW3 WELL# MW 3

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
6-13-13	6-13-13	1205	1.37	4.5

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER 36.43 (feet) WELL ELEVATION (feet)

WELL DEPTH 45.61 (feet) GROUNDWATER ELEVATION (feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
16.08 (°C)	7.65 (std)	19.20 (g/L)	29504 (µS/cm)	.34 (mg/L)	-193.8 (mV)	3.5 (gal)
15.94 (°C)	7.41 (std)	18.97 (g/L)	29178 (µS/cm)	.31 (mg/L)	-188.3 (mV)	~~3.75~~ 4.0 (gal)
15.96 (°C)	7.37 (std)	18.76 (g/L)	28849 (µS/cm)	.27 (mg/L)	-182.5 (mV)	4.5 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: ODOR: N/O COLOR: BROWN SHEEN Y/N N

WEATHER CONDITIONS: TEMPERATURE 70 WINDY Y/N N PRECIPITATION Y/N (IF Y TYPE) N

SPECIFIC COMMENTS:

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

DATE PRINT Josh Kirchner SIGNATURE

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: MARTIN 34 #2 JOB# 075035
SAMPLE ID: 075035-061313-SK-MW4 WELL# MW 4

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
6.13.13	6-13-13	1220	1.69	5.25

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER 94.14 (feet) WELL ELEVATION (feet)

WELL DEPTH 98.21 (feet) GROUNDWATER ELEVATION (feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
16.02 (°C)	7.98 (std)	21.68 (g/L)	33356 (µS/cm)	.22 (mg/L)	-211.3 (mV)	4.25 (gal)
16.12 (°C)	7.63 (std)	21.72 (g/L)	33414 (µS/cm)	.18 (mg/L)	-183.8 (mV)	4.75 (gal)
16.23 (°C)	7.52 (std)	21.67 (g/L)	3354 (µS/cm)	.12 (mg/L)	-162.6 (mV)	5.25 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: ODOR: SLIGHT COLOR: CLEAR SHEEN Y/N N

WEATHER CONDITIONS: TEMPERATURE 70 WINDY Y/N N PRECIPITATION Y/N (IF Y TYPE) N

SPECIFIC COMMENTS:

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

DATE PRINT JOSH KIRCHNER SIGNATURE

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: MARTIN 342 JOB# 075035

SAMPLE ID: 075035-061313-SK-MW5 WELL# MW 5

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
6.13.13	6-13-13	1145	.61	2.0

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER 44.13 (feet) WELL ELEVATION (feet)

WELL DEPTH 48.21 (feet) GROUNDWATER ELEVATION (feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
16.42 (°C)	7.48 (std)	5680 (g/L)	8724 (µS/cm)	.29 (mg/L)	-165.6 (mV)	1 (gal)
16.43 (°C)	7.30 (std)	9.957 (g/L)	15300 (µS/cm)	.29 (mg/L)	-162.4 (mV)	1.5 (gal)
16.63 (°C)	7.27 (std)	9.811 (g/L)	15093 (µS/cm)	.29 (mg/L)	-157.8 (mV)	2 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: ODOR: NONE COLOR: BROWN SHEEN Y/N N

WEATHER CONDITIONS: TEMPERATURE 70 WINDY Y/N N PRECIPITATION Y/N (IF Y TYPE) N

SPECIFIC COMMENTS:

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

DATE PRINT JOSH WILLIAMS SIGNATURE

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: MARTIN 34-2 JOB# 075035
SAMPLE ID: 075035-061313-SIC-MW6 WELL# MW6

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
6.13.13	6.13.13	1210	2.55	7.5

PURGING AND SAMPLING EQUIPMENT

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

PURGING DEVICE: G
SAMPLING DEVICE: G
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 OTHER (SPECIFY)
X= SAMPLING DEVICE OTHER (SPECIFY)

PURGING MATERIAL: E
SAMPLING MATERIAL: E
A - TEFLON; B - STAINLESS STEEL; C - POLYPROPYLENE; D - PVC; E - POLYETHYLENE; X - OTHER
X= PURGING MATERIAL OTHER (SPECIFY)
X= SAMPLING MATERIAL OTHER (SPECIFY)

PURGE TUBING: C
SAMPLING TUBING: C
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)

FILTERING DEVICES 0.45: A
A - IN-LINE DISPOSABLE; B - PRESSURE

FIELD MEASUREMENTS

DEPTH TO WATER: 40.91 (feet) WELL ELEVATION: (feet)
WELL DEPTH: 57.93 (feet) GROUNDWATER ELEVATION: (feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
15.98 (°C)	7.72 (std)	21.07 (g/L)	32434 (µS/cm)	.28 (mg/L)	-351.8 (mV)	6.5 (gal)
16.16 (°C)	7.68 (std)	21.26 (g/L)	32718 (µS/cm)	.25 (mg/L)	-347.3 (mV)	7 (gal)
16.11 (°C)	7.70 (std)	21.29 (g/L)	32779 (µS/cm)	.35 (mg/L)	-358.7 (mV)	7.5 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: ODOR: SLIGHT COLOR: BLACK SHEEN Y/N N - CLEAR
WEATHER CONDITIONS: TEMPERATURE 70 WINDY Y/N N PRECIPITATION Y/N (IF Y TYPE) N
SPECIFIC COMMENTS:

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

DATE PRINT JOSH KIRCHNER SIGNATURE

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: MARTIN 34-2 **JOB#** 075035
SAMPLE ID: 075035-061313-JK-MW7 **WELL#** MW7

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
6.13.13	6.13.13	1150	1.74	5.5

PURGING AND SAMPLING EQUIPMENT

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

PURGING DEVICE [G] 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 OTHER (SPECIFY)
SAMPLING DEVICE [G]
X= ______ SAMPLING DEVICE OTHER (SPECIFY)

PURGING MATERIAL [C] A - TEFLON; B - STAINLESS STEEL; C - POLYPROPYLENE; D - PVC; E - POLYETHYLENE; X - OTHER
X= ______ PURGING MATERIAL OTHER (SPECIFY)
SAMPLING MATERIAL [C]
X= ______ SAMPLING MATERIAL OTHER (SPECIFY)

PURGE TUBING [C] A - TEFLON; B - TYGON; C - ROPE; D - POLYPROPYLENE; E - POLYETHYLENE; F - SILICONE; G - COMBINATION TEFLON/POLYPROPYLENE; X - OTHER
X= ______ PURGE TUBING OTHER (SPECIFY)
SAMPLING TUBING [C]
X= ______ SAMPLING TUBING OTHER (SPECIFY)

FILTERING DEVICES 0.45 [A] A - IN-LINE DISPOSABLE; B - PRESSURE

FIELD MEASUREMENTS

DEPTH TO WATER 40.20 (feet) WELL ELEVATION ______ (feet)
WELL DEPTH 51.79 (feet) GROUNDWATER ELEVATION ______ (feet)

TEMPERATURE (°C)	pH (std)	TDS (g/L)	SC (µS/cm)	DO (mg/L)	ORP (mV)	VOLUME (gal)
15.68	7.38	16.52	24624	.24	-164.4	4.5
15.70	7.38	13.50	20671	.37	-160.1	5.0
15.90	7.37	13.42	20666	.76	-159.4	5.5

FIELD COMMENTS

SAMPLE APPEARANCE: ______ ODOR: ~~Strong~~, None COLOR: ~~Black~~ Clear SHEEN Y/N N
WEATHER CONDITIONS: TEMPERATURE 70 WINDY Y/N N PRECIPITATION Y/N (IF Y TYPE) N
SPECIFIC COMMENTS:

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

DATE ______ PRINT JOSH KIRCHNER SIGNATURE [signature]

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: MARTIN 34 No.2 JOB# 075035

SAMPLE ID: GW-075035-091213-CM-MW-1 WELL# MW-1

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
9/11/13	9/12/13	825	0.36	1.00

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER	38.87 (feet)	WELL ELEVATION	(feet)
WELL DEPTH	41.10 (feet)	GROUNDWATER ELEVATION	(feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy ODOR: hydrocarbon COLOR: gray SHEEN Y/N no

WEATHER CONDITIONS: TEMPERATURE 65° WINDY Y/N no PRECIPITATION Y/N (IF Y TYPE) Yes, rain

SPECIFIC COMMENTS:

BAILED DRY @ 1.0 GAL

No parameters due to low volume & very slow re-charge.

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

DATE 9/11/13 PRINT Christo Matteus SIGNATURE [signature]

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: MARTIN 34 No. 2 JOB# 075035

SAMPLE ID: GW-075035-091113-(M)-MW-2 WELL# MW-2

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
9/11/13	9/11/13	1230	0.57	1.75

PURGING AND SAMPLING EQUIPMENT

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

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

PURGING DEVICE	6	A - SUBMERSIBLE PUMP	D - GAS LIFT PUMP	G - BAILER	X= PURGING DEVICE OTHER (SPECIFY)
		B - PERISTALTIC PUMP	E - PURGE PUMP	H - WATERRA®	
SAMPLING DEVICE	6	C - BLADDER PUMP	F - DIPPER BOTTLE	X - OTHER	X= SAMPLING DEVICE OTHER (SPECIFY)
PURGING MATERIAL	E	A - TEFLON	D - PVC		X= PURGING MATERIAL OTHER (SPECIFY)
		B - STAINLESS STEEL	E - POLYETHYLENE		
SAMPLING MATERIAL	E	C - POLYPROPYLENE	X - OTHER		X= SAMPLING MATERIAL OTHER (SPECIFY)
PURGE TUBING	C	A - TEFLON	D - POLYPROPYLENE	G - COMBINATION TEFLON/POLYPROPYLENE	X= PURGE TUBING OTHER (SPECIFY)
		B - TYGON	E - POLYETHYLENE		
SAMPLING TUBING	C	C - ROPE	F - SILICONE	X - OTHER	X= SAMPLING TUBING OTHER (SPECIFY)
FILTERING DEVICES 0.45	A	A - IN-LINE DISPOSABLE	B - PRESSURE	0.45 for metals only	

FIELD MEASUREMENTS

DEPTH TO WATER	37.12	(feet)	WELL ELEVATION		(feet)
WELL DEPTH	40.67	(feet)	GROUNDWATER ELEVATION		(feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
16.21 (°C)	7.50 (std)	22.24 (g/L)	34216 (µS/cm)	1.53 (mg/L)	-211.5 (mV)	0.75 (gal)
16.12 (°C)	7.44 (std)	21.79 (g/L)	33504 (µS/cm)	0.85 (mg/L)	-257.8 (mV)	1.25 (gal)
16.09 (°C)	7.43 (std)	21.60 (g/L)	33232 (µS/cm)	0.61 (mg/L)	-266.5 (mV)	1.75 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: CLOUDY ODOR: BIO COLOR: BLACK SHEEN Y/N N

WEATHER CONDITIONS: TEMPERATURE 80s WINDY Y/N N PRECIPITATION Y/N (IF Y TYPE) N

SPECIFIC COMMENTS:

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

DATE 9/11/13 PRINT Christine Matthews SIGNATURE Christine Matthews

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: MARTIN 34 No. 2 JOB# 075035

SAMPLE ID: GW-075035-091113-CM-MW-3 WELL# MW-3

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
9/11/13	~~1200~~ 9/11/13	1200	1.47	4.50

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER 36.30 (feet) WELL ELEVATION (feet)

WELL DEPTH 45.46 (feet) GROUNDWATER ELEVATION (feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
15.76 (°C)	7.53 (std)	21.43 (g/L)	32929 (µS/cm)	5.81 (mg/L)	-79.2 (mV)	3.50 (gal)
15.71 (°C)	7.44 (std)	20.80 (g/L)	31991 (µS/cm)	4.82 (mg/L)	-70.9 (mV)	4.00 (gal)
15.76 (°C)	7.44 (std)	20.75 (g/L)	31921 (µS/cm)	5.13 (mg/L)	-67.1 (mV)	4.50 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: CLOUDY ODOR: NONE COLOR: BROWN SHEEN Y/N N

WEATHER CONDITIONS: TEMPERATURE 80s WINDY Y/N N PRECIPITATION Y/N (IF Y TYPE) N

SPECIFIC COMMENTS:

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

DATE 9/11/13 PRINT Christine Mathews SIGNATURE Christine Mathews

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: MARTIN 34 No. 2 JOB# 075035

SAMPLE ID: SW-075035-090113-CM-MW-4 WELL# MW-4

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
9/11/13	9/11/13	1155	1.83	5.50

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER	43.97 (feet)	WELL ELEVATION	(feet)
WELL DEPTH	55.38 (feet)	GROUNDWATER ELEVATION	(feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
16.34 (°C)	7.97 (std)	23.53 (g/L)	36198 (µS/cm)	3.52 (mg/L)	-126.0 (mV)	4.5 (gal)
16.09 (°C)	7.74 (std)	23.46 (g/L)	36104 (µS/cm)	3.72 (mg/L)	-109.7 (mV)	5.0 (gal)
16.10 (°C)	7.70 (std)	23.50 (g/L)	36161 (µS/cm)	3.02 (mg/L)	-108.8 (mV)	5.5 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy ODOR: none COLOR: brown SHEEN Y/N NO

WEATHER CONDITIONS: TEMPERATURE 75 WINDY Y/N no PRECIPITATION Y/N (IF Y TYPE) NO

SPECIFIC COMMENTS:

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

DATE 9/11/13 PRINT Christina Mathews SIGNATURE Christina Mathews

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: MARTIN JOB# 075035

SAMPLE ID: GW-075035-091113-CM-MW-5 WELL# MW-5

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
9/11/13	9/11/13	1435	0.51	1.25

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER 45.02 (feet) WELL ELEVATION (feet)

WELL DEPTH 48.21 (feet) GROUNDWATER ELEVATION (feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
16.09 (°C)	7.15 (std)	9.999 (g/L)	15385 (µS/cm)	1.48 (mg/L)	-81.7 (mV)	~~0.5~~ 0.75 (gal)
16.85 (°C)	7.27 (std)	9.971 (g/L)	16340 (µS/cm)	2.41 (mg/L)	-99.6 (mV)	1.25 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: ~~clear~~ cloudy ODOR: none COLOR: ~~clear~~ light brown SHEEN Y/N NO

WEATHER CONDITIONS: TEMPERATURE 75 WINDY Y/N NO PRECIPITATION Y/N (IF Y TYPE) NO

SPECIFIC COMMENTS:

Collected sample 0.5 gallons short of 3 volumes due to slow re-charge.

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

DATE 9/11/13 PRINT Christine Mathews SIGNATURE [signature]

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: MARTIN JOB# 075035

SAMPLE ID: GW-075035-091113-CM-MW-6 WELL# MW-6

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
9/11/13	9/11/13	1105	2.72	8.25

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER	40.81 (feet)	WELL ELEVATION	(feet)
WELL DEPTH	57.83 (feet)	GROUNDWATER ELEVATION	(feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
16.40 (°C)	7.82 (std)	22.93 (g/L)	35240 (µS/cm)	4.57 (mg/L)	-325.7 (mV)	7.25 (gal)
16.25 (°C)	7.69 (std)	23.96 (g/L)	35478 (µS/cm)	0.83 (mg/L)	-339.2 (mV)	7.75 (gal)
16.20 (°C)	7.69 (std)	23.05 (g/L)	35462 (µS/cm)	0.44 (mg/L)	-345.7 (mV)	8.25 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy ODOR: hydrocarbon COLOR: dark gray SHEEN Y/N NO

WEATHER CONDITIONS: TEMPERATURE 75° WINDY Y/N no PRECIPITATION Y/N (IF Y TYPE) NO

SPECIFIC COMMENTS:

Dup collected @ 1110

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

DATE 9/11/13 PRINT Christine Matteesen SIGNATURE [signature]

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: MARTIN JOB# 075035

SAMPLE ID: GW-075035-091113-CM-MW-7 WELL# MW-7

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
9/11/13	9/11/13	1045	1.87	5.75

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER 40.12 (feet) WELL ELEVATION (feet)

WELL DEPTH 51.79 (feet) GROUNDWATER ELEVATION (feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
15.80 (°C)	7.19 (std)	17.57 (g/L)	27042 (µS/cm)	2.23 (mg/L)	-43.9 (mV)	4.75 (gal)
15.74 (°C)	7.22 (std)	18.12 (g/L)	27873 (µS/cm)	2.56 (mg/L)	-52.3 (mV)	5.25 (gal)
15.76 (°C)	7.20 (std)	21.44 (g/L)	33037 (µS/cm)	2.02 (mg/L)	-68.3 (mV)	5.75 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy ODOR: none COLOR: brown SHEEN Y/N no

WEATHER CONDITIONS: TEMPERATURE 70° WINDY Y/N no PRECIPITATION Y/N (IF Y TYPE) no

SPECIFIC COMMENTS:

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

DATE 9/11/13 PRINT Christine Mathews SIGNATURE [signature]

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: MARTIN 24 No.2 JOB# 075035

SAMPLE ID: GW-075035-09113-CM-MW-8 WELL# MW-8

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
9/11/13	9/11/13	1500	2.01	6.25

PURGING AND SAMPLING EQUIPMENT

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

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

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

X= _____ PURGING DEVICE OTHER (SPECIFY)

X= _____ SAMPLING DEVICE OTHER (SPECIFY)

X= _____ PURGING MATERIAL OTHER (SPECIFY)

X= _____ SAMPLING MATERIAL OTHER (SPECIFY)

X= _____ PURGE TUBING OTHER (SPECIFY)

X= _____ SAMPLING TUBING OTHER (SPECIFY)

FIELD MEASUREMENTS

DEPTH TO WATER 42.39 (feet) WELL ELEVATION _____ (feet)

WELL DEPTH 54.96 (feet) GROUNDWATER ELEVATION _____ (feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
15.91 (°C)	7.85 (std)	13.65 (g/L)	21016 (µS/cm)	3.03 (mg/L)	-62.0 (mV)	5.25 (gal)
15.54 (°C)	7.65 (std)	14.51 (g/L)	22331 (µS/cm)	1.89 (mg/L)	-51.2 (mV)	5.75 (gal)
15.48 (°C)	7.58 (std)	14.50 (g/L)	22318 (µS/cm)	1.74 (mg/L)	-44.1 (mV)	6.25 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy ODOR: none COLOR: brown SHEEN Y/N no

WEATHER CONDITIONS: TEMPERATURE 85° WINDY Y/N no PRECIPITATION Y/N (IF Y TYPE) no

SPECIFIC COMMENTS:

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

DATE 9/11/13 PRINT Christine Matthews SIGNATURE Christine Matthews

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: Martin 21. No. 2 JOB# 075035

SAMPLE ID: GW-075035-121713-CM-MW-1 WELL# MW-1

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
12/11/13 ~~12/12/13~~	12/17/13	~~1020~~ 1040	0.368	0.25

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER 38.5 (feet) WELL ELEVATION (feet)

WELL DEPTH 40.8 (feet) GROUNDWATER ELEVATION (feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
16.36 (°C)	6.76 (std)	18.16 (g/L)	27935 (µS/cm)	0.86 (mg/L)	-344.8 (mV)	.25 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy ODOR: bio COLOR: gray SHEEN Y/N no

WEATHER CONDITIONS: TEMPERATURE 35° WINDY Y/N no PRECIPITATION Y/N (IF Y TYPE) no

SPECIFIC COMMENTS:

0.368 X3 = 1.10

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

DATE 12/17/13 PRINT Christine Mathews SIGNATURE Christine Mathews

WELL SAMPLING FIELD INFORMATION FORM

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

SAMPLE ID: GW-075035-121713-CM-MW-2 WELL# MW-2

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL IN CASING (GALLONS)	ACTUAL VOL PURGED (GALLONS)
12/17/13	12/17/13	1120	0.616	2.0

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER 36.55 (feet) WELL ELEVATION (feet)

WELL DEPTH 40.4 (feet) GROUNDWATER ELEVATION (feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
15.46 (°C)	7.07 (std)	21.92 (g/L)	33731 (µS/cm)	2.48 (mg/L)	-294.6 (mV)	~~1.0~~ 1.5 (gal)
15.48 (°C)	7.02 (std)	21.86 (g/L)	33621 (µS/cm)	1.74 (mg/L)	-293.9 (mV)	~~1.5~~ 1.75 (gal)
15.58 (°C)	7.00 (std)	21.82 (g/L)	33518 (µS/cm)	1.45 (mg/L)	-292.3 (mV)	2.0 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: Cloudy/silty ODOR: bio COLOR: gray SHEEN Y/N no

WEATHER CONDITIONS: TEMPERATURE 38° WINDY Y/N no PRECIPITATION Y/N (IF Y TYPE) no

SPECIFIC COMMENTS:

0.616 X 3 = 1.848

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

DATE 12/17/13 PRINT Christine Matthews SIGNATURE Christine Matthews

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: Murfin 34 No.2 JOB# 075035

SAMPLE ID: GW-075035-121713-CM-MW-3 WELL# MW-3

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
12/17/13	12/17/13	1250	1.496	4.5

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER: 35.7 (feet) WELL ELEVATION: (feet)

WELL DEPTH: 45.05 (feet) GROUNDWATER ELEVATION: (feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
13.66 (°C)	7.07 (std)	20.55 (g/L)	31608 (µS/cm)	3.87 (mg/L)	-109.6 (mV)	3.5 (gal)
13.64 (°C)	7.09 (std)	20.49 (g/L)	31538 (µS/cm)	4.09 (mg/L)	-106.8 (mV)	4.0 (gal)
14.50 (°C)	7.15 (std)	20.64 (g/L)	31754 (µS/cm)	3.94 (mg/L)	-105.7 (mV)	4.5 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy/silty ODOR: none COLOR: brown SHEEN Y/N: no

WEATHER CONDITIONS: TEMPERATURE: 40° WINDY Y/N: no PRECIPITATION Y/N (IF Y TYPE): no

SPECIFIC COMMENTS:

1.496 x 3 = 4.488

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

12/17/13 DATE | Christine Mathews PRINT | SIGNATURE

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: Murtm, 34 No. 2 JOB# 075035

SAMPLE ID: GW-075035-12713-CM-MW-4 WELL# MW-4

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
12/17/13	12/17/13	1155	1.848	5.75

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER 43.55 (feet) WELL ELEVATION (feet)

WELL DEPTH 55.1 (feet) GROUNDWATER ELEVATION (feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
14.62 (°C)	7.36 (std)	22.92 (g/L)	35293 (µS/cm)	2.92 (mg/L)	-216.5 (mV)	4.75 (gal)
15.25 (°C)	7.34 (std)	23.36 (g/L)	35935 (µS/cm)	3.44 (mg/L)	-161.0 (mV)	5.25 (gal)
15.44 (°C)	7.33 (std)	23.39 (g/L)	35981 (µS/cm)	3.58 (mg/L)	-153.0 (mV)	5.75 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy/silty ODOR: none COLOR: brown SHEEN Y/N no

WEATHER CONDITIONS: TEMPERATURE 40° WINDY Y/N no PRECIPITATION Y/N (IF Y TYPE) no

SPECIFIC COMMENTS:

1.848 X 3 = 5.544

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

DATE 12/17/13 PRINT Christine Matheus SIGNATURE Christine Matheus

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: GW-075 Martin 34 No. 2 JOB# 075035

SAMPLE ID: GW-075035-121713-CM-MW-5 WELL# MW-5

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
12/17/13	12/17/13	1405	.568	1.50

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER 44.45 (feet) WELL ELEVATION (feet)

WELL DEPTH 48.0 (feet) GROUNDWATER ELEVATION (feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	.75 (gal)
15.83 (°C)	7.00 (std)	10.12 (g/L)	15575 (µS/cm)	2.27 (mg/L)	-120.8 (mV)	1.25 (gal)
16.85 (°C)	6.99 (std)	10.13 (g/L)	15585 (µS/cm)	2.19 (mg/L)	-134.1 (mV)	1.50 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy/silty ODOR: none COLOR: brown SHEEN Y/N no

WEATHER CONDITIONS: TEMPERATURE 40° WINDY Y/N no PRECIPITATION Y/N (IF Y TYPE) no

SPECIFIC COMMENTS:

0.568 x 3 = 1.704

bailing stopped @ 1.5 gallons & sample collected. Well began to bail down & recharge is very slow

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE SOP/PROTOCOLS.

