3R-429

ADDITIONAL MONITOR WELL INSTALLATION AND GROUNDWATER MONITORING REPORT

CONOCOPHILLIPS MARTIN 34 No. 2
SAN JUAN COUNTY, NEW MEXICO
API# 30-045-08934
NMOCD# 3R-429

Prepared For:

CONOCOPHILLIPS COMPANY
Risk Management and Remediation
420 South Keeler Avenue
Bartlesville, OK, 74004

FEBRUARY 2012
REF. NO. 075035 (2)

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1.0 INTRODUCTION

This report discusses the advancement of four investigational soil borings between the dates of November 9 and 10, 2011 and the installation of three additional groundwater monitor wells between the dates of November 28 and December 1, 2011 at the ConocoPhillips Company (ConocoPhillips) Martin 34 No. 2 natural gas production well site (Site). The Site is located in Section 34, Township 30N, Range 11W, San Juan County, New Mexico, near the intersection of US Highway 550 and Utah Road (**Figure 1**). A Site detail map is included as **Figure 2**.

1.1 SITE BACKGROUND

The surface of the Site is privately owned. ConocoPhillips leases the land. The historical summary for the Site is detailed below, and is also included as **Table 1**.

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

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

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

On June 15, 2011, Site consulting responsibilities were transferred from Tetra Tech to Conestoga-Rovers & Associates (CRA) of Albuquerque, NM. To further investigate hydrocarbon impacts to soil and groundwater, CRA supervised the installation of four two-inch polyvinylchloride (PVC) groundwater monitor wells, MW-1, MW-2, MW-3 and MW-4, between July 19th and 22nd, 2011. A baseline groundwater monitoring event was conducted by CRA on July 27th, 2011. On September 30, 2011 CRA conducted the first quarterly groundwater monitoring event at the Site. Based on analytical results from the baseline and first quarterly groundwater monitoring events, it was concluded that further investigation was necessary. This report details the advancement of four additional soil borings, B-4, B-5, B-6, B-7, and the installation of three additional monitor wells, MW-5, MW-6 and MW-7, at the Site. In addition, this report also discusses the results of both September and December, 2011 quarterly groundwater monitoring events.

2.0 GEOPROBE® SOIL BORING AND SAMPLING ACTIVITIES

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

2.1 SOIL ANALYTICAL RESULTS

In addition to soil samples being collected for field screening purposes, a soil sample was collected from each of the four soil borings for laboratory analysis. In borings B-4 and B-5, soil from the interval directly above groundwater was collected for analysis at 40-44 feet bgs in B-4 and 48-52 feet bgs in B-5. For borings B-6 and B-7 since groundwater was not encountered, samples were collected from the deepest intervals at 28 - 30.5 feet bgs in B-6 and 35.5 - 38 feet bgs in B-7.

Soil samples were collected in laboratory prepared containers, packed on ice and sent under chain of custody documentation to Pace Analytical Services, Inc. (Pace) of Lenexa, Kansas. Soil samples were analyzed for BTEX by Environmental Protection Agency (EPA) Method 8260, total petroleum hydrocarbons (TPH) gasoline range organics (GRO) and diesel range organics (DRO) by EPA Method 8015B. Soil samples collected from B-4, B-5, B-6 and B-7 indicated concentrations below laboratory detection limits and below NMOCD soil action limits for BTEX, TPH GRO and TPH DRO. A summary of soil analytical data has been included as **Table 2**. The corresponding laboratory analytical report has been included in **Appendix B**. **Figure 3** and **Figure 4** show soil concentration contours for TPH GRO and TPH DRO, respectively.

2.2 GROUNDWATER ANALYTICAL RESULTS

Groundwater samples were collected from Soil Borings B-4 and B-5 utilizing the Geoprobe® water sampler. Two feet of screen was placed at the water-baring interval using the Geoprobe® rig and water was hand pumped to the surface using a tubing check valve. Groundwater samples were collected and placed into laboratory prepared containers, packed on ice and sent under chain of custody documentation to Pace to be analyzed for BTEX, 1,1,2,2 - tetrachloroethane, methylene chloride, and naphthalene by EPA Method 8260; chloride, fluoride, and sulfate by EPA Method 300.0; dissolved boron, iron and manganese by EPA Method 6010; and total dissolved solids (TDS) by EPA Method 2540C.

Groundwater samples from both B-4 and B-5 indicated concentrations below method detection limits and NMWQCC standards for BTEX, 1,1,2,2 - tetrachlorethane, methylene chloride, and naphthalene. Concentrations of fluoride, sulfate, dissolved boron, and TDS were above NMWQCC standards in groundwater from B-4 and B-5. Groundwater from B-5 also contained concentrations of chloride and dissolved manganese above NMWQCC standards. A summary of groundwater analytical results is presented as **Table 3**. The corresponding laboratory analytical report has been included in **Appendix C.**

3.0 GROUNDWATER MONITOR WELL INSTALLATION

Between November 28 and December 1 of 2011, three additional groundwater monitor wells were installed at the Site, MW-5, MW-6 and MW-7 by Precision Sampling Inc. (Precision) of Albuquerque, New Mexico under the supervision of CRA. All borings were advanced using a CME-85 drill rig, hollow stem augers, and continuous core barrel sampling techniques. Soil from each of the three monitor well borings was logged and field screened continuously to the completion depth using a PID.

Monitor wells were constructed using 2-inch PVC casing, 0.010 inch slotted PVC screen, and were all finished with flush mount completions set in concrete pads level with the ground surface. **Table 4** includes all monitor well installation specifications. During drilling activities at MW-5, it was noted that the water-bearing zone was different than in other areas. It was located at approximately 47 feet bgs, was approximately two feet thick, and was underlain by dry, dense, brown shale. Following monitor well installation only 0.9 feet of water accumulated in the well overnight.

All drill cuttings generated during monitor well installation with a PID field screening reading of 100 ppm or greater were contained in properly labeled 55 gallon drums and transported for disposal on December 2, 2011 by Envirotech Inc. to Industrial Ecosystems Inc. (IEI) landfarm.

After installation, each monitor well was developed using a 1.5-inch diameter, polyethylene disposable bailer and/or a 1.5-inch diameter submersible purge pump. Approximately 20 gallons of water was purged from Monitor Wells MW-6, and MW-7. Monitor Well MW-5 was purged of approximately one half gallon of water due to low well volume and slow well recharge. Purge water generated during well development was contained in a properly labeled 55 gallon drum on-Site and disposed of on December 2, 2011 by Envirotech Inc. at the IEI landfarm.

Soil boring logs and well completion forms are included as **Appendix A**. Generalized geologic cross sections for the Site are presented in **Figures 5** and **6**.

3.1 SOIL ANALYTICAL RESULTS

During monitor well installation activities conducted November 28 through December 1, 2011, soil samples were collected for laboratory analysis from all three of the monitor well soil borings. Soil samples were collected from MW-5 at depths of 40 to 41 feet bgs, 48.5 to 49 feet bgs, and 49 to 50 feet bgs; MW-6 at depths of 40 to 45 feet bgs, 55 to 57 feet bgs, and 57 to 60 feet bgs; and from MW-7 at depths of 35 to 40 feet bgs and 50 to 53 feet bgs. Soil samples were collected in laboratory prepared containers, packed on ice, and shipped under chain of custody documentation to Pace for analysis. Each soil sample was analyzed for BTEX by EPA Method 8260, TPH GRO and TPH DRO by EPA Method 8015B. Results for all soil samples had concentration of BTEX, TPH GRO and TPH DRO at levels below method detection limits or the NMOCD recommended soil action limits except for the sample collected from MW-6 from 55 to 57 feet bgs, which contained a concentration for total BTEX of 100.74 milligrams per kilogram (mg/kg) and a total TPH concentration of 2304 mg/kg. The NMOCD recommended soil action limits for this Site for total BTEX and total TPH are 50 mg/kg and 100 mg/kg, respectively. A summary of soil analytical data has been included as **Table 2**. The corresponding laboratory analytical report has been included in **Appendix B**.

4.0 GROUNDWATER MONITORING SUMMARY, SAMPLING METHODOLOGY AND RESULTS

4.1 GROUNDWATER MONITORING SUMMARY

Groundwater quality monitoring events were conducted on September 30 and December 13, 2011. Prior to collection of groundwater samples from Site monitor wells, depth to groundwater in each well was determined using an oil/water interface probe. The top of casings (TOC) for Site Monitor Wells, MW-1, MW-2, MW-3 and MW-4, were surveyed on July 27, 2011 using an arbitrary reference-elevation of 100. Site monitor wells were re-surveyed to include the addition of wells MW-5, MW-6 and MW-7 on January 24, 2012. Top of casing elevations determined from the original Site survey were used in conjunction with groundwater level measurements collected during the September monitoring event to develop a groundwater potentiometric surface map for the September event (**Figure 7**). Top of casing elevations from the January 24, 2012 survey were used with groundwater levels measured during the December monitoring event to develop the December 2011 potentiometric surface map (**Figure 8**). Using this data, groundwater flow direction at the Site is calculated to be toward the south. Numerical groundwater elevation information from September and December 2011 is included in **Table 4**.

It should be noted that stratigraphic correlation is poor between MW-5 and other Site monitor wells. For this reason, the groundwater elevation for MW-5 was not included in the potentiometric surface map for the December 2011 monitoring event.

4.2 GROUNDWATER SAMPLING METHODOLOGY

During the September 30 and December 13, 2011 quarterly groundwater monitoring events, Site monitor wells were either bailed dry and allowed to recharge or purged of at least three casing volumes of groundwater using a 1.5-inch diameter dedicated polyethylene bailer. While bailing each monitor well, groundwater parameters--including temperature, pH, conductivity, oxidation/reduction potential (ORP), and total dissolved solids (TDS), were measured using a YSI 556 multi-parameter sonde. Parameters were recorded along with general observations such as color, odor, and clarity on CRA Well Sampling Field Information Forms (**Appendix D**). Groundwater parameters were not recorded at Monitor Well MW-1 during the purging process due to the low well volume during both the September and December 2011 monitoring events. Groundwater parameters were also not recorded at MW-5 during the December 2011 monitoring event due to low well volume.

All groundwater samples were collected using dedicated, 1.5 inch, polyethylene bailers and were placed in laboratory prepared bottles, packed on ice, and shipped under chain of custody documentation to Pace for analysis. Groundwater samples were collected from MW-1, MW-2, MW-3, and MW-4 during the September and December 2011 events. Groundwater samples were also collected from newly installed Monitor Wells MW-5, MW-6 and MW-7 during the December 2011 event. All groundwater samples were analyzed for VOCs by EPA Method 5030B/8260; Chloride, Fluoride, and Sulfate by EPA Method 300.0; TDS by SM 2540C; and dissolved iron, dissolved boron and dissolved manganese by EPA Method 6010, with the exception of the MW-5 sample from the December 2011 which was only analyzed for VOCs due to low well volume. Results of the September and December 2011 quarterly monitoring analyses are summarized in **Table 3**.

4.3 SEPTEMBER AND DECEMBER 2011 GROUNDWATER MONITORING RESULTS

The NMWQCC mandates that groundwater quality in New Mexico be protected, and has issued groundwater quality standards in Title 20, Chapter 6, Part 2, Section 3103 of the New Mexico Administrative Code (20.6.2.3103 NMAC). Groundwater quality standards have been set for the protection of human health, domestic water supply, and irrigation use. Exceedences of NMWQCC groundwater quality standards in Site monitor wells during the September and December 2011 monitoring events are discussed below. Insufficient well volume was present in Monitor Well MW-1 for dissolved metals analysis during the September 2011 event. During the December 2011 monitoring event, insufficient well volume was present in MW-5; therefore, only analysis for VOCs was performed. The corresponding laboratory analytical reports for both September and December 2011 sampling events, including quality control documentation, are included in **Appendix C**. Groundwater benzene concentration maps for September and December 2011 are included as **Figure 9** and **Figure 10**, respectively. A summary of all groundwater analytical data is included as **Table 3**.

Benzene

The groundwater quality standard for benzene is 0.010 milligrams per liter (mg/L). Groundwater collected during the September 2011 monitoring event from Monitor Wells MW-1 and MW-2 contained benzene concentrations of 4.47mg/L and 0.197 mg/L, respectively. Groundwater collected from Monitor Wells MW-1, MW-2, MW-5, MW-6 and MW-7 during the December 2011

monitoring event contained benzene concentrations of 4.44 mg/L, 0.249 mg/L, 0.195 mg/L, 0.0247mg/L, and 0.0196 mg/L, respectively.

Toluene

The groundwater quality standard for toluene is 0.750 mg/L. Groundwater collected from Monitor Well MW-1 contained a concentration of toluene of 9.48 mg/L during the September 2011 monitoring event and a concentration of 6.23 mg/L during the December 2011 event.

Ethylbenzene

The groundwater quality standard for ethylbenzene is 0.750 mg/L. Groundwater collected from Monitor Well MW-1 was found to contain 0.772 mg/L ethylbenzene during the September 2011 monitoring event and a concentration of 0.751 mg/L during the December 2011 monitoring event.

Xylenes

The groundwater quality standard for total xylenes is 0.620 mg/L. Groundwater collected from Monitor Well MW-1 was found to contain total xylenes at a concentration of 8.330 mg/L during the September 2011 monitoring event. Groundwater samples collected from both MW-1 and MW-6 during the December 2011 monitoring event contained xylenes at concentrations of 9.04 mg/L and 2.650 mg/L, respectively.

Naphthalene

The groundwater quality standard for naphthalene is 0.030 mg/L. Groundwater collected from Monitor Well MW-2 was found to contain naphthalene at a concentration of 0.0727 mg/L during the September 2011 monitoring event. Naphthalene was reported by Pace to be below their specified reporting limits for groundwater collected from monitor well MW-1 in September 2011 and MW-1, MW-2 and MW-6 during December 2011; however, the reporting limits were above the NMWQCC standard.

Dissolved Boron

The groundwater quality standard for dissolved boron is 0.75 milligrams per liter (mg/L). Groundwater collected from Monitor Wells MW-2 and MW-3 during the September 2011 monitoring event contained dissolved boron concentrations of 1.08 mg/L and 0.914 mg/L, respectively. Groundwater collected from Monitor Wells MW-1, MW-2, MW-3, and MW-7 during the December 2011

monitoring event contained dissolved boron concentrations of 1.12 mg/L, 1.12 mg/L, 0.997 mg/L, and 0.772 mg/L.

Dissolved Manganese

The groundwater quality standard for dissolved manganese is 0.2 milligrams per liter (mg/L). Groundwater collected from Monitor Wells MW-2, MW-3 and MW-4 during the September 2011 monitoring event contained dissolved manganese concentrations of 2.54 mg/L, 3.74 mg/L, and 10.8 mg/L, respectively. Groundwater collected from Monitor Wells MW-1, MW-2, MW-3, MW-4, MW-6 and MW-7 during the December 2011 monitoring event contained dissolved manganese concentrations of 4.17 mg/L, 2.28 mg/L, 0.776 mg/L, 8.50 mg/L, 2.93 mg/L, and 2.28 mg/L, respectively.

Dissolved Iron

The groundwater quality standard for dissolved iron is 1.0 mg/L. Groundwater collected from Monitor Wells MW-2 and MW-4 contained concentrations of dissolved iron above the NMWQCC standard at 3.59 mg/L, and 1.13 mg/L, respectively. Groundwater samples collected from Monitor Wells MW-2, MW-3, MW-4, MW-6 contained dissolved iron concentrations at 8.94 mg/L, 4.16 mg/L, 1.02 mg/L, 1.43 mg/L, and 4.10 mg/L, respectively.

Total Dissolved Solids

The NMWQCC groundwater quality standard for TDS is 1,000 mg/L. Groundwater samples collected from all site monitor wells during both the September and December 2011 monitoring events were found to contain TDS concentrations greater than 1,000 mg/L. TDS values in groundwater samples ranged from 21,000mg/L to 40,700 mg/L.

Sulfate

The NMWQCC groundwater quality standard for sulfate is 600 mg/L. Groundwater samples collected from all site monitor wells during both the September and December 2011 monitoring events were found to contain sulfate in concentrations greater than 600 mg/L. Sulfate concentrations in groundwater samples ranged from 13,300 to 27,400 mg/L in September 2011, and from 12,300 to 26,900 mg/L in December 2011.

Chloride

The groundwater quality standard for chloride is 250 mg/L. Groundwater samples collected from all site monitor wells during the September and December 2011 monitoring events were found to contain chloride in concentrations greater than 250 mg/L. Chloride concentrations in groundwater samples ranged from 287 mg/L to 449 mg/L in September 2011, and from 269 mg/L to 375 mg/L in December 2011.

Fluoride

The groundwater quality standard for fluoride is 1.6 mg/L. Groundwater collected from Monitor Well MW-4 was found to contain fluoride at a concentration of 2.8 mg/L during the September 2011 monitoring event. Fluoride was reported the specified reporting limits for groundwater collected from Monitor Wells MW-1, MW-2 and MW-3 during the September 2011 event; however, the reporting limit was above the NMWQCC standard.

5.0 CONCLUSIONS AND RECOMMENDATIONS

CRA conducted additional soil and groundwater investigation activities between November 9 and December 1, 2011, as well as, quarterly groundwater monitoring events on September 30 and December 13, 2011 at the Martin 34 No. 2 site. CRA recommends the continuation of quarterly groundwater monitoring until concentrations of all monitored groundwater quality parameters are below NMWQCC standards, appear stable or reach regional background levels.

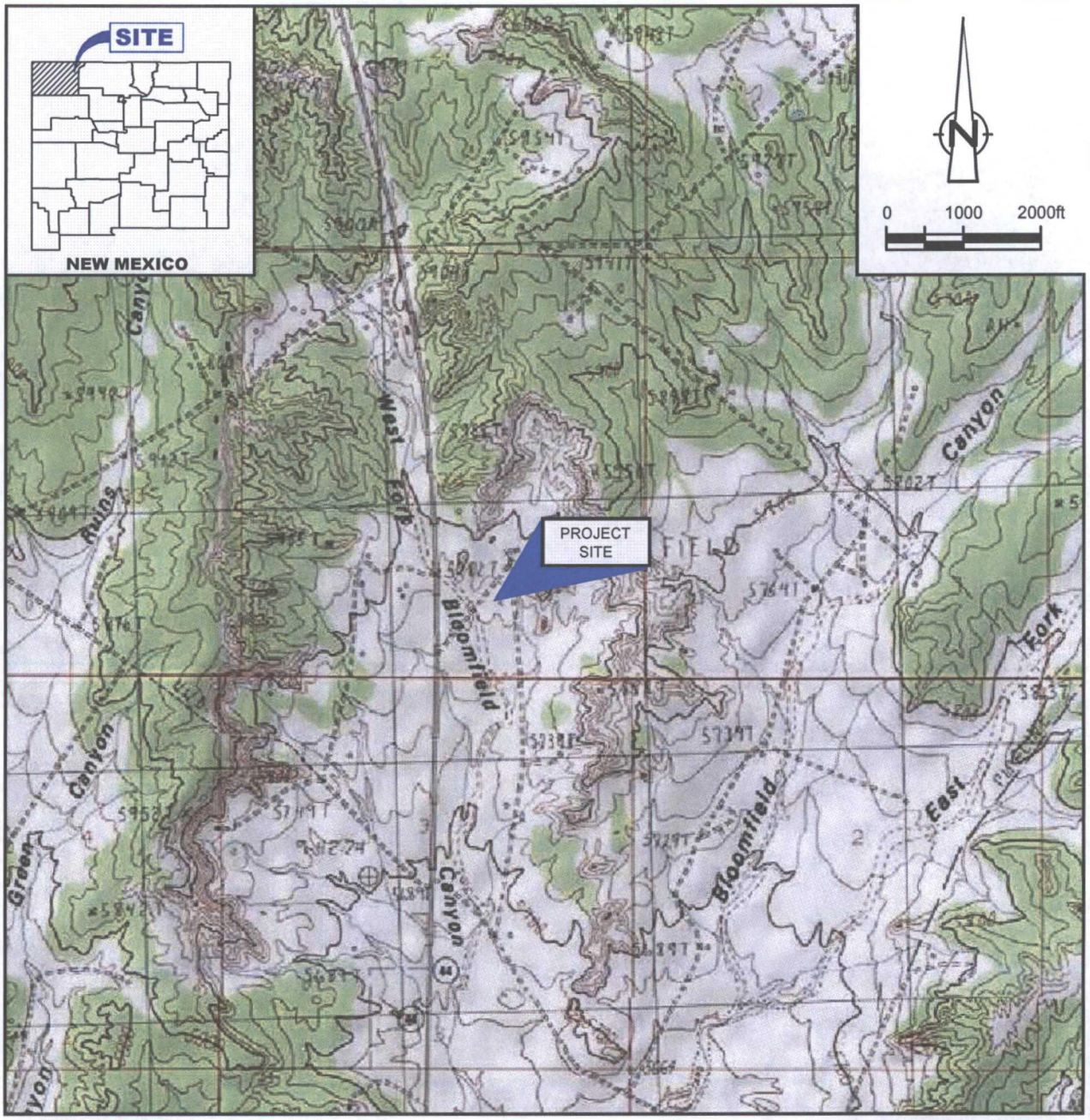
In order to better delineate the aerial extent of subsurface hydrocarbons in the shallow soil and groundwater, CRA recommends installing a monitor well east of MW-1.

In order to attempt to delineate impacts in MW-5, which appear to be separate from other impacted areas at the Site, CRA recommends installing an additional monitor well north of MW-5. Proposed locations for additional monitor wells are shown in **Figure 11**.

Groundwater flow direction at the Site was calculated to be toward the south. CRA will continue to monitor groundwater flow direction at the Site and will note any changes should they occur.

The next groundwater monitoring event at the Site is scheduled for March 2012.