DATE 12/17/13 PRINT Christine Mathews SIGNATURE Christine Mathews

WELL SAMPLING FIELD INFORMATION FORM

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

SAMPLE ID: GW-075035-12713-CM-MW-6 WELL# MW-6

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
12/17/13	12/17/13	1020	2.75	8.75

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER 40.2 (feet) WELL ELEVATION (feet)

WELL DEPTH 57.4 (feet) GROUNDWATER ELEVATION (feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME	
15.58 (°C)	6.95 (std)	22.77 (g/L)	35088 (µS/cm)	.94 (mg/L)	-365.3 (mV)	TM 7.25 (gal)	7.75
15.52 (°C)	7.01 (std)	22.93 (g/L)	35271 (µS/cm)	.88 (mg/L)	-360.2 (mV)	TM 7.75 (gal)	8.25
15.58 (°C)	7.05 (std)	23.0 (g/L)	35377 (µS/cm)	.78 (mg/L)	-367.9 (mV)	TM 8.25 (gal)	8.75
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)	
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)	

FIELD COMMENTS

SAMPLE APPEARANCE: Cloudy ODOR: Bio odor COLOR: Gray SHEEN Y/N N

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

SPECIFIC COMMENTS:

2.75 x 3 = 8.25 Duplicate collected @ 1025

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

DATE 12/17/13 PRINT Christie Mathis SIGNATURE [signature]

WELL SAMPLING FIELD INFORMATION FORM

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

SAMPLE ID: GW-075035-12113-CM-MW-7 WELL# MW-7

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
12/17/13	12/17/13	1310	1.888	5.75

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER 39.7 (feet) WELL ELEVATION (feet)

WELL DEPTH 51.5 (feet) GROUNDWATER ELEVATION (feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
15.06 (°C)	7.15 (std)	~~3.64~~ 18.49 (g/L)	26077 (µS/cm)	3.62 (mg/L)	-98.1 (mV)	4.25 (gal)
15.18 (°C)	7.08 (std)	~~3.05~~ 18.54 (g/L)	27525 (µS/cm)	3.00 (mg/L)	-105.3 (mV)	5.25 (gal)
15.19 (°C)	6.99 (std)	~~2.6~~ 18.47 (g/L)	28479 (µS/cm)	2.58 (mg/L)	-108.8 (mV)	5.75 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy/silty ODOR: none COLOR: brown SHEEN Y/N no

WEATHER CONDITIONS: TEMPERATURE 46° WINDY Y/N no PRECIPITATION Y/N (IF Y TYPE) no

SPECIFIC COMMENTS:

1.888 x 3 = 5.664

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

DATE 12/17/13 PRINT Christine Mathieu SIGNATURE Christine Mathieu

WELL SAMPLING FIELD INFORMATION FORM

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

SAMPLE ID: GW-075035-12713-CM-MW-8 WELL# MW-8

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
12/17/13	12/17/13	1435	2.064	6.25

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER 41.8 (feet) WELL ELEVATION (feet)

WELL DEPTH 54.7 (feet) GROUNDWATER ELEVATION (feet)

TEMPERATURE	pH	TDS	SC	DO	ORP	VOLUME
14.98 (°C)	7.26 (std)	15.53 (g/L)	23897 (µS/cm)	2.54 (mg/L)	-130.3 (mV)	5.25 (gal)
14.96 (°C)	7.25 (std)	15.59 (g/L)	23979 (µS/cm)	2.26 (mg/L)	-129.8 (mV)	5.75 (gal)
14.97 (°C)	7.25 (std)	15.64 (g/L)	24085 (µS/cm)	2.12 (mg/L)	-126.8 (mV)	6.25 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mg/L)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy/silty ODOR: none COLOR: brown SHEEN Y/N no

WEATHER CONDITIONS: TEMPERATURE 40° WINDY Y/N no PRECIPITATION Y/N (IF Y TYPE) no

SPECIFIC COMMENTS:

2.064 X 3 = 6.192

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

DATE 12/17/13 PRINT Christine Matheus SIGNATURE Christine Matheus

Appendix B

GROUNDWATER LABORATORY ANALYTICAL REPORTS

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

April 12, 2013

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

RE: Project: 075035 Martin 34 No 2
Pace Project No.: 60141069

Dear Christine Matthews:
Enclosed are the analytical results for sample(s) received by the laboratory on March 23, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Alice Flanagan

alice.flanagan@pacelabs.com
Project Manager

Enclosures

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

Pace Analytical Services, Inc.
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Lenexa, KS 66219
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CERTIFICATIONS

Project: 075035 Martin 34 No 2
Pace Project No.: 60141069

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
Illinois Certification #: 003097

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

SAMPLE SUMMARY

Project: 075035 Martin 34 No 2
Pace Project No.: 60141069

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60141069001	**GW-075035-032013-CM-MW-1**	Water	03/20/13 10:05	03/23/13 08:45
60141069002	**GW-075035-032013-CM-MW-2**	Water	03/20/13 11:00	03/23/13 08:45
60141069003	**GW-075035-032013-CM-MW-3**	Water	03/20/13 12:00	03/23/13 08:45
60141069004	**GW-075035-032013-CM-MW-4**	Water	03/20/13 12:35	03/23/13 08:45
60141069005	**GW-075035-032013-CM-MW-5**	Water	03/20/13 14:00	03/23/13 08:45
60141069006	**GW-075035-032013-CM-MW-6**	Water	03/20/13 11:10	03/23/13 08:45
60141069007	**GW-075035-032013-CM-MW-7**	Water	03/20/13 13:10	03/23/13 08:45
60141069008	**GW-075035-032013-CM-DUP**	Water	03/20/13 11:15	03/23/13 08:45
60141069009	**TB-075035-032013-CM-001**	Water	03/20/13 00:00	03/23/13 08:45

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SAMPLE ANALYTE COUNT

Project: 075035 Martin 34 No 2
Pace Project No.: 60141069

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60141069001	**GW-075035-032013-CM-MW-1**	EPA 6010	JGP	3
		EPA 8270C by SIM	CEM	3
		EPA 5030B/8260	PRG	12
		SM 2540C	JML	1
		EPA 300.0	OL	3
60141069002	**GW-075035-032013-CM-MW-2**	EPA 6010	JGP	3
		EPA 8270C by SIM	CEM	3
		EPA 5030B/8260	PRG	12
		SM 2540C	JML	1
		EPA 300.0	OL	3
60141069003	**GW-075035-032013-CM-MW-3**	EPA 6010	JGP	3
		EPA 8270C by SIM	CEM	3
		EPA 5030B/8260	PRG	12
		SM 2540C	JML	1
		EPA 300.0	OL	3
60141069004	**GW-075035-032013-CM-MW-4**	EPA 6010	JGP	3
		EPA 8270C by SIM	CEM	3
		EPA 5030B/8260	PRG	12
		SM 2540C	JML	1
		EPA 300.0	OL	3
60141069005	**GW-075035-032013-CM-MW-5**	EPA 6010	JGP	3
		EPA 8270C by SIM	CEM	3
		EPA 5030B/8260	PRG	12
		SM 2540C	JML	1
		EPA 300.0	OL	3
60141069006	**GW-075035-032013-CM-MW-6**	EPA 6010	JGP	3
		EPA 8270C by SIM	CEM	3
		EPA 5030B/8260	PRG	12
		SM 2540C	JML	1
		EPA 300.0	OL	3
60141069007	**GW-075035-032013-CM-MW-7**	EPA 6010	JGP	3
		EPA 8270C by SIM	CEM	3
		EPA 5030B/8260	PRG	12
		SM 2540C	JML	1
		EPA 300.0	OL	3
60141069008	**GW-075035-032013-CM-DUP**	EPA 5030B/8260	PRG	12
60141069009	**TB-075035-032013-CM-001**	EPA 5030B/8260	PRG	12

REPORT OF LABORATORY ANALYSIS

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

PROJECT NARRATIVE

Project: 075035 Martin 34 No 2
Pace Project No.: 60141069

Method: **EPA 6010**
Description: 6010 MET ICP, Dissolved
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: April 12, 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:

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

PROJECT NARRATIVE

Project: 075035 Martin 34 No 2
Pace Project No.: 60141069

Method: **EPA 8270C by SIM**
Description: 8270 MSSV PAH by SIM
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: April 12, 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.

QC Batch: MSSV/11958

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

Additional Comments:

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

PROJECT NARRATIVE

Project: 075035 Martin 34 No 2
Pace Project No.: 60141069

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: April 12, 2013

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/52648

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

QC Batch: MSV/52673

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

Additional Comments:

Pace Analytical Services, Inc.
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(913)599-5665

PROJECT NARRATIVE

Project: 075035 Martin 34 No 2
Pace Project No.: 60141069

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: April 12, 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:

Pace Analytical Services, Inc.
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PROJECT NARRATIVE

Project: 075035 Martin 34 No 2
Pace Project No.: 60141069

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: April 12, 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.

Additional Comments:

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

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

ANALYTICAL RESULTS

Project: 075035 Martin 34 No 2
Pace Project No.: 60141069

Sample: GW-075035-032013-CM-MW-1 **Lab ID: 60141069001** Collected: 03/20/13 10:05 Received: 03/23/13 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Boron, Dissolved	**1210**	ug/L	500	250	5	03/27/13 14:00	04/04/13 17:49	7440-42-8	
Iron, Dissolved	**345**	ug/L	250	58.0	5	03/27/13 14:00	04/04/13 17:49	7439-89-6	
Manganese, Dissolved	**670**	ug/L	25.0	2.4	5	03/27/13 14:00	04/04/13 17:49	7439-96-5	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C								
Naphthalene	**43.8**	ug/L	2.5		5	03/27/13 00:00	04/11/13 16:10	91-20-3	
Surrogates									
2-Fluorobiphenyl (S)	60	%	40-120		5	03/27/13 00:00	04/11/13 16:10	321-60-8	
Terphenyl-d14 (S)	104	%	43-122		5	03/27/13 00:00	04/11/13 16:10	1718-51-0	
8260 MSV	Analytical Method: EPA 5030B/8260								
Benzene	**4230**	ug/L	100	9.8	100		03/28/13 18:51	71-43-2	
Ethylbenzene	**411**	ug/L	100	23.0	100		03/28/13 18:51	100-41-4	
Methylene chloride	ND	ug/L	100	24.0	100		03/28/13 18:51	75-09-2	
Naphthalene	ND	ug/L	1000	11.0	100		03/28/13 18:51	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	100	8.6	100		03/28/13 18:51	79-34-5	
Toluene	**1050**	ug/L	100	15.0	100		03/28/13 18:51	108-88-3	
Xylene (Total)	**8380**	ug/L	300	41.0	100		03/28/13 18:51	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		100		03/28/13 18:51	460-00-4	
Dibromofluoromethane (S)	89	%	80-120		100		03/28/13 18:51	1868-53-7	
1,2-Dichloroethane-d4 (S)	95	%	80-120		100		03/28/13 18:51	17060-07-0	
Toluene-d8 (S)	101	%	80-120		100		03/28/13 18:51	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	100		03/28/13 18:51		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**32200**	mg/L	5.0	5.0	1		03/26/13 11:59		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**285**	mg/L	50.0	25.0	50		04/02/13 12:46	16887-00-6	
Fluoride	ND	mg/L	0.20	0.069	1		04/01/13 17:21	16984-48-8	
Sulfate	**13600**	mg/L	1000	59.0	1000		04/02/13 13:04	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 075035 Martin 34 No 2
Pace Project No.: 60141069

Sample: GW-075035-032013-CM-MW-2 **Lab ID: 60141069002** Collected: 03/20/13 11:00 Received: 03/23/13 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Boron, Dissolved	**981**	ug/L	500	250	5	03/27/13 14:00	04/04/13 18:06	7440-42-8	
Iron, Dissolved	**1180**	ug/L	250	58.0	5	03/27/13 14:00	04/04/13 18:06	7439-89-6	
Manganese, Dissolved	**2210**	ug/L	25.0	2.4	5	03/27/13 14:00	04/04/13 18:06	7439-96-5	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C								
Naphthalene	**0.89**	ug/L	0.50		1	03/27/13 00:00	04/10/13 17:21	91-20-3	
Surrogates									
2-Fluorobiphenyl (S)	71	%	40-120		1	03/27/13 00:00	04/10/13 17:21	321-60-8	
Terphenyl-d14 (S)	87	%	43-122		1	03/27/13 00:00	04/10/13 17:21	1718-51-0	
8260 MSV	Analytical Method: EPA 5030B/8260								
Benzene	**177**	ug/L	5.0	0.49	5		03/28/13 19:06	71-43-2	
Ethylbenzene	**334**	ug/L	5.0	1.2	5		03/28/13 19:06	100-41-4	
Methylene chloride	ND	ug/L	5.0	1.2	5		03/28/13 19:06	75-09-2	
Naphthalene	**90.0**	ug/L	50.0	0.55	5		03/28/13 19:06	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	0.43	5		03/28/13 19:06	79-34-5	
Toluene	ND	ug/L	5.0	0.75	5		03/28/13 19:06	108-88-3	
Xylene (Total)	**84.0**	ug/L	15.0	2.0	5		03/28/13 19:06	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		5		03/28/13 19:06	460-00-4	
Dibromofluoromethane (S)	93	%	80-120		5		03/28/13 19:06	1868-53-7	
1,2-Dichloroethane-d4 (S)	97	%	80-120		5		03/28/13 19:06	17060-07-0	
Toluene-d8 (S)	102	%	80-120		5		03/28/13 19:06	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	5		03/28/13 19:06		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**43200**	mg/L	5.0	5.0	1		03/26/13 11:59		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**408**	mg/L	50.0	25.0	50		04/02/13 13:22	16887-00-6	
Fluoride	ND	mg/L	0.20	0.069	1		04/01/13 17:39	16984-48-8	
Sulfate	**19100**	mg/L	1000	59.0	1000		04/02/13 13:40	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 075035 Martin 34 No 2
Pace Project No.: 60141069

Sample: GW-075035-032013-CM-MW-3 **Lab ID: 60141069003** Collected: 03/20/13 12:00 Received: 03/23/13 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Boron, Dissolved	**936**	ug/L	500	250	5	03/27/13 14:00	04/04/13 18:08	7440-42-8	
Iron, Dissolved	**217**	ug/L	100	23.2	2	03/27/13 14:00	04/05/13 10:54	7439-89-6	
Manganese, Dissolved	**4160**	ug/L	25.0	2.4	5	03/27/13 14:00	04/04/13 18:08	7439-96-5	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C								
Naphthalene	ND	ug/L	0.50		1	03/27/13 00:00	04/10/13 17:39	91-20-3	
Surrogates									
2-Fluorobiphenyl (S)	73	%	40-120		1	03/27/13 00:00	04/10/13 17:39	321-60-8	
Terphenyl-d14 (S)	100	%	43-122		1	03/27/13 00:00	04/10/13 17:39	1718-51-0	
8260 MSV	Analytical Method: EPA 5030B/8260								
Benzene	ND	ug/L	1.0	0.098	1		03/28/13 19:20	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.23	1		03/28/13 19:20	100-41-4	
Methylene chloride	ND	ug/L	1.0	0.24	1		03/28/13 19:20	75-09-2	
Naphthalene	ND	ug/L	10.0	0.11	1		03/28/13 19:20	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.086	1		03/28/13 19:20	79-34-5	
Toluene	ND	ug/L	1.0	0.15	1		03/28/13 19:20	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.41	1		03/28/13 19:20	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		03/28/13 19:20	460-00-4	
Dibromofluoromethane (S)	92	%	80-120		1		03/28/13 19:20	1868-53-7	
1,2-Dichloroethane-d4 (S)	102	%	80-120		1		03/28/13 19:20	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		03/28/13 19:20	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		03/28/13 19:20		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**45600**	mg/L	5.0	5.0	1		03/26/13 12:00		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**373**	mg/L	50.0	25.0	50		04/02/13 13:57	16887-00-6	
Fluoride	ND	mg/L	0.20	0.069	1		04/01/13 17:56	16984-48-8	
Sulfate	**20400**	mg/L	2000	360	2000		04/03/13 11:17	14808-79-8	

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ANALYTICAL RESULTS

Project: 075035 Martin 34 No 2
Pace Project No.: 60141069

Sample: GW-075035-032013-CM-MW-4 **Lab ID: 60141069004** Collected: 03/20/13 12:35 Received: 03/23/13 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Boron, Dissolved	**748**	ug/L	500	250	5	03/27/13 14:00	04/04/13 18:10	7440-42-8	
Iron, Dissolved	**836**	ug/L	250	58.0	5	03/27/13 14:00	04/04/13 18:10	7439-89-6	
Manganese, Dissolved	**3580**	ug/L	25.0	2.4	5	03/27/13 14:00	04/04/13 18:10	7439-96-5	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C								
Naphthalene	**0.90**	ug/L	0.50		1	03/27/13 00:00	04/10/13 17:57	91-20-3	
Surrogates									
2-Fluorobiphenyl (S)	66	%	40-120		1	03/27/13 00:00	04/10/13 17:57	321-60-8	
Terphenyl-d14 (S)	86	%	43-122		1	03/27/13 00:00	04/10/13 17:57	1718-51-0	
8260 MSV	Analytical Method: EPA 5030B/8260								
Benzene	ND	ug/L	1.0	0.098	1		03/28/13 19:35	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.23	1		03/28/13 19:35	100-41-4	
Methylene chloride	ND	ug/L	1.0	0.24	1		03/28/13 19:35	75-09-2	
Naphthalene	ND	ug/L	10.0	0.11	1		03/28/13 19:35	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.086	1		03/28/13 19:35	79-34-5	
Toluene	ND	ug/L	1.0	0.15	1		03/28/13 19:35	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.41	1		03/28/13 19:35	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	105	%	80-120		1		03/28/13 19:35	460-00-4	
Dibromofluoromethane (S)	95	%	80-120		1		03/28/13 19:35	1868-53-7	
1,2-Dichloroethane-d4 (S)	105	%	80-120		1		03/28/13 19:35	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		03/28/13 19:35	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		03/28/13 19:35		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**63000**	mg/L	5.0	5.0	1		03/27/13 14:46		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**377**	mg/L	50.0	25.0	50		04/02/13 15:26	16887-00-6	
Fluoride	ND	mg/L	0.20	0.069	1		04/01/13 18:49	16984-48-8	
Sulfate	**23600**	mg/L	2000	360	2000		04/03/13 11:33	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 075035 Martin 34 No 2
Pace Project No.: 60141069

Sample: GW-075035-032013-CM-MW-5 **Lab ID: 60141069005** Collected: 03/20/13 14:00 Received: 03/23/13 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Boron, Dissolved	**2870**	ug/L	1000	500	10	03/27/13 14:00	04/04/13 18:12	7440-42-8	
Iron, Dissolved	**6060**	ug/L	500	116	10	03/27/13 14:00	04/04/13 18:12	7439-89-6	
Manganese, Dissolved	**2230**	ug/L	50.0	4.9	10	03/27/13 14:00	04/04/13 18:12	7439-96-5	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C								
Naphthalene	ND	ug/L	0.50		1	03/27/13 00:00	04/10/13 18:15	91-20-3	
Surrogates									
2-Fluorobiphenyl (S)	66	%	40-120		1	03/27/13 00:00	04/10/13 18:15	321-60-8	
Terphenyl-d14 (S)	101	%	43-122		1	03/27/13 00:00	04/10/13 18:15	1718-51-0	
8260 MSV	Analytical Method: EPA 5030B/8260								
Benzene	**493**	ug/L	5.0	0.49	5		03/29/13 15:53	71-43-2	
Ethylbenzene	**26.6**	ug/L	5.0	1.2	5		03/29/13 15:53	100-41-4	
Methylene chloride	ND	ug/L	5.0	1.2	5		03/29/13 15:53	75-09-2	
Naphthalene	ND	ug/L	50.0	0.55	5		03/29/13 15:53	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	0.43	5		03/29/13 15:53	79-34-5	
Toluene	ND	ug/L	5.0	0.75	5		03/29/13 15:53	108-88-3	
Xylene (Total)	ND	ug/L	15.0	2.0	5		03/29/13 15:53	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		5		03/29/13 15:53	460-00-4	
Dibromofluoromethane (S)	101	%	80-120		5		03/29/13 15:53	1868-53-7	
1,2-Dichloroethane-d4 (S)	107	%	80-120		5		03/29/13 15:53	17060-07-0	
Toluene-d8 (S)	99	%	80-120		5		03/29/13 15:53	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	5		03/29/13 15:53		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**11000**	mg/L	5.0	5.0	1		03/27/13 14:47		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**206**	mg/L	20.0	10.0	20		04/02/13 15:43	16887-00-6	
Fluoride	ND	mg/L	0.20	0.069	1		04/01/13 19:07	16984-48-8	
Sulfate	**6960**	mg/L	500	29.5	500		04/02/13 16:01	14808-79-8	

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ANALYTICAL RESULTS

Project: 075035 Martin 34 No 2
Pace Project No.: 60141069

Sample: GW-075035-032013-CM-MW-6 **Lab ID: 60141069006** Collected: 03/20/13 11:10 Received: 03/23/13 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Boron, Dissolved	**642**	ug/L	500	250	5	03/27/13 14:00	04/04/13 18:14	7440-42-8	
Iron, Dissolved	ND	ug/L	50.0	11.6	1	03/27/13 14:00	04/05/13 10:56	7439-89-6	
Manganese, Dissolved	**2460**	ug/L	25.0	2.4	5	03/27/13 14:00	04/04/13 18:14	7439-96-5	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C								
Naphthalene	**33.6**	ug/L	0.50		1	03/27/13 00:00	04/10/13 18:33	91-20-3	
Surrogates									
2-Fluorobiphenyl (S)	66	%	40-120		1	03/27/13 00:00	04/10/13 18:33	321-60-8	
Terphenyl-d14 (S)	103	%	43-122		1	03/27/13 00:00	04/10/13 18:33	1718-51-0	
8260 MSV	Analytical Method: EPA 5030B/8260								
Benzene	**22.1**	ug/L	10.0	0.98	10		03/28/13 20:04	71-43-2	
Ethylbenzene	**196**	ug/L	10.0	2.3	10		03/28/13 20:04	100-41-4	
Methylene chloride	ND	ug/L	10.0	2.4	10		03/28/13 20:04	75-09-2	
Naphthalene	ND	ug/L	100	1.1	10		03/28/13 20:04	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	10.0	0.86	10		03/28/13 20:04	79-34-5	
Toluene	ND	ug/L	10.0	1.5	10		03/28/13 20:04	108-88-3	
Xylene (Total)	**3450**	ug/L	30.0	4.1	10		03/28/13 20:04	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		10		03/28/13 20:04	460-00-4	
Dibromofluoromethane (S)	85	%	80-120		10		03/28/13 20:04	1868-53-7	
1,2-Dichloroethane-d4 (S)	95	%	80-120		10		03/28/13 20:04	17060-07-0	
Toluene-d8 (S)	103	%	80-120		10		03/28/13 20:04	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	10		03/28/13 20:04		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**70000**	mg/L	5.0	5.0	1		03/27/13 14:47		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**380**	mg/L	50.0	25.0	50		04/02/13 16:19	16887-00-6	
Fluoride	ND	mg/L	0.20	0.069	1		04/01/13 19:25	16984-48-8	
Sulfate	**23200**	mg/L	2000	360	2000		04/03/13 11:48	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 075035 Martin 34 No 2
Pace Project No.: 60141069

Sample: GW-075035-032013-CM-MW-7 **Lab ID: 60141069007** Collected: 03/20/13 13:10 Received: 03/23/13 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Boron, Dissolved	**864**	ug/L	500	250	5	03/27/13 14:00	04/04/13 18:16	7440-42-8	
Iron, Dissolved	**2560**	ug/L	250	58.0	5	03/27/13 14:00	04/04/13 18:16	7439-89-6	
Manganese, Dissolved	**3300**	ug/L	25.0	2.4	5	03/27/13 14:00	04/04/13 18:16	7439-96-5	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C								
Naphthalene	ND	ug/L	0.50		1	03/27/13 00:00	04/10/13 18:51	91-20-3	
Surrogates									
2-Fluorobiphenyl (S)	76	%	40-120		1	03/27/13 00:00	04/10/13 18:51	321-60-8	
Terphenyl-d14 (S)	99	%	43-122		1	03/27/13 00:00	04/10/13 18:51	1718-51-0	
8260 MSV	Analytical Method: EPA 5030B/8260								
Benzene	**7.7**	ug/L	5.0	0.49	5		03/28/13 20:18	71-43-2	
Ethylbenzene	**450**	ug/L	5.0	1.2	5		03/28/13 20:18	100-41-4	
Methylene chloride	ND	ug/L	5.0	1.2	5		03/28/13 20:18	75-09-2	
Naphthalene	ND	ug/L	50.0	0.55	5		03/28/13 20:18	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	0.43	5		03/28/13 20:18	79-34-5	
Toluene	ND	ug/L	5.0	0.75	5		03/28/13 20:18	108-88-3	
Xylene (Total)	ND	ug/L	15.0	2.0	5		03/28/13 20:18	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		5		03/28/13 20:18	460-00-4	
Dibromofluoromethane (S)	88	%	80-120		5		03/28/13 20:18	1868-53-7	
1,2-Dichloroethane-d4 (S)	96	%	80-120		5		03/28/13 20:18	17060-07-0	
Toluene-d8 (S)	99	%	80-120		5		03/28/13 20:18	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	5		03/28/13 20:18		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**56000**	mg/L	5.0	5.0	1		03/27/13 14:47		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**283**	mg/L	50.0	25.0	50		04/02/13 16:54	16887-00-6	
Fluoride	ND	mg/L	0.20	0.069	1		04/01/13 19:42	16984-48-8	
Sulfate	**21500**	mg/L	2000	360	2000		04/03/13 12:04	14808-79-8	

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ANALYTICAL RESULTS

Project: 075035 Martin 34 No 2
Pace Project No.: 60141069

Sample: GW-075035-032013-CM-DUP **Lab ID: 60141069008** Collected: 03/20/13 11:15 Received: 03/23/13 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Benzene	**19.8**	ug/L	2.0	0.20	2		03/28/13 22:42	71-43-2	
Ethylbenzene	**200**	ug/L	2.0	0.46	2		03/28/13 22:42	100-41-4	
Methylene chloride	ND	ug/L	2.0	0.48	2		03/28/13 22:42	75-09-2	
Naphthalene	**57.0**	ug/L	20.0	0.22	2		03/28/13 22:42	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	2.0	0.17	2		03/28/13 22:42	79-34-5	
Toluene	ND	ug/L	2.0	0.30	2		03/28/13 22:42	108-88-3	
Xylene (Total)	**3520**	ug/L	30.0	4.1	10		03/29/13 16:07	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		2		03/28/13 22:42	460-00-4	
Dibromofluoromethane (S)	88	%	80-120		2		03/28/13 22:42	1868-53-7	
1,2-Dichloroethane-d4 (S)	107	%	80-120		2		03/28/13 22:42	17060-07-0	
Toluene-d8 (S)	107	%	80-120		2		03/28/13 22:42	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	2		03/28/13 22:42		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 075035 Martin 34 No 2
Pace Project No.: 60141069

Sample: TB-075035-032013-CM-001 **Lab ID: 60141069009** Collected: 03/20/13 00:00 Received: 03/23/13 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Benzene	ND	ug/L	1.0	0.098	1		03/28/13 22:57	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.23	1		03/28/13 22:57	100-41-4	
Methylene chloride	ND	ug/L	1.0	0.24	1		03/28/13 22:57	75-09-2	
Naphthalene	ND	ug/L	10.0	0.11	1		03/28/13 22:57	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.086	1		03/28/13 22:57	79-34-5	
Toluene	ND	ug/L	1.0	0.15	1		03/28/13 22:57	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.41	1		03/29/13 16:21	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		03/28/13 22:57	460-00-4	
Dibromofluoromethane (S)	91	%	80-120		1		03/28/13 22:57	1868-53-7	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		03/28/13 22:57	17060-07-0	
Toluene-d8 (S)	101	%	80-120		1		03/28/13 22:57	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		03/28/13 22:57		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 075035 Martin 34 No 2
Pace Project No.: 60141069

QC Batch: MPRP/22048 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved
Associated Lab Samples: 60141069001, 60141069002, 60141069003, 60141069004, 60141069005, 60141069006, 60141069007

METHOD BLANK: 1160117 Matrix: Water
Associated Lab Samples: 60141069001, 60141069002, 60141069003, 60141069004, 60141069005, 60141069006, 60141069007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	04/04/13 16:29	
Iron, Dissolved	ug/L	ND	50.0	04/04/13 16:29	
Manganese, Dissolved	ug/L	ND	5.0	04/04/13 16:29	

LABORATORY CONTROL SAMPLE: 1160118

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	945	94	80-120	
Iron, Dissolved	ug/L	10000	9260	93	80-120	
Manganese, Dissolved	ug/L	1000	1010	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1160119 1160120

Parameter	Units	60141069001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	1210	1000	1000	2130	2210	92	100	75-125	4	20	
Iron, Dissolved	ug/L	345	10000	10000	9420	9680	91	93	75-125	3	20	
Manganese, Dissolved	ug/L	670	1000	1000	1600	1660	93	99	75-125	4	20	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 075035 Martin 34 No 2
Pace Project No.: 60141069

QC Batch: MSV/52648 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60141069001, 60141069002, 60141069003, 60141069004, 60141069006, 60141069007

METHOD BLANK: 1160784 Matrix: Water
Associated Lab Samples: 60141069001, 60141069002, 60141069003, 60141069004, 60141069006, 60141069007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	03/28/13 15:43	
Benzene	ug/L	ND	1.0	03/28/13 15:43	
Ethylbenzene	ug/L	ND	1.0	03/28/13 15:43	
Methylene chloride	ug/L	ND	1.0	03/28/13 15:43	
Naphthalene	ug/L	ND	10.0	03/28/13 15:43	
Toluene	ug/L	ND	1.0	03/28/13 15:43	
Xylene (Total)	ug/L	ND	3.0	03/28/13 15:43	
1,2-Dichloroethane-d4 (S)	%	99	80-120	03/28/13 15:43	
4-Bromofluorobenzene (S)	%	103	80-120	03/28/13 15:43	
Dibromofluoromethane (S)	%	80	80-120	03/28/13 15:43	
Toluene-d8 (S)	%	100	80-120	03/28/13 15:43	

LABORATORY CONTROL SAMPLE: 1160785

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	20.2	101	73-120	
Benzene	ug/L	20	19.8	99	73-122	
Ethylbenzene	ug/L	20	19.9	100	76-123	
Methylene chloride	ug/L	20	22.1	111	71-123	
Naphthalene	ug/L	20	21.5	108	64-127	
Toluene	ug/L	20	20.3	101	76-122	
Xylene (Total)	ug/L	60	61.6	103	76-122	
1,2-Dichloroethane-d4 (S)	%			90	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Dibromofluoromethane (S)	%			85	80-120	
Toluene-d8 (S)	%			101	80-120	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 075035 Martin 34 No 2
Pace Project No.: 60141069

QC Batch: MSV/52651 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60141069008, 60141069009

METHOD BLANK: 1160820 Matrix: Water
Associated Lab Samples: 60141069008, 60141069009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	03/28/13 21:30	
Benzene	ug/L	ND	1.0	03/28/13 21:30	
Ethylbenzene	ug/L	ND	1.0	03/28/13 21:30	
Methylene chloride	ug/L	ND	1.0	03/28/13 21:30	
Naphthalene	ug/L	ND	10.0	03/28/13 21:30	
Toluene	ug/L	ND	1.0	03/28/13 21:30	
1,2-Dichloroethane-d4 (S)	%	96	80-120	03/28/13 21:30	
4-Bromofluorobenzene (S)	%	96	80-120	03/28/13 21:30	
Dibromofluoromethane (S)	%	84	80-120	03/28/13 21:30	
Toluene-d8 (S)	%	102	80-120	03/28/13 21:30	

LABORATORY CONTROL SAMPLE: 1160821

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	21.8	109	73-120	
Benzene	ug/L	20	21.5	108	73-122	
Ethylbenzene	ug/L	20	22.0	110	76-123	
Methylene chloride	ug/L	20	22.9	115	71-123	
Naphthalene	ug/L	20	24.7	124	64-127	
Toluene	ug/L	20	22.0	110	76-122	
1,2-Dichloroethane-d4 (S)	%			98	80-120	
4-Bromofluorobenzene (S)	%			96	80-120	
Dibromofluoromethane (S)	%			84	80-120	
Toluene-d8 (S)	%			101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1160822 1160823

Parameter	Units	60140771012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,2,2-Tetrachloroethane	ug/L	<0.086	20	20	18.5	19.2	93	96	63-126	4	20	
Benzene	ug/L	0.18J	20	20	20.8	21.0	103	104	48-150	1	31	
Ethylbenzene	ug/L	<0.23	20	20	20.2	20.5	101	102	50-147	1	31	
Methylene chloride	ug/L	0.30J	20	20	21.9	22.4	108	111	67-128	2	20	
Naphthalene	ug/L	<0.11	20	20	20.7	22.1	104	110	40-140	6	33	
Toluene	ug/L	<0.15	20	20	20.3	20.5	101	103	51-147	1	32	
1,2-Dichloroethane-d4 (S)	%						95	96	80-120			
4-Bromofluorobenzene (S)	%						98	98	80-120			
Dibromofluoromethane (S)	%						87	86	80-120			
Toluene-d8 (S)	%						102	101	80-120			
Preservation pH		1.0			1.0	1.0				0		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 075035 Martin 34 No 2
Pace Project No.: 60141069

QC Batch: MSV/52673 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60141069005, 60141069008, 60141069009

METHOD BLANK: 1161713 Matrix: Water
Associated Lab Samples: 60141069005, 60141069008, 60141069009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	03/29/13 13:13	
Benzene	ug/L	ND	1.0	03/29/13 13:13	
Ethylbenzene	ug/L	ND	1.0	03/29/13 13:13	
Methylene chloride	ug/L	ND	1.0	03/29/13 13:13	
Naphthalene	ug/L	ND	10.0	03/29/13 13:13	
Toluene	ug/L	ND	1.0	03/29/13 13:13	
Xylene (Total)	ug/L	ND	3.0	03/29/13 13:13	
1,2-Dichloroethane-d4 (S)	%	104	80-120	03/29/13 13:13	
4-Bromofluorobenzene (S)	%	103	80-120	03/29/13 13:13	
Dibromofluoromethane (S)	%	101	80-120	03/29/13 13:13	
Toluene-d8 (S)	%	101	80-120	03/29/13 13:13	

LABORATORY CONTROL SAMPLE: 1161714

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	19.5	97	73-120	
Benzene	ug/L	20	19.9	99	73-122	
Ethylbenzene	ug/L	20	19.9	100	76-123	
Methylene chloride	ug/L	20	19.2	96	71-123	
Naphthalene	ug/L	20	18.7	93	64-127	
Toluene	ug/L	20	20.4	102	76-122	
Xylene (Total)	ug/L	60	60.7	101	76-122	
1,2-Dichloroethane-d4 (S)	%			99	80-120	
4-Bromofluorobenzene (S)	%			103	80-120	
Dibromofluoromethane (S)	%			99	80-120	
Toluene-d8 (S)	%			100	80-120	

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QUALITY CONTROL DATA

Project: 075035 Martin 34 No 2
Pace Project No.: 60141069

QC Batch: OEXT/37713 Analysis Method: EPA 8270C by SIM
QC Batch Method: EPA 3510C Analysis Description: 8270 Water PAH by SIM MSSV
Associated Lab Samples: 60141069001, 60141069002, 60141069003, 60141069004, 60141069005, 60141069006, 60141069007

METHOD BLANK: 1159830 Matrix: Water
Associated Lab Samples: 60141069001, 60141069002, 60141069003, 60141069004, 60141069005, 60141069006, 60141069007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Naphthalene	ug/L	ND	0.50	04/10/13 14:39	
2-Fluorobiphenyl (S)	%	83	40-120	04/10/13 14:39	
Terphenyl-d14 (S)	%	111	43-122	04/10/13 14:39	

LABORATORY CONTROL SAMPLE: 1159831

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Naphthalene	ug/L	10	9.1	91	41-120	
2-Fluorobiphenyl (S)	%			82	40-120	
Terphenyl-d14 (S)	%			97	43-122	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 075035 Martin 34 No 2
Pace Project No.: 60141069

QC Batch: WET/40401 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 60141069001, 60141069002, 60141069003

METHOD BLANK: 1159598 Matrix: Water
Associated Lab Samples: 60141069001, 60141069002, 60141069003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	03/26/13 11:53	

SAMPLE DUPLICATE: 1159599

Parameter	Units	60140890005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1080	1080	0	17	

SAMPLE DUPLICATE: 1159600

Parameter	Units	60140942006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	178	184	3	17	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 075035 Martin 34 No 2
Pace Project No.: 60141069

QC Batch: WET/40427 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 60141069004, 60141069005, 60141069006, 60141069007

METHOD BLANK: 1160247 Matrix: Water
Associated Lab Samples: 60141069004, 60141069005, 60141069006, 60141069007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	03/27/13 14:46	

SAMPLE DUPLICATE: 1160248

Parameter	Units	60141069004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	63000	65000	3	17	

SAMPLE DUPLICATE: 1160249

Parameter	Units	60141075001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	301	309	3	17	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 075035 Martin 34 No 2
Pace Project No.: 60141069

QC Batch: WETA/24072 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60141069001, 60141069002, 60141069003, 60141069004, 60141069005, 60141069006, 60141069007

METHOD BLANK: 1162735 Matrix: Water
Associated Lab Samples: 60141069001, 60141069002, 60141069003, 60141069004, 60141069005, 60141069006, 60141069007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.20	04/01/13 12:02	

METHOD BLANK: 1163179 Matrix: Water
Associated Lab Samples: 60141069001, 60141069002, 60141069003, 60141069004, 60141069005, 60141069006, 60141069007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	04/02/13 09:32	
Sulfate	mg/L	ND	1.0	04/02/13 09:32	

METHOD BLANK: 1163684 Matrix: Water
Associated Lab Samples: 60141069003, 60141069004, 60141069006, 60141069007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	04/03/13 10:16	

LABORATORY CONTROL SAMPLE: 1162736

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.5	102	90-110	

LABORATORY CONTROL SAMPLE: 1163180

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	96	90-110	
Sulfate	mg/L	5	4.6	92	90-110	

LABORATORY CONTROL SAMPLE: 1163685

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	4.9	98	90-110	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 075035 Martin 34 No 2
Pace Project No.: 60141069

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1162737 1162738

Parameter	Units	60141070003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	130	100	100	222	223	92	93	64-118	0	12	
Fluoride	mg/L	0.22	2.5	2.5	2.7	2.7	98	101	75-110	2	10	
Sulfate	mg/L	ND	5	5	5.3	5.5	98	100	61-119	3	10	

MATRIX SPIKE SAMPLE: 1162739

Parameter	Units	60141066004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	ND	2500	2160	73	64-118	
Fluoride	mg/L	ND	1250	1000	80	75-110	
Sulfate	mg/L	3070	2500	5030	79	61-119	

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 075035 Martin 34 No 2
Pace Project No.: 60141069

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/37713

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

Batch: MSV/52648

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

Batch: MSV/52673

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

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 075035 Martin 34 No 2
Pace Project No.: 60141069

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60141069001	**GW-075035-032013-CM-MW-1**	EPA 3010	MPRP/22048	EPA 6010	ICP/17600
60141069002	**GW-075035-032013-CM-MW-2**	EPA 3010	MPRP/22048	EPA 6010	ICP/17600
60141069003	**GW-075035-032013-CM-MW-3**	EPA 3010	MPRP/22048	EPA 6010	ICP/17600
60141069004	**GW-075035-032013-CM-MW-4**	EPA 3010	MPRP/22048	EPA 6010	ICP/17600
60141069005	**GW-075035-032013-CM-MW-5**	EPA 3010	MPRP/22048	EPA 6010	ICP/17600
60141069006	**GW-075035-032013-CM-MW-6**	EPA 3010	MPRP/22048	EPA 6010	ICP/17600
60141069007	**GW-075035-032013-CM-MW-7**	EPA 3010	MPRP/22048	EPA 6010	ICP/17600
60141069001	**GW-075035-032013-CM-MW-1**	EPA 3510C	OEXT/37713	EPA 8270C by SIM	MSSV/11958
60141069002	**GW-075035-032013-CM-MW-2**	EPA 3510C	OEXT/37713	EPA 8270C by SIM	MSSV/11958
60141069003	**GW-075035-032013-CM-MW-3**	EPA 3510C	OEXT/37713	EPA 8270C by SIM	MSSV/11958
60141069004	**GW-075035-032013-CM-MW-4**	EPA 3510C	OEXT/37713	EPA 8270C by SIM	MSSV/11958
60141069005	**GW-075035-032013-CM-MW-5**	EPA 3510C	OEXT/37713	EPA 8270C by SIM	MSSV/11958
60141069006	**GW-075035-032013-CM-MW-6**	EPA 3510C	OEXT/37713	EPA 8270C by SIM	MSSV/11958
60141069007	**GW-075035-032013-CM-MW-7**	EPA 3510C	OEXT/37713	EPA 8270C by SIM	MSSV/11958
60141069001	**GW-075035-032013-CM-MW-1**	EPA 5030B/8260	MSV/52648		
60141069002	**GW-075035-032013-CM-MW-2**	EPA 5030B/8260	MSV/52648		
60141069003	**GW-075035-032013-CM-MW-3**	EPA 5030B/8260	MSV/52648		
60141069004	**GW-075035-032013-CM-MW-4**	EPA 5030B/8260	MSV/52648		
60141069005	**GW-075035-032013-CM-MW-5**	EPA 5030B/8260	MSV/52673		
60141069006	**GW-075035-032013-CM-MW-6**	EPA 5030B/8260	MSV/52648		
60141069007	**GW-075035-032013-CM-MW-7**	EPA 5030B/8260	MSV/52648		
60141069008	**GW-075035-032013-CM-DUP**	EPA 5030B/8260	MSV/52651		
60141069008	**GW-075035-032013-CM-DUP**	EPA 5030B/8260	MSV/52673		
60141069009	**TB-075035-032013-CM-001**	EPA 5030B/8260	MSV/52651		
60141069009	**TB-075035-032013-CM-001**	EPA 5030B/8260	MSV/52673		
60141069001	**GW-075035-032013-CM-MW-1**	SM 2540C	WET/40401		
60141069002	**GW-075035-032013-CM-MW-2**	SM 2540C	WET/40401		
60141069003	**GW-075035-032013-CM-MW-3**	SM 2540C	WET/40401		
60141069004	**GW-075035-032013-CM-MW-4**	SM 2540C	WET/40427		
60141069005	**GW-075035-032013-CM-MW-5**	SM 2540C	WET/40427		
60141069006	**GW-075035-032013-CM-MW-6**	SM 2540C	WET/40427		
60141069007	**GW-075035-032013-CM-MW-7**	SM 2540C	WET/40427		
60141069001	**GW-075035-032013-CM-MW-1**	EPA 300.0	WETA/24072		
60141069002	**GW-075035-032013-CM-MW-2**	EPA 300.0	WETA/24072		
60141069003	**GW-075035-032013-CM-MW-3**	EPA 300.0	WETA/24072		
60141069004	**GW-075035-032013-CM-MW-4**	EPA 300.0	WETA/24072		
60141069005	**GW-075035-032013-CM-MW-5**	EPA 300.0	WETA/24072		
60141069006	**GW-075035-032013-CM-MW-6**	EPA 300.0	WETA/24072		
60141069007	**GW-075035-032013-CM-MW-7**	EPA 300.0	WETA/24072		

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Sample Condition Upon Receipt
ESI Tech Spec Client

WO#: 60141069

60141069

Optional
Proj Due Date:
Proj Name:

Client Name: CoP- CRA NM

Courier: Fed Ex ☑ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ☐

Tracking #: 8001 1091 7315 Pace Shipping Label Used? Yes ☐ No ☑

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

Packing Material: Bubble Wrap ☐ Bubble Bags ☑ Foam ☑ None ☐ Other ☐

Thermometer Used: T-112 / T-194 **Type of Ice:** Wet Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 3.8

Date and initials of person examining contents: 3/23/13 [illegible]

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	1.
Chain of Custody filled out:	☑Yes ☐No ☐N/A	2.
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	3.
Sampler name & signature on COC:	☑Yes ☐No ☐N/A	4.
Samples arrived within holding time:	☑Yes ☐No ☐N/A	5.
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	7.
Sufficient volume:	☑Yes ☐No ☐N/A	8.
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	9.
Containers intact:	☑Yes ☐No ☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	12.
Sample labels match COC: Includes date/time/ID/analyses Matrix: WT	☑Yes ☐No ☐N/A	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: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes ☐No	Initial when completed / Lot # of added preservative
Trip Blank present: Pace Trip Blank lot # (if purchased): 030413-3	☑Yes ☐No ☐N/A	15.
Headspace in VOA vials (>6mm):	☐Yes ☑No ☐N/A	16.
Project sampled in USDA Regulated Area:	☐Yes ☐No ☑N/A	17. List State:

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: AAL Date: 3/25/13

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

Start: 0918	Start:
End: 0925	End:
Temp:	Temp:

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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.

Page: 1 of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	COP CRA NM	Report To:	Christine Mathews	Attention:	ENFOS
Address:	6121 Indian School Rd NE, Ste 200	Copy To:	Kelly Blanchard, Angela Bown	Company Name:	
	Albequerque, NM 87110			Address:	
Email To:	cmathews@craworld.com	Purchase Order No.:	4517205766	Pace Quote Reference:	
Phone:	(505)884-0672 Fax: (505)884-4932	Project Name:	Martin 34 No. 2	Pace Project Manager:	Alice Flanagan
Requested Due Date/TAT:	standard	Project Number:	075035	Pace Profile #:	5341, 7

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: NM

Requested Analysis Filtered (Y/N)

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	8260****	Dissolved Fe, Mn, B	TDS	300.0 **	8270 Naphthalene					Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																												60141869
1	GW-075035-032013-CM-MW-1	WT	G			3.20.13	1005		7	X		X	X						X	X	X	X	X		3	069	H		1BP3U, 1BP3F^{20}, 2AG4U (W)
2	GW-075035-032013-CM-MW-2	WT	G			3.20.13	1100		7	X		X	X						X	X	X	X	X						(W)
3	GW-075035-032013-CM-MW-3	WT	G			3.20.13	1200		7	X		X	X						X	X	X	X	X						(W)
4	GW-075035-032013-CM-MW-4	WT	G			3.20.13	1235		7	X		X	X						X	X	X	X	X						(W)
5	GW-075035-032013-CM-MW-5	WT	G			3.20.13	1400		7	X		X	X						X	X	X	X	X						(W)
6	GW-075035-032013-CM-MW-6	WT	G			3.20.13	1110		7	X		X	X						X	X	X	X	X						(W)
7	GW-075035-032013-CM-MW-7	WT	G			3.20.13	1310		7	X		X	X						X	X	X	X	X						(W)
8	GW-075035-032013-CM-DUP	WT	G			3.20.13	1115		3				X						X										(W)
9	TB-075035-032013-CM-001	WT				3.20.13	1200		3				X						X							↓ (TB)			(W)
10																													
11																													
12																													

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
****BTEX, Methylene Chloride, 1,1,2,2-Tetrachloroethane	[signature]/CRA	3.22.13	1200	E Brockett	3/23	0845	3.8	Y	Y	Y
**Chloride, Sulfate, Fluoride										

SAMPLER NAME AND SIGNATURE				
PRINT Name of SAMPLER:	Christine Mathews			
SIGNATURE of SAMPLER:	[signature]	DATE Signed (MM/DD/YY):	3.22.13	

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

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

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(913)599-5665

March 18, 2014

Jeff Walker
COP Conestoga-Rovers & Associa
6121 Indian School Rd. NE
Ste 200
Albuquerque, NM 87110

RE: Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

Dear Jeff Walker:
Enclosed are the analytical results for sample(s) received by the laboratory on June 17, 2013. 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.

REVISED

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

Sincerely,

Alice Flanagan
alice.flanagan@pacelabs.com
Project Manager

Enclosures

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

Pace Analytical Services, Inc.
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CERTIFICATIONS

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

Kansas Certification IDs
9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 13-012-0
Illinois Certification #: 003097
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212008A
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407-13-4
Utah Certification #: KS000212013-3
Illinois Certification #: 003097

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SAMPLE SUMMARY

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60147069001	**075035-061313-JK-MW1**	Water	06/13/13 12:30	06/17/13 08:15
60147069002	**075035-061313-JK-MW2**	Water	06/13/13 12:15	06/17/13 08:15
60147069003	**075035-061313-JK-MW3**	Water	06/13/13 12:05	06/17/13 08:15
60147069004	**075035-061313-JK-MW4**	Water	06/13/13 12:20	06/17/13 08:15
60147069005	**075035-061313-JK-MW5**	Water	06/13/13 11:45	06/17/13 08:15
60147069006	**075035-061313-JK-MW6**	Water	06/13/13 12:10	06/17/13 08:15
60147069007	**075035-061313-JK-MW7**	Water	06/13/13 11:50	06/17/13 08:15
60147069008	**075035-061313-JK-DUP**	Water	06/13/13 08:00	06/17/13 08:15
60147069009	**TRIP BLANK 1**	Water	06/13/13 08:00	06/17/13 08:15
60147069010	**TRIP BLANK 2**	Water	06/13/13 08:00	06/17/13 08:15

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SAMPLE ANALYTE COUNT

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60147069001	**075035-061313-JK-MW1**	EPA 6010	TJT	3
		EPA 8270C by SIM	NAW	3
		EPA 5030B/8260	PRG	12
		SM 2540C	JML	1
		EPA 300.0	OL	3
60147069002	**075035-061313-JK-MW2**	EPA 6010	TJT	3
		EPA 8270C by SIM	NAW	3
		EPA 5030B/8260	PRG	12
		SM 2540C	JML	1
		EPA 300.0	OL	3
60147069003	**075035-061313-JK-MW3**	EPA 6010	TJT	3
		EPA 8270C by SIM	NAW	3
		EPA 5030B/8260	PRG	12
		SM 2540C	JML	1
		EPA 300.0	OL	3
60147069004	**075035-061313-JK-MW4**	EPA 6010	TJT	3
		EPA 8270C by SIM	NAW	3
		EPA 5030B/8260	PRG	12
		SM 2540C	JML	1
		EPA 300.0	OL	3
60147069005	**075035-061313-JK-MW5**	EPA 6010	TJT	3
		EPA 8270C by SIM	NAW	3
		EPA 5030B/8260	PRG	12
		SM 2540C	JML	1
		EPA 300.0	OL	3
60147069006	**075035-061313-JK-MW6**	EPA 6010	TJT	3
		EPA 8270C by SIM	NAW	3
		EPA 5030B/8260	PRG	12
		SM 2540C	JML	1
		EPA 300.0	OL	3
60147069007	**075035-061313-JK-MW7**	EPA 6010	TJT	3
		EPA 8270C by SIM	NAW	3
		EPA 5030B/8260	PRG	12
		SM 2540C	JML	1
		EPA 300.0	OL	3
60147069008	**075035-061313-JK-DUP**	EPA 5030B/8260	PRG	12
60147069009	**TRIP BLANK 1**	EPA 5030B/8260	PRG	12

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SAMPLE ANALYTE COUNT

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60147069010	**TRIP BLANK 2**	EPA 5030B/8260	PRG	12

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PROJECT NARRATIVE

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

Method: **EPA 6010**
Description: 6010 MET ICP, Dissolved
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: March 18, 2014

General Information:
6 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

TP: The samples were received outside of required temperature range. Analysis was completed upon client approval.
- 075035-061313-JK-MW2 (Lab ID: 60147069002)
- 075035-061313-JK-MW3 (Lab ID: 60147069003)
- 075035-061313-JK-MW4 (Lab ID: 60147069004)
- 075035-061313-JK-MW5 (Lab ID: 60147069005)
- 075035-061313-JK-MW6 (Lab ID: 60147069006)
- 075035-061313-JK-MW7 (Lab ID: 60147069007)

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, where applicable, 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: MPRP/23127

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
- 075035-061313-JK-MW3 (Lab ID: 60147069003)
  - Iron, Dissolved
- 075035-061313-JK-MW6 (Lab ID: 60147069006)
  - Iron, Dissolved

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PROJECT NARRATIVE

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

Method: **EPA 6010**
Description: 6010 MET ICP, Dissolved (LF)
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: March 18, 2014

General Information:
1 sample was analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

TP: The samples were received outside of required temperature range. Analysis was completed upon client approval.
- 075035-061313-JK-MW1 (Lab ID: 60147069001)

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, where applicable, 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:

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PROJECT NARRATIVE

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

Method: **EPA 8270C by SIM**
Description: 8270 MSSV PAH by SIM
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: March 18, 2014

General Information:
7 samples were analyzed for EPA 8270C by SIM. All samples were received in acceptable condition with any exceptions noted below.