FIGURES



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

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

Figure 1

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

075035-95(002)GN-DL005 JAN 18/2012

RE: NAIP Aerial Photograph

Figure 2

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

075035-95(002)GN-DL001 MAR 15/2012

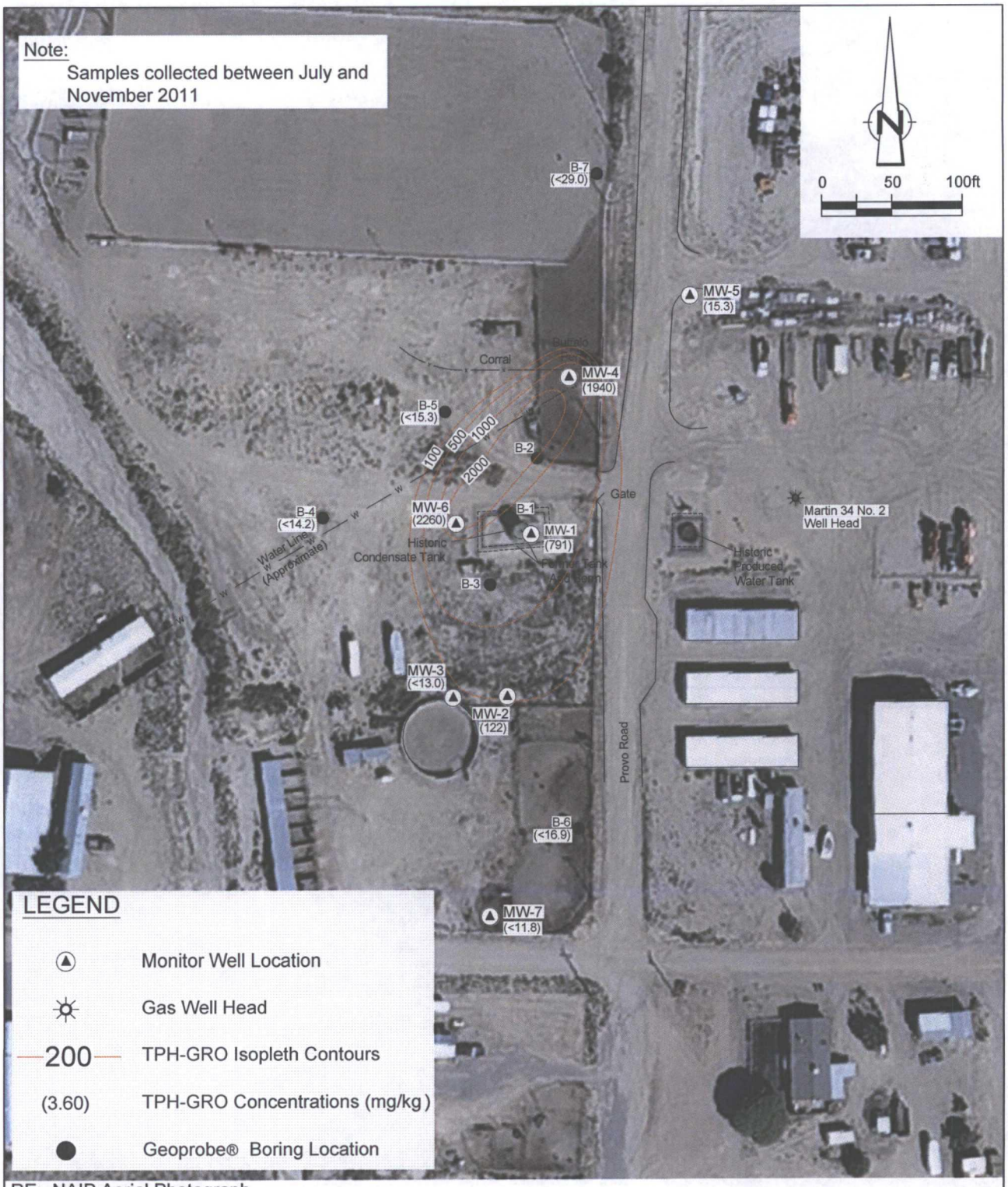


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Figure 3

TPH-GRO CONCENTRATION IN SOIL MAP
MARTIN 34 No. 2 GAS WELL REMEDIATION SITE
SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

075035-95(002)GN-DL006 MAR 15/2012

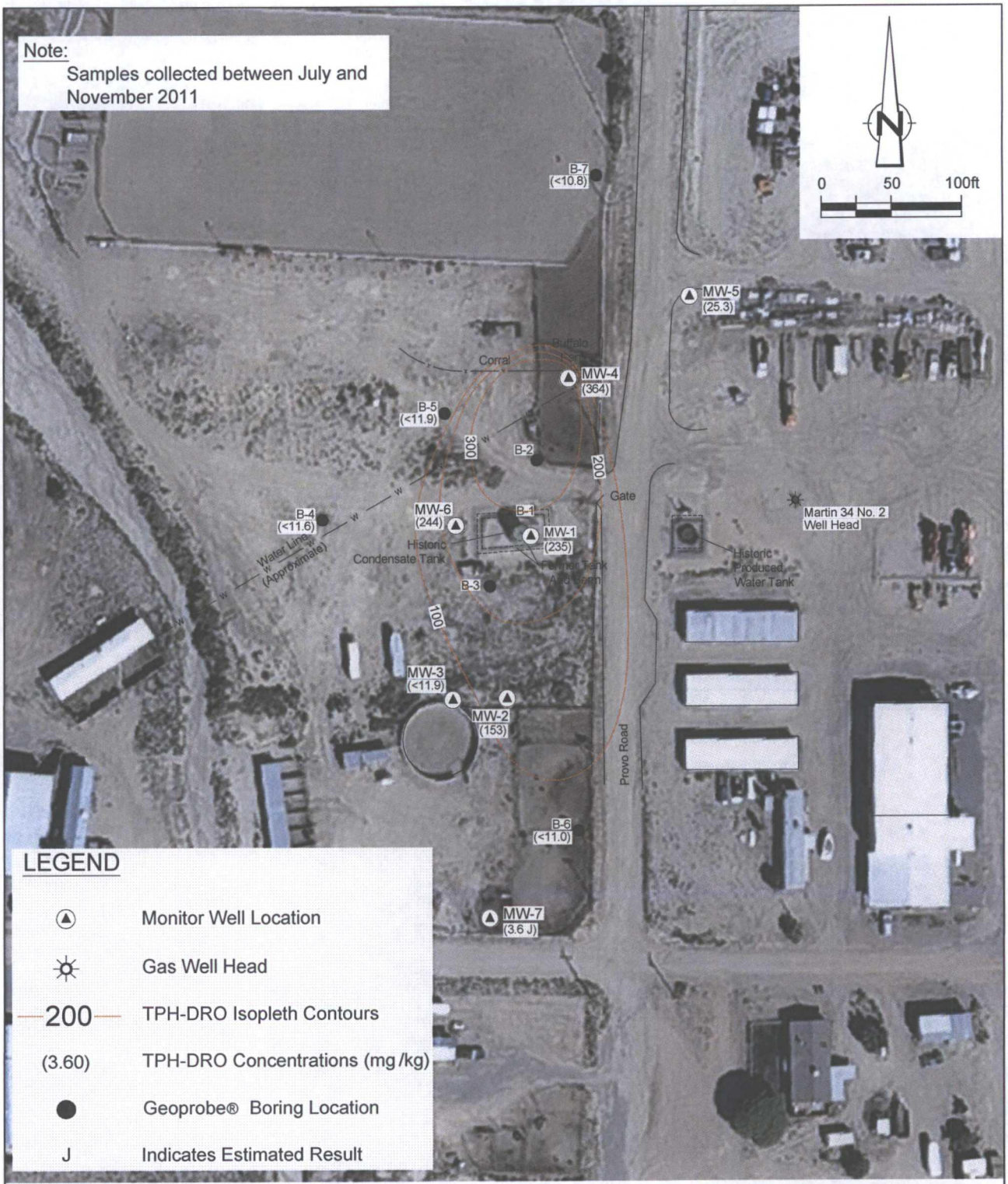

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Figure 4

TPH-DRO CONCENTRATION IN SOIL MAP
MARTIN 34 No. 2 GAS WELL REMEDIATION SITE
SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

075035-95(002)GN-DL006 MAR 15/2012

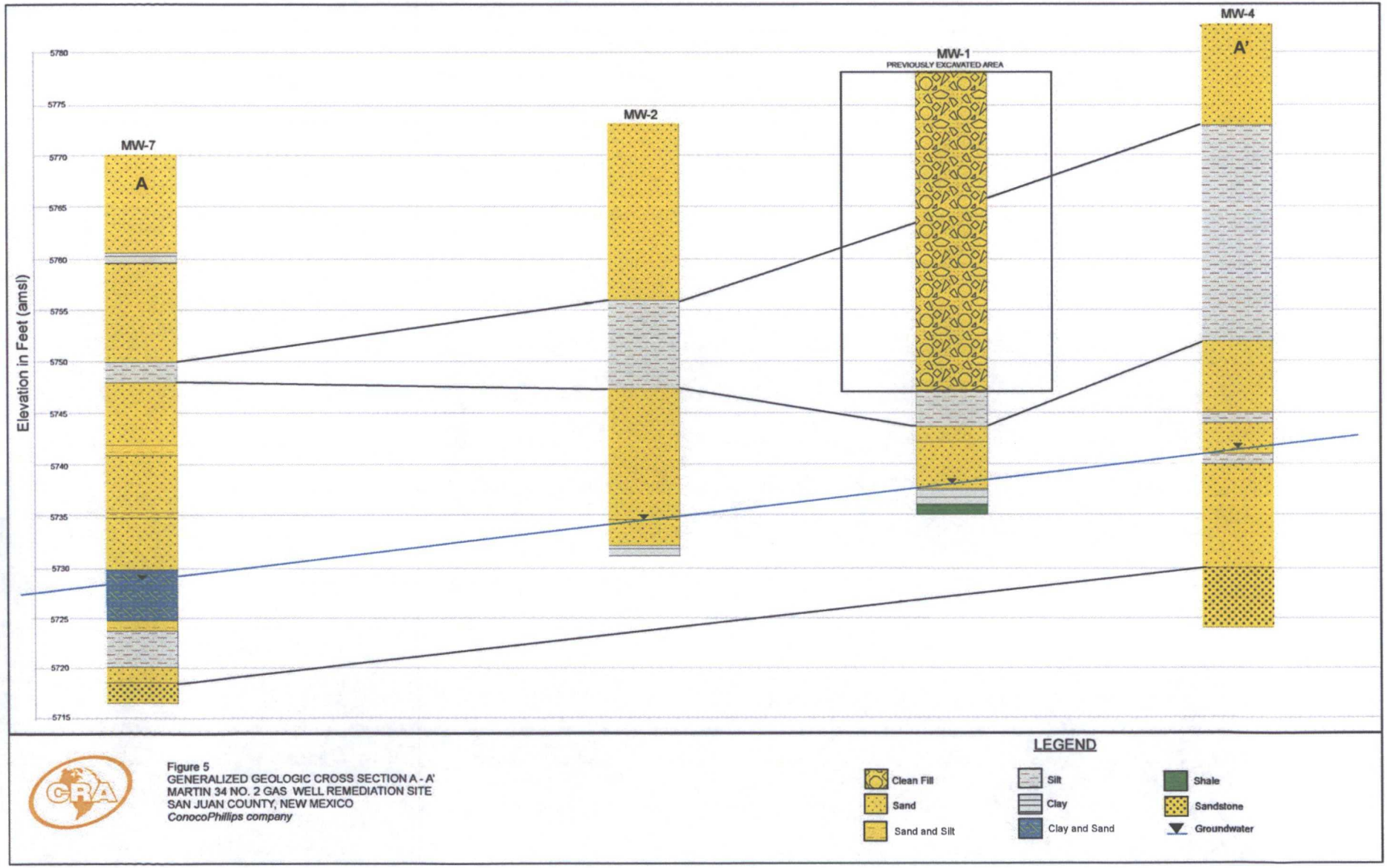

Figure 5
GENERALIZED GEOLOGIC CROSS SECTION A - A'
MARTIN 34 NO. 2 GAS WELL REMEDIATION SITE
SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips company

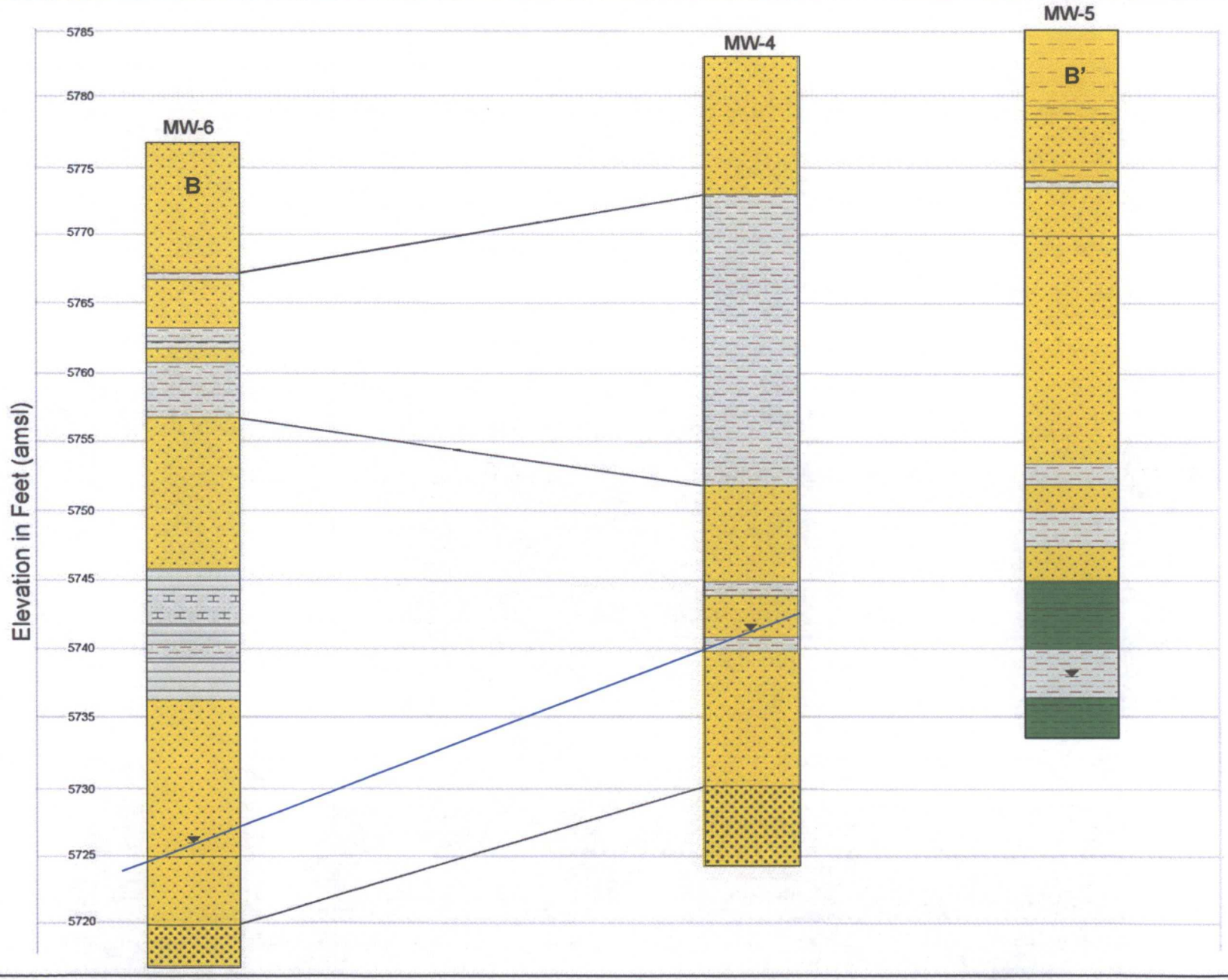

Figure 6
GENERALIZED GEOLOGIC CROSS SECTION B - B'
MARTIN 34 NO. 2 GAS WELL REMEDIATION SITE
SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips company

LEGEND

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

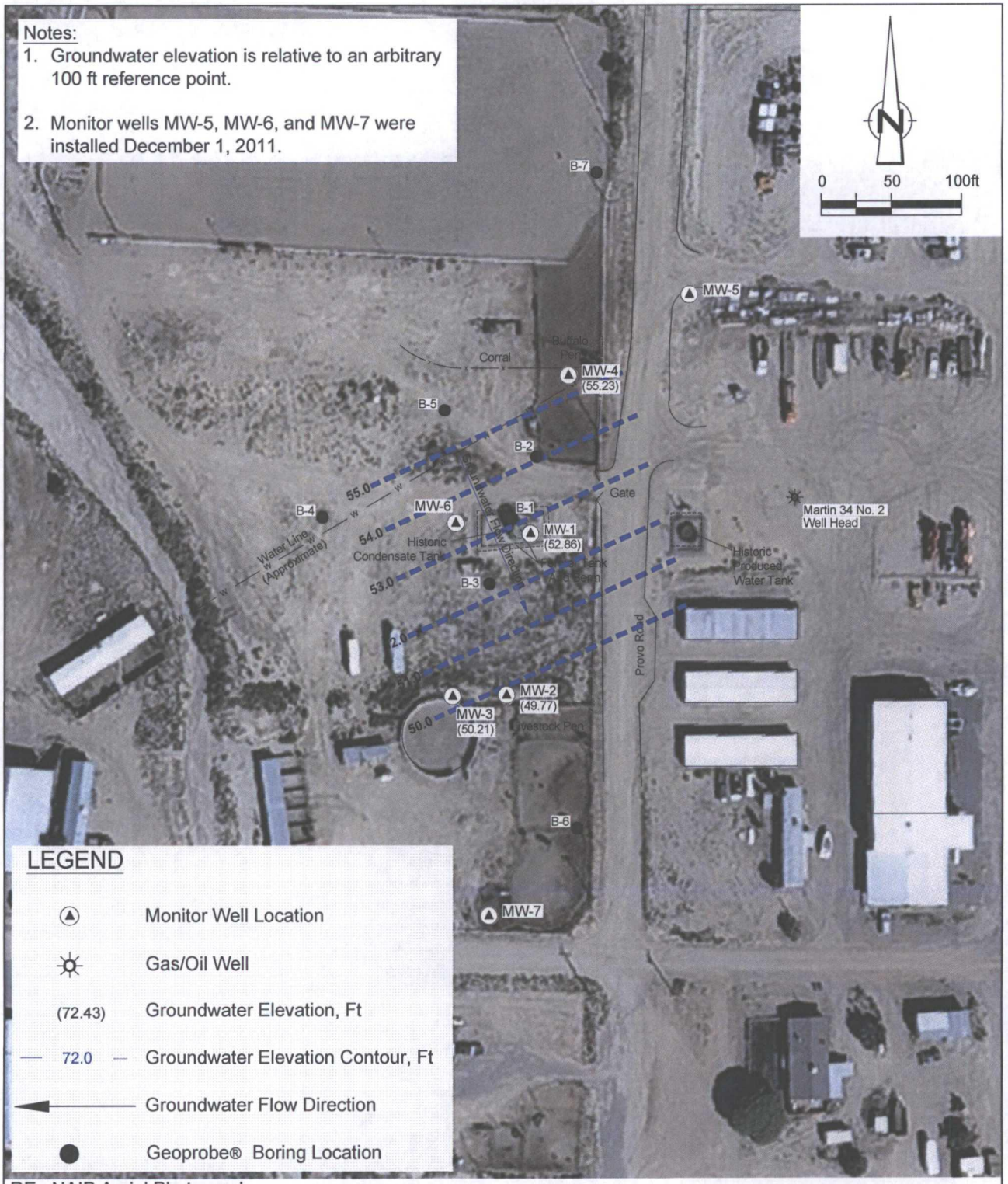

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Figure 7

SEPTEMBER 2011 GROUNDWATER POTENTIOMETRIC SURFACE MAP
MARTIN 34 No. 2 GAS WELL REMEDIATION SITE
SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