TP: The samples were received outside of required temperature range. Analysis was completed upon client approval.
- 075035-061313-JK-MW1 (Lab ID: 60147069001)
- 075035-061313-JK-MW2 (Lab ID: 60147069002)
- 075035-061313-JK-MW3 (Lab ID: 60147069003)
- 075035-061313-JK-MW4 (Lab ID: 60147069004)
- 075035-061313-JK-MW5 (Lab ID: 60147069005)
- 075035-061313-JK-MW6 (Lab ID: 60147069006)
- 075035-061313-JK-MW7 (Lab ID: 60147069007)

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, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: OEXT/38927

L0: Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
- LCS (Lab ID: 1207722)
  - Naphthalene

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

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PROJECT NARRATIVE

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

Method: **EPA 8270C by SIM**
Description: 8270 MSSV PAH by SIM
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: March 18, 2014

QC Batch: MSSV/12336

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

Additional Comments:

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PROJECT NARRATIVE

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: March 18, 2014

General Information:
10 samples were analyzed for EPA 5030B/8260. All samples were received in acceptable condition with any exceptions noted below.

TP: The samples were received outside of required temperature range. Analysis was completed upon client approval.
- 075035-061313-JK-DUP (Lab ID: 60147069008)
- 075035-061313-JK-MW1 (Lab ID: 60147069001)
- 075035-061313-JK-MW2 (Lab ID: 60147069002)
- 075035-061313-JK-MW3 (Lab ID: 60147069003)
- 075035-061313-JK-MW4 (Lab ID: 60147069004)
- 075035-061313-JK-MW5 (Lab ID: 60147069005)
- 075035-061313-JK-MW6 (Lab ID: 60147069006)
- 075035-061313-JK-MW7 (Lab ID: 60147069007)
- TRIP BLANK 1 (Lab ID: 60147069009)
- TRIP BLANK 2 (Lab ID: 60147069010)

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, where applicable, 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/54497

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

QC Batch: MSV/54523

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

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PROJECT NARRATIVE

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: March 18, 2014

Additional Comments:

Pace Analytical Services, Inc.
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PROJECT NARRATIVE

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: March 18, 2014

General Information:
7 samples were analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below.

TP: The samples were received outside of required temperature range. Analysis was completed upon client approval.
- 075035-061313-JK-MW1 (Lab ID: 60147069001)
- 075035-061313-JK-MW2 (Lab ID: 60147069002)
- 075035-061313-JK-MW3 (Lab ID: 60147069003)
- 075035-061313-JK-MW4 (Lab ID: 60147069004)
- 075035-061313-JK-MW5 (Lab ID: 60147069005)
- 075035-061313-JK-MW6 (Lab ID: 60147069006)
- 075035-061313-JK-MW7 (Lab ID: 60147069007)

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, where applicable, 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:

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PROJECT NARRATIVE

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: March 18, 2014

General Information:
7 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below.

TP: The samples were received outside of required temperature range. Analysis was completed upon client approval.
- 075035-061313-JK-MW1 (Lab ID: 60147069001)
- 075035-061313-JK-MW2 (Lab ID: 60147069002)
- 075035-061313-JK-MW3 (Lab ID: 60147069003)
- 075035-061313-JK-MW4 (Lab ID: 60147069004)
- 075035-061313-JK-MW5 (Lab ID: 60147069005)
- 075035-061313-JK-MW6 (Lab ID: 60147069006)
- 075035-061313-JK-MW7 (Lab ID: 60147069007)

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, where applicable, 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/25209

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60146886001,60147069005

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- MS (Lab ID: 1209733)
  - Fluoride
- MSD (Lab ID: 1209732)
  - Chloride
  - Fluoride

R1: RPD value was outside control limits.
- MSD (Lab ID: 1209732)
  - Fluoride

Additional Comments:

Pace Analytical Services, Inc.
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PROJECT NARRATIVE

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: March 18, 2014

Analyte Comments:

QC Batch: WETA/25209

1e: Result has been revised.

- 075035-061313-JK-MW1 (Lab ID: 60147069001)
  - Sulfate
- 075035-061313-JK-MW2 (Lab ID: 60147069002)
  - Sulfate
- 075035-061313-JK-MW3 (Lab ID: 60147069003)
  - Sulfate
- 075035-061313-JK-MW4 (Lab ID: 60147069004)
  - Sulfate
- 075035-061313-JK-MW6 (Lab ID: 60147069006)
  - Sulfate
- 075035-061313-JK-MW7 (Lab ID: 60147069007)
  - Sulfate

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

Pace Analytical Services, Inc.
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(913)599-5665

ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

Sample: 075035-061313-JK-MW1 **Lab ID: 60147069001** Collected: 06/13/13 12:30 Received: 06/17/13 08:15 Matrix: Water

Comments: • The samples were received outside of required temperature range. Analysis was completed upon client approval.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved (LF)	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Boron, Dissolved	**1190**	ug/L	200	2	06/18/13 14:00	06/21/13 09:46	7440-42-8	
Iron, Dissolved	**67.0**	ug/L	50.0	1	06/18/13 14:00	06/20/13 12:47	7439-89-6	
Manganese, Dissolved	**507**	ug/L	10.0	2	06/18/13 14:00	06/21/13 09:46	7439-96-5	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C							
Naphthalene	**50.8**	ug/L	5.0	10	06/20/13 00:00	06/26/13 14:55	91-20-3	L1
Surrogates								
2-Fluorobiphenyl (S)	59	%	40-120	1	06/20/13 00:00	06/26/13 01:37	321-60-8	
Terphenyl-d14 (S)	71	%	43-122	1	06/20/13 00:00	06/26/13 01:37	1718-51-0	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**4410**	ug/L	100	100		06/24/13 18:03	71-43-2	
Ethylbenzene	**418**	ug/L	100	100		06/24/13 18:03	100-41-4	
Methylene chloride	ND	ug/L	100	100		06/24/13 18:03	75-09-2	
Naphthalene	ND	ug/L	1000	100		06/24/13 18:03	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	100	100		06/24/13 18:03	79-34-5	
Toluene	**1640**	ug/L	100	100		06/24/13 18:03	108-88-3	
Xylene (Total)	**7220**	ug/L	300	100		06/24/13 18:03	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	106	%	80-120	100		06/24/13 18:03	460-00-4	
Dibromofluoromethane (S)	93	%	80-120	100		06/24/13 18:03	1868-53-7	
1,2-Dichloroethane-d4 (S)	101	%	80-120	100		06/24/13 18:03	17060-07-0	
Toluene-d8 (S)	101	%	80-120	100		06/24/13 18:03	2037-26-5	
Preservation pH	**1.0**		0.10	100		06/24/13 18:03		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**22000**	mg/L	5.0	1		06/20/13 17:56		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Chloride	**289**	mg/L	50.0	50		06/25/13 13:35	16887-00-6	
Fluoride	ND	mg/L	0.20	1		06/24/13 13:17	16984-48-8	
Sulfate	**12400**	mg/L	1000	1000		06/26/13 10:21	14808-79-8	1e

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

Sample: 075035-061313-JK-MW2 **Lab ID: 60147069002** Collected: 06/13/13 12:15 Received: 06/17/13 08:15 Matrix: Water

Comments: • The samples were received outside of required temperature range. Analysis was completed upon client approval.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Boron, Dissolved	**940**	ug/L	500	5	06/18/13 14:00	06/21/13 10:25	7440-42-8	
Iron, Dissolved	**1660**	ug/L	250	5	06/18/13 14:00	06/21/13 10:25	7439-89-6	
Manganese, Dissolved	**3190**	ug/L	25.0	5	06/18/13 14:00	06/21/13 10:25	7439-96-5	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C							
Naphthalene	**2.5**	ug/L	0.50	1	06/20/13 00:00	06/26/13 01:58	91-20-3	L1
Surrogates								
2-Fluorobiphenyl (S)	71	%	40-120	1	06/20/13 00:00	06/26/13 01:58	321-60-8	
Terphenyl-d14 (S)	85	%	43-122	1	06/20/13 00:00	06/26/13 01:58	1718-51-0	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**128**	ug/L	5.0	5		06/24/13 18:17	71-43-2	
Ethylbenzene	**232**	ug/L	5.0	5		06/24/13 18:17	100-41-4	
Methylene chloride	ND	ug/L	5.0	5		06/24/13 18:17	75-09-2	
Naphthalene	**58.4**	ug/L	50.0	5		06/24/13 18:17	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	5		06/24/13 18:17	79-34-5	
Toluene	ND	ug/L	5.0	5		06/24/13 18:17	108-88-3	
Xylene (Total)	**50.8**	ug/L	15.0	5		06/24/13 18:17	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	102	%	80-120	5		06/24/13 18:17	460-00-4	
Dibromofluoromethane (S)	102	%	80-120	5		06/24/13 18:17	1868-53-7	
1,2-Dichloroethane-d4 (S)	107	%	80-120	5		06/24/13 18:17	17060-07-0	
Toluene-d8 (S)	99	%	80-120	5		06/24/13 18:17	2037-26-5	
Preservation pH	**1.0**		0.10	5		06/24/13 18:17		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**18500**	mg/L	5.0	1		06/20/13 17:56		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Chloride	**416**	mg/L	50.0	50		06/25/13 14:10	16887-00-6	
Fluoride	ND	mg/L	0.20	1		06/24/13 13:35	16984-48-8	
Sulfate	**19500**	mg/L	2000	2000		06/26/13 10:38	14808-79-8	1e

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

Sample: 075035-061313-JK-MW3 **Lab ID: 60147069003** Collected: 06/13/13 12:05 Received: 06/17/13 08:15 Matrix: Water

Comments: • The samples were received outside of required temperature range. Analysis was completed upon client approval.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Boron, Dissolved	**991**	ug/L	500	5	06/18/13 14:00	06/21/13 10:52	7440-42-8	
Iron, Dissolved	ND	ug/L	100	2	06/18/13 14:00	06/21/13 10:27	7439-89-6	D3
Manganese, Dissolved	**1250**	ug/L	25.0	5	06/18/13 14:00	06/21/13 10:52	7439-96-5	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C							
Naphthalene	ND	ug/L	0.50	1	06/20/13 00:00	06/26/13 02:18	91-20-3	L1
Surrogates								
2-Fluorobiphenyl (S)	79	%	40-120	1	06/20/13 00:00	06/26/13 02:18	321-60-8	
Terphenyl-d14 (S)	74	%	43-122	1	06/20/13 00:00	06/26/13 02:18	1718-51-0	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		06/24/13 18:32	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		06/24/13 18:32	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		06/24/13 18:32	75-09-2	
Naphthalene	ND	ug/L	10.0	1		06/24/13 18:32	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		06/24/13 18:32	79-34-5	
Toluene	ND	ug/L	1.0	1		06/24/13 18:32	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		06/24/13 18:32	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	102	%	80-120	1		06/24/13 18:32	460-00-4	
Dibromofluoromethane (S)	105	%	80-120	1		06/24/13 18:32	1868-53-7	
1,2-Dichloroethane-d4 (S)	118	%	80-120	1		06/24/13 18:32	17060-07-0	
Toluene-d8 (S)	98	%	80-120	1		06/24/13 18:32	2037-26-5	
Preservation pH	**1.0**		0.10	1		06/24/13 18:32		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**30900**	mg/L	5.0	1		06/20/13 17:56		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Chloride	**377**	mg/L	50.0	50		06/25/13 14:46	16887-00-6	
Fluoride	ND	mg/L	0.20	1		06/24/13 13:53	16984-48-8	
Sulfate	**18900**	mg/L	2000	2000		06/26/13 11:31	14808-79-8	1e

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

Sample: 075035-061313-JK-MW4 **Lab ID: 60147069004** Collected: 06/13/13 12:20 Received: 06/17/13 08:15 Matrix: Water

Comments: • The samples were received outside of required temperature range. Analysis was completed upon client approval.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Boron, Dissolved	**785**	ug/L	500	5	06/18/13 14:00	06/21/13 10:47	7440-42-8	
Iron, Dissolved	**506**	ug/L	100	2	06/18/13 14:00	06/21/13 10:29	7439-89-6	
Manganese, Dissolved	**4080**	ug/L	25.0	5	06/18/13 14:00	06/21/13 10:47	7439-96-5	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C							
Naphthalene	ND	ug/L	0.50	1	06/20/13 00:00	06/26/13 02:38	91-20-3	L1
Surrogates								
2-Fluorobiphenyl (S)	73	%	40-120	1	06/20/13 00:00	06/26/13 02:38	321-60-8	
Terphenyl-d14 (S)	68	%	43-122	1	06/20/13 00:00	06/26/13 02:38	1718-51-0	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**1.2**	ug/L	1.0	1		06/24/13 18:47	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		06/24/13 18:47	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		06/24/13 18:47	75-09-2	
Naphthalene	ND	ug/L	10.0	1		06/24/13 18:47	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		06/24/13 18:47	79-34-5	
Toluene	ND	ug/L	1.0	1		06/24/13 18:47	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		06/24/13 18:47	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	101	%	80-120	1		06/24/13 18:47	460-00-4	
Dibromofluoromethane (S)	108	%	80-120	1		06/24/13 18:47	1868-53-7	
1,2-Dichloroethane-d4 (S)	117	%	80-120	1		06/24/13 18:47	17060-07-0	
Toluene-d8 (S)	97	%	80-120	1		06/24/13 18:47	2037-26-5	
Preservation pH	**1.0**		0.10	1		06/24/13 18:47		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**33700**	mg/L	5.0	1		06/20/13 17:56		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Chloride	**378**	mg/L	50.0	50		06/25/13 15:22	16887-00-6	
Fluoride	ND	mg/L	0.20	1		06/24/13 14:10	16984-48-8	
Sulfate	**23200**	mg/L	2000	2000		06/26/13 11:49	14808-79-8	1e

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

Sample: 075035-061313-JK-MW5 **Lab ID: 60147069005** Collected: 06/13/13 11:45 Received: 06/17/13 08:15 Matrix: Water

Comments: • The samples were received outside of required temperature range. Analysis was completed upon client approval.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Boron, Dissolved	**1460**	ug/L	1000	10	06/18/13 14:00	06/21/13 10:32	7440-42-8	
Iron, Dissolved	**2200**	ug/L	500	10	06/18/13 14:00	06/21/13 10:32	7439-89-6	
Manganese, Dissolved	**806**	ug/L	50.0	10	06/18/13 14:00	06/21/13 10:32	7439-96-5	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C							
Naphthalene	ND	ug/L	0.50	1	06/20/13 00:00	06/26/13 02:58	91-20-3	L1
Surrogates								
2-Fluorobiphenyl (S)	72	%	40-120	1	06/20/13 00:00	06/26/13 02:58	321-60-8	
Terphenyl-d14 (S)	81	%	43-122	1	06/20/13 00:00	06/26/13 02:58	1718-51-0	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**278**	ug/L	5.0	5		06/24/13 19:02	71-43-2	
Ethylbenzene	**14.6**	ug/L	5.0	5		06/24/13 19:02	100-41-4	
Methylene chloride	ND	ug/L	5.0	5		06/24/13 19:02	75-09-2	
Naphthalene	ND	ug/L	50.0	5		06/24/13 19:02	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	5		06/24/13 19:02	79-34-5	
Toluene	ND	ug/L	5.0	5		06/24/13 19:02	108-88-3	
Xylene (Total)	ND	ug/L	15.0	5		06/24/13 19:02	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	102	%	80-120	5		06/24/13 19:02	460-00-4	
Dibromofluoromethane (S)	106	%	80-120	5		06/24/13 19:02	1868-53-7	
1,2-Dichloroethane-d4 (S)	107	%	80-120	5		06/24/13 19:02	17060-07-0	
Toluene-d8 (S)	98	%	80-120	5		06/24/13 19:02	2037-26-5	
Preservation pH	**1.0**		0.10	5		06/24/13 19:02		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**15100**	mg/L	5.0	1		06/20/13 17:56		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Chloride	**203**	mg/L	20.0	20		06/26/13 09:45	16887-00-6	
Fluoride	ND	mg/L	0.20	1		06/24/13 15:03	16984-48-8	M1
Sulfate	**7110**	mg/L	1000	1000		06/25/13 15:57	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

Sample: 075035-061313-JK-MW6 **Lab ID: 60147069006** Collected: 06/13/13 12:10 Received: 06/17/13 08:15 Matrix: Water

Comments: • The samples were received outside of required temperature range. Analysis was completed upon client approval.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Boron, Dissolved	**666**	ug/L	500	5	06/18/13 14:00	06/21/13 10:49	7440-42-8	
Iron, Dissolved	ND	ug/L	100	2	06/18/13 14:00	06/21/13 10:34	7439-89-6	D3
Manganese, Dissolved	**2030**	ug/L	25.0	5	06/18/13 14:00	06/21/13 10:49	7439-96-5	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C							
Naphthalene	**19.0**	ug/L	0.50	1	06/20/13 00:00	06/26/13 15:15	91-20-3	L1
Surrogates								
2-Fluorobiphenyl (S)	56	%	40-120	1	06/20/13 00:00	06/26/13 15:15	321-60-8	
Terphenyl-d14 (S)	64	%	43-122	1	06/20/13 00:00	06/26/13 15:15	1718-51-0	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**15.4**	ug/L	10.0	10		06/24/13 19:16	71-43-2	
Ethylbenzene	**129**	ug/L	10.0	10		06/24/13 19:16	100-41-4	
Methylene chloride	ND	ug/L	10.0	10		06/24/13 19:16	75-09-2	
Naphthalene	ND	ug/L	100	10		06/24/13 19:16	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	10.0	10		06/24/13 19:16	79-34-5	
Toluene	ND	ug/L	10.0	10		06/24/13 19:16	108-88-3	
Xylene (Total)	**2030**	ug/L	30.0	10		06/24/13 19:16	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	103	%	80-120	10		06/24/13 19:16	460-00-4	
Dibromofluoromethane (S)	106	%	80-120	10		06/24/13 19:16	1868-53-7	
1,2-Dichloroethane-d4 (S)	106	%	80-120	10		06/24/13 19:16	17060-07-0	
Toluene-d8 (S)	101	%	80-120	10		06/24/13 19:16	2037-26-5	
Preservation pH	**1.0**		0.10	10		06/24/13 19:16		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**36000**	mg/L	5.0	1		06/20/13 17:56		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Chloride	**396**	mg/L	50.0	50		06/25/13 17:43	16887-00-6	
Fluoride	ND	mg/L	0.20	1		06/24/13 15:39	16984-48-8	
Sulfate	**23000**	mg/L	2000	2000		06/26/13 12:07	14808-79-8	1e

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

Sample: 075035-061313-JK-MW7 **Lab ID: 60147069007** Collected: 06/13/13 11:50 Received: 06/17/13 08:15 Matrix: Water

Comments: • The samples were received outside of required temperature range. Analysis was completed upon client approval.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Boron, Dissolved	**752**	ug/L	500	5	06/18/13 14:00	06/21/13 10:41	7440-42-8	
Iron, Dissolved	**578**	ug/L	250	5	06/18/13 14:00	06/21/13 10:41	7439-89-6	
Manganese, Dissolved	**2460**	ug/L	25.0	5	06/18/13 14:00	06/21/13 10:41	7439-96-5	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C							
Naphthalene	ND	ug/L	0.50	1	06/20/13 00:00	06/26/13 03:39	91-20-3	L1
Surrogates								
2-Fluorobiphenyl (S)	73	%	40-120	1	06/20/13 00:00	06/26/13 03:39	321-60-8	
Terphenyl-d14 (S)	77	%	43-122	1	06/20/13 00:00	06/26/13 03:39	1718-51-0	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**5.1**	ug/L	5.0	5		06/24/13 19:31	71-43-2	
Ethylbenzene	**188**	ug/L	5.0	5		06/24/13 19:31	100-41-4	
Methylene chloride	ND	ug/L	5.0	5		06/24/13 19:31	75-09-2	
Naphthalene	ND	ug/L	50.0	5		06/24/13 19:31	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	5		06/24/13 19:31	79-34-5	
Toluene	ND	ug/L	5.0	5		06/24/13 19:31	108-88-3	
Xylene (Total)	ND	ug/L	15.0	5		06/24/13 19:31	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	106	%	80-120	5		06/24/13 19:31	460-00-4	
Dibromofluoromethane (S)	101	%	80-120	5		06/24/13 19:31	1868-53-7	
1,2-Dichloroethane-d4 (S)	102	%	80-120	5		06/24/13 19:31	17060-07-0	
Toluene-d8 (S)	100	%	80-120	5		06/24/13 19:31	2037-26-5	
Preservation pH	**1.0**		0.10	5		06/24/13 19:31		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**35900**	mg/L	5.0	1		06/20/13 17:57		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Chloride	**258**	mg/L	50.0	50		06/25/13 18:19	16887-00-6	
Fluoride	ND	mg/L	0.20	1		06/24/13 15:57	16984-48-8	
Sulfate	**20400**	mg/L	2000	2000		06/26/13 12:24	14808-79-8	1e

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

Sample: 075035-061313-JK-DUP **Lab ID: 60147069008** Collected: 06/13/13 08:00 Received: 06/17/13 08:15 Matrix: Water

Comments: • The samples were received outside of required temperature range. Analysis was completed upon client approval.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**141**	ug/L	5.0	5		06/25/13 20:23	71-43-2	
Ethylbenzene	**273**	ug/L	5.0	5		06/25/13 20:23	100-41-4	
Methylene chloride	ND	ug/L	5.0	5		06/25/13 20:23	75-09-2	
Naphthalene	**63.3**	ug/L	50.0	5		06/25/13 20:23	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	5		06/25/13 20:23	79-34-5	
Toluene	ND	ug/L	5.0	5		06/25/13 20:23	108-88-3	
Xylene (Total)	**63.1**	ug/L	15.0	5		06/25/13 20:23	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	100	%	80-120	5		06/25/13 20:23	460-00-4	
Dibromofluoromethane (S)	102	%	80-120	5		06/25/13 20:23	1868-53-7	
1,2-Dichloroethane-d4 (S)	107	%	80-120	5		06/25/13 20:23	17060-07-0	
Toluene-d8 (S)	102	%	80-120	5		06/25/13 20:23	2037-26-5	
Preservation pH	**1.0**		0.10	5		06/25/13 20:23		

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ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

Sample: TRIP BLANK 1 **Lab ID: 60147069009** Collected: 06/13/13 08:00 Received: 06/17/13 08:15 Matrix: Water

Comments: • The samples were received outside of required temperature range. Analysis was completed upon client approval.

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		06/24/13 16:20	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		06/24/13 16:20	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		06/24/13 16:20	75-09-2	
Naphthalene	ND	ug/L	10.0	1		06/24/13 16:20	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		06/24/13 16:20	79-34-5	
Toluene	ND	ug/L	1.0	1		06/24/13 16:20	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		06/24/13 16:20	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	104	%	80-120	1		06/24/13 16:20	460-00-4	
Dibromofluoromethane (S)	98	%	80-120	1		06/24/13 16:20	1868-53-7	
1,2-Dichloroethane-d4 (S)	100	%	80-120	1		06/24/13 16:20	17060-07-0	
Toluene-d8 (S)	100	%	80-120	1		06/24/13 16:20	2037-26-5	
Preservation pH	**1.0**		0.10	1		06/24/13 16:20		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

Sample: TRIP BLANK 2 **Lab ID: 60147069010** Collected: 06/13/13 08:00 Received: 06/17/13 08:15 Matrix: Water

Comments: • The samples were received outside of required temperature range. Analysis was completed upon client approval.