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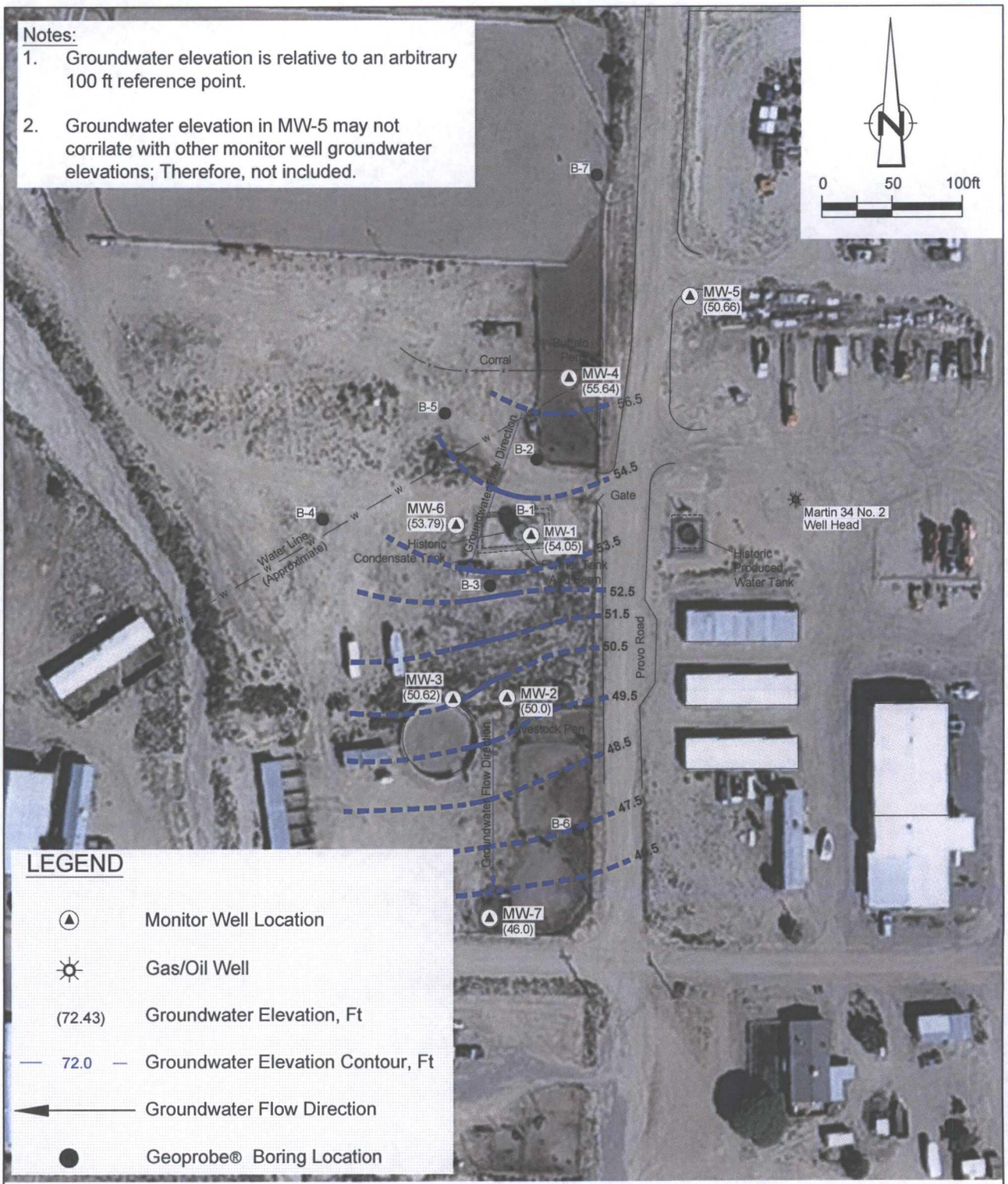

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Figure 8

DECEMBER 2011 GROUNDWATER POTENTIOMETRIC SURFACE MAP
MARTIN 34 No. 2 GAS WELL REMEDIATION SITE
SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

075035-95(002)GN-DL002 MAR 15/2012

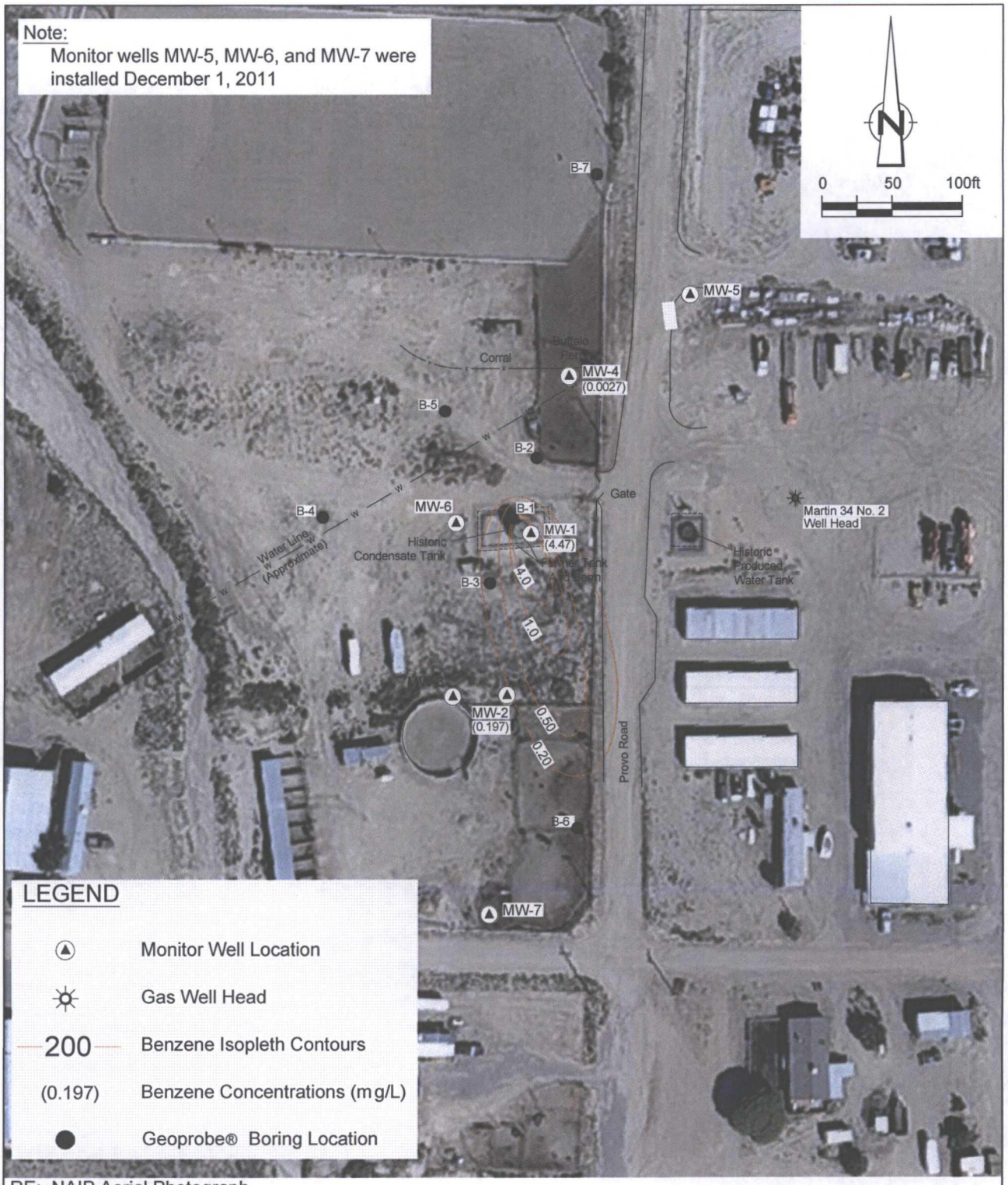

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Figure 9

SEPTEMBER 2011 BENZENE CONCENTRATION MAP
MARTIN 34 No. 2 GAS WELL REMEDIATION SITE
SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

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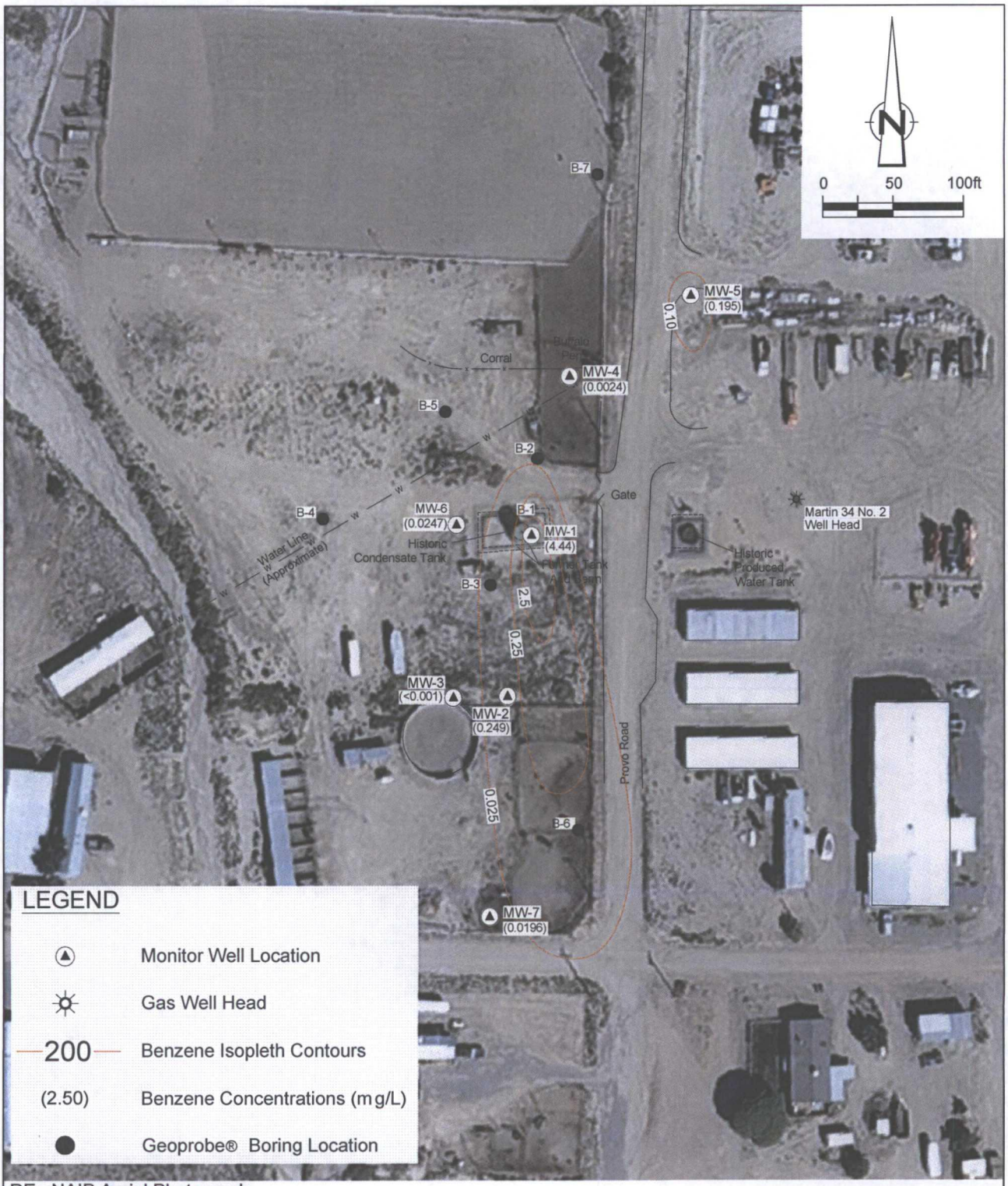

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Figure 10

DECEMBER 2011 BENZENE CONCENTRATION MAP
MARTIN 34 No. 2 GAS WELL REMEDIATION SITE
SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

075035-95(002)GN-DL002 MAR 15/2012

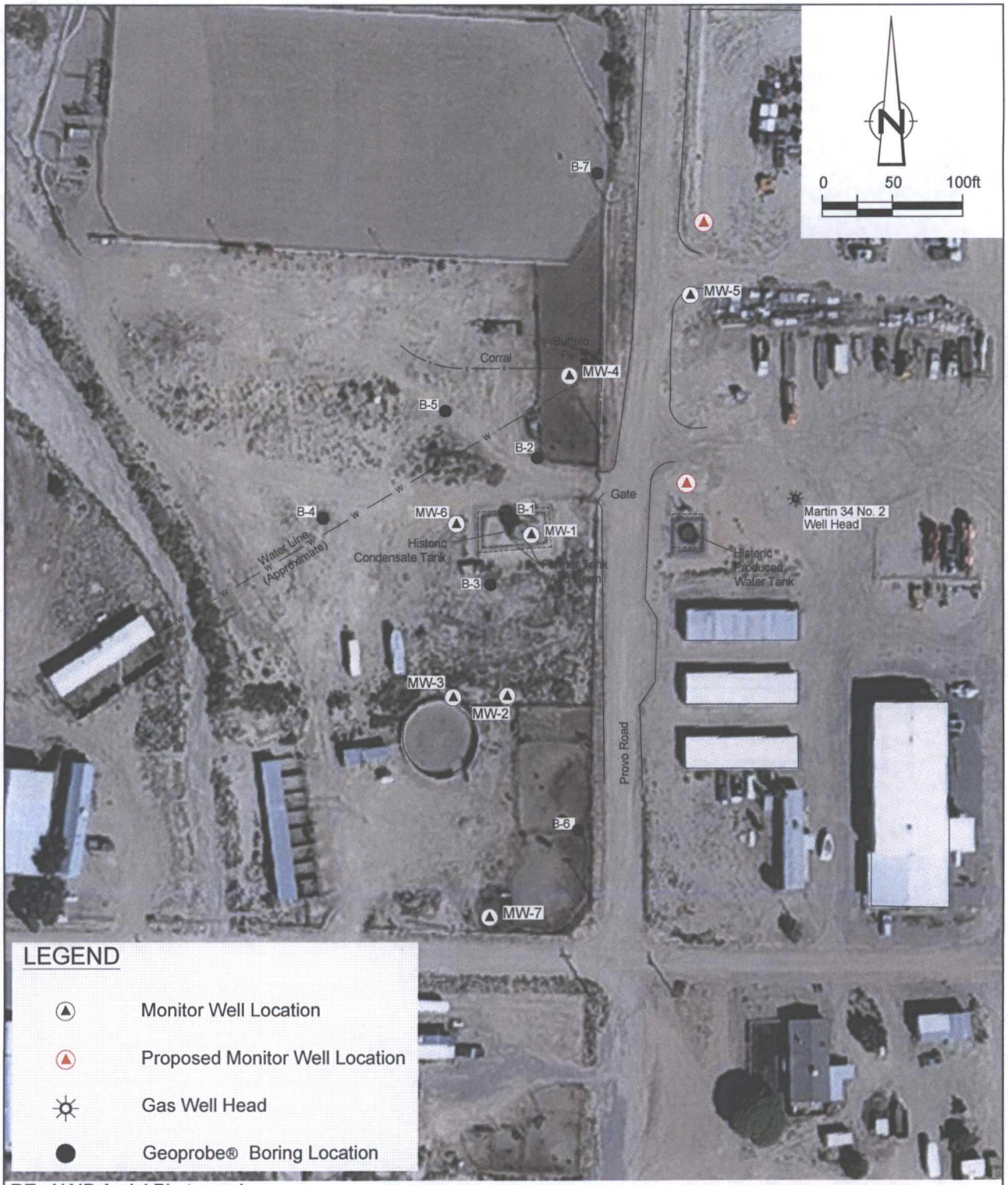

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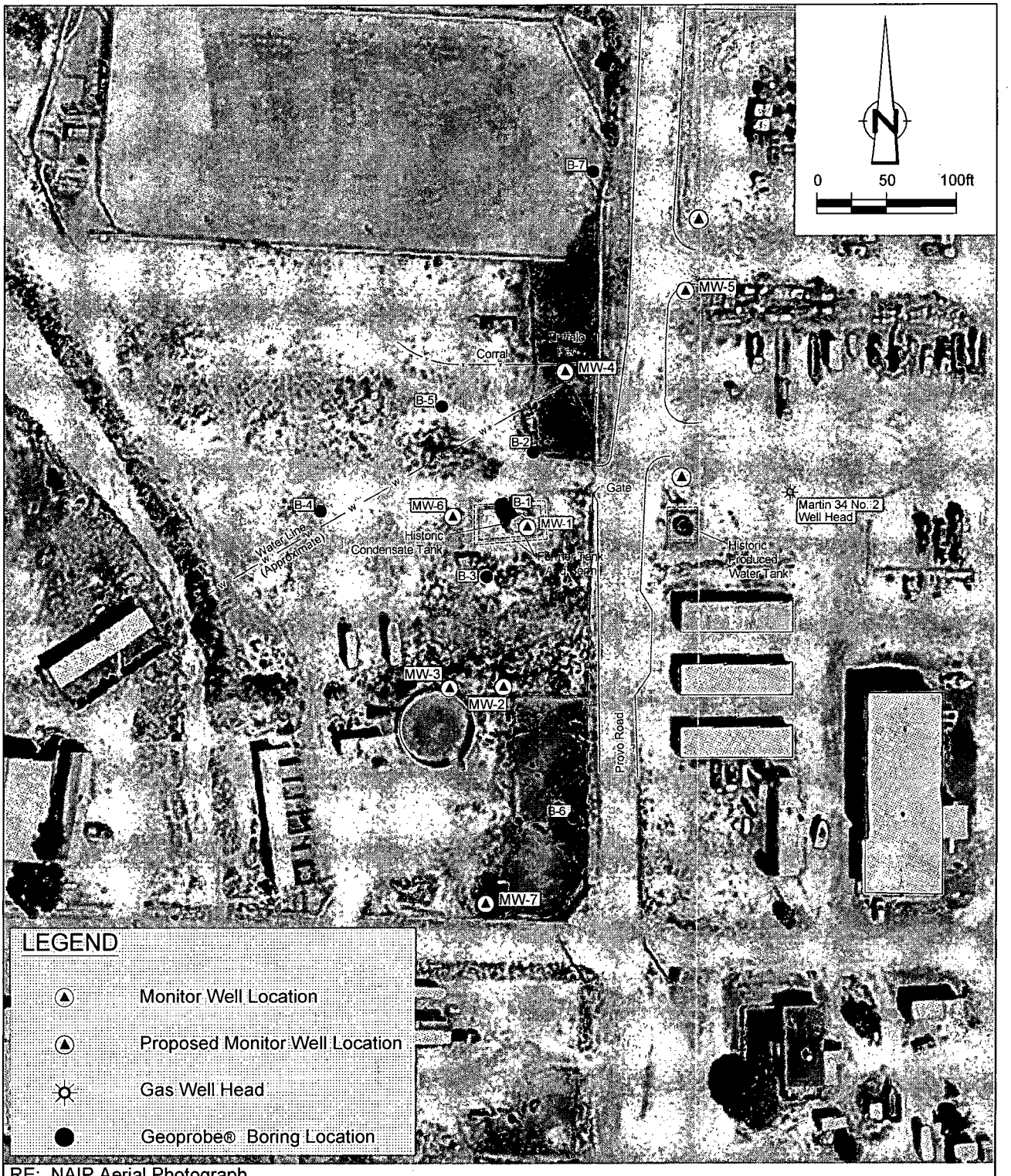
Figure 11

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

075035-95(002)GN-DL007 MAR 15/2012



RE: NAIP Aerial Photograph

Figure 11

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

075035-95(002)GN-DL007 MAR 15/2012

TABLES

TABLE 1

SITE HISTORY
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.
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.

TABLE 2

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

Well ID	Sample Interval (ft)	Sample ID	Date	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Xylenes (total) (mg/kg)	Total BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)
B-4	(40-44)	075035-110911-B4-(40-44)	11/9/2011	<0.0053	<0.0053	<0.0053	<0.0053	<0.0212	<11.6	<14.2
B-5	(48-52)	075035-110911-B5-(48-52)	11/9/2011	<0.0047	<0.0047	<0.0047	<0.0047	<0.0188	<11.9	<15.3
B-6	(28-30.5)	075035-110911-B6-(28-30.5)	11/10/2011	<0.0059	<0.0059	<0.0059	<0.0059	<0.0236	<11.0	<16.9
B-7	(35.5-38)	075035-110911-B7-(35.5-38)	11/10/2011	<0.0059	<0.0059	<0.0059	<0.0059	<0.0236	<10.8	<29.0
MW-1	(36-38)	S-075035-210711-CFM-007	7/21/2011	0.295	4.06	16.8	46.9	**68.055**	**235**	**791**
	(42-43)	S-075035-210711-CFM-008	7/21/2011	0.0217	0.0164	0.242	0.205	0.4851	<11.7	23.6
MW-2	(35-37)	S-075035-200711-CFM-004	7/20/2011	<0.0062	<0.0062	<0.0062	<0.0125	<0.0311	<10.6	21.5
	(39-41)	S-075035-200711-CFM-005	7/20/2011	<0.306	0.529	<0.306	0.597	1.126	**153**	**122**
MW-3	(36-38)	S-075035-200711-CFM-006	7/20/2011	<0.0059	<0.0059	<0.0059	<0.0118	<0.0295	<11.9	<13.0
MW-4	(39-41)	S-075035-190711-CFM-001	7/19/2011	<0.0066	<0.0066	<0.0066	<0.0131	<0.0329	<11.2	<11.2
	(51-53)	S-075035-190711-CFM-002	7/19/2011	<0.291	4.29	2.61	88.4	**95.3**	**364**	**1940**
	(54-56)	S-075035-190711-CFM-003	7/19/2011	<0.0083	<0.0083	<0.0083	<0.0166	<0.0415	<11.4	**206**
MW-5	(40-41)	S-075035-112911-JP-MW-5(40-41)	11/29/2011	< 0.0062	< 0.0062	< 0.0062	< 0.0123	<0.0309	4.2J	<12.5
	(48.5-49)	S-075035-112911-JP-MW-5(48.5-49)	11/29/2011	0.0682	0.0596	<0.0051	0.0929	0.0596	25.3	15.3
	(49-50)	S-075035-112911-JP-MW-5(49-50)	11/29/2011	0.0521	0.0140	<0.0052	0.0285	0.0946	5.5J	<11.7
MW-6	(40-45)	S-075035-112911-JP-MW-6(40-45)	11/29/2011	<0.0052	<0.0052	<0.0052	<0.0104	<0.00248	6.2J	<12.3
	(55-57)	S-075035-112911-JP-MW-6(55-57)	11/29/2011	<0.249	2.740	<0.249	98.0	**100.74**	**244**	**2260**
	(57-60)	S-075035-112911-JP-MW-6(57-60)	11/29/2011	<0.0069	<0.0069	<0.0069	<0.0139	<0.0346	2.4J	<17.9
MW-7	(35-40)	S-075035-113011-JP-MW-7(35-40)	11/30/2011	<0.0049	<0.0049	<0.0049	<0.0098	<0.0245	3.0J	<11.4
	(50-53)	S-075035-113011-JP-MW-7(50-53)	11/30/2011	<0.0051	<0.0051	<0.0051	<0.0103	<0.0256	3.6J	<11.8
NMOCD Soil Guidelines				**10.0**	**NE**	**NE**	**NE**	**50.0**	**100**	