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		06/24/13 16:35	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		06/24/13 16:35	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		06/24/13 16:35	75-09-2	
Naphthalene	ND	ug/L	10.0	1		06/24/13 16:35	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		06/24/13 16:35	79-34-5	
Toluene	ND	ug/L	1.0	1		06/24/13 16:35	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		06/24/13 16:35	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	107	%	80-120	1		06/24/13 16:35	460-00-4	
Dibromofluoromethane (S)	103	%	80-120	1		06/24/13 16:35	1868-53-7	
1,2-Dichloroethane-d4 (S)	102	%	80-120	1		06/24/13 16:35	17060-07-0	
Toluene-d8 (S)	99	%	80-120	1		06/24/13 16:35	2037-26-5	
Preservation pH	**1.0**		0.10	1		06/24/13 16:35		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

QC Batch: MPRP/23127 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved
Associated Lab Samples: 60147069002, 60147069003, 60147069004, 60147069005, 60147069006, 60147069007

METHOD BLANK: 1206781 Matrix: Water
Associated Lab Samples: 60147069002, 60147069003, 60147069004, 60147069005, 60147069006, 60147069007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	06/20/13 12:56	
Iron, Dissolved	ug/L	ND	50.0	06/20/13 12:56	
Manganese, Dissolved	ug/L	ND	5.0	06/20/13 12:56	

LABORATORY CONTROL SAMPLE: 1206782

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	1020	102	80-120	
Iron, Dissolved	ug/L	10000	9680	97	80-120	
Manganese, Dissolved	ug/L	1000	1040	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1206783 1206784

Parameter	Units	60146960001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	ND	1000	1000	1050	1060	96	97	75-125	1	20	
Iron, Dissolved	ug/L	1460	10000	10000	11400	11300	99	99	75-125	0	20	
Manganese, Dissolved	ug/L	1840	1000	1000	2630	2640	78	80	75-125	1	20	

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QUALITY CONTROL DATA

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

QC Batch: MPRP/23126
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Associated Lab Samples: 60147069001

METHOD BLANK: 1206776 Matrix: Water
Associated Lab Samples: 60147069001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	06/20/13 12:42	
Iron, Dissolved	ug/L	ND	50.0	06/20/13 12:42	
Manganese, Dissolved	ug/L	ND	5.0	06/20/13 12:42	

LABORATORY CONTROL SAMPLE: 1206777

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	1030	103	80-120	
Iron, Dissolved	ug/L	10000	9650	96	80-120	
Manganese, Dissolved	ug/L	1000	1050	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1206778 1206779

Parameter	Units	60147069001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	1190	1000	1000	2250	2250	106	106	75-125	0	20	
Iron, Dissolved	ug/L	67.0	10000	10000	9250	9870	92	98	75-125	6	20	
Manganese, Dissolved	ug/L	507	1000	1000	1500	1490	99	98	75-125	1	20	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

QC Batch: MSV/54497 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60147069001, 60147069002, 60147069003, 60147069004, 60147069005, 60147069006, 60147069007, 60147069009, 60147069010

METHOD BLANK: 1209891 Matrix: Water
Associated Lab Samples: 60147069001, 60147069002, 60147069003, 60147069004, 60147069005, 60147069006, 60147069007, 60147069009, 60147069010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	06/24/13 15:07	
Benzene	ug/L	ND	1.0	06/24/13 15:07	
Ethylbenzene	ug/L	ND	1.0	06/24/13 15:07	
Methylene chloride	ug/L	ND	1.0	06/24/13 15:07	
Naphthalene	ug/L	ND	10.0	06/24/13 15:07	
Toluene	ug/L	ND	1.0	06/24/13 15:07	
Xylene (Total)	ug/L	ND	3.0	06/24/13 15:07	
1,2-Dichloroethane-d4 (S)	%	103	80-120	06/24/13 15:07	
4-Bromofluorobenzene (S)	%	101	80-120	06/24/13 15:07	
Dibromofluoromethane (S)	%	104	80-120	06/24/13 15:07	
Toluene-d8 (S)	%	98	80-120	06/24/13 15:07	

LABORATORY CONTROL SAMPLE: 1209892

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	19.5	98	73-120	
Benzene	ug/L	20	19.9	99	73-122	
Ethylbenzene	ug/L	20	19.8	99	76-123	
Methylene chloride	ug/L	20	21.6	108	71-123	
Naphthalene	ug/L	20	19.3	97	64-127	
Toluene	ug/L	20	19.1	96	76-122	
Xylene (Total)	ug/L	60	58.5	98	76-122	
1,2-Dichloroethane-d4 (S)	%			99	80-120	
4-Bromofluorobenzene (S)	%			102	80-120	
Dibromofluoromethane (S)	%			105	80-120	
Toluene-d8 (S)	%			102	80-120	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

QC Batch: MSV/54523
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60147069008

METHOD BLANK: 1210238
Matrix: Water
Associated Lab Samples: 60147069008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	06/25/13 19:25	
Benzene	ug/L	ND	1.0	06/25/13 19:25	
Ethylbenzene	ug/L	ND	1.0	06/25/13 19:25	
Methylene chloride	ug/L	ND	1.0	06/25/13 19:25	
Naphthalene	ug/L	ND	10.0	06/25/13 19:25	
Toluene	ug/L	ND	1.0	06/25/13 19:25	
Xylene (Total)	ug/L	ND	3.0	06/25/13 19:25	
1,2-Dichloroethane-d4 (S)	%	99	80-120	06/25/13 19:25	
4-Bromofluorobenzene (S)	%	100	80-120	06/25/13 19:25	
Dibromofluoromethane (S)	%	102	80-120	06/25/13 19:25	
Toluene-d8 (S)	%	97	80-120	06/25/13 19:25	

LABORATORY CONTROL SAMPLE: 1210239

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	21.1	106	73-120	
Benzene	ug/L	20	19.3	97	73-122	
Ethylbenzene	ug/L	20	20.3	102	76-123	
Methylene chloride	ug/L	20	20.3	101	71-123	
Naphthalene	ug/L	20	19.5	97	64-127	
Toluene	ug/L	20	19.1	95	76-122	
Xylene (Total)	ug/L	60	61.2	102	76-122	
1,2-Dichloroethane-d4 (S)	%			102	80-120	
4-Bromofluorobenzene (S)	%			96	80-120	
Dibromofluoromethane (S)	%			101	80-120	
Toluene-d8 (S)	%			102	80-120	

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QUALITY CONTROL DATA

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

QC Batch: OEXT/38927 Analysis Method: EPA 8270C by SIM
QC Batch Method: EPA 3510C Analysis Description: 8270 Water PAH by SIM MSSV
Associated Lab Samples: 60147069001, 60147069002, 60147069003, 60147069004, 60147069005, 60147069006, 60147069007

METHOD BLANK: 1207721 Matrix: Water
Associated Lab Samples: 60147069001, 60147069002, 60147069003, 60147069004, 60147069005, 60147069006, 60147069007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Naphthalene	ug/L	ND	0.50	06/25/13 18:41	
2-Fluorobiphenyl (S)	%	81	40-120	06/25/13 18:41	
Terphenyl-d14 (S)	%	81	43-122	06/25/13 18:41	

LABORATORY CONTROL SAMPLE: 1207722

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Naphthalene	ug/L	10	17.4	174	41-120	L0
2-Fluorobiphenyl (S)	%			85	40-120	
Terphenyl-d14 (S)	%			83	43-122	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

QC Batch: WET/41961 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 60147069001, 60147069002, 60147069003, 60147069004, 60147069005, 60147069006, 60147069007

METHOD BLANK: 1208400 Matrix: Water
Associated Lab Samples: 60147069001, 60147069002, 60147069003, 60147069004, 60147069005, 60147069006, 60147069007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	06/20/13 17:53	

LABORATORY CONTROL SAMPLE: 1208401

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1040	104	80-120	

SAMPLE DUPLICATE: 1208402

Parameter	Units	60147022001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	104	111	7	17	

SAMPLE DUPLICATE: 1208403

Parameter	Units	60147022010 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	177	176	1	17	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

QC Batch: WETA/25209 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60147069001, 60147069002, 60147069003, 60147069004, 60147069005, 60147069006, 60147069007

METHOD BLANK: 1209729 Matrix: Water
Associated Lab Samples: 60147069001, 60147069002, 60147069003, 60147069004, 60147069005, 60147069006, 60147069007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.20	06/24/13 09:10	

METHOD BLANK: 1210399 Matrix: Water
Associated Lab Samples: 60147069001, 60147069002, 60147069003, 60147069004, 60147069005, 60147069006, 60147069007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	06/25/13 09:10	
Sulfate	mg/L	ND	1.0	06/25/13 09:10	

METHOD BLANK: 1210982 Matrix: Water
Associated Lab Samples: 60147069001, 60147069002, 60147069003, 60147069004, 60147069005, 60147069006, 60147069007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	06/26/13 09:10	
Sulfate	mg/L	ND	1.0	06/26/13 09:10	

LABORATORY CONTROL SAMPLE: 1209730

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.4	97	90-110	

LABORATORY CONTROL SAMPLE: 1210400

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.0	99	90-110	
Sulfate	mg/L	5	5.2	104	90-110	

LABORATORY CONTROL SAMPLE: 1210983

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.9	98	90-110	
Sulfate	mg/L	5	5.1	101	90-110	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1209731 1209732

Parameter	Units	60146886001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	157	50	50	195	187	77	59	64-118	5	12	M1
Fluoride	mg/L	ND	25	25	22.2	16.3	89	65	75-110	30	10	M1,R1
Sulfate	mg/L	122	50	50	165	153	87	64	61-119	7	10	

MATRIX SPIKE SAMPLE: 1209733

Parameter	Units	60147069005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	203	100	290	87	64-118	
Fluoride	mg/L	ND	2.5	1.8	74	75-110	M1
Sulfate	mg/L	7110	5000	12400	105	61-119	

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QUALIFIERS

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

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/38927

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

Batch: MSV/54497

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

Batch: MSV/54523

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

ANALYTE QUALIFIERS

1e	Result has been revised.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1	RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60147069

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60147069002	**075035-061313-JK-MW2**	EPA 3010	MPRP/23127	EPA 6010	ICP/18251
60147069003	**075035-061313-JK-MW3**	EPA 3010	MPRP/23127	EPA 6010	ICP/18251
60147069004	**075035-061313-JK-MW4**	EPA 3010	MPRP/23127	EPA 6010	ICP/18251
60147069005	**075035-061313-JK-MW5**	EPA 3010	MPRP/23127	EPA 6010	ICP/18251
60147069006	**075035-061313-JK-MW6**	EPA 3010	MPRP/23127	EPA 6010	ICP/18251
60147069007	**075035-061313-JK-MW7**	EPA 3010	MPRP/23127	EPA 6010	ICP/18251
60147069001	**075035-061313-JK-MW1**	EPA 3010	MPRP/23126	EPA 6010	ICP/18252
60147069001	**075035-061313-JK-MW1**	EPA 3510C	OEXT/38927	EPA 8270C by SIM	MSSV/12336
60147069002	**075035-061313-JK-MW2**	EPA 3510C	OEXT/38927	EPA 8270C by SIM	MSSV/12336
60147069003	**075035-061313-JK-MW3**	EPA 3510C	OEXT/38927	EPA 8270C by SIM	MSSV/12336
60147069004	**075035-061313-JK-MW4**	EPA 3510C	OEXT/38927	EPA 8270C by SIM	MSSV/12336
60147069005	**075035-061313-JK-MW5**	EPA 3510C	OEXT/38927	EPA 8270C by SIM	MSSV/12336
60147069006	**075035-061313-JK-MW6**	EPA 3510C	OEXT/38927	EPA 8270C by SIM	MSSV/12336
60147069007	**075035-061313-JK-MW7**	EPA 3510C	OEXT/38927	EPA 8270C by SIM	MSSV/12336
60147069001	**075035-061313-JK-MW1**	EPA 5030B/8260	MSV/54497		
60147069002	**075035-061313-JK-MW2**	EPA 5030B/8260	MSV/54497		
60147069003	**075035-061313-JK-MW3**	EPA 5030B/8260	MSV/54497		
60147069004	**075035-061313-JK-MW4**	EPA 5030B/8260	MSV/54497		
60147069005	**075035-061313-JK-MW5**	EPA 5030B/8260	MSV/54497		
60147069006	**075035-061313-JK-MW6**	EPA 5030B/8260	MSV/54497		
60147069007	**075035-061313-JK-MW7**	EPA 5030B/8260	MSV/54497		
60147069008	**075035-061313-JK-DUP**	EPA 5030B/8260	MSV/54523		
60147069009	**TRIP BLANK 1**	EPA 5030B/8260	MSV/54497		
60147069010	**TRIP BLANK 2**	EPA 5030B/8260	MSV/54497		
60147069001	**075035-061313-JK-MW1**	SM 2540C	WET/41961		
60147069002	**075035-061313-JK-MW2**	SM 2540C	WET/41961		
60147069003	**075035-061313-JK-MW3**	SM 2540C	WET/41961		
60147069004	**075035-061313-JK-MW4**	SM 2540C	WET/41961		
60147069005	**075035-061313-JK-MW5**	SM 2540C	WET/41961		
60147069006	**075035-061313-JK-MW6**	SM 2540C	WET/41961		
60147069007	**075035-061313-JK-MW7**	SM 2540C	WET/41961		
60147069001	**075035-061313-JK-MW1**	EPA 300.0	WETA/25209		
60147069002	**075035-061313-JK-MW2**	EPA 300.0	WETA/25209		
60147069003	**075035-061313-JK-MW3**	EPA 300.0	WETA/25209		
60147069004	**075035-061313-JK-MW4**	EPA 300.0	WETA/25209		
60147069005	**075035-061313-JK-MW5**	EPA 300.0	WETA/25209		
60147069006	**075035-061313-JK-MW6**	EPA 300.0	WETA/25209		
60147069007	**075035-061313-JK-MW7**	EPA 300.0	WETA/25209		

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Sample Condition Upon Receipt
ESI Tech Spec Client

WO#: 60147069

60147069

Optional
Proj Due Date:
Proj Name:

Client Name: COP CRA

Courier: Fed Ex ☑ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ☐

Tracking #: 8022 4442 6618 Pace Shipping Label Used? Yes ☐ No ☑

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

Packing Material: Bubble Wrap ☐ Bubble Bags ☑ Foam ☑ None ☐ Other ☑ ZPLC

Thermometer Used: (T-112) / T-194 **Type of Ice:** (Wet) Blue None (circle one) ☐ Samples received on ice, cooling process has begun.

Cooler Temperature: 9.8/11.2

Temperature should be above freezing to 6°C

Date and initials of person examining contents: PV 6/12/13

Chain of Custody present:	☑Yes	☐No	☐N/A	1.
Chain of Custody filled out:	☑Yes	☐No	☐N/A	2. Ice melted in cooler during
Chain of Custody relinquished:	☐Yes	☑No	☐N/A	3. Shipping.
Sampler name & signature on COC:	☑Yes	☐No	☐N/A	4.
Samples arrived within holding time:	☑Yes	☐No	☐N/A	5.
Short Hold Time analyses (<72hr):	☐Yes	☑No	☐N/A	6. Did not received BP3F for MW-1.
Rush Turn Around Time requested:	☐Yes	☑No	☐N/A	7.
Sufficient volume:	☑Yes	☐No	☐N/A	8.
Correct containers used:	☑Yes	☐No	☐N/A	MW-1,2 4 and DUP came with TB1
Pace containers used:	☑Yes	☐No	☐N/A	9.
Containers intact:	☑Yes	☐No	☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes	☐No	☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes	☐No	☑N/A	12.
Sample labels match COC: Includes date/time/ID/analyses Matrix: WT	☑Yes	☐No	☐N/A	13.
All containers needing preservation have been checked.	☑Yes	☐No	☐N/A	Added 2.5 mL of HNO3 to MW-5 BP3F
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes	☐No	☐N/A	14. pH 3.0 1.5
Exceptions: (VOA), coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes	☐No		Initial when completed: PV / Lot # of added preservative: 12510
Trip Blank present: Pace Trip Blank lot # (if purchased): 050613-3	☑Yes	☐No	☐N/A	15.
Headspace in VOA vials (>6mm):	☒Yes	☐No	☐N/A	3 of 3 MW-1 16.
Project sampled in USDA Regulated Area:	☐Yes	☐No	☑N/A	17. List State:

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

Person Contacted: Date/Time:

Comments/ Resolution: proceed + footnote. used unp. volume for metals analysis on sample MW1 per client 6/17/13 AF

Temp Log: Record start and finish times when unpacking cooler, if >20 min, recheck sample temps	
Start: 1045	Start:
End: 1100	End:
Temp:	Temp:

Project Manager Review: AAF Date: 6/17/13

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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Page: of

Section A Required Client Information:

Company:	COP CRA NM
Address:	6121 Indian School Rd NE, Ste 200
	Albequerque, NM 87110
Email To:	cmathews@craworld.com
Phone:	(505)884-0672 Fax: (505)884-4932
Requested Due Date/TAT:	standard

Section B Required Project Information:

Report To:	Christine Mathews
Copy To:	Kelly Blanchard, Angela Bown
Purchase Order No.:	4517205766
Project Name:	Martin 34 No. 2
Project Number:	075035

Section C Invoice Information:

Attention:	ENFOS
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Alice Flanagan
Pace Profile #:	5341, 7

REGULATORY AGENCY

NPDES | GROUND WATER | DRINKING WATER | UST | RCRA | OTHER

Site Location STATE: NM

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Valid Matrix Codes: DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WIPE WP; AIR AR; OTHER OT; TISSUE TS

Requested Analysis Filtered (Y/N)

Pace Project No./ Lab I.D.: 60147069

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	Composite Start DATE	Composite Start TIME	Composite End/Grab DATE	Composite End/Grab TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	8260****	Dissolved Fe, Mn, B	TDS	300.0 **	8270 Naphthalene			Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	075035-061313-JK-MW1	WT	G			061313	1230		7	3		1	3						X	X	X	X	X	3DG9H			1BP2U 2AG4U 01
2	075035-061313-JK-MW2	WT	G			061313	1215		7	3		1	3						X	X	X	X	X		1BP3F H5		02
3	075035-061313-JK-MW3	WT	G			061313	1205		7	3		1	3						X	X	X	X	X				03
4	075035-061313-JK-MW4	WT	G			061313	1220		7	3		1	3						X	X	X	X	X				04
5	075035-061313-JK-MW5	WT	G			061313	1145		7	3		1	3						X	X	X	X	X				05
6	075035-061313-JK-MW6	WT	G			061313	1210		7	3		1	3						X	X	X	X	X				06
7	075035-061313-JK-MW7	WT	G			061313	1150		7	3		1	3						X	X	X	X	X				07
8	075035-061313-JK-DUP	WT	G			061313			3				3						X								08
9	TRIP BLANK	~~WT~~																									~~6DG9H~~ 3DG9HTB1 3DG9HTB2 09 10
10																											RV6/17/13
11																											
12																											

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
****BTEX, Methylene Chloride, 1,1,2,2-Tetrachloroethane				[signature] /PASI	6/17/13	815	9.8	melted	Y	Y
**Chloride, Sulfate, Fluoride							11.2		Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kelly Williams

SIGNATURE of SAMPLER: Kelly Williams

DATE Signed (MM/DD/YY): 06/13/13

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

F-ALL-Q-020rev 08, 12-Oct-2007

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September 27, 2013

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

RE: Project: 075035 Martin 34 No. 2
Pace Project No.: 60153050

Dear Christine Matthews:
Enclosed are the analytical results for sample(s) received by the laboratory on September 13, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Alice Flanagan

alice.flanagan@pacelabs.com
Project Manager

Enclosures

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

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CERTIFICATIONS

Project: 075035 Martin 34 No. 2
Pace Project No.: 60153050

Kansas Certification IDs
9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 13-012-0
Illinois Certification #: 003097
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212008A
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407-13-4
Utah Certification #: KS000212013-3
Illinois Certification #: 003097

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SAMPLE SUMMARY

Project: 075035 Martin 34 No. 2
Pace Project No.: 60153050

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60153050001	**GW-075035-091213-CM-MW-1**	Water	09/12/13 08:25	09/13/13 08:30
60153050002	**GW-075035-091213-CM-MW-2**	Water	09/12/13 12:30	09/13/13 08:30
60153050003	**GW-075035-091213-CM-MW-3**	Water	09/12/13 12:00	09/13/13 08:30
60153050004	**GW-075035-091213-CM-MW-4**	Water	09/12/13 11:55	09/13/13 08:30
60153050005	**GW-075035-091213-CM-MW-5**	Water	09/12/13 14:35	09/13/13 08:30
60153050006	**GW-075035-091213-CM-MW-6**	Water	09/12/13 11:05	09/13/13 08:30
60153050007	**GW-075035-091213-CM-MW-7**	Water	09/12/13 10:45	09/13/13 08:30
60153050008	**GW-075035-091213-CM-MW-8**	Water	09/12/13 15:00	09/13/13 08:30
60153050009	**GW-075035-091213-CM-DUP**	Water	09/12/13 11:10	09/13/13 08:30
60153050010	**TB-075035-091213-CM-001**	Water	09/12/13 12:30	09/13/13 08:30

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SAMPLE ANALYTE COUNT

Project: 075035 Martin 34 No. 2
Pace Project No.: 60153050

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60153050001	**GW-075035-091213-CM-MW-1**	EPA 6010	JGP, NDJ	3
		EPA 8270C by SIM	NAW	3
		EPA 5030B/8260	PRG	10
		SM 2540C	RAH	1
		EPA 300.0	OL	3
60153050002	**GW-075035-091213-CM-MW-2**	EPA 6010	JGP, NDJ	3
		EPA 8270C by SIM	NAW	3
		EPA 5030B/8260	PRG	10
		SM 2540C	RAH	1
		EPA 300.0	OL	3
60153050003	**GW-075035-091213-CM-MW-3**	EPA 6010	JGP, NDJ	3
		EPA 8270C by SIM	NAW	3
		EPA 5030B/8260	PRG	10
		SM 2540C	RAH	1
		EPA 300.0	OL	3
60153050004	**GW-075035-091213-CM-MW-4**	EPA 6010	JGP, NDJ	3
		EPA 8270C by SIM	NAW	3
		EPA 5030B/8260	PRG	10
		SM 2540C	RAH	1
		EPA 300.0	OL	3
60153050005	**GW-075035-091213-CM-MW-5**	EPA 6010	JGP, NDJ	3
		EPA 8270C by SIM	NAW	3
		EPA 5030B/8260	PRG	10
		SM 2540C	RAH	1
		EPA 300.0	OL	3
60153050006	**GW-075035-091213-CM-MW-6**	EPA 6010	JGP, NDJ	3
		EPA 8270C by SIM	NAW	3
		EPA 5030B/8260	PRG	10
		SM 2540C	RAH	1
		EPA 300.0	OL	3
60153050007	**GW-075035-091213-CM-MW-7**	EPA 6010	JGP, NDJ	3
		EPA 8270C by SIM	NAW	3
		EPA 5030B/8260	PRG	10
		SM 2540C	RAH	1
		EPA 300.0	OL	3
60153050008	**GW-075035-091213-CM-MW-8**	EPA 6010	JGP, NDJ	3
		EPA 8270C by SIM	NAW	3

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 075035 Martin 34 No. 2
Pace Project No.: 60153050

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 5030B/8260	PRG	10
		SM 2540C	RAH	1
		EPA 300.0	OL	3
60153050009	**GW-075035-091213-CM-DUP**	EPA 5030B/8260	PRG	8
60153050010	**TB-075035-091213-CM-001**	EPA 5030B/8260	PRG	8

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 075035 Martin 34 No. 2
Pace Project No.: 60153050

Method: **EPA 6010**
Description: 6010 MET ICP, Dissolved
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: September 27, 2013

General Information:
8 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:

Analyte Comments:

QC Batch: MPRP/24320

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

- GW-075035-091213-CM-MW-3 (Lab ID: 60153050003)
  - Iron, Dissolved
- GW-075035-091213-CM-MW-6 (Lab ID: 60153050006)
  - Iron, Dissolved
- GW-075035-091213-CM-MW-8 (Lab ID: 60153050008)
  - Iron, Dissolved

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PROJECT NARRATIVE

Project: 075035 Martin 34 No. 2
Pace Project No.: 60153050

Method: **EPA 8270C by SIM**
Description: 8270 MSSV PAH by SIM
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: September 27, 2013

General Information:
8 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/12856

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

Additional Comments:

Analyte Comments:

QC Batch: OEXT/40543

1e: The internal standard response was outside the laboratory acceptance limits (no target analytes associated with this internal standard).

- GW-075035-091213-CM-MW-6 (Lab ID: 60153050006)
  - Naphthalene
- GW-075035-091213-CM-MW-7 (Lab ID: 60153050007)
  - Naphthalene

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PROJECT NARRATIVE

Project: 075035 Martin 34 No. 2
Pace Project No.: 60153050

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: September 27, 2013

General Information:
10 samples were analyzed for EPA 5030B/8260. All samples were received in acceptable condition with any exceptions noted below.

pH: Post-analysis pH measurement indicates insufficient VOA sample preservation.
- GW-075035-091213-CM-MW-1 (Lab ID: 60153050001)

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/56316

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

Additional Comments:

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PROJECT NARRATIVE

Project: 075035 Martin 34 No. 2
Pace Project No.: 60153050

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: September 27, 2013

General Information:
8 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:

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PROJECT NARRATIVE

Project: 075035 Martin 34 No. 2
Pace Project No.: 60153050

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: September 27, 2013

General Information:
8 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/26321

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60153050001

M3: Matrix spike recovery was outside laboratory control limits due to matrix interferences.