Notes:
NMOCD = New Mexico Oil Conservation Division
mg/L = milligrams per liter (parts per million)
mg/kg = milligrams per kilogram (parts per million)
BTEX = benzene, toluene, ethylbenzene, and xylenes
TPH = total petroleum hydrocarbons
DRO = diesel range organics
GRO = gasoline range organics
J = estimated value detected between the method detection limit and the reporting limit
<0.001 = Below laboratory detection limit of 0.001 mg/L
Bold = concentrations that exceed the NMOCD guidelines

TABLE 3

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)
B-4	SW-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	SW-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	--	--	--	--	--	--	--	--	--	--
MW-2	GW-075035-072711-CFM-001	7/27/2011	(orig)	0.244	0.152	< 0.01	0.0814	0.0191	0.0165	< 0.112 / < 0.1	330	2.9	17100	1.09	3.46	2.71	26600
	GW-075035-072711-CFM-002	7/27/2011	(Duplicate)	0.23	0.143	< 0.005	0.0784	0.0092	0.0096	0.0535	--	--	--	--	--	--	--
	GW-075035-093011-CM-007	9/30/2011	(orig)	0.197	0.155	< 0.001	0.112	< 0.001	< 0.001	0.0727	328	< 2.0	19100	1.08	3.59	2.54	26000
	GW-075035-093011-CM-010	9/30/2011	(Duplicate)	0.258	0.189	< 0.005	0.113	< 0.005	0.0144	0.0715	--	--	--	--	--	--	--
	GW-075036-121311-CB-MW-2	12/13/2011	(orig)	0.249	0.199	0.0266	0.143	<0.010	<0.010	<0.10	348	0.75	16800	1.12	4.16	2.280	26600
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
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
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	--	--	--	--	--	--	--
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
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
NMWQCC Groundwater Quality Standards				0.01	0.75	0.75	0.62	0.01	0.1	0.03	250	1.6	600	0.75	1	0.2	1000

Notes:
NMWQCC = New Mexico Water Quality Control Commission
mg/L = milligrams per liter (parts per million)
<0.001 = Below laboratory detection limit of 0.001 mg/L
Bold = concentrations that exceed the NMWQCC groundwater quality standard

TABLE 4

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
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
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
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
MW-5	48.5	38.5 - 48.5	98.27	12/13/2011	47.61	50.66
MW-6	59.0	44-59	94.8	12/13/2011	41.01	53.79
MW-7	51.5	36.5-51.5	86.49	12/13/2011	40.49	46.00

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

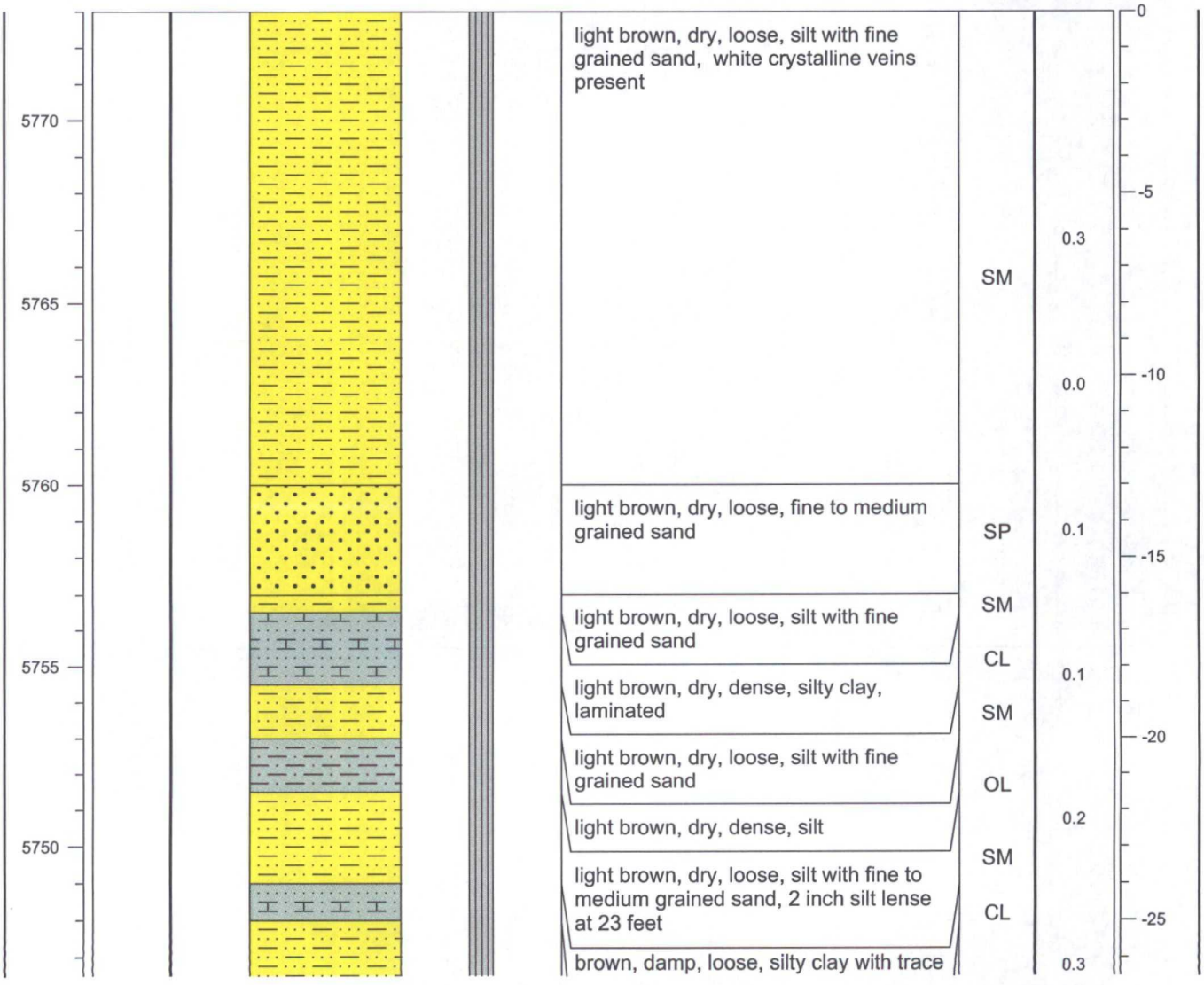
APPENDIX A

SOIL BORING LOG AND WELL COMPLETION FORMS

PROJECT NAME: Martin 34 No. 2
LOCATION: San Juan County, NM
FIELD LOGGED BY: Christine Mathews
SURFACE ELEVATION (msl): ~ 5773 feet
GROUNDWATER ELEVATION (msl): ~ 5729 feet
REMARKS:

COORDINATES: 36.763908 -107.976695

SOIL BORING NO: B-4
DRILL TYPE: Geoprobe
Direct push
BORE HOLE DIAMETER: 2 inches
DRILLED BY: JR Drilling
DATE/TIME HOLE STARTED: November 9, 2011 at 10:00 AM
DATE/TIME HOLE COMPLETED: November 9, 2011 at 2:00 PM



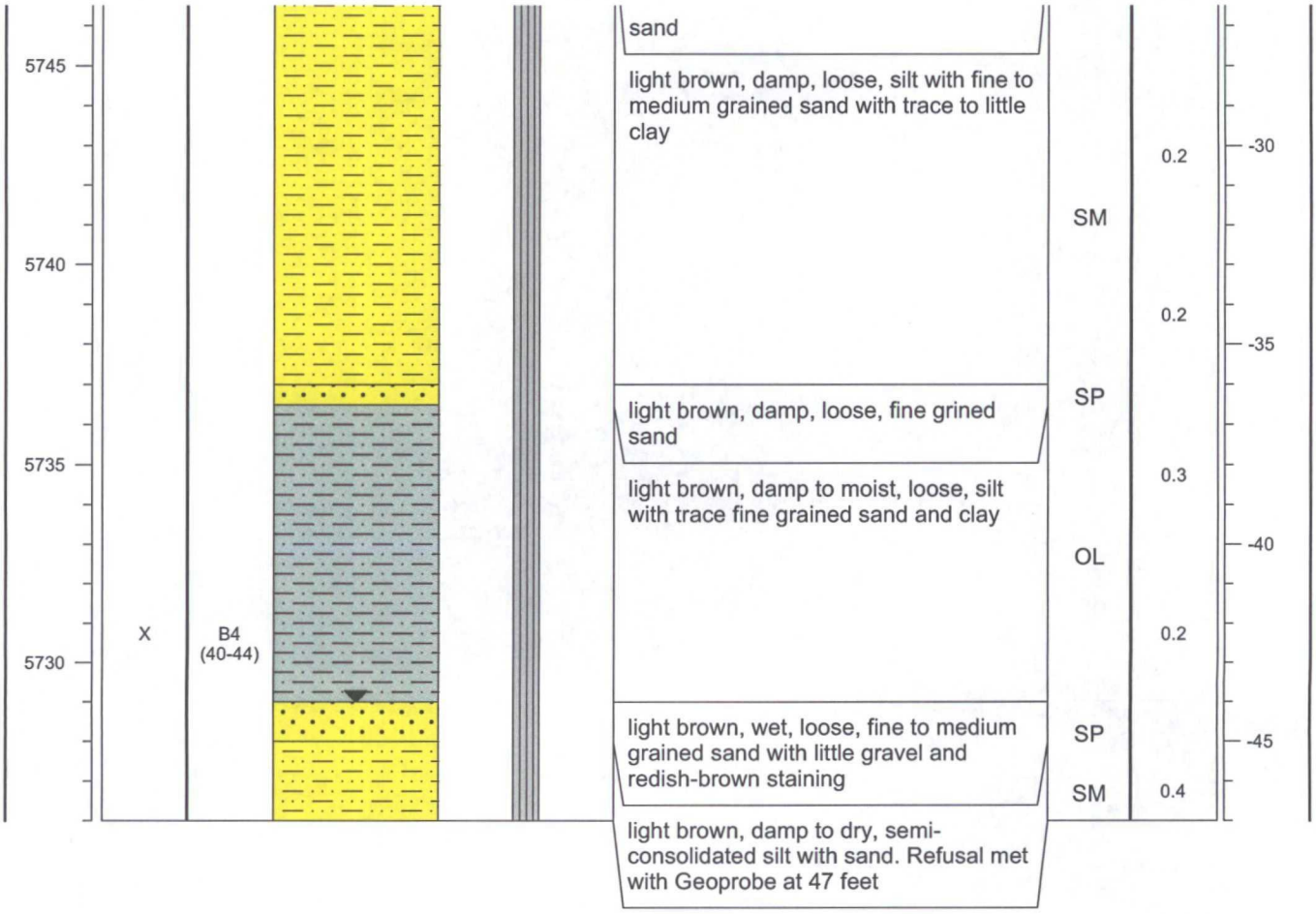
Total depth = 47 feet

CONESTOGA-ROVERS & ASSOCIATES

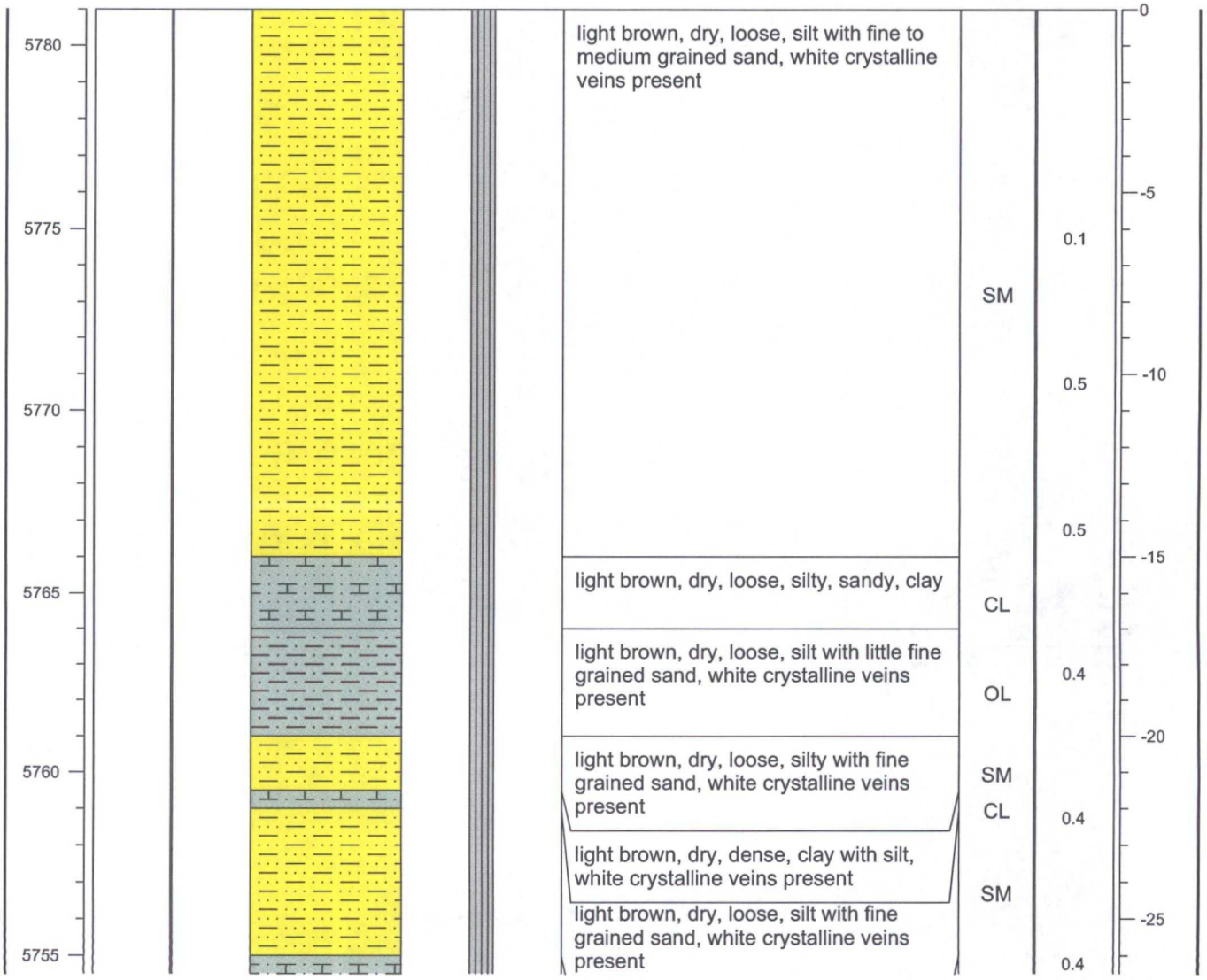
BORING LOG AND WELL COMPLETION FORM

PROJECT NAME: Martin 34 No. 2
LOCATION: San Juan County, NM
FIELD LOGGED BY: Christine Mathews
SURFACE ELEVATION (msl): ~ 5773 feet
GROUNDWATER ELEVATION (msl): ~ 5729 feet
REMARKS:
COORDINATES: 36.763908 -107.976695

SOIL BORING NO: B-4
DRILL TYPE: Geoprobe
Direct push
BORE HOLE DIAMETER: 2 inches
DRILLED BY: JR Drilling
DATE/TIME HOLE STARTED: November 9, 2011 at 10:00 AM
DATE/TIME HOLE COMPLETED: November 9, 2011 at 2:00 PM



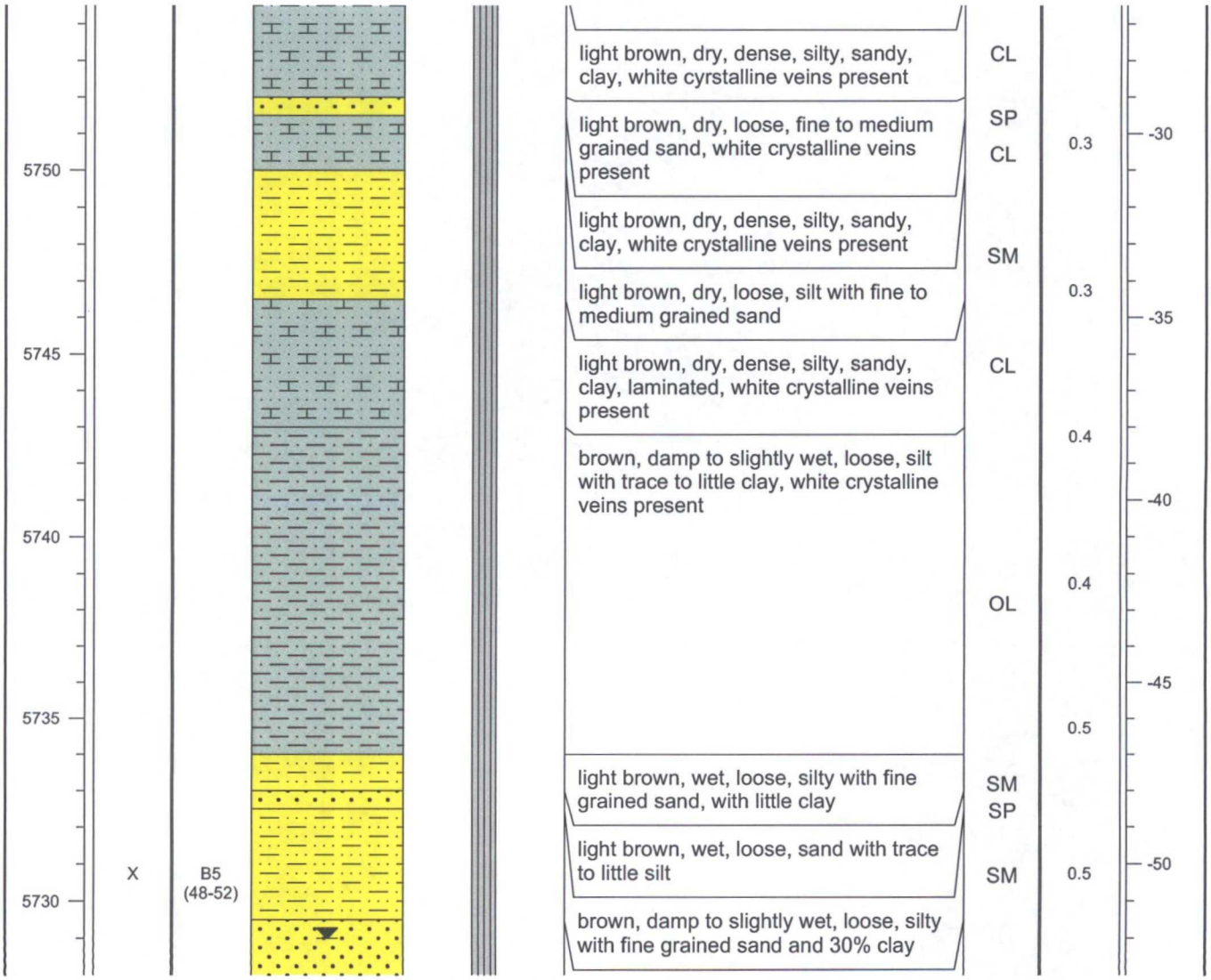
PROJECT NAME: Martin 34 No. 2	SOIL BORING NO: B-5
LOCATION: San Juan County, NM	DRILL TYPE: Geoprobe
FIELD LOGGED BY: Christine Mathews	Direct push
SURFACE ELEVATION (msl): ~ 5781 feet	BORE HOLE DIAMETER: 2 inches
GROUNDWATER ELEVATION (msl): ~ 5729 feet	DRILLED BY: JR Drilling
REMARKS:	DATE/TIME HOLE STARTED: November 9, 2011 at 2:00 PM
	DATE/TIME HOLE COMPLETED: November 10, 2011 at 9:20 AM
COORDINATES: 36.764067 -107.976454	



Total depth = 56.5 feet	CONESTOGA-ROVERS & ASSOCIATES	BORING LOG AND WELL COMPLETION FORM	page 1 of 3

PROJECT NAME: Martin 34 No. 2
LOCATION: San Juan County, NM
FIELD LOGGED BY: Christine Mathews
SURFACE ELEVATION (msl): ~ 5781 feet
GROUNDWATER ELEVATION (msl): ~ 5729 feet
REMARKS:
COORDINATES: 36.764067 -107.976454

SOIL BORING NO: B-5
DRILL TYPE: Geoprobe
Direct push
BORE HOLE DIAMETER: 2 inches
DRILLED BY: JR Drilling
DATE/TIME HOLE STARTED: November 9, 2011 at 2:00 PM
DATE/TIME HOLE COMPLETED: November 10, 2011 at 9:20 AM