- MS (Lab ID: 1259733)
  - Fluoride
- MSD (Lab ID: 1259734)
  - Fluoride

Additional Comments:

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

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ANALYTICAL RESULTS

Project: 075035 Martin 34 No. 2
Pace Project No.: 60153050

Sample: GW-075035-091213-CM-MW-1 **Lab ID: 60153050001** Collected: 09/12/13 08:25 Received: 09/13/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Boron, Dissolved	**1.1**	mg/L	0.50	0.25	5	09/18/13 11:30	09/19/13 12:44	7440-42-8	
Iron, Dissolved	**0.46**	mg/L	0.25	0.058	5	09/18/13 11:30	09/20/13 10:42	7439-89-6	
Manganese, Dissolved	**0.95**	mg/L	0.025	0.0024	5	09/18/13 11:30	09/19/13 12:44	7439-96-5	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C								
Naphthalene	**36.5**	ug/L	2.5	0.16	5	09/19/13 00:00	09/24/13 16:53	91-20-3	
Surrogates									
2-Fluorobiphenyl (S)	52	%	36-120		1	09/19/13 00:00	09/20/13 19:20	321-60-8	
Terphenyl-d14 (S)	59	%	29-134		1	09/19/13 00:00	09/20/13 19:20	1718-51-0	
8260 MSV	Analytical Method: EPA 5030B/8260								
Benzene	**3470**	ug/L	100	6.0	100		09/17/13 04:28	71-43-2	
Ethylbenzene	**428**	ug/L	100	18.0	100		09/17/13 04:28	100-41-4	
Methylene chloride	ND	ug/L	100	15.0	100		09/17/13 04:28	75-09-2	
1,1,2,2-Tetrachloroethane	ND	ug/L	100	15.0	100		09/17/13 04:28	79-34-5	
Toluene	**3020**	ug/L	100	17.0	100		09/17/13 04:28	108-88-3	
Xylene (Total)	**7900**	ug/L	300	42.0	100		09/17/13 04:28	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		100		09/17/13 04:28	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	80-120		100		09/17/13 04:28	17060-07-0	
Toluene-d8 (S)	106	%	80-120		100		09/17/13 04:28	2037-26-5	
Preservation pH	**6.0**		0.10	0.10	100		09/17/13 04:28		pH
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**31300**	mg/L	5.0	5.0	1		09/18/13 15:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**296**	mg/L	50.0	25.0	50		09/26/13 11:18	16887-00-6	
Fluoride	ND	mg/L	0.20	0.047	1		09/25/13 09:30	16984-48-8	M3
Sulfate	**12100**	mg/L	1000	160	1000		09/26/13 14:21	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

ANALYTICAL RESULTS

Project: 075035 Martin 34 No. 2
Pace Project No.: 60153050

Sample: GW-075035-091213-CM-MW-2 **Lab ID: 60153050002** Collected: 09/12/13 12:30 Received: 09/13/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Boron, Dissolved	**0.85**	mg/L	0.50	0.25	5	09/18/13 11:30	09/19/13 12:47	7440-42-8	
Iron, Dissolved	**1.6**	mg/L	0.25	0.058	5	09/18/13 11:30	09/20/13 10:45	7439-89-6	
Manganese, Dissolved	**2.0**	mg/L	0.025	0.0024	5	09/18/13 11:30	09/19/13 12:47	7439-96-5	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C								
Naphthalene	**0.97**	ug/L	0.50	0.031	1	09/19/13 00:00	09/20/13 19:39	91-20-3	
Surrogates									
2-Fluorobiphenyl (S)	75	%	36-120		1	09/19/13 00:00	09/20/13 19:39	321-60-8	
Terphenyl-d14 (S)	80	%	29-134		1	09/19/13 00:00	09/20/13 19:39	1718-51-0	
8260 MSV	Analytical Method: EPA 5030B/8260								
Benzene	**107**	ug/L	5.0	0.30	5		09/17/13 04:41	71-43-2	
Ethylbenzene	**318**	ug/L	5.0	0.90	5		09/17/13 04:41	100-41-4	
Methylene chloride	ND	ug/L	5.0	0.75	5		09/17/13 04:41	75-09-2	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	0.75	5		09/17/13 04:41	79-34-5	
Toluene	ND	ug/L	5.0	0.85	5		09/17/13 04:41	108-88-3	
Xylene (Total)	**61.9**	ug/L	15.0	2.1	5		09/17/13 04:41	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	105	%	80-120		5		09/17/13 04:41	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	80-120		5		09/17/13 04:41	17060-07-0	
Toluene-d8 (S)	104	%	80-120		5		09/17/13 04:41	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	5		09/17/13 04:41		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**88400**	mg/L	5.0	5.0	1		09/18/13 15:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**450**	mg/L	50.0	25.0	50		09/26/13 12:05	16887-00-6	
Fluoride	ND	mg/L	0.20	0.047	1		09/25/13 11:02	16984-48-8	
Sulfate	**18900**	mg/L	1000	160	1000		09/26/13 15:10	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 075035 Martin 34 No. 2
Pace Project No.: 60153050

Sample: GW-075035-091213-CM-MW-3 **Lab ID: 60153050003** Collected: 09/12/13 12:00 Received: 09/13/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Boron, Dissolved	**0.87**	mg/L	0.50	0.25	5	09/18/13 11:30	09/19/13 12:49	7440-42-8	
Iron, Dissolved	ND	mg/L	0.25	0.058	5	09/18/13 11:30	09/20/13 10:49	7439-89-6	D3
Manganese, Dissolved	**3.9**	mg/L	0.025	0.0024	5	09/18/13 11:30	09/19/13 12:49	7439-96-5	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C								
Naphthalene	ND	ug/L	0.50	0.031	1	09/19/13 00:00	09/20/13 19:57	91-20-3	
Surrogates									
2-Fluorobiphenyl (S)	75	%	36-120		1	09/19/13 00:00	09/20/13 19:57	321-60-8	
Terphenyl-d14 (S)	68	%	29-134		1	09/19/13 00:00	09/20/13 19:57	1718-51-0	
8260 MSV	Analytical Method: EPA 5030B/8260								
Benzene	ND	ug/L	1.0	0.060	1		09/17/13 04:55	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.18	1		09/17/13 04:55	100-41-4	
Methylene chloride	ND	ug/L	1.0	0.15	1		09/17/13 04:55	75-09-2	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		09/17/13 04:55	79-34-5	
Toluene	ND	ug/L	1.0	0.17	1		09/17/13 04:55	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.42	1		09/17/13 04:55	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		09/17/13 04:55	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	80-120		1		09/17/13 04:55	17060-07-0	
Toluene-d8 (S)	101	%	80-120		1		09/17/13 04:55	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		09/17/13 04:55		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**80500**	mg/L	5.0	5.0	1		09/18/13 15:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**403**	mg/L	50.0	25.0	50		09/26/13 12:20	16887-00-6	
Fluoride	ND	mg/L	0.20	0.047	1		09/25/13 11:17	16984-48-8	
Sulfate	**18700**	mg/L	1000	160	1000		09/26/13 15:26	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 075035 Martin 34 No. 2
Pace Project No.: 60153050

Sample: GW-075035-091213-CM-MW-4 **Lab ID: 60153050004** Collected: 09/12/13 11:55 Received: 09/13/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Boron, Dissolved	**0.73**	mg/L	0.50	0.25	5	09/18/13 11:30	09/19/13 12:51	7440-42-8	
Iron, Dissolved	**0.51**	mg/L	0.25	0.058	5	09/18/13 11:30	09/20/13 10:52	7439-89-6	
Manganese, Dissolved	**2.9**	mg/L	0.025	0.0024	5	09/18/13 11:30	09/19/13 12:51	7439-96-5	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C								
Naphthalene	**2.7**	ug/L	0.50	0.031	1	09/19/13 00:00	09/20/13 20:15	91-20-3	
Surrogates									
2-Fluorobiphenyl (S)	78	%	36-120		1	09/19/13 00:00	09/20/13 20:15	321-60-8	
Terphenyl-d14 (S)	79	%	29-134		1	09/19/13 00:00	09/20/13 20:15	1718-51-0	
8260 MSV	Analytical Method: EPA 5030B/8260								
Benzene	**1.0**	ug/L	1.0	0.060	1		09/17/13 05:08	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.18	1		09/17/13 05:08	100-41-4	
Methylene chloride	ND	ug/L	1.0	0.15	1		09/17/13 05:08	75-09-2	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		09/17/13 05:08	79-34-5	
Toluene	ND	ug/L	1.0	0.17	1		09/17/13 05:08	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.42	1		09/17/13 05:08	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		09/17/13 05:08	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	80-120		1		09/17/13 05:08	17060-07-0	
Toluene-d8 (S)	93	%	80-120		1		09/17/13 05:08	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		09/17/13 05:08		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**90900**	mg/L	5.0	5.0	1		09/18/13 15:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**389**	mg/L	50.0	25.0	50		09/26/13 12:35	16887-00-6	
Fluoride	ND	mg/L	0.20	0.047	1		09/25/13 11:32	16984-48-8	
Sulfate	**20800**	mg/L	2000	320	2000		09/27/13 09:31	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 075035 Martin 34 No. 2
Pace Project No.: 60153050

Sample: GW-075035-091213-CM-MW-5 **Lab ID: 60153050005** Collected: 09/12/13 14:35 Received: 09/13/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Boron, Dissolved	**1.4**	mg/L	0.10	0.050	1	09/18/13 11:30	09/19/13 12:30	7440-42-8	
Iron, Dissolved	**0.96**	mg/L	0.25	0.058	5	09/18/13 11:30	09/20/13 11:02	7439-89-6	
Manganese, Dissolved	**0.69**	mg/L	0.0050	0.00049	1	09/18/13 11:30	09/19/13 12:30	7439-96-5	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C								
Naphthalene	**0.61**	ug/L	0.50	0.031	1	09/19/13 00:00	09/20/13 20:34	91-20-3	
Surrogates									
2-Fluorobiphenyl (S)	74	%	36-120		1	09/19/13 00:00	09/20/13 20:34	321-60-8	
Terphenyl-d14 (S)	68	%	29-134		1	09/19/13 00:00	09/20/13 20:34	1718-51-0	
8260 MSV	Analytical Method: EPA 5030B/8260								
Benzene	**175**	ug/L	5.0	0.30	5		09/17/13 05:22	71-43-2	
Ethylbenzene	**10.3**	ug/L	5.0	0.90	5		09/17/13 05:22	100-41-4	
Methylene chloride	ND	ug/L	5.0	0.75	5		09/17/13 05:22	75-09-2	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	0.75	5		09/17/13 05:22	79-34-5	
Toluene	ND	ug/L	5.0	0.85	5		09/17/13 05:22	108-88-3	
Xylene (Total)	ND	ug/L	15.0	2.1	5		09/17/13 05:22	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	104	%	80-120		5		09/17/13 05:22	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-120		5		09/17/13 05:22	17060-07-0	
Toluene-d8 (S)	104	%	80-120		5		09/17/13 05:22	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	5		09/17/13 05:22		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**15100**	mg/L	5.0	5.0	1		09/18/13 15:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**228**	mg/L	50.0	25.0	50		09/26/13 12:50	16887-00-6	
Fluoride	ND	mg/L	0.20	0.047	1		09/25/13 11:47	16984-48-8	
Sulfate	**5400**	mg/L	1000	160	1000		09/26/13 16:55	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 075035 Martin 34 No. 2
Pace Project No.: 60153050

Sample: GW-075035-091213-CM-MW-6 **Lab ID: 60153050006** Collected: 09/12/13 11:05 Received: 09/13/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Boron, Dissolved	**0.63**	mg/L	0.50	0.25	5	09/18/13 11:30	09/19/13 12:54	7440-42-8	
Iron, Dissolved	ND	mg/L	0.25	0.058	5	09/18/13 11:30	09/20/13 11:05	7439-89-6	D3
Manganese, Dissolved	**2.0**	mg/L	0.025	0.0024	5	09/18/13 11:30	09/19/13 12:54	7439-96-5	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C								
Naphthalene	**25.0**	ug/L	2.5	0.16	5	09/19/13 00:00	09/24/13 17:11	91-20-3	1e
Surrogates									
2-Fluorobiphenyl (S)	70	%	36-120		1	09/19/13 00:00	09/20/13 20:53	321-60-8	
Terphenyl-d14 (S)	82	%	29-134		1	09/19/13 00:00	09/20/13 20:53	1718-51-0	
8260 MSV	Analytical Method: EPA 5030B/8260								
Benzene	**12.0**	ug/L	10.0	0.60	10		09/17/13 05:36	71-43-2	
Ethylbenzene	**125**	ug/L	10.0	1.8	10		09/17/13 05:36	100-41-4	
Methylene chloride	ND	ug/L	10.0	1.5	10		09/17/13 05:36	75-09-2	
1,1,2,2-Tetrachloroethane	ND	ug/L	10.0	1.5	10		09/17/13 05:36	79-34-5	
Toluene	ND	ug/L	10.0	1.7	10		09/17/13 05:36	108-88-3	
Xylene (Total)	**1790**	ug/L	30.0	4.2	10		09/17/13 05:36	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		10		09/17/13 05:36	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-120		10		09/17/13 05:36	17060-07-0	
Toluene-d8 (S)	104	%	80-120		10		09/17/13 05:36	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	10		09/17/13 05:36		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**85400**	mg/L	5.0	5.0	1		09/18/13 15:49		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**492**	mg/L	50.0	25.0	50		09/26/13 13:05	16887-00-6	
Fluoride	ND	mg/L	0.20	0.047	1		09/25/13 12:03	16984-48-8	
Sulfate	**19600**	mg/L	2000	320	2000		09/27/13 09:46	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 075035 Martin 34 No. 2
Pace Project No.: 60153050

Sample: GW-075035-091213-CM-MW-7 **Lab ID: 60153050007** Collected: 09/12/13 10:45 Received: 09/13/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Boron, Dissolved	**0.80**	mg/L	0.50	0.25	5	09/18/13 11:30	09/19/13 12:56	7440-42-8	
Iron, Dissolved	**2.6**	mg/L	0.25	0.058	5	09/18/13 11:30	09/20/13 11:08	7439-89-6	
Manganese, Dissolved	**3.2**	mg/L	0.025	0.0024	5	09/18/13 11:30	09/19/13 12:56	7439-96-5	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C								
Naphthalene	ND	ug/L	0.50	0.031	1	09/19/13 00:00	09/20/13 21:11	91-20-3	1e
Surrogates									
2-Fluorobiphenyl (S)	64	%	36-120		1	09/19/13 00:00	09/20/13 21:11	321-60-8	
Terphenyl-d14 (S)	55	%	29-134		1	09/19/13 00:00	09/20/13 21:11	1718-51-0	
8260 MSV	Analytical Method: EPA 5030B/8260								
Benzene	**8.1**	ug/L	5.0	0.30	5		09/17/13 05:50	71-43-2	
Ethylbenzene	**468**	ug/L	5.0	0.90	5		09/17/13 05:50	100-41-4	
Methylene chloride	ND	ug/L	5.0	0.75	5		09/17/13 05:50	75-09-2	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	0.75	5		09/17/13 05:50	79-34-5	
Toluene	ND	ug/L	5.0	0.85	5		09/17/13 05:50	108-88-3	
Xylene (Total)	ND	ug/L	15.0	2.1	5		09/17/13 05:50	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		5		09/17/13 05:50	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	80-120		5		09/17/13 05:50	17060-07-0	
Toluene-d8 (S)	99	%	80-120		5		09/17/13 05:50	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	5		09/17/13 05:50		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**91600**	mg/L	5.0	5.0	1		09/18/13 15:49		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**363**	mg/L	50.0	25.0	50		09/26/13 13:21	16887-00-6	
Fluoride	ND	mg/L	0.20	0.047	1		09/25/13 12:18	16984-48-8	
Sulfate	**19300**	mg/L	2000	320	2000		09/27/13 10:01	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 075035 Martin 34 No. 2
Pace Project No.: 60153050

Sample: GW-075035-091213-CM-MW-8 **Lab ID: 60153050008** Collected: 09/12/13 15:00 Received: 09/13/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Boron, Dissolved	**0.87**	mg/L	0.50	0.25	5	09/18/13 11:30	09/19/13 12:58	7440-42-8	
Iron, Dissolved	ND	mg/L	0.25	0.058	5	09/18/13 11:30	09/20/13 11:12	7439-89-6	D3
Manganese, Dissolved	**4.6**	mg/L	0.025	0.0024	5	09/18/13 11:30	09/19/13 12:58	7439-96-5	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C								
Naphthalene	ND	ug/L	0.50	0.031	1	09/19/13 00:00	09/20/13 21:29	91-20-3	
Surrogates									
2-Fluorobiphenyl (S)	74	%	36-120		1	09/19/13 00:00	09/20/13 21:29	321-60-8	
Terphenyl-d14 (S)	71	%	29-134		1	09/19/13 00:00	09/20/13 21:29	1718-51-0	
8260 MSV	Analytical Method: EPA 5030B/8260								
Benzene	ND	ug/L	1.0	0.060	1		09/17/13 06:03	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.18	1		09/17/13 06:03	100-41-4	
Methylene chloride	ND	ug/L	1.0	0.15	1		09/17/13 06:03	75-09-2	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		09/17/13 06:03	79-34-5	
Toluene	ND	ug/L	1.0	0.17	1		09/17/13 06:03	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.42	1		09/17/13 06:03	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		09/17/13 06:03	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	80-120		1		09/17/13 06:03	17060-07-0	
Toluene-d8 (S)	102	%	80-120		1		09/17/13 06:03	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		09/17/13 06:03		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**26700**	mg/L	5.0	5.0	1		09/18/13 15:49		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**309**	mg/L	50.0	25.0	50		09/26/13 14:06	16887-00-6	
Fluoride	ND	mg/L	0.20	0.047	1		09/25/13 12:33	16984-48-8	
Sulfate	**10800**	mg/L	1000	160	1000		09/26/13 18:11	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 075035 Martin 34 No. 2
Pace Project No.: 60153050

Sample: GW-075035-091213-CM-DUP **Lab ID: 60153050009** Collected: 09/12/13 11:10 Received: 09/13/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Benzene	**11.4**	ug/L	10.0	0.60	10		09/17/13 06:17	71-43-2	
Ethylbenzene	**133**	ug/L	10.0	1.8	10		09/17/13 06:17	100-41-4	
Toluene	ND	ug/L	10.0	1.7	10		09/17/13 06:17	108-88-3	
Xylene (Total)	**1890**	ug/L	30.0	4.2	10		09/17/13 06:17	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		10		09/17/13 06:17	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	80-120		10		09/17/13 06:17	17060-07-0	
Toluene-d8 (S)	105	%	80-120		10		09/17/13 06:17	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	10		09/17/13 06:17		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 075035 Martin 34 No. 2
Pace Project No.: 60153050

Sample: TB-075035-091213-CM-001 **Lab ID: 60153050010** Collected: 09/12/13 12:30 Received: 09/13/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Benzene	ND	ug/L	1.0	0.060	1		09/17/13 02:52	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.18	1		09/17/13 02:52	100-41-4	
Toluene	ND	ug/L	1.0	0.17	1		09/17/13 02:52	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.42	1		09/17/13 02:52	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	80-120		1		09/17/13 02:52	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	80-120		1		09/17/13 02:52	17060-07-0	
Toluene-d8 (S)	92	%	80-120		1		09/17/13 02:52	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		09/17/13 02:52		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 075035 Martin 34 No. 2
Pace Project No.: 60153050

QC Batch: MPRP/24320 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved
Associated Lab Samples: 60153050001, 60153050002, 60153050003, 60153050004, 60153050005, 60153050006, 60153050007, 60153050008

METHOD BLANK: 1255299 Matrix: Water
Associated Lab Samples: 60153050001, 60153050002, 60153050003, 60153050004, 60153050005, 60153050006, 60153050007, 60153050008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Boron, Dissolved	mg/L	ND	0.10	09/19/13 11:46	
Iron, Dissolved	mg/L	ND	0.050	09/20/13 10:23	
Manganese, Dissolved	mg/L	ND	0.0050	09/19/13 11:46	

LABORATORY CONTROL SAMPLE: 1255300

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	mg/L	1	0.94	94	80-120	
Iron, Dissolved	mg/L	10	10.4	104	80-120	
Manganese, Dissolved	mg/L	1	1.0	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1255301 1255302

Parameter	Units	60152803001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	mg/L	ND	1	1	1.0	1.0	97	97	75-125	0	20	
Iron, Dissolved	mg/L	ND	10	10	10.2	10.2	102	102	75-125	0	20	
Manganese, Dissolved	mg/L	164 ug/L	1	1	1.2	1.2	99	99	75-125	0	20	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 075035 Martin 34 No. 2
Pace Project No.: 60153050

QC Batch: MSV/56316 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60153050001, 60153050002, 60153050003, 60153050004, 60153050005, 60153050006, 60153050007, 60153050008, 60153050009, 60153050010

METHOD BLANK: 1254091 Matrix: Water
Associated Lab Samples: 60153050001, 60153050002, 60153050003, 60153050004, 60153050005, 60153050006, 60153050007, 60153050008, 60153050009, 60153050010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	09/17/13 02:38	
Benzene	ug/L	ND	1.0	09/17/13 02:38	
Ethylbenzene	ug/L	ND	1.0	09/17/13 02:38	
Methylene chloride	ug/L	ND	1.0	09/17/13 02:38	
Toluene	ug/L	ND	1.0	09/17/13 02:38	
Xylene (Total)	ug/L	ND	3.0	09/17/13 02:38	
1,2-Dichloroethane-d4 (S)	%	98	80-120	09/17/13 02:38	
4-Bromofluorobenzene (S)	%	101	80-120	09/17/13 02:38	
Toluene-d8 (S)	%	105	80-120	09/17/13 02:38	

LABORATORY CONTROL SAMPLE: 1254092

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	20.5	103	73-120	
Benzene	ug/L	20	19.3	97	73-122	
Ethylbenzene	ug/L	20	20.9	104	76-123	
Methylene chloride	ug/L	20	17.4	87	71-123	
Toluene	ug/L	20	20.9	104	76-122	
Xylene (Total)	ug/L	60	62.0	103	76-122	
1,2-Dichloroethane-d4 (S)	%			97	80-120	
4-Bromofluorobenzene (S)	%			107	80-120	
Toluene-d8 (S)	%			105	80-120	

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QUALITY CONTROL DATA

Project: 075035 Martin 34 No. 2
Pace Project No.: 60153050

QC Batch: OEXT/40543 Analysis Method: EPA 8270C by SIM
QC Batch Method: EPA 3510C Analysis Description: 8270 Water PAH by SIM MSSV
Associated Lab Samples: 60153050001, 60153050002, 60153050003, 60153050004, 60153050005, 60153050006, 60153050007, 60153050008

METHOD BLANK: 1255906 Matrix: Water
Associated Lab Samples: 60153050001, 60153050002, 60153050003, 60153050004, 60153050005, 60153050006, 60153050007, 60153050008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Naphthalene	ug/L	ND	0.50	09/20/13 17:10	
2-Fluorobiphenyl (S)	%	85	36-120	09/20/13 17:10	
Terphenyl-d14 (S)	%	83	29-134	09/20/13 17:10	

LABORATORY CONTROL SAMPLE: 1255907

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Naphthalene	ug/L	10	8.1	81	44-120	
2-Fluorobiphenyl (S)	%			82	36-120	
Terphenyl-d14 (S)	%			75	29-134	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 075035 Martin 34 No. 2
Pace Project No.: 60153050

QC Batch: WET/43476 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 60153050001, 60153050002, 60153050003, 60153050004, 60153050005, 60153050006, 60153050007, 60153050008

METHOD BLANK: 1255501 Matrix: Water
Associated Lab Samples: 60153050001, 60153050002, 60153050003, 60153050004, 60153050005, 60153050006, 60153050007, 60153050008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	09/18/13 15:47	

LABORATORY CONTROL SAMPLE: 1255502

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	952	95	80-120	

SAMPLE DUPLICATE: 1255503

Parameter	Units	60152910002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	375	391	4	17	

SAMPLE DUPLICATE: 1255504

Parameter	Units	60153050006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	85400	97200	13	17	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 075035 Martin 34 No. 2
Pace Project No.: 60153050

QC Batch: WETA/26321 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60153050001, 60153050002, 60153050003, 60153050004, 60153050005, 60153050006, 60153050007, 60153050008

METHOD BLANK: 1259731 Matrix: Water
Associated Lab Samples: 60153050001, 60153050002, 60153050003, 60153050004, 60153050005, 60153050006, 60153050007, 60153050008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.20	09/25/13 09:00	

METHOD BLANK: 1261363 Matrix: Water
Associated Lab Samples: 60153050001, 60153050002, 60153050003, 60153050004, 60153050005, 60153050006, 60153050007, 60153050008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	09/26/13 10:17	
Sulfate	mg/L	ND	1.0	09/26/13 10:17	

METHOD BLANK: 1261462 Matrix: Water
Associated Lab Samples: 60153050004, 60153050006, 60153050007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	09/27/13 09:00	