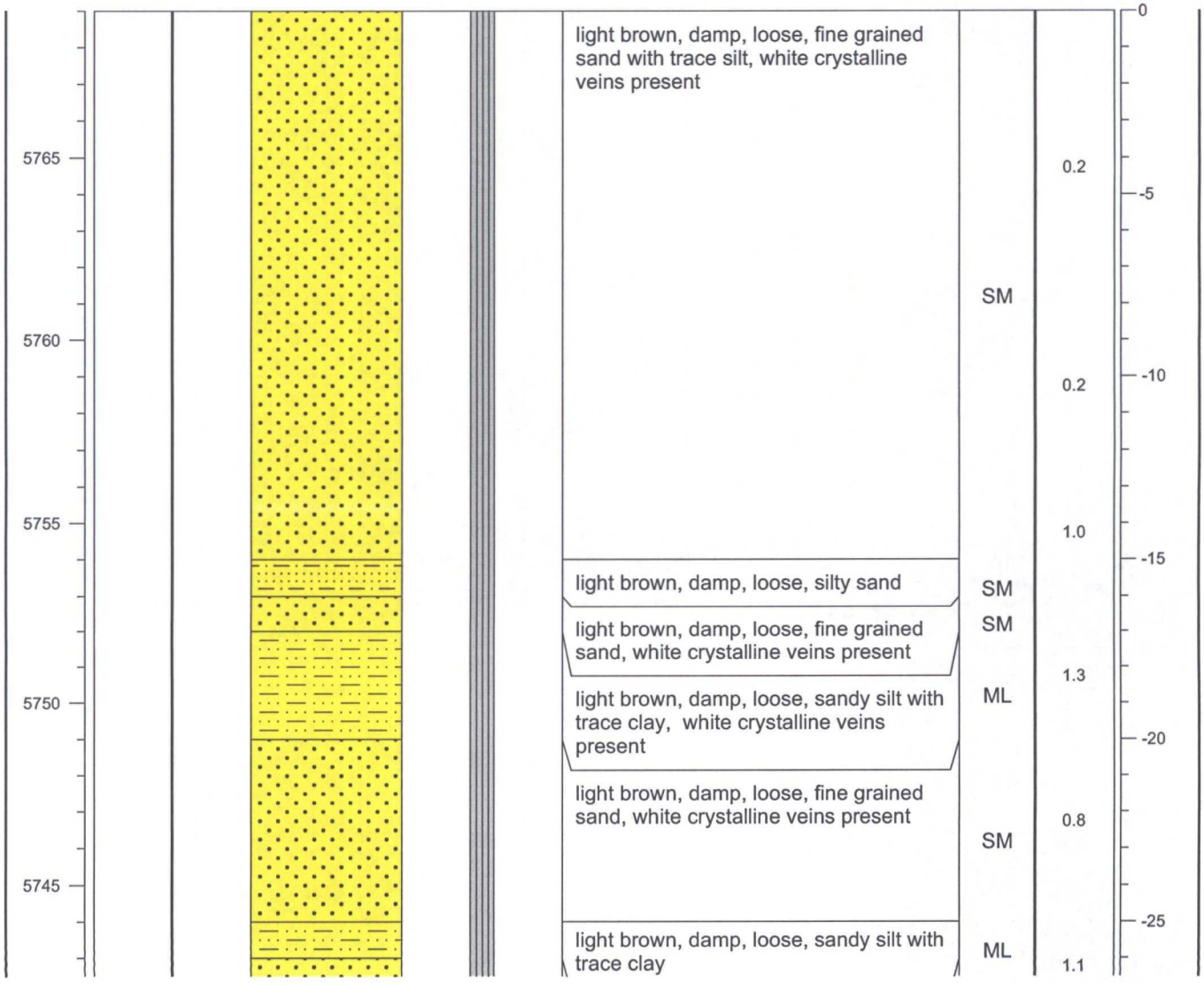
PROJECT NAME: Martin 34 No. 2
LOCATION: San Juan County, NM
FIELD LOGGED BY: Christine Mathews
SURFACE ELEVATION (msl): ~ 5781 feet
GROUNDWATER ELEVATION (msl): ~ 5729 feet
REMARKS:
COORDINATES: 36.764067 -107.976454

SOIL BORING NO: B-5
DRILL TYPE: Geoprobe
Direct push
BORE HOLE DIAMETER: 2 inches
DRILLED BY: JR Drilling
DATE/TIME HOLE STARTED: November 9, 2011 at 2:00 PM
DATE/TIME HOLE COMPLETED: November 10, 2011 at 9:20 AM

ELEVATION (msl) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	PID RESULT (ppm)	DEPTH (bgs) - ft
5725					light brown, saturated to wet, loose, fine to medium grained sand	SP	0.5	-55
					tan to slightly gray,damp to dry, dense, fine to medium grained sandstone	SP	0.3	

PROJECT NAME: Martin 34 No. 2
LOCATION: San Juan County, NM
FIELD LOGGED BY: Christine Mathews
SURFACE ELEVATION (msl): ~ 5769 feet
GROUNDWATER ELEVATION (msl): Not observed in boring
REMARKS:
COORDINATES: 36.763327 -107.976092

SOIL BORING NO: B-6
DRILL TYPE: Geoprobe
Direct push
BORE HOLE DIAMETER: 2 inches
DRILLED BY: JR Drilling
DATE/TIME HOLE STARTED: November 10, 2011 at 11:15 AM
DATE/TIME HOLE COMPLETED: November 10, 2011 at 11:45 AM



Total depth = 30.5 feet

CONESTOGA-ROVERS & ASSOCIATES

BORING LOG AND WELL COMPLETION FORM

PROJECT NAME: Martin 34 No. 2
LOCATION: San Juan County, NM
FIELD LOGGED BY: Christine Mathews
SURFACE ELEVATION (msl): ~ 5769 feet
GROUNDWATER ELEVATION (msl): Not observed in boring
REMARKS:
COORDINATES: 36.763327 -107.976092

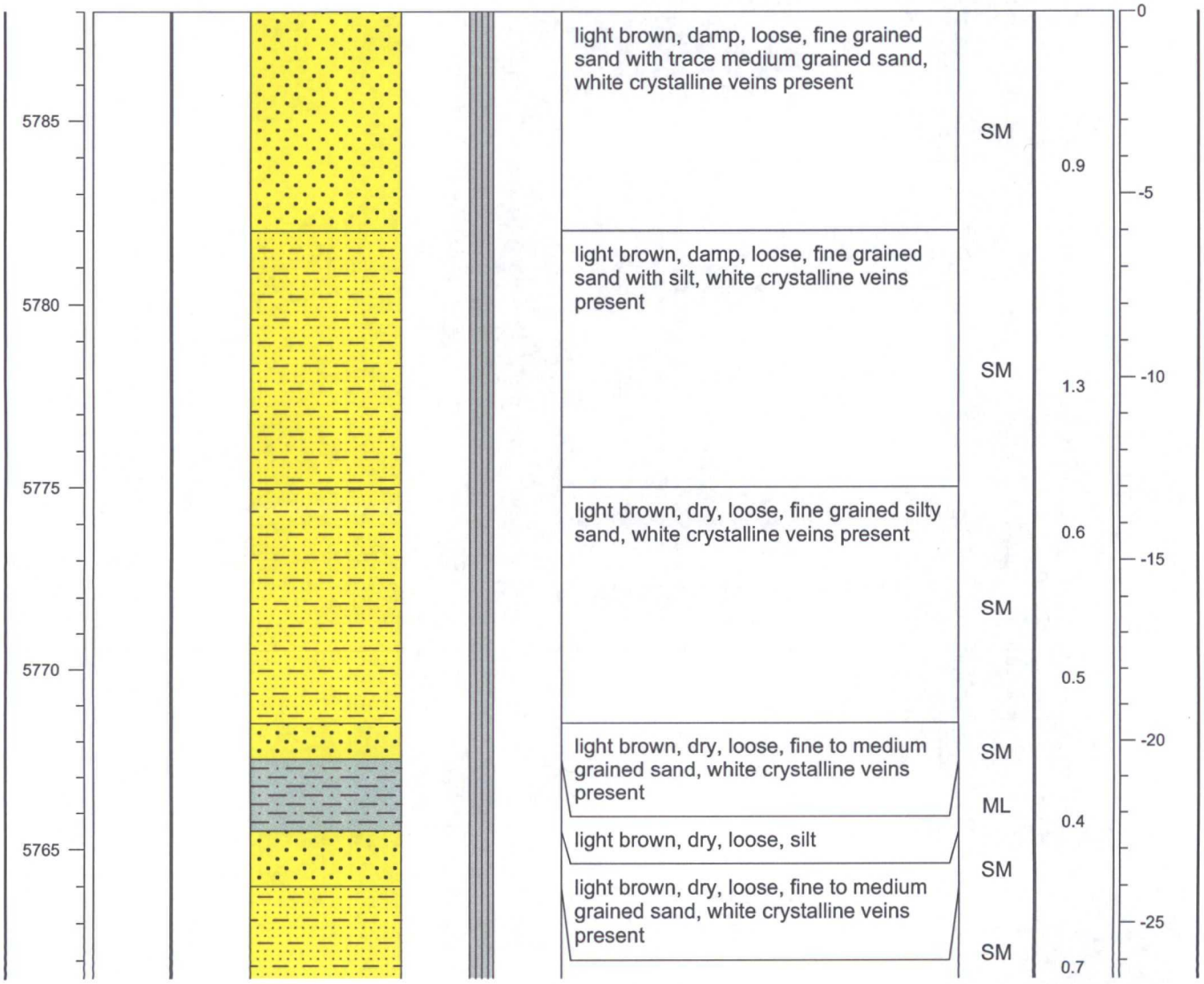
SOIL BORING NO: B-6
DRILL TYPE: Geoprobe
Direct push
BORE HOLE DIAMETER: 2 inches
DRILLED BY: JR Drilling
DATE/TIME HOLE STARTED: November 10, 2011 at 11:15 AM
DATE/TIME HOLE COMPLETED: November 10, 2011 at 11:45 AM

ELEVATION (msl) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	PID RESULT (ppm)	DEPTH (bgs) - ft
5740	X	B-6 (28-30.5)			light brown, damp, loose, fine to medium grained sand	SM	1.2	
					gray, dry, shale	CL		-30

PROJECT NAME: Martin 34 No. 2
LOCATION: San Juan County, NM
FIELD LOGGED BY: Christine Mathews
SURFACE ELEVATION (msl): ~ 5788 feet
GROUNDWATER ELEVATION (msl): Not observed in boring
REMARKS:

COORDINATES: 36.764577 -107.976070

SOIL BORING NO: B-7
DRILL TYPE: Geoprobe
Direct push
BORE HOLE DIAMETER: 2 inches
DRILLED BY: JR Drilling
DATE/TIME HOLE STARTED: November 10, 2011 at 12:45 PM
DATE/TIME HOLE COMPLETED: November 10, 2011 at 2:10 PM



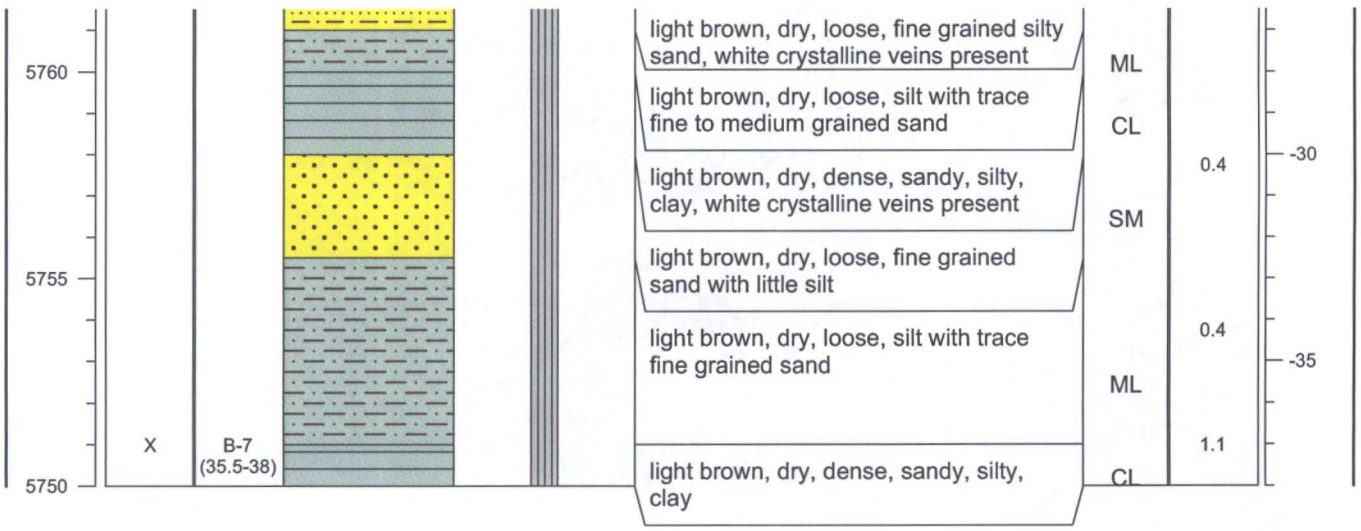
Total depth = 38 feet

CONESTOGA-ROVERS & ASSOCIATES

BORING LOG AND WELL COMPLETION FORM

PROJECT NAME: Martin 34 No. 2
LOCATION: San Juan County, NM
FIELD LOGGED BY: Christine Mathews
SURFACE ELEVATION (msl): ~ 5788 feet
GROUNDWATER ELEVATION (msl): Not observed in boring
REMARKS:
COORDINATES: 36.764577 -107.976070

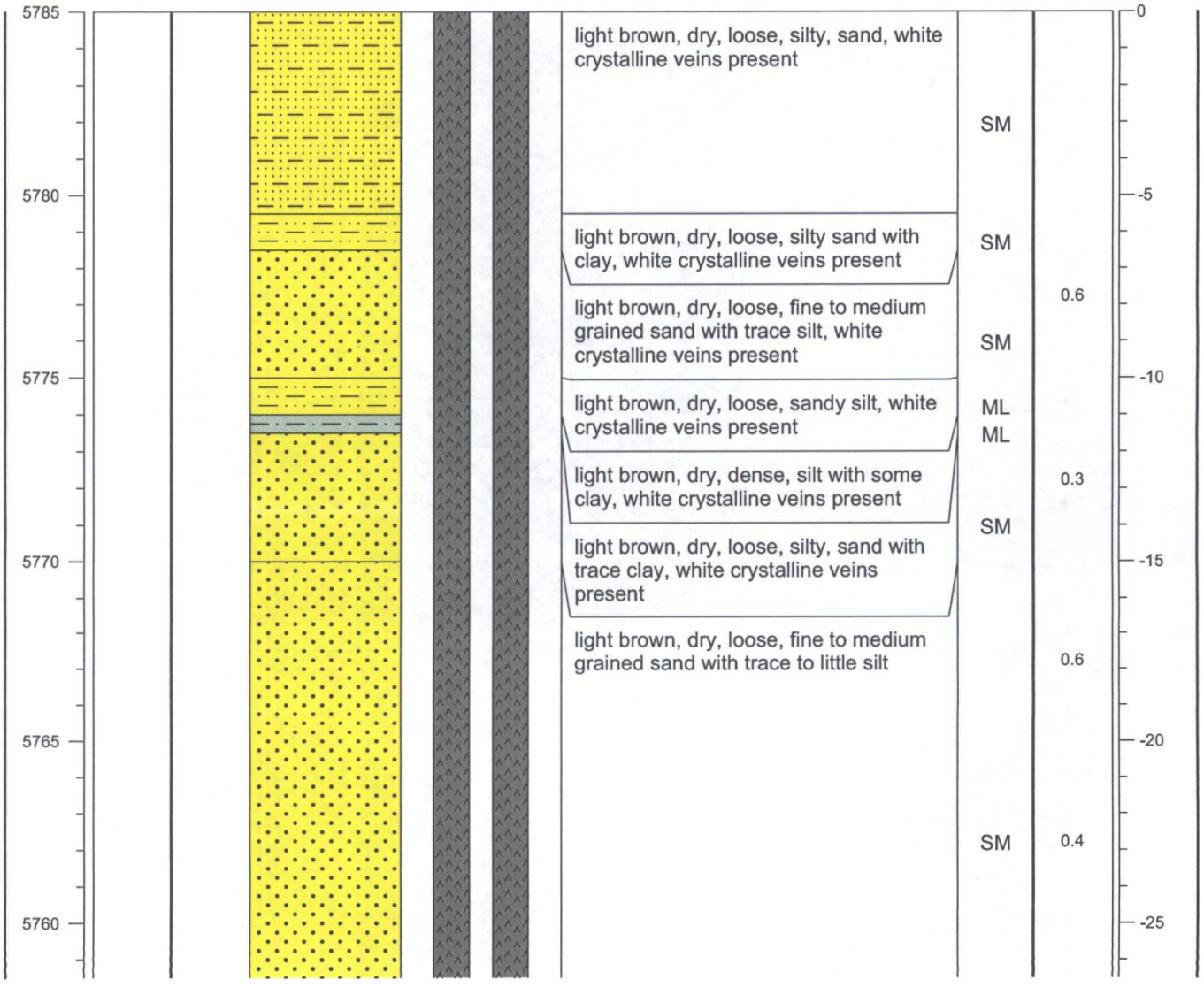
SOIL BORING NO: B-7
DRILL TYPE: Geoprobe
Direct push
BORE HOLE DIAMETER: 2 inches
DRILLED BY: JR Drilling
DATE/TIME HOLE STARTED: November 10, 2011 at 12:45 PM
DATE/TIME HOLE COMPLETED: November 10, 2011 at 2:10 PM



PROJECT NAME: Martin 34 No. 2
LOCATION: San Juan County, NM
FIELD LOGGED BY: Christine Mathews
SURFACE ELEVATION (msl): ~ 5785 feet
GROUNDWATER ELEVATION (msl): ~ 5738 feet
REMARKS:

COORDINATES: 36.764325 -107.975827

SOIL BORING NO: MW-5
DRILL TYPE: CEM-85
Hollow Stem Auger
BORE HOLE DIAMETER: 7 7/8 inches
DRILLED BY: Precision Sampling
DATE/TIME HOLE STARTED: November 28, 2011 at 3:20 PM
DATE/TIME HOLE COMPLETED: November 29, 2011 at 10:10 AM

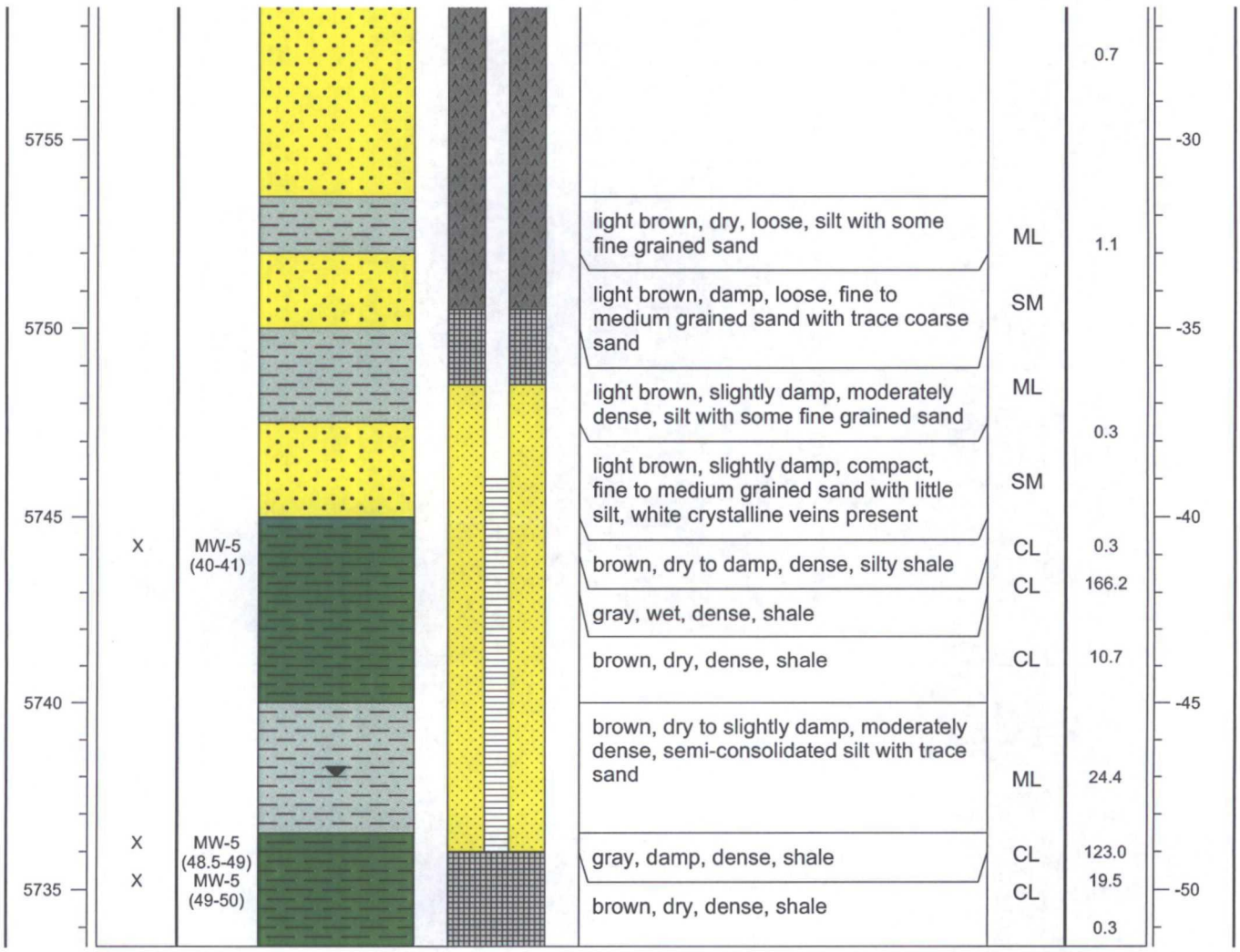


Total depth = 51.5 feet

CONESTOGA-ROVERS & ASSOCIATES

BORING LOG AND WELL COMPLETION FORM

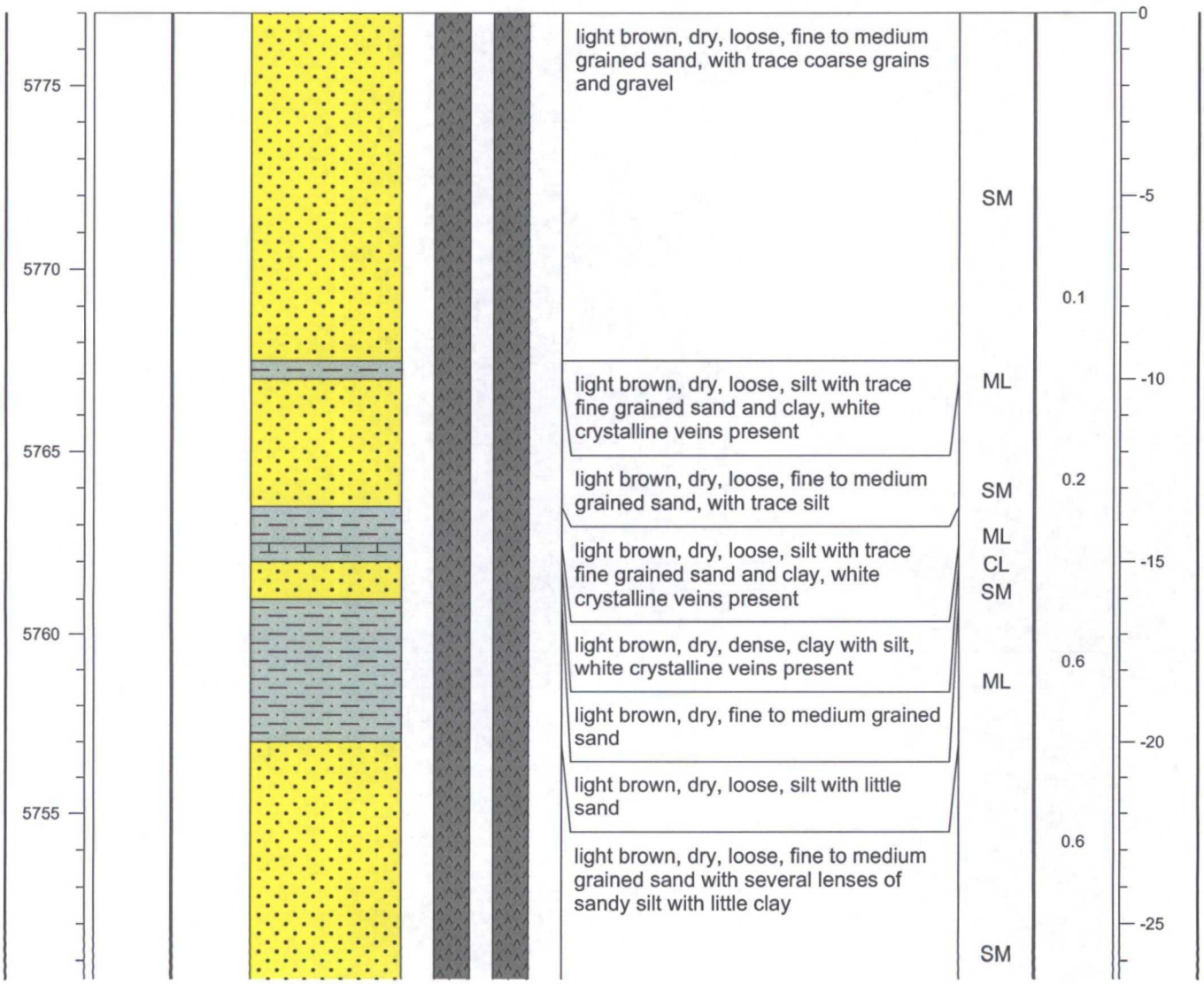
PROJECT NAME: Martin 34 No. 2	SOIL BORING NO: MW-5
LOCATION: San Juan County, NM	DRILL TYPE: CEM-85 Hollow Stem Auger
FIELD LOGGED BY: Christine Mathews	BORE HOLE DIAMETER: 7 7/8 inches
SURFACE ELEVATION (msl): ~ 5785 feet	DRILLED BY: Precision Sampling
GROUNDWATER ELEVATION (msl): ~ 5738 feet	DATE/TIME HOLE STARTED: November 28, 2011 at 3:20 PM
REMARKS:	DATE/TIME HOLE COMPLETED: November 29, 2011 at 10:10 AM
COORDINATES: 36.764325 -107.975827	



Total depth = 51.5 feet	CONESTOGA-ROVERS & ASSOCIATES	BORING LOG AND WELL COMPLETION FORM	page 2 of 2

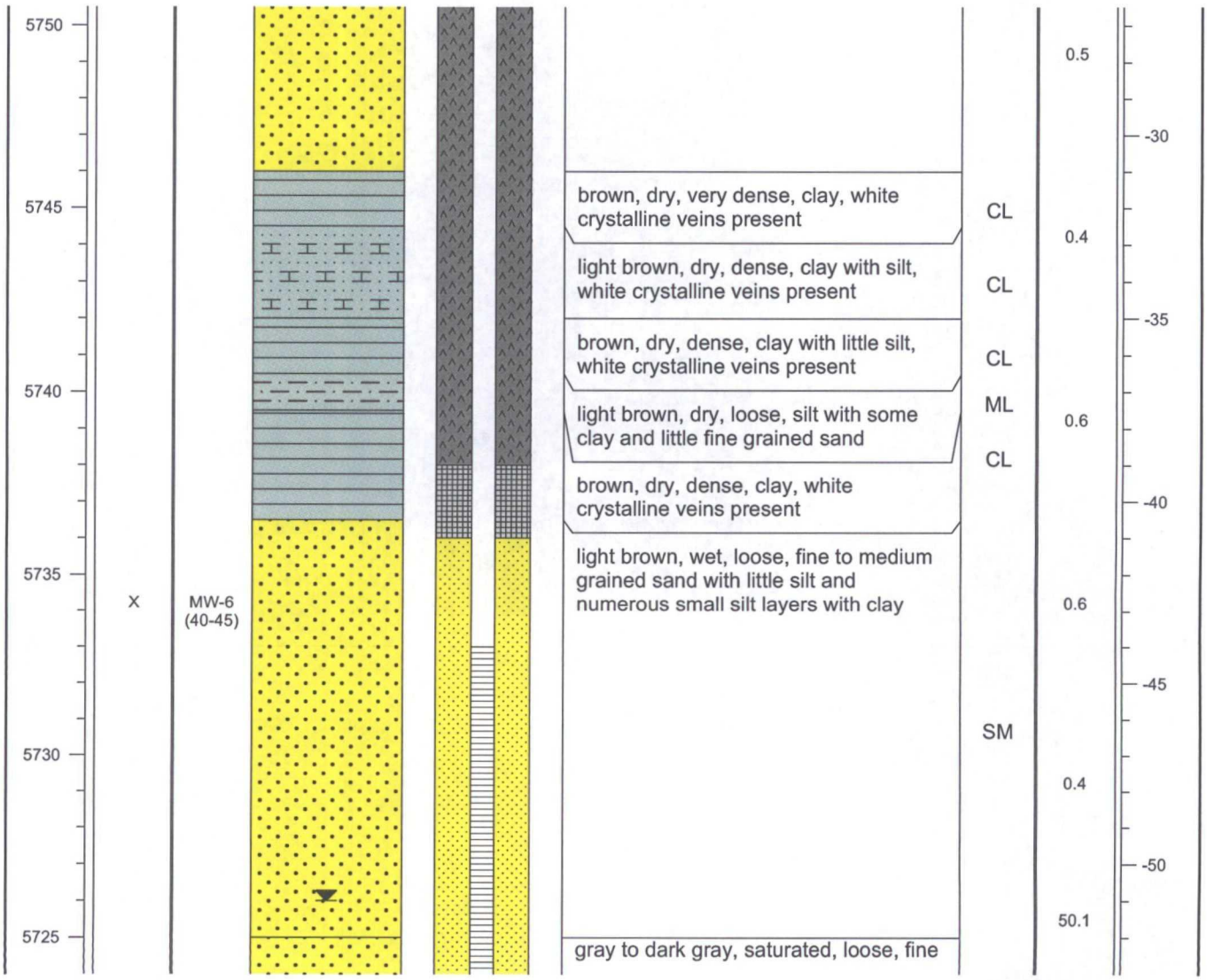
PROJECT NAME: Martin 34 No. 2
LOCATION: San Juan County, NM
FIELD LOGGED BY: Christine Mathews
SURFACE ELEVATION (msl): ~ 5777 feet
GROUNDWATER ELEVATION (msl): ~ 5726 feet
REMARKS:
COORDINATES: 36.763881 -107.976350

SOIL BORING NO: MW-6
DRILL TYPE: CEM-85
Hollow Stem Auger
BORE HOLE DIAMETER: 7 7/8 inches
DRILLED BY: Precision Sampling
DATE/TIME HOLE STARTED: November 29, 2011 at 1:15 PM
DATE/TIME HOLE COMPLETED: November 29, 2011 at 4:00 PM



PROJECT NAME: Martin 34 No. 2
LOCATION: San Juan County, NM
FIELD LOGGED BY: Christine Mathews
SURFACE ELEVATION (msl): ~ 5777 feet
GROUNDWATER ELEVATION (msl): ~ 5726 feet
REMARKS:
COORDINATES: 36.763881 -107.976350

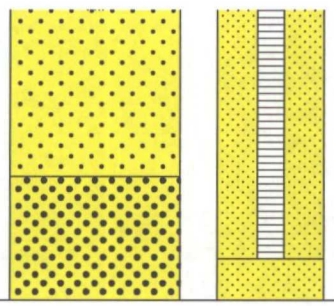
SOIL BORING NO: MW-6
DRILL TYPE: CEM-85
Hollow Stem Auger
BORE HOLE DIAMETER: 7 7/8 inches
DRILLED BY: Precision Sampling
DATE/TIME HOLE STARTED: November 29, 2011 at 1:15 PM
DATE/TIME HOLE COMPLETED: November 29, 2011 at 4:00 PM



PROJECT NAME: Martin 34 No. 2
LOCATION: San Juan County, NM
FIELD LOGGED BY: Christine Mathews
SURFACE ELEVATION (msl): ~ 5777 feet
GROUNDWATER ELEVATION (msl): ~ 5726 feet
REMARKS:
COORDINATES: 36.763881 -107.976350

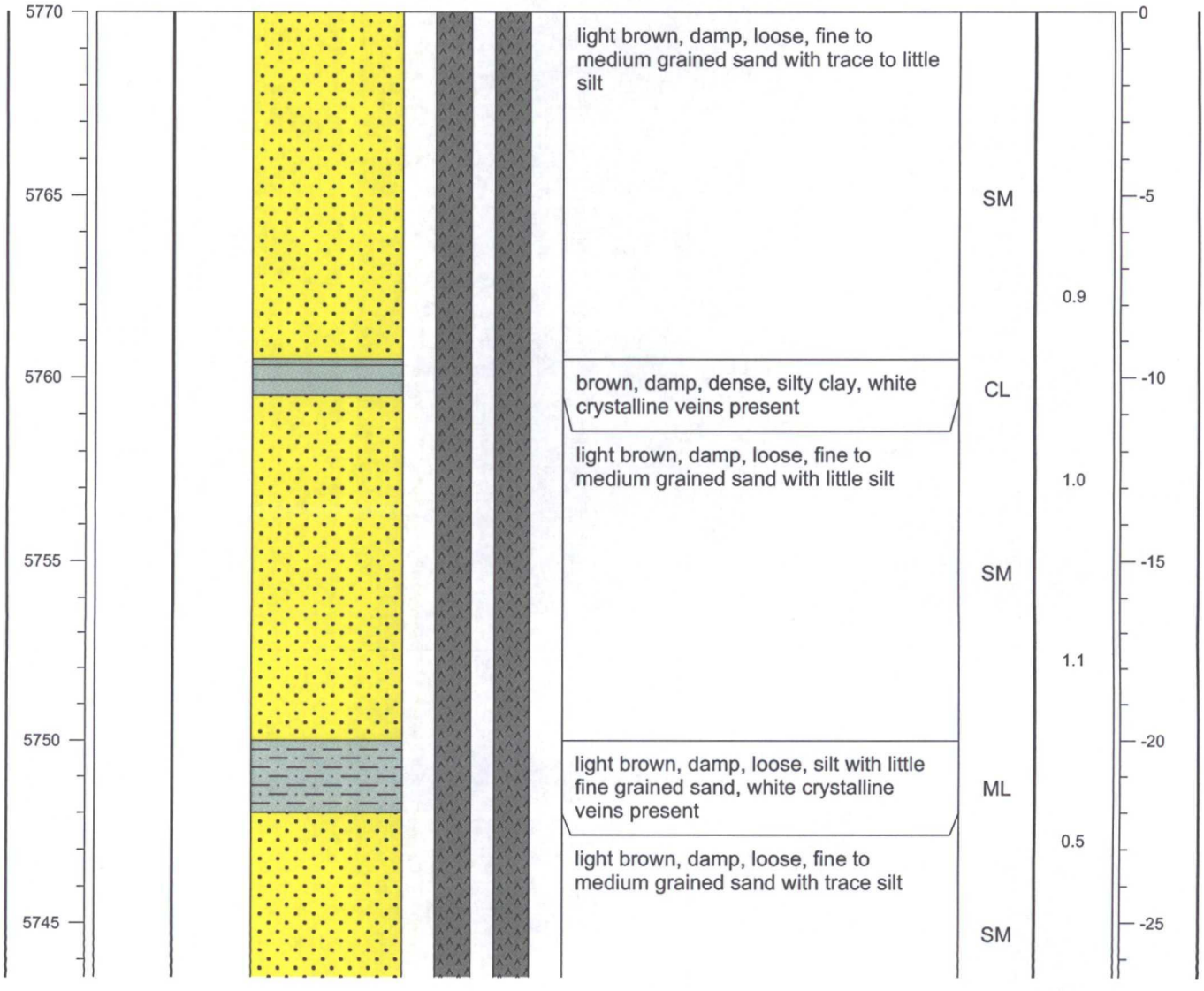
SOIL BORING NO: MW-6
DRILL TYPE: CEM-85
Hollow Stem Auger
BORE HOLE DIAMETER: 7 7/8 inches
DRILLED BY: Precision Sampling
DATE/TIME HOLE STARTED: November 29, 2011 at 1:15 PM
DATE/TIME HOLE COMPLETED: November 29, 2011 at 4:00 PM

ELEVATION (msl) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	PID RESULT (ppm)	DEPTH (bgs) - ft
5720	X	MW-6 (55-57)			to medium grained sand	SM	603.7	-55
	X	MW-6 (57-60)			light brown, dry, dense, fine to medium grained sandstone		1587.0 7.0	-60



PROJECT NAME: Martin 34 No. 2
LOCATION: San Juan County, NM
FIELD LOGGED BY: Christine Mathews
SURFACE ELEVATION (msl): ~ 5770 feet
GROUNDWATER ELEVATION (msl): ~ 5729 feet
REMARKS:
COORDINATES: 36.763145 -107.976381

SOIL BORING NO: MW-7
DRILL TYPE: CEM-85
Hollow Stem Auger
BORE HOLE DIAMETER: 7 7/8 inches
DRILLED BY: Precision Sampling
DATE/TIME HOLE STARTED: November 30, 2011 at 10:00 AM
DATE/TIME HOLE COMPLETED: November 30, 2011 at 12:25 PM



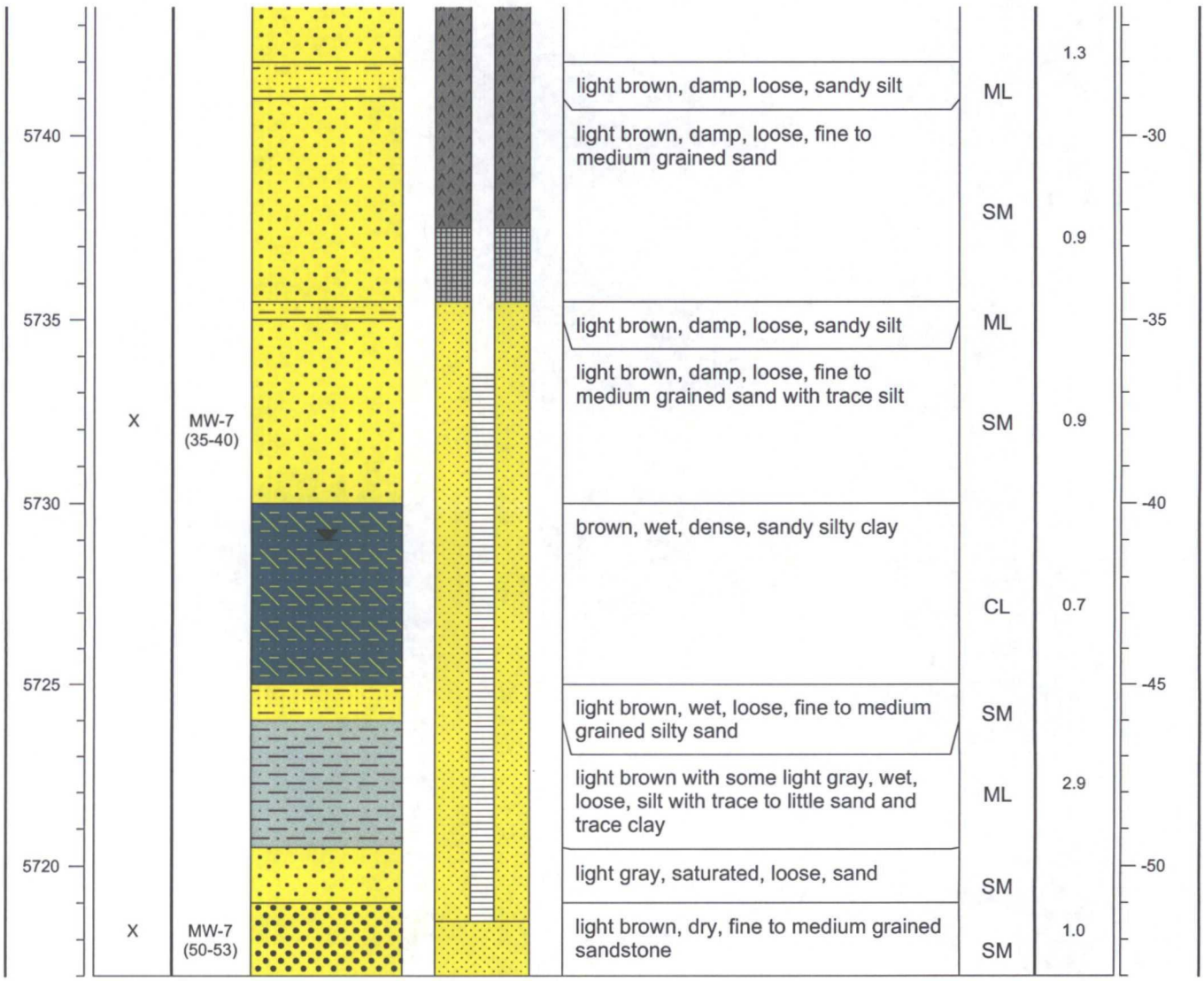
Total depth = 53 feet

CONESTOGA-ROVERS & ASSOCIATES

BORING LOG AND WELL COMPLETION FORM

PROJECT NAME: Martin 34 No. 2
LOCATION: San Juan County, NM
FIELD LOGGED BY: Christine Mathews
SURFACE ELEVATION (msl): ~ 5770 feet
GROUNDWATER ELEVATION (msl): ~ 5729 feet
REMARKS:
COORDINATES: 36.763145 -107.976381

SOIL BORING NO: MW-7
DRILL TYPE: CEM-85
Hollow Stem Auger
BORE HOLE DIAMETER: 7 7/8 inches
DRILLED BY: Precision Sampling
DATE/TIME HOLE STARTED: November 30, 2011 at 10:00 AM
DATE/TIME HOLE COMPLETED: November 30, 2011 at 12:25 PM



Total depth = 53 feet

CONESTOGA-ROVERS & ASSOCIATES

BORING LOG AND WELL COMPLETION FORM

APPENDIX B

SOIL LABORATORTY ANALYTICAL REPORTS

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

November 23, 2011

Cassie Brown
COP Conestoga-Rovers & Associa

,

RE: Project: MARTIN 34 NO 2
Pace Project No.: 60110117

Dear Cassie Brown:
Enclosed are the analytical results for sample(s) received by the laboratory on November 11, 2011. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Anna Custer

Anna Custer

anna.custer@pacelabs.com
Project Manager

Enclosures

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

Pace Analytical Services, Inc.
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Lenexa, KS 66219
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CERTIFICATIONS

Project: MARTIN 34 NO 2
Pace Project No.: 60110117

Kansas Certification IDs
9608 Loiret Boulevard, Lenexa, KS 66219
A2LA Certification #: 2456.01
Arkansas Certification #: 05-008-0
Illinois Certification #: 001191
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212008A
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407-08-TX
Utah Certification #: 9135995665

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Lenexa, KS 66219
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SAMPLE SUMMARY

Project: MARTIN 34 NO 2
Pace Project No.: 60110117

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60110117001	**075035-110911-B4 (40-44)**	Solid	11/09/11 11:30	11/11/11 09:00
60110117002	**075035-110911-B5 (48-52)**	Solid	11/09/11 16:30	11/11/11 09:00
60110117003	**075035-110911-B6 (28-30.5)**	Solid	11/10/11 11:45	11/11/11 09:00
60110117004	**075035-110911-B7 (35.5-38)**	Solid	11/10/11 14:10	11/11/11 09:00

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SAMPLE ANALYTE COUNT

Project: MARTIN 34 NO 2
Pace Project No.: 60110117

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60110117001	**075035-110911-B4 (40-44)**	EPA 8015B	SDR	3
		EPA 8015B	PRG	2
		EPA 8260	RAB	8
		ASTM D2974-87	BAC	1
60110117002	**075035-110911-B5 (48-52)**	EPA 8015B	SDR	3
		EPA 8015B	PRG	2
		EPA 8260	RAB	8
		ASTM D2974-87	BAC	1
60110117003	**075035-110911-B6 (28-30.5)**	EPA 8015B	SDR	3
		EPA 8015B	PRG	2
		EPA 8260	RAB	8
		ASTM D2974-87	BAC	1
60110117004	**075035-110911-B7 (35.5-38)**	EPA 8015B	SDR	3
		EPA 8015B	PRG	2
		EPA 8260	RAB	8
		ASTM D2974-87	BAC	1

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PROJECT NARRATIVE

Project: MARTIN 34 NO 2
Pace Project No.: 60110117

Method: **EPA 8015B**
Description: 8015B Diesel Range Organics
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: November 23, 2011

General Information:
4 samples were analyzed for EPA 8015B. 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 3546 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.