LABORATORY CONTROL SAMPLE: 1259732

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.4	97	90-110	

LABORATORY CONTROL SAMPLE: 1261364

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	96	90-110	
Sulfate	mg/L	5	4.9	97	90-110	

LABORATORY CONTROL SAMPLE: 1261463

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	5.0	100	90-110	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 075035 Martin 34 No. 2
Pace Project No.: 60153050

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1259733 1259734

Parameter	Units	60153050001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	296	250	250	584	504	115	83	80-120	15	15	
Fluoride	mg/L	ND	2.5	2.5	ND	ND	0	0	80-120		15	M3
Sulfate	mg/L	12100	5000	5000	17500	18000	109	119	80-120	3	15	

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 075035 Martin 34 No. 2
Pace Project No.: 60153050

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: MSV/56316

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

Batch: OEXT/40543

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

ANALYTE QUALIFIERS

1e	The internal standard response was outside the laboratory acceptance limits (no target analytes associated with this internal standard).
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
M3	Matrix spike recovery was outside laboratory control limits due to matrix interferences.
pH	Post-analysis pH measurement indicates insufficient VOA sample preservation.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 075035 Martin 34 No. 2
Pace Project No.: 60153050

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60153050001	**GW-075035-091213-CM-MW-1**	EPA 3010	MPRP/24320	EPA 6010	ICP/18973
60153050002	**GW-075035-091213-CM-MW-2**	EPA 3010	MPRP/24320	EPA 6010	ICP/18973
60153050003	**GW-075035-091213-CM-MW-3**	EPA 3010	MPRP/24320	EPA 6010	ICP/18973
60153050004	**GW-075035-091213-CM-MW-4**	EPA 3010	MPRP/24320	EPA 6010	ICP/18973
60153050005	**GW-075035-091213-CM-MW-5**	EPA 3010	MPRP/24320	EPA 6010	ICP/18973
60153050006	**GW-075035-091213-CM-MW-6**	EPA 3010	MPRP/24320	EPA 6010	ICP/18973
60153050007	**GW-075035-091213-CM-MW-7**	EPA 3010	MPRP/24320	EPA 6010	ICP/18973
60153050008	**GW-075035-091213-CM-MW-8**	EPA 3010	MPRP/24320	EPA 6010	ICP/18973
60153050001	**GW-075035-091213-CM-MW-1**	EPA 3510C	OEXT/40543	EPA 8270C by SIM	MSSV/12856
60153050002	**GW-075035-091213-CM-MW-2**	EPA 3510C	OEXT/40543	EPA 8270C by SIM	MSSV/12856
60153050003	**GW-075035-091213-CM-MW-3**	EPA 3510C	OEXT/40543	EPA 8270C by SIM	MSSV/12856
60153050004	**GW-075035-091213-CM-MW-4**	EPA 3510C	OEXT/40543	EPA 8270C by SIM	MSSV/12856
60153050005	**GW-075035-091213-CM-MW-5**	EPA 3510C	OEXT/40543	EPA 8270C by SIM	MSSV/12856
60153050006	**GW-075035-091213-CM-MW-6**	EPA 3510C	OEXT/40543	EPA 8270C by SIM	MSSV/12856
60153050007	**GW-075035-091213-CM-MW-7**	EPA 3510C	OEXT/40543	EPA 8270C by SIM	MSSV/12856
60153050008	**GW-075035-091213-CM-MW-8**	EPA 3510C	OEXT/40543	EPA 8270C by SIM	MSSV/12856
60153050001	**GW-075035-091213-CM-MW-1**	EPA 5030B/8260	MSV/56316		
60153050002	**GW-075035-091213-CM-MW-2**	EPA 5030B/8260	MSV/56316		
60153050003	**GW-075035-091213-CM-MW-3**	EPA 5030B/8260	MSV/56316		
60153050004	**GW-075035-091213-CM-MW-4**	EPA 5030B/8260	MSV/56316		
60153050005	**GW-075035-091213-CM-MW-5**	EPA 5030B/8260	MSV/56316		
60153050006	**GW-075035-091213-CM-MW-6**	EPA 5030B/8260	MSV/56316		
60153050007	**GW-075035-091213-CM-MW-7**	EPA 5030B/8260	MSV/56316		
60153050008	**GW-075035-091213-CM-MW-8**	EPA 5030B/8260	MSV/56316		
60153050009	**GW-075035-091213-CM-DUP**	EPA 5030B/8260	MSV/56316		
60153050010	**TB-075035-091213-CM-001**	EPA 5030B/8260	MSV/56316		
60153050001	**GW-075035-091213-CM-MW-1**	SM 2540C	WET/43476		
60153050002	**GW-075035-091213-CM-MW-2**	SM 2540C	WET/43476		
60153050003	**GW-075035-091213-CM-MW-3**	SM 2540C	WET/43476		
60153050004	**GW-075035-091213-CM-MW-4**	SM 2540C	WET/43476		
60153050005	**GW-075035-091213-CM-MW-5**	SM 2540C	WET/43476		
60153050006	**GW-075035-091213-CM-MW-6**	SM 2540C	WET/43476		
60153050007	**GW-075035-091213-CM-MW-7**	SM 2540C	WET/43476		
60153050008	**GW-075035-091213-CM-MW-8**	SM 2540C	WET/43476		
60153050001	**GW-075035-091213-CM-MW-1**	EPA 300.0	WETA/26321		
60153050002	**GW-075035-091213-CM-MW-2**	EPA 300.0	WETA/26321		
60153050003	**GW-075035-091213-CM-MW-3**	EPA 300.0	WETA/26321		
60153050004	**GW-075035-091213-CM-MW-4**	EPA 300.0	WETA/26321		
60153050005	**GW-075035-091213-CM-MW-5**	EPA 300.0	WETA/26321		
60153050006	**GW-075035-091213-CM-MW-6**	EPA 300.0	WETA/26321		
60153050007	**GW-075035-091213-CM-MW-7**	EPA 300.0	WETA/26321		
60153050008	**GW-075035-091213-CM-MW-8**	EPA 300.0	WETA/26321		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt
ESI Tech Spec Client

WO#: 60153050

60153050

802368279410

Client Name: COP CRA NM

Optional
Proj Due Date:
Proj Name:

Courier: Fed Ex ☒ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ☐

Tracking #: 802368284800 Pace Shipping Label Used? Yes ☒ No ☐

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

Packing Material: Bubble Wrap ☑ Bubble Bags ☐ Foam ☐ None ☐ Other ☐

Thermometer Used: T-112 / T-194 **Type of Ice:** Wet Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 0.5

Temperature should be above freezing to 6°C

Date and initials of person examining contents: JMS 9/13/13 1030

Chain of Custody present:	☑Yes ☐No ☐N/A	1.
Chain of Custody filled out:	☑Yes ☐No ☐N/A	2.
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	3.
Sampler name & signature on COC:	☑Yes ☐No ☐N/A	4.
Samples arrived within holding time:	☑Yes ☐No ☐N/A	5.
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	7.
Sufficient volume:	☑Yes ☐No ☐N/A	8.
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	9.
Containers intact:	☑Yes ☐No ☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☒N/A	11.
Filtered volume received for dissolved tests?	☑Yes ☐No ☐N/A	12.
Sample labels match COC:	☑Yes ☐No ☐N/A	
Includes date/time/ID/analyses Matrix: water		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: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes ☐No	Initial when completed: JMS / Lot # of added preservative:
Trip Blank present:	☑Yes ☐No ☐N/A	
Pace Trip Blank lot # (if purchased): 081213-3		15.
Headspace in VOA vials (>6mm):	☐Yes ☑No ☐N/A	16.
Project sampled in USDA Regulated Area:	☐Yes ☐No ☒N/A	17. List State:

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: AAF Date: 9/13/13

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

Start: 1015	Start:
End: 1030	End:
Temp:	Temp:

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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.

Page: 1 of 1

Section A — Required Client Information:

Company:	COP CRA NM
Address:	6121 Indian School Rd NE, Ste 200
	Albequerque, NM 87110
Email To:	cmathews@craworld.com
Phone:	(505)884-0672
Fax:	(505)884-4932
Requested Due Date/TAT:	standard

Section B — Required Project Information:

Report To:	Christine Mathews
Copy To:	Jeff Walker, Angela Bown
Purchase Order No.:	4517653455
Project Name:	Martin 34 No. 2
Project Number:	075035

Section C — Invoice Information:

Attention:	ENFOS
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Alice Flanagan
Pace Profile #:	5514,2

REGULATORY AGENCY

☐ NPDES ☒ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER ______

Site Location STATE: NM

Section D — Required Client Information

Valid Matrix Codes (MATRIX / CODE): DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WIPE WP; AIR AR; OTHER OT; TISSUE TS

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

Pace Project No./Lab I.D.: 60153050

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	8260****	Dissolved Fe, Mn, B	TDS	300.0 **	8270 Naphthalene	BTEX ONLY		Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	GW-075035-091213-CM-MW-1		G			9/12/13	825		7	X		X	X						X	X	X	X	X		001		3(DG9H) 2(AG4H) 1(BP2N) 1(BP3?)
2	GW-075035-091113-CM-MW-2		G			9/11/13	1230		7	X		X	X						X	X	X	X	X		002		↓
3	GW-075035-091113-CM-MW-3		G			9/11/13	1200		7	X		X	X						X	X	X	X	X		003		↓
4	GW-075035-091113-CM-MW-4		G			9/11/13	1155		7	X		X	X						X	X	X	X	X		004		↓
5	GW-075035-091113-CM-MW-5		G			9/11/13	1435		7	X		X	X						X	X	X	X	X		005		↓
6	GW-075035-091113-CM-MW-6		G			9/11/13	1105		7	X		X	X						X	X	X	X	X		006		↓
7	GW-075035-091113-CM-MW-7		G			9/11/13	1045		7	X		X	X						X	X	X	X	X		007		↓
8	GW-075035-091113-CM-MW-8		G			9/11/13	1500		7	X		X	X						X	X	X	X	X		008		↓
9	GW-075035-091113-CM-DUP		G			9/11/13	1110		3				X											X	009		3(DG9H)
10	TB-075035-091213-CM-001					9/12/13	1230		3				X											X	010		↓
11																											
12																											

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
****BTEX, Methylene Chloride, 1,1,2,2-Tetrachloroethane	[signature] /CRA	9/12/13	1300	[signature]	9/13/13	830	0.5	Y	Y	Y
**Chloride, Sulfate, Fluoride										
Metals were field filtered							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Christine Mathews

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 9/12/13

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

F-ALL-Q-020rev.08, 12-Oct-2007

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

January 07, 2014

Jeff Walker
COP Conestoga-Rovers & Associa
6121 Indian School Rd. NE
Ste 200
Albuquerque, NM 87110

RE: Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60160036

Dear Jeff Walker:
Enclosed are the analytical results for sample(s) received by the laboratory on December 19, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Alice Flanagan

alice.flanagan@pacelabs.com
Project Manager

Enclosures

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

REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60160036

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 13-012-0
Illinois Certification #: 003097
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212008A
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407-13-4
Utah Certification #: KS000212013-3
Illinois Certification #: 003097

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SAMPLE SUMMARY

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60160036

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60160036001	**GW-075035-121713-CM-MW-1**	Water	12/17/13 10:40	12/19/13 09:25
60160036002	**GW-075035-121713-CM-MW-2**	Water	12/17/13 11:20	12/19/13 09:25
60160036003	**GW-075035-121713-CM-MW-3**	Water	12/17/13 12:50	12/19/13 09:25
60160036004	**GW-075035-121713-CM-MW-4**	Water	12/17/13 11:55	12/19/13 09:25
60160036005	**GW-075035-121713-CM-MW-5**	Water	12/17/13 14:05	12/19/13 09:25
60160036006	**GW-075035-121713-CM-MW-6**	Water	12/17/13 10:20	12/19/13 09:25
60160036007	**GW-075035-121713-CM-MW-7**	Water	12/17/13 13:10	12/19/13 09:25
60160036008	**GW-075035-121713-CM-MW-8**	Water	12/17/13 14:35	12/19/13 09:25
60160036009	**GW-075035-121713-CM-DUP**	Water	12/17/13 10:25	12/19/13 09:25

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SAMPLE ANALYTE COUNT

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60160036

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60160036001	GW-075035-121713-CM-MW-1	EPA 6010	SMW, TDS	3
		EPA 8270C by SIM	NAW	3
		EPA 5030B/8260	PRG	10
		SM 2540C	RAH	1
		EPA 300.0	OL	3
60160036002	GW-075035-121713-CM-MW-2	EPA 6010	SMW, TDS	3
		EPA 8270C by SIM	NAW	3
		EPA 5030B/8260	PRG	10
		SM 2540C	RAH	1
		EPA 300.0	OL	3
60160036003	GW-075035-121713-CM-MW-3	EPA 6010	SMW, TDS	3
		EPA 8270C by SIM	NAW	3
		EPA 5030B/8260	PRG	10
		SM 2540C	RAH	1
		EPA 300.0	OL	3
60160036004	GW-075035-121713-CM-MW-4	EPA 6010	SMW, TDS	3
		EPA 8270C by SIM	NAW	3
		EPA 5030B/8260	PRG	10
		SM 2540C	RAH	1
		EPA 300.0	OL	3
60160036005	GW-075035-121713-CM-MW-5	EPA 6010	SMW, TDS	3
		EPA 8270C by SIM	NAW	3
		EPA 5030B/8260	PRG	10
		SM 2540C	RAH	1
		EPA 300.0	OL	3
60160036006	GW-075035-121713-CM-MW-6	EPA 6010	SMW, TDS	3
		EPA 8270C by SIM	NAW	3
		EPA 5030B/8260	PRG	10
		SM 2540C	RAH	1
		EPA 300.0	OL	3
60160036007	GW-075035-121713-CM-MW-7	EPA 6010	SMW, TDS	3
		EPA 8270C by SIM	NAW	3
		EPA 5030B/8260	PRG, SDR	10
		SM 2540C	RAH	1
		EPA 300.0	OL	3
60160036008	GW-075035-121713-CM-MW-8	EPA 6010	SMW, TDS	3
		EPA 8270C by SIM	NAW	3

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60160036

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 5030B/8260	PRG	10
		SM 2540C	RAH	1
		EPA 300.0	OL	3
60160036009	**GW-075035-121713-CM-DUP**	EPA 5030B/8260	PRG	10

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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PROJECT NARRATIVE

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60160036

Method: **EPA 6010**
Description: 6010 MET ICP, Dissolved
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: January 07, 2014

General Information:
8 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, where applicable, 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:

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PROJECT NARRATIVE

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60160036

Method: **EPA 8270C by SIM**
Description: 8270 MSSV PAH by SIM
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: January 07, 2014

General Information:
8 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, where applicable, 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/13367

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

Additional Comments:

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PROJECT NARRATIVE

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60160036

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: January 07, 2014

General Information:
9 samples were analyzed for EPA 5030B/8260. All samples were received in acceptable condition with any exceptions noted below.

pH: Post-analysis pH measurement indicates insufficient VOA sample preservation.
- GW-075035-121713-CM-MW-1 (Lab ID: 60160036001)

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, where applicable, 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/58563

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

QC Batch: MSV/58601

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

Additional Comments:

Pace Analytical Services, Inc.
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(913)599-5665

PROJECT NARRATIVE

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60160036

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: January 07, 2014

General Information:
8 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, where applicable, 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:

Pace Analytical Services, Inc.
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PROJECT NARRATIVE

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60160036

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: January 07, 2014

General Information:
8 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, where applicable, 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/27681

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

- GW-075035-121713-CM-MW-1 (Lab ID: 60160036001)
  - Fluoride
- GW-075035-121713-CM-MW-2 (Lab ID: 60160036002)
  - Fluoride
- GW-075035-121713-CM-MW-3 (Lab ID: 60160036003)
  - Fluoride
- GW-075035-121713-CM-MW-4 (Lab ID: 60160036004)
  - Fluoride
- GW-075035-121713-CM-MW-5 (Lab ID: 60160036005)
  - Fluoride
- GW-075035-121713-CM-MW-6 (Lab ID: 60160036006)
  - Fluoride
- GW-075035-121713-CM-MW-7 (Lab ID: 60160036007)
  - Fluoride
- GW-075035-121713-CM-MW-8 (Lab ID: 60160036008)
  - Fluoride

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

Pace Analytical Services, Inc.
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(913)599-5665

ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60160036

Sample: GW-075035-121713-CM-MW-1 **Lab ID: 60160036001** Collected: 12/17/13 10:40 Received: 12/19/13 09:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Boron, Dissolved	**1160**	ug/L	100	1	12/24/13 09:00	12/26/13 11:30	7440-42-8	
Iron, Dissolved	**91.0**	ug/L	50.0	1	12/24/13 09:00	12/30/13 14:42	7439-89-6	
Manganese, Dissolved	**590**	ug/L	5.0	1	12/24/13 09:00	12/26/13 11:30	7439-96-5	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C							
Naphthalene	**25.8**	ug/L	5.0	10	12/20/13 00:00	12/24/13 12:53	91-20-3	
Surrogates								
2-Fluorobiphenyl (S)	38	%	36-120	10	12/20/13 00:00	12/24/13 12:53	321-60-8	
Terphenyl-d14 (S)	58	%	29-134	10	12/20/13 00:00	12/24/13 12:53	1718-51-0	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**3180**	ug/L	100	100		12/25/13 03:15	71-43-2	
Ethylbenzene	**297**	ug/L	100	100		12/25/13 03:15	100-41-4	
Methylene chloride	**156**	ug/L	100	100		12/25/13 03:15	75-09-2	
1,1,2,2-Tetrachloroethane	ND	ug/L	100	100		12/25/13 03:15	79-34-5	
Toluene	**5230**	ug/L	100	100		12/25/13 03:15	108-88-3	
Xylene (Total)	**6120**	ug/L	300	100		12/25/13 03:15	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	101	%	80-120	100		12/25/13 03:15	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-120	100		12/25/13 03:15	17060-07-0	
Toluene-d8 (S)	99	%	80-120	100		12/25/13 03:15	2037-26-5	
Preservation pH	**6.0**		0.10	100		12/25/13 03:15		pH
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**24300**	mg/L	5.0	1		12/23/13 11:29		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Chloride	**459**	mg/L	50.0	50		12/29/13 20:29	16887-00-6	
Fluoride	ND	mg/L	4.0	20		12/29/13 22:53	16984-48-8	D3
Sulfate	**15100**	mg/L	2000	2000		12/29/13 18:05	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60160036

Sample: GW-075035-121713-CM-MW-2 **Lab ID: 60160036002** Collected: 12/17/13 11:20 Received: 12/19/13 09:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Boron, Dissolved	**791**	ug/L	100	1	12/24/13 09:00	12/26/13 11:33	7440-42-8	
Iron, Dissolved	**1450**	ug/L	500	10	12/24/13 09:00	12/30/13 14:44	7439-89-6	
Manganese, Dissolved	**2430**	ug/L	5.0	1	12/24/13 09:00	12/26/13 11:33	7439-96-5	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C							
Naphthalene	**33.6**	ug/L	2.5	5	12/20/13 00:00	01/06/14 20:00	91-20-3	
Surrogates								
2-Fluorobiphenyl (S)	80	%	36-120	1	12/20/13 00:00	12/24/13 13:11	321-60-8	
Terphenyl-d14 (S)	98	%	29-134	1	12/20/13 00:00	12/24/13 13:11	1718-51-0	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**102**	ug/L	5.0	5		12/25/13 03:29	71-43-2	
Ethylbenzene	**247**	ug/L	5.0	5		12/25/13 03:29	100-41-4	
Methylene chloride	**10.3**	ug/L	5.0	5		12/25/13 03:29	75-09-2	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	5		12/25/13 03:29	79-34-5	
Toluene	ND	ug/L	5.0	5		12/25/13 03:29	108-88-3	
Xylene (Total)	**63.2**	ug/L	15.0	5		12/25/13 03:29	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	99	%	80-120	5		12/25/13 03:29	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120	5		12/25/13 03:29	17060-07-0	
Toluene-d8 (S)	96	%	80-120	5		12/25/13 03:29	2037-26-5	
Preservation pH	**1.0**		0.10	5		12/25/13 03:29		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**32800**	mg/L	5.0	1		12/23/13 11:30		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Chloride	**453**	mg/L	50.0	50		12/29/13 20:44	16887-00-6	
Fluoride	ND	mg/L	4.0	20		12/29/13 23:08	16984-48-8	D3
Sulfate	**22400**	mg/L	2000	2000		12/29/13 18:20	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60160036

Sample: GW-075035-121713-CM-MW-3 **Lab ID: 60160036003** Collected: 12/17/13 12:50 Received: 12/19/13 09:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Boron, Dissolved	**899**	ug/L	100	1	12/24/13 09:00	12/26/13 11:37	7440-42-8	
Iron, Dissolved	**272**	ug/L	150	3	12/24/13 09:00	12/30/13 14:46	7439-89-6	
Manganese, Dissolved	**83.6**	ug/L	5.0	1	12/24/13 09:00	12/26/13 11:37	7439-96-5	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C							
Naphthalene	ND	ug/L	0.50	1	12/20/13 00:00	12/24/13 13:30	91-20-3	
Surrogates								
2-Fluorobiphenyl (S)	97	%	36-120	1	12/20/13 00:00	12/24/13 13:30	321-60-8	
Terphenyl-d14 (S)	104	%	29-134	1	12/20/13 00:00	12/24/13 13:30	1718-51-0	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		12/25/13 03:44	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/25/13 03:44	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		12/25/13 03:44	75-09-2	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		12/25/13 03:44	79-34-5	
Toluene	ND	ug/L	1.0	1		12/25/13 03:44	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/25/13 03:44	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	105	%	80-120	1		12/25/13 03:44	460-00-4	
1,2-Dichloroethane-d4 (S)	112	%	80-120	1		12/25/13 03:44	17060-07-0	
Toluene-d8 (S)	99	%	80-120	1		12/25/13 03:44	2037-26-5	
Preservation pH	**1.0**		0.10	1		12/25/13 03:44		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**31600**	mg/L	5.0	1		12/23/13 11:31		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Chloride	**476**	mg/L	50.0	50		12/29/13 20:58	16887-00-6	
Fluoride	ND	mg/L	4.0	20		12/29/13 23:22	16984-48-8	D3
Sulfate	**20300**	mg/L	2000	2000		12/29/13 18:34	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60160036

Sample: GW-075035-121713-CM-MW-4 **Lab ID: 60160036004** Collected: 12/17/13 11:55 Received: 12/19/13 09:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Boron, Dissolved	**789**	ug/L	100	1	12/24/13 09:00	12/26/13 11:40	7440-42-8	
Iron, Dissolved	**354**	ug/L	250	5	12/24/13 09:00	12/30/13 14:49	7439-89-6	
Manganese, Dissolved	**2720**	ug/L	5.0	1	12/24/13 09:00	12/26/13 11:40	7439-96-5	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C							
Naphthalene	**2.1**	ug/L	0.50	1	12/20/13 00:00	12/24/13 13:48	91-20-3	
Surrogates								
2-Fluorobiphenyl (S)	86	%	36-120	1	12/20/13 00:00	12/24/13 13:48	321-60-8	
Terphenyl-d14 (S)	94	%	29-134	1	12/20/13 00:00	12/24/13 13:48	1718-51-0	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		12/25/13 03:58	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/25/13 03:58	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		12/25/13 03:58	75-09-2	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		12/25/13 03:58	79-34-5	
Toluene	ND	ug/L	1.0	1		12/25/13 03:58	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/25/13 03:58	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	105	%	80-120	1		12/25/13 03:58	460-00-4	
1,2-Dichloroethane-d4 (S)	115	%	80-120	1		12/25/13 03:58	17060-07-0	
Toluene-d8 (S)	100	%	80-120	1		12/25/13 03:58	2037-26-5	
Preservation pH	**1.0**		0.10	1		12/25/13 03:58		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**36300**	mg/L	5.0	1		12/23/13 11:31		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Chloride	**394**	mg/L	50.0	50		12/29/13 21:12	16887-00-6	
Fluoride	**5.1**	mg/L	4.0	20		12/29/13 23:37	16984-48-8	D3
Sulfate	**24300**	mg/L	2000	2000		12/29/13 18:48	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60160036

Sample: GW-075035-121713-CM-MW-5 **Lab ID: 60160036005** Collected: 12/17/13 14:05 Received: 12/19/13 09:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Boron, Dissolved	**1490**	ug/L	100	1	12/24/13 09:00	12/26/13 11:44	7440-42-8	
Iron, Dissolved	**1610**	ug/L	500	10	12/24/13 09:00	12/30/13 14:58	7439-89-6	
Manganese, Dissolved	**647**	ug/L	5.0	1	12/24/13 09:00	12/26/13 11:44	7439-96-5	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C							
Naphthalene	ND	ug/L	0.50	1	12/20/13 00:00	12/24/13 14:07	91-20-3	
Surrogates								
2-Fluorobiphenyl (S)	85	%	36-120	1	12/20/13 00:00	12/24/13 14:07	321-60-8	
Terphenyl-d14 (S)	98	%	29-134	1	12/20/13 00:00	12/24/13 14:07	1718-51-0	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**114**	ug/L	1.0	1		12/25/13 04:12	71-43-2	
Ethylbenzene	**6.9**	ug/L	1.0	1		12/25/13 04:12	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		12/25/13 04:12	75-09-2	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		12/25/13 04:12	79-34-5	
Toluene	ND	ug/L	1.0	1		12/25/13 04:12	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/25/13 04:12	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	99	%	80-120	1		12/25/13 04:12	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	80-120	1		12/25/13 04:12	17060-07-0	
Toluene-d8 (S)	100	%	80-120	1		12/25/13 04:12	2037-26-5	
Preservation pH	**1.0**		0.10	1		12/25/13 04:12		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**12000**	mg/L	5.0	1		12/23/13 11:32		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Chloride	**228**	mg/L	20.0	20		12/29/13 21:27	16887-00-6	
Fluoride	ND	mg/L	4.0	20		12/29/13 21:27	16984-48-8	D3
Sulfate	**7120**	mg/L	2000	2000		12/29/13 19:03	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60160036