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.

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

Additional Comments:

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(913)599-5665

PROJECT NARRATIVE

Project: MARTIN 34 NO 2
Pace Project No.: 60110117

Method: **EPA 8015B**
Description: Gasoline Range Organics
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: November 23, 2011

General Information:
4 samples were analyzed for EPA 8015B. 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 5035A/5030B 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.

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: MARTIN 34 NO 2
Pace Project No.: 60110117

Method: **EPA 8260**
Description: 8260 MSV 5035A VOA
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: November 23, 2011

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

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

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

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

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

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

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

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

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

QC Batch: MSV/41694

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

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

Additional Comments:

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

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: MARTIN 34 NO 2
Pace Project No.: 60110117

Sample: 075035-110911-B4 (40-44) **Lab ID: 60110117001** Collected: 11/09/11 11:30 Received: 11/11/11 09:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B		Preparation Method: EPA 3546					
TPH-DRO	ND	mg/kg	11.6	1	11/14/11 00:00	11/16/11 14:46		
Surrogates								
n-Tetracosane (S)	81	%	41-130	1	11/14/11 00:00	11/16/11 14:46	646-31-1	
p-Terphenyl (S)	77	%	39-130	1	11/14/11 00:00	11/16/11 14:46	92-94-4	
Gasoline Range Organics	Analytical Method: EPA 8015B		Preparation Method: EPA 5035A/5030B					
TPH-GRO	ND	mg/kg	14.2	1	11/16/11 00:00	11/16/11 21:03		
Surrogates								
4-Bromofluorobenzene (S)	95	%	68-134	1	11/16/11 00:00	11/16/11 21:03	460-00-4	
8260 MSV 5035A VOA	Analytical Method: EPA 8260							
Benzene	ND	ug/kg	5.3	1		11/14/11 10:54	71-43-2	
Ethylbenzene	ND	ug/kg	5.3	1		11/14/11 10:54	100-41-4	
Toluene	ND	ug/kg	5.3	1		11/14/11 10:54	108-88-3	
Xylene (Total)	ND	ug/kg	5.3	1		11/14/11 10:54	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	100	%	68-129	1		11/14/11 10:54	1868-53-7	
Toluene-d8 (S)	101	%	81-121	1		11/14/11 10:54	2037-26-5	
4-Bromofluorobenzene (S)	97	%	75-131	1		11/14/11 10:54	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	77-131	1		11/14/11 10:54	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**15.3**	%	0.50	1		11/17/11 00:00		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: MARTIN 34 NO 2
Pace Project No.: 60110117

Sample: 075035-110911-B5 (48-52) **Lab ID: 60110117002** Collected: 11/09/11 16:30 Received: 11/11/11 09:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546							
TPH-DRO	ND	mg/kg	11.9	1	11/14/11 00:00	11/16/11 14:57		
Surrogates								
n-Tetracosane (S)	72	%	41-130	1	11/14/11 00:00	11/16/11 14:57	646-31-1	
p-Terphenyl (S)	71	%	39-130	1	11/14/11 00:00	11/16/11 14:57	92-94-4	
Gasoline Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 5035A/5030B							
TPH-GRO	ND	mg/kg	15.3	1	11/16/11 00:00	11/16/11 21:26		
Surrogates								
4-Bromofluorobenzene (S)	95	%	68-134	1	11/16/11 00:00	11/16/11 21:26	460-00-4	
8260 MSV 5035A VOA	Analytical Method: EPA 8260							
Benzene	ND	ug/kg	4.7	1		11/14/11 11:09	71-43-2	
Ethylbenzene	ND	ug/kg	4.7	1		11/14/11 11:09	100-41-4	
Toluene	ND	ug/kg	4.7	1		11/14/11 11:09	108-88-3	
Xylene (Total)	ND	ug/kg	4.7	1		11/14/11 11:09	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	104	%	68-129	1		11/14/11 11:09	1868-53-7	
Toluene-d8 (S)	101	%	81-121	1		11/14/11 11:09	2037-26-5	
4-Bromofluorobenzene (S)	99	%	75-131	1		11/14/11 11:09	460-00-4	
1,2-Dichloroethane-d4 (S)	113	%	77-131	1		11/14/11 11:09	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**16.9**	%	0.50	1		11/17/11 00:00		

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ANALYTICAL RESULTS

Project: MARTIN 34 NO 2
Pace Project No.: 60110117

Sample: 075035-110911-B6 (28-30.5) **Lab ID: 60110117003** Collected: 11/10/11 11:45 Received: 11/11/11 09:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546							
TPH-DRO	ND	mg/kg	11.0	1	11/14/11 00:00	11/16/11 15:08		
Surrogates								
n-Tetracosane (S)	64	%	41-130	1	11/14/11 00:00	11/16/11 15:08	646-31-1	
p-Terphenyl (S)	63	%	39-130	1	11/14/11 00:00	11/16/11 15:08	92-94-4	
Gasoline Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 5035A/5030B							
TPH-GRO	ND	mg/kg	16.9	1	11/16/11 00:00	11/16/11 21:48		
Surrogates								
4-Bromofluorobenzene (S)	93	%	68-134	1	11/16/11 00:00	11/16/11 21:48	460-00-4	
8260 MSV 5035A VOA	Analytical Method: EPA 8260							
Benzene	ND	ug/kg	5.9	1		11/14/11 11:24	71-43-2	
Ethylbenzene	ND	ug/kg	5.9	1		11/14/11 11:24	100-41-4	
Toluene	ND	ug/kg	5.9	1		11/14/11 11:24	108-88-3	
Xylene (Total)	ND	ug/kg	5.9	1		11/14/11 11:24	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	106	%	68-129	1		11/14/11 11:24	1868-53-7	
Toluene-d8 (S)	102	%	81-121	1		11/14/11 11:24	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-131	1		11/14/11 11:24	460-00-4	
1,2-Dichloroethane-d4 (S)	112	%	77-131	1		11/14/11 11:24	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**9.7**	%	0.50	1		11/17/11 00:00		

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ANALYTICAL RESULTS

Project: MARTIN 34 NO 2
Pace Project No.: 60110117

Sample: 075035-110911-B7 (35.5-38) **Lab ID: 60110117004** Collected: 11/10/11 14:10 Received: 11/11/11 09:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B		Preparation Method: EPA 3546					
TPH-DRO	ND	mg/kg	10.8	1	11/14/11 00:00	11/16/11 15:20		
Surrogates								
n-Tetracosane (S)	68	%	41-130	1	11/14/11 00:00	11/16/11 15:20	646-31-1	
p-Terphenyl (S)	66	%	39-130	1	11/14/11 00:00	11/16/11 15:20	92-94-4	
Gasoline Range Organics	Analytical Method: EPA 8015B		Preparation Method: EPA 5035A/5030B					
TPH-GRO	ND	mg/kg	29.0	1	11/16/11 00:00	11/16/11 22:11		
Surrogates								
4-Bromofluorobenzene (S)	95	%	68-134	1	11/16/11 00:00	11/16/11 22:11	460-00-4	
8260 MSV 5035A VOA	Analytical Method: EPA 8260							
Benzene	ND	ug/kg	5.9	1		11/14/11 11:39	71-43-2	
Ethylbenzene	ND	ug/kg	5.9	1		11/14/11 11:39	100-41-4	
Toluene	ND	ug/kg	5.9	1		11/14/11 11:39	108-88-3	
Xylene (Total)	ND	ug/kg	5.9	1		11/14/11 11:39	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	106	%	68-129	1		11/14/11 11:39	1868-53-7	
Toluene-d8 (S)	101	%	81-121	1		11/14/11 11:39	2037-26-5	
4-Bromofluorobenzene (S)	101	%	75-131	1		11/14/11 11:39	460-00-4	
1,2-Dichloroethane-d4 (S)	115	%	77-131	1		11/14/11 11:39	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**9.2**	%	0.50	1		11/17/11 00:00		

Pace Analytical Services, Inc.
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QUALITY CONTROL DATA

Project: MARTIN 34 NO 2
Pace Project No.: 60110117

QC Batch: GCV/3942 Analysis Method: EPA 8015B
QC Batch Method: EPA 5035A/5030B Analysis Description: Gasoline Range Organics
Associated Lab Samples: 60110117001, 60110117002, 60110117003, 60110117004

METHOD BLANK: 911205 Matrix: Solid
Associated Lab Samples: 60110117001, 60110117002, 60110117003, 60110117004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH-GRO	mg/kg	ND	10.0	11/16/11 17:16	
4-Bromofluorobenzene (S)	%	94	68-134	11/16/11 17:16	

LABORATORY CONTROL SAMPLE: 911206

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-GRO	mg/kg	50	50.1	100	77-122	
4-Bromofluorobenzene (S)	%			96	68-134	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 911207 911208

Parameter	Units	60110238001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
TPH-GRO	mg/kg	ND	58	58	53.5	55.2	92	95	51-130	3	27	
4-Bromofluorobenzene (S)	%						95	96	68-134			

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: MARTIN 34 NO 2
Pace Project No.: 60110117

QC Batch: MSV/41694 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 5035A Volatile Organics
Associated Lab Samples: 60110117001, 60110117002, 60110117003, 60110117004

METHOD BLANK: 910939 Matrix: Solid
Associated Lab Samples: 60110117001, 60110117002, 60110117003, 60110117004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/kg	ND	5.0	11/14/11 09:37	
Ethylbenzene	ug/kg	ND	5.0	11/14/11 09:37	
Toluene	ug/kg	ND	5.0	11/14/11 09:37	
Xylene (Total)	ug/kg	ND	5.0	11/14/11 09:37	
1,2-Dichloroethane-d4 (S)	%	100	77-131	11/14/11 09:37	
4-Bromofluorobenzene (S)	%	99	75-131	11/14/11 09:37	
Dibromofluoromethane (S)	%	101	68-129	11/14/11 09:37	
Toluene-d8 (S)	%	101	81-121	11/14/11 09:37	

LABORATORY CONTROL SAMPLE: 910940

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/kg	100	88.5	89	84-119	
Ethylbenzene	ug/kg	100	91.3	91	80-120	
Toluene	ug/kg	100	90.9	91	83-117	
Xylene (Total)	ug/kg	300	274	91	80-120	
1,2-Dichloroethane-d4 (S)	%			96	77-131	
4-Bromofluorobenzene (S)	%			98	75-131	
Dibromofluoromethane (S)	%			99	68-129	
Toluene-d8 (S)	%			100	81-121	

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QUALITY CONTROL DATA

Project: MARTIN 34 NO 2
Pace Project No.: 60110117

QC Batch: OEXT/31122 Analysis Method: EPA 8015B
QC Batch Method: EPA 3546 Analysis Description: EPA 8015B
Associated Lab Samples: 60110117001, 60110117002, 60110117003, 60110117004

METHOD BLANK: 910871 Matrix: Solid
Associated Lab Samples: 60110117001, 60110117002, 60110117003, 60110117004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH-DRO	mg/kg	ND	10	11/16/11 12:32	
n-Tetracosane (S)	%	78	41-130	11/16/11 12:32	
p-Terphenyl (S)	%	76	39-130	11/16/11 12:32	

LABORATORY CONTROL SAMPLE: 910872

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-DRO	mg/kg	82.3	70.1	85	57-120	
n-Tetracosane (S)	%			84	41-130	
p-Terphenyl (S)	%			77	39-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 910873 910874

Parameter	Units	60110117001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
TPH-DRO	mg/kg	ND	98.3	97.2	83.6	84.8	82	84	36-125	1	28	
n-Tetracosane (S)	%						78	77	41-130			
p-Terphenyl (S)	%						75	78	39-130			

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MARTIN 34 NO 2
Pace Project No.: 60110117

QC Batch: PMST/6748 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 60110117001, 60110117002, 60110117003, 60110117004

METHOD BLANK: 912915 Matrix: Solid
Associated Lab Samples: 60110117001, 60110117002, 60110117003, 60110117004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	11/17/11 00:00	

SAMPLE DUPLICATE: 912916

Parameter	Units	60110036061 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	20.3	20.2	1	20	

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: MARTIN 34 NO 2
Pace Project No.: 60110117

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

BATCH QUALIFIERS

Batch: MSV/41694

[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: MARTIN 34 NO 2
Pace Project No.: 60110117

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60110117001	**075035-110911-B4 (40-44)**	EPA 3546	OEXT/31122	EPA 8015B	GCSV/11540
60110117002	**075035-110911-B5 (48-52)**	EPA 3546	OEXT/31122	EPA 8015B	GCSV/11540
60110117003	**075035-110911-B6 (28-30.5)**	EPA 3546	OEXT/31122	EPA 8015B	GCSV/11540
60110117004	**075035-110911-B7 (35.5-38)**	EPA 3546	OEXT/31122	EPA 8015B	GCSV/11540
60110117001	**075035-110911-B4 (40-44)**	EPA 5035A/5030B	GCV/3942	EPA 8015B	GCV/3944
60110117002	**075035-110911-B5 (48-52)**	EPA 5035A/5030B	GCV/3942	EPA 8015B	GCV/3944
60110117003	**075035-110911-B6 (28-30.5)**	EPA 5035A/5030B	GCV/3942	EPA 8015B	GCV/3944
60110117004	**075035-110911-B7 (35.5-38)**	EPA 5035A/5030B	GCV/3942	EPA 8015B	GCV/3944
60110117001	**075035-110911-B4 (40-44)**	EPA 8260	MSV/41694		
60110117002	**075035-110911-B5 (48-52)**	EPA 8260	MSV/41694		
60110117003	**075035-110911-B6 (28-30.5)**	EPA 8260	MSV/41694		
60110117004	**075035-110911-B7 (35.5-38)**	EPA 8260	MSV/41694		
60110117001	**075035-110911-B4 (40-44)**	ASTM D2974-87	PMST/6748		
60110117002	**075035-110911-B5 (48-52)**	ASTM D2974-87	PMST/6748		
60110117003	**075035-110911-B6 (28-30.5)**	ASTM D2974-87	PMST/6748		
60110117004	**075035-110911-B7 (35.5-38)**	ASTM D2974-87	PMST/6748		

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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:	CRA
Address:	6121 Indian School #200 Albuquerque, NM 8710
Email To:	kblanchard@craworld.com
Phone:	505-877-0672
Fax:	
Requested Due Date/TAT:	Standard

Section B Required Project Information:

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

Section C Invoice Information:

Attention:	ENFOS
Company Name:	ConocoPhillips
Address:	
Pace Quote Reference:	
Pace Project Manager:	Anna Custer
Pace Profile #:	

REGULATORY AGENCY

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

SITE LOCATION

☐ GA ☐ IL ☐ IN ☐ MI ☐ NC ☐ OH ☐ SC ☐ WI ☒ OTHER NM

Filtered (Y/N)

Requested Analysis: BTEX, TPH GRO, TPH DRO; Residual Chlorine (Y/N)

Pace Project No./Lab I.D.: 6011617

Section D Required Client Information

SAMPLE ID
One Character per box.
(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	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	BTEX	TPH GRO	TPH DRO	Residual Chlorine (Y/N)	Pace Project No./Lab I.D.
1	075035-110911-B4(40-44)	SL	G	11.9.11	1130				8	X						X	X	X	X	X	2(WGFM) 1(WGFM) 2(...) 2(...) 200(98)(...)	001
2	075035-110911-B5(48-52)	SL	G	11.9.11	1630				8	X						X	X	X	X	X	↓	002
3	075035-111011-B6(28-30.5)	SL	G	11.10.11	1145				8	X						X	X	X	X	X	↓	003
4	075035-111011-B7(35.5-38)	SL	G	11.10.11	1410				8	X						X	X	X	X	X	↓	004
5																						
6																						
7																						
8																						
9																						
10																						
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)
Christine Mathews	11.10.11	1630	[signature]	11/11/11	900	2.5	Y	Y	Y
							Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Christine Mathews

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 11/10/11

e-File(ALLQ020rev.3,31Mar05))22Jun2005

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Sample Condition Upon Receipt – ESI Tech Specs

Client Name: COP CRA Project #: 60110117

Courier: Fed Ex ☒ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ☐ _____

Optional
Proj Due Date: 11/23
Proj Name:

Tracking #: 8758 3041 1584 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-193 / T-194 **Type of Ice:** ~~Wet~~ Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 2.5

Date and initials of person examining contents: 11/14/11 1120

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: soils		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 MA 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: _____

Project Manager Review: MW Sellers Date: 11/12/11

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

Start: 1110	Start:
End: 1120	End:
Temp:	Temp:

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

F-KS-C-004-Rev.0, 02February2011

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

December 13, 2011

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

RE: Project: Martin 34 No. 2 (075035)
Pace Project No.: 60111194

Dear Christine Matthews:
Enclosed are the analytical results for sample(s) received by the laboratory on December 01, 2011. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Anna Custer

anna.custer@pacelabs.com
Project Manager

Enclosures

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

Pace Analytical Services, Inc.
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CERTIFICATIONS

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60111194

Kansas Certification IDs
9608 Loiret Boulevard, Lenexa, KS 66219
A2LA Certification #: 2456.01
Arkansas Certification #: 05-008-0
Illinois Certification #: 001191
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212008A
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407-08-TX
Utah Certification #: 9135995665

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SAMPLE SUMMARY

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60111194

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60111194001	**S-075035-112911-JP-MW-5(40-41)**	Solid	11/29/11 08:35	12/01/11 09:00
60111194002	**S-075035-112911-JP-MW-5(48.5-4**	Solid	11/29/11 09:50	12/01/11 09:00
60111194003	**S-075035-112911-JP-MW-5(49-50)**	Solid	11/29/11 09:50	12/01/11 09:00
60111194004	**S-075035-112911-JP-MW-6(40-45)**	Solid	11/29/11 14:50	12/01/11 09:00
60111194005	**S-075035-112911-JP-MW-6(55-57)**	Solid	11/29/11 16:00	12/01/11 09:00
60111194006	**S-075035-112911-JP-MW-6(57-60)**	Solid	11/29/11 16:00	12/01/11 09:00
60111194007	**S-075035-113011-JP-MW-7(35-40)**	Solid	11/30/11 11:35	12/01/11 09:00
60111194008	**S-075035-113011-JP-MW-7(50-53)**	Solid	11/30/11 12:20	12/01/11 09:00
60111194009	**TB-113011-JP-001**	Solid	11/30/11 16:00	12/01/11 09:00

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SAMPLE ANALYTE COUNT

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60111194

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60111194001	S-075035-112911-JP-MW-5(40-41)	EPA 8015B	SDR	3
		EPA 8015B	PRG	2
		EPA 5035A/8260	RAB	7
		ASTM D2974-87	DWC	1
60111194002	S-075035-112911-JP-MW-5(48.5-4	EPA 8015B	SDR	3
		EPA 8015B	PRG	2
		EPA 5035A/8260	RAB	7
		ASTM D2974-87	DWC	1
60111194003	S-075035-112911-JP-MW-5(49-50)	EPA 8015B	SDR	3
		EPA 8015B	PRG	2
		EPA 5035A/8260	RAB	7
		ASTM D2974-87	DWC	1
60111194004	S-075035-112911-JP-MW-6(40-45)	EPA 8015B	SDR	3
		EPA 8015B	PRG	2
		EPA 5035A/8260	RAB	7
		ASTM D2974-87	DWC	1
60111194005	S-075035-112911-JP-MW-6(55-57)	EPA 8015B	SDR	3
		EPA 8015B	PRG	2
		EPA 5035A/8260	RAB	7
		ASTM D2974-87	DWC	1
60111194006	S-075035-112911-JP-MW-6(57-60)	EPA 8015B	SDR	3
		EPA 8015B	PRG	2
		EPA 5035A/8260	RAB	7
		ASTM D2974-87	DWC	1
60111194007	S-075035-113011-JP-MW-7(35-40)	EPA 8015B	SDR	3
		EPA 8015B	PRG	2
		EPA 5035A/8260	RAB	7
		ASTM D2974-87	DWC	1
60111194008	S-075035-113011-JP-MW-7(50-53)	EPA 8015B	SDR	3
		EPA 8015B	PRG	2
		EPA 5035A/8260	RAB	7
		ASTM D2974-87	DWC	1
60111194009	TB-113011-JP-001	EPA 5035A/8260	RAB	7

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PROJECT NARRATIVE

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60111194

Method: **EPA 8015B**
Description: 8015B Diesel Range Organics
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: December 13, 2011

General Information:
8 samples were analyzed for EPA 8015B. 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 3546 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.

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.

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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(913)599-5665

PROJECT NARRATIVE

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60111194

Method: **EPA 8015B**
Description: Gasoline Range Organics
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: December 13, 2011

General Information:
8 samples were analyzed for EPA 8015B. 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 5035A/5030B with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

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

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

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

QC Batch: GCV/3963

S2: Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-analysis).

- S-075035-112911-JP-MW-6(55-57) (Lab ID: 60111194005)
  - 4-Bromofluorobenzene (S)

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

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

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

QC Batch: GCV/3965

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

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

Additional Comments:

Pace Analytical Services, Inc.
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PROJECT NARRATIVE

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60111194

Method: **EPA 5035A/8260**
Description: 8260 MSV GRO and Oxygenates
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: December 13, 2011

General Information:
9 samples were analyzed for EPA 5035A/8260. All samples were received in acceptable condition with any exceptions noted below.