Sample: GW-075035-121713-CM-MW-6 **Lab ID: 60160036006** Collected: 12/17/13 10:20 Received: 12/19/13 09:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Boron, Dissolved	**653**	ug/L	100	1	12/24/13 09:00	12/26/13 11:47	7440-42-8	
Iron, Dissolved	**121**	ug/L	100	2	12/24/13 09:00	12/30/13 15:00	7439-89-6	
Manganese, Dissolved	**1860**	ug/L	5.0	1	12/24/13 09:00	12/26/13 11:47	7439-96-5	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C							
Naphthalene	**30.2**	ug/L	2.5	5	12/20/13 00:00	01/06/14 20:20	91-20-3	
Surrogates								
2-Fluorobiphenyl (S)	83	%	36-120	1	12/20/13 00:00	12/24/13 14:25	321-60-8	
Terphenyl-d14 (S)	107	%	29-134	1	12/20/13 00:00	12/24/13 14:25	1718-51-0	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**14.1**	ug/L	10.0	10		12/25/13 04:26	71-43-2	
Ethylbenzene	**127**	ug/L	10.0	10		12/25/13 04:26	100-41-4	
Methylene chloride	**22.2**	ug/L	10.0	10		12/25/13 04:26	75-09-2	
1,1,2,2-Tetrachloroethane	ND	ug/L	10.0	10		12/25/13 04:26	79-34-5	
Toluene	ND	ug/L	10.0	10		12/25/13 04:26	108-88-3	
Xylene (Total)	**1810**	ug/L	30.0	10		12/25/13 04:26	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	98	%	80-120	10		12/25/13 04:26	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	80-120	10		12/25/13 04:26	17060-07-0	
Toluene-d8 (S)	102	%	80-120	10		12/25/13 04:26	2037-26-5	
Preservation pH	**1.0**		0.10	10		12/25/13 04:26		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**34600**	mg/L	5.0	1		12/23/13 11:33		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Chloride	**755**	mg/L	50.0	50		12/29/13 21:41	16887-00-6	
Fluoride	**4.5**	mg/L	4.0	20		12/29/13 23:51	16984-48-8	D3
Sulfate	**23000**	mg/L	2000	2000		12/29/13 19:17	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60160036

Sample: GW-075035-121713-CM-MW-7 **Lab ID: 60160036007** Collected: 12/17/13 13:10 Received: 12/19/13 09:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Boron, Dissolved	**767**	ug/L	100	1	12/24/13 09:00	12/26/13 11:51	7440-42-8	
Iron, Dissolved	**3130**	ug/L	1000	20	12/24/13 09:00	12/30/13 15:03	7439-89-6	
Manganese, Dissolved	**2640**	ug/L	5.0	1	12/24/13 09:00	12/26/13 11:51	7439-96-5	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C							
Naphthalene	**7.9**	ug/L	0.50	1	12/20/13 00:00	12/24/13 14:43	91-20-3	
Surrogates								
2-Fluorobiphenyl (S)	90	%	36-120	1	12/20/13 00:00	12/24/13 14:43	321-60-8	
Terphenyl-d14 (S)	97	%	29-134	1	12/20/13 00:00	12/24/13 14:43	1718-51-0	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**6.4**	ug/L	1.0	1		12/25/13 04:40	71-43-2	
Ethylbenzene	**185**	ug/L	5.0	5		12/26/13 18:14	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		12/25/13 04:40	75-09-2	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		12/25/13 04:40	79-34-5	
Toluene	ND	ug/L	1.0	1		12/25/13 04:40	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/25/13 04:40	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	103	%	80-120	1		12/25/13 04:40	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	80-120	1		12/25/13 04:40	17060-07-0	
Toluene-d8 (S)	98	%	80-120	1		12/25/13 04:40	2037-26-5	
Preservation pH	**1.0**		0.10	1		12/25/13 04:40		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**28900**	mg/L	5.0	1		12/23/13 11:34		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Chloride	**279**	mg/L	20.0	20		12/29/13 21:56	16887-00-6	
Fluoride	ND	mg/L	4.0	20		12/29/13 21:56	16984-48-8	D3
Sulfate	**20500**	mg/L	2000	2000		12/29/13 19:32	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60160036

Sample: GW-075035-121713-CM-MW-8 **Lab ID: 60160036008** Collected: 12/17/13 14:35 Received: 12/19/13 09:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Boron, Dissolved	**876**	ug/L	100	1	12/24/13 09:00	12/26/13 11:54	7440-42-8	
Iron, Dissolved	ND	ug/L	50.0	1	12/24/13 09:00	12/30/13 14:56	7439-89-6	
Manganese, Dissolved	**3440**	ug/L	5.0	1	12/24/13 09:00	12/26/13 11:54	7439-96-5	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C							
Naphthalene	ND	ug/L	0.50	1	12/20/13 00:00	12/24/13 15:02	91-20-3	
Surrogates								
2-Fluorobiphenyl (S)	88	%	36-120	1	12/20/13 00:00	12/24/13 15:02	321-60-8	
Terphenyl-d14 (S)	98	%	29-134	1	12/20/13 00:00	12/24/13 15:02	1718-51-0	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		12/26/13 15:01	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/26/13 15:01	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		12/26/13 15:01	75-09-2	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		12/26/13 15:01	79-34-5	
Toluene	ND	ug/L	1.0	1		12/26/13 15:01	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/26/13 15:01	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	99	%	80-120	1		12/26/13 15:01	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	80-120	1		12/26/13 15:01	17060-07-0	
Toluene-d8 (S)	98	%	80-120	1		12/26/13 15:01	2037-26-5	
Preservation pH	**1.0**		0.10	1		12/26/13 15:01		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**21400**	mg/L	5.0	1		12/23/13 11:34		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Chloride	**465**	mg/L	50.0	50		12/29/13 22:10	16887-00-6	
Fluoride	ND	mg/L	4.0	20		12/30/13 00:05	16984-48-8	D3
Sulfate	**14400**	mg/L	2000	2000		12/29/13 19:46	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60160036

Sample: GW-075035-121713-CM-DUP **Lab ID: 60160036009** Collected: 12/17/13 10:25 Received: 12/19/13 09:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**11.2**	ug/L	10.0	10		12/26/13 15:16	71-43-2	
Ethylbenzene	**133**	ug/L	10.0	10		12/26/13 15:16	100-41-4	
Methylene chloride	**12.4**	ug/L	10.0	10		12/26/13 15:16	75-09-2	
1,1,2,2-Tetrachloroethane	ND	ug/L	10.0	10		12/26/13 15:16	79-34-5	
Toluene	ND	ug/L	10.0	10		12/26/13 15:16	108-88-3	
Xylene (Total)	**1780**	ug/L	30.0	10		12/26/13 15:16	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	100	%	80-120	10		12/26/13 15:16	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120	10		12/26/13 15:16	17060-07-0	
Toluene-d8 (S)	98	%	80-120	10		12/26/13 15:16	2037-26-5	
Preservation pH	**1.0**		0.10	10		12/26/13 15:16		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60160036

QC Batch: MPRP/25711 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved
Associated Lab Samples: 60160036001, 60160036002, 60160036003, 60160036004, 60160036005, 60160036006, 60160036007, 60160036008

METHOD BLANK: 1311138 Matrix: Water
Associated Lab Samples: 60160036001, 60160036002, 60160036003, 60160036004, 60160036005, 60160036006, 60160036007, 60160036008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	12/26/13 10:51	
Iron, Dissolved	ug/L	ND	50.0	12/30/13 14:28	
Manganese, Dissolved	ug/L	ND	5.0	12/26/13 10:51	

LABORATORY CONTROL SAMPLE: 1311139

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	977	98	80-120	
Iron, Dissolved	ug/L	10000	9940	99	80-120	
Manganese, Dissolved	ug/L	1000	964	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1311140 1311141

Parameter	Units	60159759001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	165	1000	1000	1160	1150	99	98	75-125	1	20	
Iron, Dissolved	ug/L	ND	10000	10000	9940	9750	99	97	75-125	2	20	
Manganese, Dissolved	ug/L	6.5	1000	1000	981	969	97	96	75-125	1	20	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60160036

QC Batch: MSV/58563 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60160036001, 60160036002, 60160036003, 60160036004, 60160036005, 60160036006, 60160036007

METHOD BLANK: 1311169 Matrix: Water
Associated Lab Samples: 60160036001, 60160036002, 60160036003, 60160036004, 60160036005, 60160036006, 60160036007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	12/25/13 03:01	
Benzene	ug/L	ND	1.0	12/25/13 03:01	
Ethylbenzene	ug/L	ND	1.0	12/25/13 03:01	
Methylene chloride	ug/L	ND	1.0	12/25/13 03:01	
Toluene	ug/L	ND	1.0	12/25/13 03:01	
Xylene (Total)	ug/L	ND	3.0	12/25/13 03:01	
1,2-Dichloroethane-d4 (S)	%	103	80-120	12/25/13 03:01	
4-Bromofluorobenzene (S)	%	100	80-120	12/25/13 03:01	
Toluene-d8 (S)	%	100	80-120	12/25/13 03:01	

LABORATORY CONTROL SAMPLE: 1311170

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	18.4	92	73-120	
Benzene	ug/L	20	18.8	94	73-122	
Ethylbenzene	ug/L	20	18.6	93	76-123	
Methylene chloride	ug/L	20	18.8	94	71-123	
Toluene	ug/L	20	18.8	94	76-122	
Xylene (Total)	ug/L	60	55.7	93	76-122	
1,2-Dichloroethane-d4 (S)	%			103	80-120	
4-Bromofluorobenzene (S)	%			102	80-120	
Toluene-d8 (S)	%			104	80-120	

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(913)599-5665

QUALITY CONTROL DATA

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60160036

QC Batch: MSV/58598
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60160036007

METHOD BLANK: 1311776 Matrix: Water
Associated Lab Samples: 60160036007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/L	ND	1.0	12/26/13 11:57	
1,2-Dichloroethane-d4 (S)	%	102	80-120	12/26/13 11:57	
4-Bromofluorobenzene (S)	%	101	80-120	12/26/13 11:57	
Toluene-d8 (S)	%	104	80-120	12/26/13 11:57	

LABORATORY CONTROL SAMPLE: 1311777

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethylbenzene	ug/L	20	20.4	102	76-123	
1,2-Dichloroethane-d4 (S)	%			109	80-120	
4-Bromofluorobenzene (S)	%			98	80-120	
Toluene-d8 (S)	%			97	80-120	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60160036

QC Batch: MSV/58601 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60160036008, 60160036009

METHOD BLANK: 1311787 Matrix: Water
Associated Lab Samples: 60160036008, 60160036009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	12/26/13 14:33	
Benzene	ug/L	ND	1.0	12/26/13 14:33	
Ethylbenzene	ug/L	ND	1.0	12/26/13 14:33	
Methylene chloride	ug/L	ND	1.0	12/26/13 14:33	
Toluene	ug/L	ND	1.0	12/26/13 14:33	
Xylene (Total)	ug/L	ND	3.0	12/26/13 14:33	
1,2-Dichloroethane-d4 (S)	%	94	80-120	12/26/13 14:33	
4-Bromofluorobenzene (S)	%	98	80-120	12/26/13 14:33	
Toluene-d8 (S)	%	101	80-120	12/26/13 14:33	

LABORATORY CONTROL SAMPLE: 1311788

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	21.2	106	73-120	
Benzene	ug/L	20	20.1	100	73-122	
Ethylbenzene	ug/L	20	20.2	101	76-123	
Methylene chloride	ug/L	20	19.5	98	71-123	
Toluene	ug/L	20	20.5	102	76-122	
Xylene (Total)	ug/L	60	61.6	103	76-122	
1,2-Dichloroethane-d4 (S)	%			97	80-120	
4-Bromofluorobenzene (S)	%			99	80-120	
Toluene-d8 (S)	%			103	80-120	

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QUALITY CONTROL DATA

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60160036

QC Batch: OEXT/42047 Analysis Method: EPA 8270C by SIM
QC Batch Method: EPA 3510C Analysis Description: 8270 Water PAH by SIM MSSV
Associated Lab Samples: 60160036001, 60160036002, 60160036003, 60160036004, 60160036005, 60160036006, 60160036007, 60160036008

METHOD BLANK: 1309487 Matrix: Water
Associated Lab Samples: 60160036001, 60160036002, 60160036003, 60160036004, 60160036005, 60160036006, 60160036007, 60160036008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Naphthalene	ug/L	ND	0.50	12/24/13 12:16	
2-Fluorobiphenyl (S)	%	85	36-120	12/24/13 12:16	
Terphenyl-d14 (S)	%	94	29-134	12/24/13 12:16	

LABORATORY CONTROL SAMPLE: 1309488

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Naphthalene	ug/L	10	9.8	98	44-120	
2-Fluorobiphenyl (S)	%			98	36-120	
Terphenyl-d14 (S)	%			103	29-134	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60160036

QC Batch: WET/45293 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 60160036001, 60160036002, 60160036003, 60160036004, 60160036005, 60160036006, 60160036007, 60160036008

METHOD BLANK: 1310518 Matrix: Water
Associated Lab Samples: 60160036001, 60160036002, 60160036003, 60160036004, 60160036005, 60160036006, 60160036007, 60160036008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	12/23/13 11:28	

LABORATORY CONTROL SAMPLE: 1310519

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1000	100	80-120	

SAMPLE DUPLICATE: 1310520

Parameter	Units	60160036001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	24300	24400	0	17	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60160036

QC Batch: WETA/27681 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60160036001, 60160036002, 60160036003, 60160036004, 60160036005, 60160036006, 60160036007, 60160036008

METHOD BLANK: 1312356 Matrix: Water
Associated Lab Samples: 60160036001, 60160036002, 60160036003, 60160036004, 60160036005, 60160036006, 60160036007, 60160036008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	12/29/13 09:27	
Fluoride	mg/L	ND	0.20	12/29/13 09:27	
Sulfate	mg/L	ND	1.0	12/29/13 09:27	

LABORATORY CONTROL SAMPLE: 1312357

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.0	99	90-110	
Fluoride	mg/L	2.5	2.5	100	90-110	
Sulfate	mg/L	5	5.2	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1312358 1312359

Parameter	Units	60159830001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	437	250	250	690	658	101	88	80-120	5	15	
Fluoride	mg/L	ND	25	25	27.3	27.8	109	111	80-120	2	15	
Sulfate	mg/L	64.1	50	50	113	114	97	99	80-120	1	15	

MATRIX SPIKE SAMPLE: 1312653

Parameter	Units	60160135001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	163	50	216	106	80-120	
Fluoride	mg/L	4.8	25	30.6	103	80-120	
Sulfate	mg/L	2.2	5	7.1	98	80-120	

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60160036

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/42047

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

Batch: MSV/58563

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

Batch: MSV/58601

[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.

pH Post-analysis pH measurement indicates insufficient VOA sample preservation.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 075035 MARTIN 34 NO 2
Pace Project No.: 60160036

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60160036001	**GW-075035-121713-CM-MW-1**	EPA 3010	MPRP/25711	EPA 6010	ICP/19729
60160036002	**GW-075035-121713-CM-MW-2**	EPA 3010	MPRP/25711	EPA 6010	ICP/19729
60160036003	**GW-075035-121713-CM-MW-3**	EPA 3010	MPRP/25711	EPA 6010	ICP/19729
60160036004	**GW-075035-121713-CM-MW-4**	EPA 3010	MPRP/25711	EPA 6010	ICP/19729
60160036005	**GW-075035-121713-CM-MW-5**	EPA 3010	MPRP/25711	EPA 6010	ICP/19729
60160036006	**GW-075035-121713-CM-MW-6**	EPA 3010	MPRP/25711	EPA 6010	ICP/19729
60160036007	**GW-075035-121713-CM-MW-7**	EPA 3010	MPRP/25711	EPA 6010	ICP/19729
60160036008	**GW-075035-121713-CM-MW-8**	EPA 3010	MPRP/25711	EPA 6010	ICP/19729
60160036001	**GW-075035-121713-CM-MW-1**	EPA 3510C	OEXT/42047	EPA 8270C by SIM	MSSV/13367
60160036002	**GW-075035-121713-CM-MW-2**	EPA 3510C	OEXT/42047	EPA 8270C by SIM	MSSV/13367
60160036003	**GW-075035-121713-CM-MW-3**	EPA 3510C	OEXT/42047	EPA 8270C by SIM	MSSV/13367
60160036004	**GW-075035-121713-CM-MW-4**	EPA 3510C	OEXT/42047	EPA 8270C by SIM	MSSV/13367
60160036005	**GW-075035-121713-CM-MW-5**	EPA 3510C	OEXT/42047	EPA 8270C by SIM	MSSV/13367
60160036006	**GW-075035-121713-CM-MW-6**	EPA 3510C	OEXT/42047	EPA 8270C by SIM	MSSV/13367
60160036007	**GW-075035-121713-CM-MW-7**	EPA 3510C	OEXT/42047	EPA 8270C by SIM	MSSV/13367
60160036008	**GW-075035-121713-CM-MW-8**	EPA 3510C	OEXT/42047	EPA 8270C by SIM	MSSV/13367
60160036001	**GW-075035-121713-CM-MW-1**	EPA 5030B/8260	MSV/58563		
60160036002	**GW-075035-121713-CM-MW-2**	EPA 5030B/8260	MSV/58563		
60160036003	**GW-075035-121713-CM-MW-3**	EPA 5030B/8260	MSV/58563		
60160036004	**GW-075035-121713-CM-MW-4**	EPA 5030B/8260	MSV/58563		
60160036005	**GW-075035-121713-CM-MW-5**	EPA 5030B/8260	MSV/58563		
60160036006	**GW-075035-121713-CM-MW-6**	EPA 5030B/8260	MSV/58563		
60160036007	**GW-075035-121713-CM-MW-7**	EPA 5030B/8260	MSV/58563		
60160036007	**GW-075035-121713-CM-MW-7**	EPA 5030B/8260	MSV/58598		
60160036008	**GW-075035-121713-CM-MW-8**	EPA 5030B/8260	MSV/58601		
60160036009	**GW-075035-121713-CM-DUP**	EPA 5030B/8260	MSV/58601		
60160036001	**GW-075035-121713-CM-MW-1**	SM 2540C	WET/45293		
60160036002	**GW-075035-121713-CM-MW-2**	SM 2540C	WET/45293		
60160036003	**GW-075035-121713-CM-MW-3**	SM 2540C	WET/45293		
60160036004	**GW-075035-121713-CM-MW-4**	SM 2540C	WET/45293		
60160036005	**GW-075035-121713-CM-MW-5**	SM 2540C	WET/45293		
60160036006	**GW-075035-121713-CM-MW-6**	SM 2540C	WET/45293		
60160036007	**GW-075035-121713-CM-MW-7**	SM 2540C	WET/45293		
60160036008	**GW-075035-121713-CM-MW-8**	SM 2540C	WET/45293		
60160036001	**GW-075035-121713-CM-MW-1**	EPA 300.0	WETA/27681		
60160036002	**GW-075035-121713-CM-MW-2**	EPA 300.0	WETA/27681		
60160036003	**GW-075035-121713-CM-MW-3**	EPA 300.0	WETA/27681		
60160036004	**GW-075035-121713-CM-MW-4**	EPA 300.0	WETA/27681		
60160036005	**GW-075035-121713-CM-MW-5**	EPA 300.0	WETA/27681		
60160036006	**GW-075035-121713-CM-MW-6**	EPA 300.0	WETA/27681		
60160036007	**GW-075035-121713-CM-MW-7**	EPA 300.0	WETA/27681		
60160036008	**GW-075035-121713-CM-MW-8**	EPA 300.0	WETA/27681		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt
ESI Tech Spec Client

WO#: 60160036

60160036

Optional
Proj Due Date:
Proj Name:

Client Name: CoP CBA NM

Courier: Fed Ex ☒ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ☐

Tracking #: 5689 1279 1193; 5689 1279 1208 Pace Shipping Label Used? Yes ☐ No ☒

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

Packing Material: Bubble Wrap ☑ Bubble Bags ☑ Foam ☒ None ☐ Other ☐

Thermometer Used: T-239 / T-194 **Type of Ice:** (Wet) Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 3.8, 1.8

Date and initials of person examining contents: JAS 12/19/13 1148

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes	☐No	☐N/A	1.
Chain of Custody filled out:	☑Yes	☐No	☐N/A	2.
Chain of Custody relinquished:	☑Yes	☐No	☐N/A	3.
Sampler name & signature on COC:	☑Yes	☐No	☐N/A	4.
Samples arrived within holding time:	☑Yes	☐No	☐N/A	5.
Short Hold Time analyses (<72hr):	☐Yes	☑No	☐N/A	6.
Rush Turn Around Time requested:	☐Yes	☑No	☐N/A	7.
Sufficient volume:	☑Yes	☐No	☐N/A	8.
Correct containers used:	☑Yes	☐No	☐N/A	
Pace containers used:	☑Yes	☐No	☐N/A	9.
Containers intact:	☑Yes	☐No	☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes	☐No	☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes	☐No	☑N/A	12.
Sample labels match COC:	☑Yes	☐No	☐N/A	
Includes date/time/ID/analyses Matrix: water				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: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes	☐No		Initial when completed MM / Lot # of added preservative
Trip Blank present:	☐Yes	☒No	☐N/A	
Pace Trip Blank lot # (if purchased): N/A				15.
Headspace in VOA vials (>6mm):	☐Yes	☒No	☐N/A	
				16.
Project sampled in USDA Regulated Area:	☐Yes	☐No	☒N/A	17. List State:

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Temp Log: Record start and finish times when unpacking cooler, if >20 min, recheck sample temps.	
Start: 1135	Start:
End: 1148	End:
Temp:	Temp:

Project Manager Review: MAF Date: 12/20/13

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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.

Page: of

Section A Required Client Information:
Company: COP CRA NM
Address: 6121 Indian School Rd NE, Ste 200
Albequerque, NM 87110
Email To: cmathews@craworld.com
Phone: (505)884-0672 Fax: (505)884-4932
Requested Due Date/TAT: standard

Section B Required Project Information:
Report To: Christine Mathews
Copy To: Jeff Walker, Angela Bown
Purchase Order No.: 4517653455
Project Name: Martin 34 No. 2
Project Number: 075035

Section C Invoice Information:
Attention: ENFOS
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: Alice Flanagan
Pace Profile #: 5514,2

REGULATORY AGENCY
☐ NPDES ☒ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER ______

Site Location STATE: NM

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Valid Matrix Codes: MATRIX / CODE — DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WIPE WP; AIR AR; OTHER OT; TISSUE TS

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start DATE	Composite Start TIME	Composite End/Grab DATE	Composite End/Grab TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	↓Analysis Test↓ Y/N	8260****	Dissolved Fe, Mn, B	TDS	300.0 **	8270 Naphthalene	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 60160036
1	GW-075035-121713-CM-MW-1	WT	G			12/17/13	1040		8	2		1	3						X	X	X	X	X		3(DG9H) 1(BP3?) 2(BP3N) 2(AG4U) 01
2	GW-075035-121713-CM-MW-2	WT	G			12/17/13	1120		8	2		1	3						X	X	X	X	X		02
3	GW-075035-121713-CM-MW-3	WT	G			12/17/13	1250		8	2		1	3						X	X	X	X	X		03
4	GW-075035-121713-CM-MW-4	WT	G			12/17/13	1156		8	2		1	3						X	X	X	X	X		04
5	GW-075035-121713-CM-MW-5	WT	G			12/17/13	1405		8	4		1	3						X	X	X	X	X		05
6	GW-075035-121713-CM-MW-6	WT	G			12/17/13	1020		8	4		1	3						X	X	X	X	X		06
7	GW-075035-121713-CM-MW-7	WT	G			12/17/13	1310		8	4		1	3						X	X	X	X	X		07
8	GW-075035-121713-CM-MW-8	WT	G			12/17/13	1435		8	4		1	3						X	X	X	X	X		08
9	GW-075035-121713-CM-DUP	WT	G			12/17/13	1025		3				3						X						3(DG9H) 09
10																									
11																									
12																									

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
****BTEX, Methylene Chloride, 1,1,2,2-Tetrachloroethane	[signature] / CRA	12/18/13	1730	[signature] / Pace	12/19/13	925	1.8	Y	Y	Y
**Chloride, Sulfate, Fluoride							3.8	Y	Y	Y

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Christine Mathews
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 12/18/13

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

F-ALL-Q-020rev.08, 12-Oct-2007