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

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

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

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

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

QC Batch: MSV/42162

S1: Surrogate recovery outside laboratory control limits (confirmed by re-analysis).
- S-075035-112911-JP-MW-6(55-57) (Lab ID: 60111194005)
  - Toluene-d8 (S)

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

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

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

QC Batch: MSV/42162

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

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

Additional Comments:

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

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ANALYTICAL RESULTS

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60111194

Sample: S-075035-112911-JP-MW-5(40-41) **Lab ID: 60111194001** Collected: 11/29/11 08:35 Received: 12/01/11 09:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546								
TPH-DRO	**4.2J**	mg/kg	11.7	2.2	1	12/02/11 00:00	12/06/11 03:38		
Surrogates									
n-Tetracosane (S)	88	%	41-130		1	12/02/11 00:00	12/06/11 03:38	646-31-1	
p-Terphenyl (S)	92	%	39-130		1	12/02/11 00:00	12/06/11 03:38	92-94-4	
Gasoline Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 5035A/5030B								
TPH-GRO	ND	mg/kg	12.5	4.5	1	12/08/11 00:00	12/08/11 14:49		
Surrogates									
4-Bromofluorobenzene (S)	101	%	68-134		1	12/08/11 00:00	12/08/11 14:49	460-00-4	
8260 MSV GRO and Oxygenates	Analytical Method: EPA 5035A/8260								
Benzene	ND	ug/kg	6.2	0.47	1		12/02/11 13:21	71-43-2	
Ethylbenzene	ND	ug/kg	6.2	0.57	1		12/02/11 13:21	100-41-4	
Toluene	ND	ug/kg	6.2	0.47	1		12/02/11 13:21	108-88-3	
Xylene (Total)	ND	ug/kg	12.3	1.4	1		12/02/11 13:21	1330-20-7	
Surrogates									
Toluene-d8 (S)	98	%	81-121		1		12/02/11 13:21	2037-26-5	
4-Bromofluorobenzene (S)	101	%	75-131		1		12/02/11 13:21	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	77-131		1		12/02/11 13:21	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**15.0**	%	0.50	0.50	1		12/02/11 00:00		

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ANALYTICAL RESULTS

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60111194

Sample: S-075035-112911-JP-MW-5(48.5-4 **Lab ID: 60111194002** Collected: 11/29/11 09:50 Received: 12/01/11 09:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546								
TPH-DRO	**25.3**	mg/kg	11.6	2.2	1	12/02/11 00:00	12/06/11 03:49		
Surrogates									
n-Tetracosane (S)	89	%	41-130		1	12/02/11 00:00	12/06/11 03:49	646-31-1	
p-Terphenyl (S)	89	%	39-130		1	12/02/11 00:00	12/06/11 03:49	92-94-4	
Gasoline Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 5035A/5030B								
TPH-GRO	**15.3**	mg/kg	11.4	4.1	1	12/08/11 00:00	12/08/11 15:59		
Surrogates									
4-Bromofluorobenzene (S)	110	%	68-134		1	12/08/11 00:00	12/08/11 15:59	460-00-4	
8260 MSV GRO and Oxygenates	Analytical Method: EPA 5035A/8260								
Benzene	**68.2**	ug/kg	5.1	0.39	1		12/02/11 13:36	71-43-2	
Ethylbenzene	**59.6**	ug/kg	5.1	0.47	1		12/02/11 13:36	100-41-4	
Toluene	ND	ug/kg	5.1	0.39	1		12/02/11 13:36	108-88-3	
Xylene (Total)	**92.9**	ug/kg	10.2	1.2	1		12/02/11 13:36	1330-20-7	
Surrogates									
Toluene-d8 (S)	107	%	81-121		1		12/02/11 13:36	2037-26-5	
4-Bromofluorobenzene (S)	127	%	75-131		1		12/02/11 13:36	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	77-131		1		12/02/11 13:36	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**15.5**	%	0.50	0.50	1		12/02/11 00:00		

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ANALYTICAL RESULTS

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60111194

Sample: S-075035-112911-JP-MW-5(49-50) **Lab ID: 60111194003** Collected: 11/29/11 09:50 Received: 12/01/11 09:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546								
TPH-DRO	**5.5J**	mg/kg	11.5	2.2	1	12/02/11 00:00	12/06/11 04:00		
Surrogates									
n-Tetracosane (S)	88	%	41-130		1	12/02/11 00:00	12/06/11 04:00	646-31-1	
p-Terphenyl (S)	97	%	39-130		1	12/02/11 00:00	12/06/11 04:00	92-94-4	
Gasoline Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 5035A/5030B								
TPH-GRO	ND	mg/kg	11.7	4.2	1	12/08/11 00:00	12/08/11 16:23		
Surrogates									
4-Bromofluorobenzene (S)	99	%	68-134		1	12/08/11 00:00	12/08/11 16:23	460-00-4	
8260 MSV GRO and Oxygenates	Analytical Method: EPA 5035A/8260								
Benzene	**52.1**	ug/kg	5.2	0.39	1		12/02/11 13:51	71-43-2	
Ethylbenzene	**14.0**	ug/kg	5.2	0.48	1		12/02/11 13:51	100-41-4	
Toluene	ND	ug/kg	5.2	0.39	1		12/02/11 13:51	108-88-3	
Xylene (Total)	**28.5**	ug/kg	10.3	1.2	1		12/02/11 13:51	1330-20-7	
Surrogates									
Toluene-d8 (S)	100	%	81-121		1		12/02/11 13:51	2037-26-5	
4-Bromofluorobenzene (S)	101	%	75-131		1		12/02/11 13:51	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	77-131		1		12/02/11 13:51	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**13.8**	%	0.50	0.50	1		12/02/11 00:00		

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ANALYTICAL RESULTS

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60111194

Sample: S-075035-112911-JP-MW-6(40-45) **Lab ID: 60111194004** Collected: 11/29/11 14:50 Received: 12/01/11 09:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546								
TPH-DRO	**6.2J**	mg/kg	12.2	2.3	1	12/02/11 00:00	12/06/11 04:11		
Surrogates									
n-Tetracosane (S)	87	%	41-130		1	12/02/11 00:00	12/06/11 04:11	646-31-1	
p-Terphenyl (S)	91	%	39-130		1	12/02/11 00:00	12/06/11 04:11	92-94-4	
Gasoline Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 5035A/5030B								
TPH-GRO	ND	mg/kg	12.3	4.4	1	12/08/11 00:00	12/08/11 16:45		
Surrogates									
4-Bromofluorobenzene (S)	96	%	68-134		1	12/08/11 00:00	12/08/11 16:45	460-00-4	
8260 MSV GRO and Oxygenates	Analytical Method: EPA 5035A/8260								
Benzene	ND	ug/kg	5.2	0.40	1		12/02/11 14:06	71-43-2	
Ethylbenzene	ND	ug/kg	5.2	0.48	1		12/02/11 14:06	100-41-4	
Toluene	ND	ug/kg	5.2	0.40	1		12/02/11 14:06	108-88-3	
Xylene (Total)	ND	ug/kg	10.4	1.2	1		12/02/11 14:06	1330-20-7	
Surrogates									
Toluene-d8 (S)	105	%	81-121		1		12/02/11 14:06	2037-26-5	
4-Bromofluorobenzene (S)	101	%	75-131		1		12/02/11 14:06	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	77-131		1		12/02/11 14:06	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**18.3**	%	0.50	0.50	1		12/02/11 00:00		

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ANALYTICAL RESULTS

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60111194

Sample: S-075035-112911-JP-MW-6(55-57) **Lab ID: 60111194005** Collected: 11/29/11 16:00 Received: 12/01/11 09:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546								
TPH-DRO	**244**	mg/kg	70.1	13.3	1	12/02/11 00:00	12/06/11 04:23		
Surrogates									
n-Tetracosane (S)	91	%	41-130		1	12/02/11 00:00	12/06/11 04:23	646-31-1	
p-Terphenyl (S)	87	%	39-130		1	12/02/11 00:00	12/06/11 04:23	92-94-4	
Gasoline Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 5035A/5030B								
TPH-GRO	**2260**	mg/kg	237	85.2	20	12/08/11 00:00	12/09/11 14:17		
Surrogates									
4-Bromofluorobenzene (S)	160	%	68-134		20	12/08/11 00:00	12/09/11 14:17	460-00-4	S2
8260 MSV GRO and Oxygenates	Analytical Method: EPA 5035A/8260								
Benzene	ND	ug/kg	249	18.9	50		12/02/11 14:21	71-43-2	
Ethylbenzene	**2740**	ug/kg	249	22.9	50		12/02/11 14:21	100-41-4	
Toluene	ND	ug/kg	249	18.9	50		12/02/11 14:21	108-88-3	
Xylene (Total)	**98000**	ug/kg	2490	291	250		12/02/11 17:21	1330-20-7	
Surrogates									
Toluene-d8 (S)	211	%	81-121		50		12/02/11 14:21	2037-26-5	S1
4-Bromofluorobenzene (S)	130	%	75-131		50		12/02/11 14:21	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	77-131		50		12/02/11 14:21	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**15.5**	%	0.50	0.50	1		12/02/11 00:00		

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ANALYTICAL RESULTS

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60111194

Sample: S-075035-112911-JP-MW-6(57-60) **Lab ID: 60111194006** Collected: 11/29/11 16:00 Received: 12/01/11 09:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546								
TPH-DRO	**2.4J**	mg/kg	11.3	2.1	1	12/06/11 00:00	12/07/11 18:56		
Surrogates									
n-Tetracosane (S)	82	%	41-130		1	12/06/11 00:00	12/07/11 18:56	646-31-1	
p-Terphenyl (S)	80	%	39-130		1	12/06/11 00:00	12/07/11 18:56	92-94-4	
Gasoline Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 5035A/5030B								
TPH-GRO	ND	mg/kg	17.9	6.4	1	12/08/11 00:00	12/09/11 14:40		
Surrogates									
4-Bromofluorobenzene (S)	99	%	68-134		1	12/08/11 00:00	12/09/11 14:40	460-00-4	
8260 MSV GRO and Oxygenates	Analytical Method: EPA 5035A/8260								
Benzene	ND	ug/kg	6.9	0.53	1		12/02/11 14:36	71-43-2	
Ethylbenzene	ND	ug/kg	6.9	0.64	1		12/02/11 14:36	100-41-4	
Toluene	ND	ug/kg	6.9	0.53	1		12/02/11 14:36	108-88-3	
Xylene (Total)	ND	ug/kg	13.9	1.6	1		12/02/11 14:36	1330-20-7	
Surrogates									
Toluene-d8 (S)	105	%	81-121		1		12/02/11 14:36	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-131		1		12/02/11 14:36	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	77-131		1		12/02/11 14:36	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**12.7**	%	0.50	0.50	1		12/02/11 00:00		

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ANALYTICAL RESULTS

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60111194

Sample: S-075035-113011-JP-MW-7(35-40) **Lab ID: 60111194007** Collected: 11/30/11 11:35 Received: 12/01/11 09:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546								
TPH-DRO	**3.0J**	mg/kg	10.7	2.0	1	12/02/11 00:00	12/06/11 04:56		
Surrogates									
n-Tetracosane (S)	92	%	41-130		1	12/02/11 00:00	12/06/11 04:56	646-31-1	
p-Terphenyl (S)	90	%	39-130		1	12/02/11 00:00	12/06/11 04:56	92-94-4	
Gasoline Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 5035A/5030B								
TPH-GRO	ND	mg/kg	11.4	4.1	1	12/08/11 00:00	12/09/11 15:03		
Surrogates									
4-Bromofluorobenzene (S)	98	%	68-134		1	12/08/11 00:00	12/09/11 15:03	460-00-4	
8260 MSV GRO and Oxygenates	Analytical Method: EPA 5035A/8260								
Benzene	ND	ug/kg	4.9	0.37	1		12/02/11 14:51	71-43-2	
Ethylbenzene	ND	ug/kg	4.9	0.45	1		12/02/11 14:51	100-41-4	
Toluene	ND	ug/kg	4.9	0.37	1		12/02/11 14:51	108-88-3	
Xylene (Total)	ND	ug/kg	9.8	1.2	1		12/02/11 14:51	1330-20-7	
Surrogates									
Toluene-d8 (S)	99	%	81-121		1		12/02/11 14:51	2037-26-5	
4-Bromofluorobenzene (S)	101	%	75-131		1		12/02/11 14:51	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	77-131		1		12/02/11 14:51	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**6.8**	%	0.50	0.50	1		12/02/11 00:00		

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ANALYTICAL RESULTS

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60111194

Sample: S-075035-113011-JP-MW-7(50-53) **Lab ID: 60111194008** Collected: 11/30/11 12:20 Received: 12/01/11 09:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546								
TPH-DRO	**3.6J**	mg/kg	11.3	2.1	1	12/02/11 00:00	12/06/11 05:07		
Surrogates									
n-Tetracosane (S)	91	%	41-130		1	12/02/11 00:00	12/06/11 05:07	646-31-1	
p-Terphenyl (S)	89	%	39-130		1	12/02/11 00:00	12/06/11 05:07	92-94-4	
Gasoline Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 5035A/5030B								
TPH-GRO	ND	mg/kg	11.8	4.2	1	12/08/11 00:00	12/09/11 15:25		
Surrogates									
4-Bromofluorobenzene (S)	99	%	68-134		1	12/08/11 00:00	12/09/11 15:25	460-00-4	
8260 MSV GRO and Oxygenates	Analytical Method: EPA 5035A/8260								
Benzene	ND	ug/kg	5.1	0.39	1		12/02/11 15:06	71-43-2	
Ethylbenzene	ND	ug/kg	5.1	0.47	1		12/02/11 15:06	100-41-4	
Toluene	ND	ug/kg	5.1	0.39	1		12/02/11 15:06	108-88-3	
Xylene (Total)	ND	ug/kg	10.3	1.2	1		12/02/11 15:06	1330-20-7	
Surrogates									
Toluene-d8 (S)	104	%	81-121		1		12/02/11 15:06	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-131		1		12/02/11 15:06	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	77-131		1		12/02/11 15:06	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**12.7**	%	0.50	0.50	1		12/02/11 00:00		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60111194

Sample: TB-113011-JP-001 **Lab ID: 60111194009** Collected: 11/30/11 16:00 Received: 12/01/11 09:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV GRO and Oxygenates	Analytical Method: EPA 5035A/8260								
Benzene	ND	ug/kg	5.0	0.38	1		12/02/11 13:05	71-43-2	
Ethylbenzene	ND	ug/kg	5.0	0.46	1		12/02/11 13:05	100-41-4	
Toluene	ND	ug/kg	5.0	0.38	1		12/02/11 13:05	108-88-3	
Xylene (Total)	ND	ug/kg	10.0	1.2	1		12/02/11 13:05	1330-20-7	
Surrogates									
Toluene-d8 (S)	105	%	81-121		1		12/02/11 13:05	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-131		1		12/02/11 13:05	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	77-131		1		12/02/11 13:05	17060-07-0	

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QUALITY CONTROL DATA

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60111194

QC Batch: GCV/3963 Analysis Method: EPA 8015B
QC Batch Method: EPA 5035A/5030B Analysis Description: Gasoline Range Organics
Associated Lab Samples: 60111194001, 60111194002, 60111194003, 60111194004, 60111194005, 60111194006, 60111194007, 60111194008

METHOD BLANK: 922978 Matrix: Solid
Associated Lab Samples: 60111194001, 60111194002, 60111194003, 60111194004, 60111194005, 60111194006, 60111194007, 60111194008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH-GRO	mg/kg	ND	10.0	12/08/11 14:26	
4-Bromofluorobenzene (S)	%	100	68-134	12/08/11 14:26	

METHOD BLANK: 923961 Matrix: Solid
Associated Lab Samples: 60111194001, 60111194002, 60111194003, 60111194004, 60111194005, 60111194006, 60111194007, 60111194008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH-GRO	mg/kg	ND	10.0	12/09/11 13:54	
4-Bromofluorobenzene (S)	%	97	68-134	12/09/11 13:54	

LABORATORY CONTROL SAMPLE: 922979

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-GRO	mg/kg	50	46.9	94	77-122	
4-Bromofluorobenzene (S)	%			100	68-134	

LABORATORY CONTROL SAMPLE: 923962

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-GRO	mg/kg	50	52.2	104	77-122	
4-Bromofluorobenzene (S)	%			97	68-134	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 922980 922981

Parameter	Units	60111194001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
TPH-GRO	mg/kg	ND	62.4	62.4	54.7	53.8	88	86	51-130	2	27	
4-Bromofluorobenzene (S)	%						103	103	68-134			

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60111194

QC Batch: MSV/42162 Analysis Method: EPA 5035A/8260
QC Batch Method: EPA 5035A/8260 Analysis Description: 8260 MSV GRO and Oxygenates
Associated Lab Samples: 60111194001, 60111194002, 60111194003, 60111194004, 60111194005, 60111194006, 60111194007, 60111194008, 60111194009

METHOD BLANK: 919980 Matrix: Solid
Associated Lab Samples: 60111194001, 60111194002, 60111194003, 60111194004, 60111194005, 60111194006, 60111194007, 60111194008, 60111194009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/kg	ND	5.0	12/02/11 10:19	
Ethylbenzene	ug/kg	ND	5.0	12/02/11 10:19	
Toluene	ug/kg	ND	5.0	12/02/11 10:19	
Xylene (Total)	ug/kg	ND	10.0	12/02/11 10:19	
1,2-Dichloroethane-d4 (S)	%	104	77-131	12/02/11 10:19	
4-Bromofluorobenzene (S)	%	100	75-131	12/02/11 10:19	
Toluene-d8 (S)	%	98	81-121	12/02/11 10:19	

LABORATORY CONTROL SAMPLE: 919981

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/kg	100	105	105	84-119	
Ethylbenzene	ug/kg	100	106	106	80-120	
Toluene	ug/kg	100	110	110	83-117	
Xylene (Total)	ug/kg	300	304	101	80-120	
1,2-Dichloroethane-d4 (S)	%			105	77-131	
4-Bromofluorobenzene (S)	%			100	75-131	
Toluene-d8 (S)	%			107	81-121	

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(913)599-5665

QUALITY CONTROL DATA

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60111194

QC Batch: OEXT/31348 Analysis Method: EPA 8015B
QC Batch Method: EPA 3546 Analysis Description: EPA 8015B
Associated Lab Samples: 60111194001, 60111194002, 60111194003, 60111194004, 60111194005, 60111194007, 60111194008

METHOD BLANK: 919958 Matrix: Solid
Associated Lab Samples: 60111194001, 60111194002, 60111194003, 60111194004, 60111194005, 60111194007, 60111194008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH-DRO	mg/kg	1.9J	9.9	12/06/11 02:53	
n-Tetracosane (S)	%	92	41-130	12/06/11 02:53	
p-Terphenyl (S)	%	94	39-130	12/06/11 02:53	

LABORATORY CONTROL SAMPLE: 919959

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-DRO	mg/kg	82.6	76.7	93	57-120	
n-Tetracosane (S)	%			94	41-130	
p-Terphenyl (S)	%			101	39-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 919960 919961

Parameter	Units	60111194001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
TPH-DRO	mg/kg	4.2J	97.1	97.7	91.5	93.2	90	91	36-125	2	28	
n-Tetracosane (S)	%						96	89	41-130			
p-Terphenyl (S)	%						94	92	39-130			

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60111194

QC Batch: OEXT/31393 Analysis Method: EPA 8015B
QC Batch Method: EPA 3546 Analysis Description: EPA 8015B
Associated Lab Samples: 60111194006

METHOD BLANK: 921962 Matrix: Solid
Associated Lab Samples: 60111194006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH-DRO	mg/kg	1.9J	9.7	12/07/11 18:11	
n-Tetracosane (S)	%	93	41-130	12/07/11 18:11	
p-Terphenyl (S)	%	87	39-130	12/07/11 18:11	

LABORATORY CONTROL SAMPLE: 921963

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-DRO	mg/kg	82.1	71.2	87	57-120	
n-Tetracosane (S)	%			100	41-130	
p-Terphenyl (S)	%			99	39-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 921964 921965

Parameter	Units	60111194006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
TPH-DRO	mg/kg	2.4J	94.9	93.3	72.4	74.9	74	78	36-125	3	28	
n-Tetracosane (S)	%						85	90	41-130			
p-Terphenyl (S)	%						83	91	39-130			

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60111194

QC Batch: PMST/6804 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 60111194001, 60111194002, 60111194003, 60111194004, 60111194005, 60111194006, 60111194007, 60111194008

METHOD BLANK: 919969 Matrix: Solid
Associated Lab Samples: 60111194001, 60111194002, 60111194003, 60111194004, 60111194005, 60111194006, 60111194007, 60111194008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	12/02/11 00:00	

SAMPLE DUPLICATE: 919970

Parameter	Units	60111199001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	97.2	97.2	0	20	

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60111194

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

BATCH QUALIFIERS

Batch: MSV/42162

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

Batch: GCV/3965

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

ANALYTE QUALIFIERS

S1 Surrogate recovery outside laboratory control limits (confirmed by re-analysis).

S2 Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-analysis).

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60111194

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60111194001	S-075035-112911-JP-MW-5(40-41)	EPA 3546	OEXT/31348	EPA 8015B	GCSV/11632
60111194002	S-075035-112911-JP-MW-5(48.5-4	EPA 3546	OEXT/31348	EPA 8015B	GCSV/11632
60111194003	S-075035-112911-JP-MW-5(49-50)	EPA 3546	OEXT/31348	EPA 8015B	GCSV/11632
60111194004	S-075035-112911-JP-MW-6(40-45)	EPA 3546	OEXT/31348	EPA 8015B	GCSV/11632
60111194005	S-075035-112911-JP-MW-6(55-57)	EPA 3546	OEXT/31348	EPA 8015B	GCSV/11632
60111194006	S-075035-112911-JP-MW-6(57-60)	EPA 3546	OEXT/31393	EPA 8015B	GCSV/11651
60111194007	S-075035-113011-JP-MW-7(35-40)	EPA 3546	OEXT/31348	EPA 8015B	GCSV/11632
60111194008	S-075035-113011-JP-MW-7(50-53)	EPA 3546	OEXT/31348	EPA 8015B	GCSV/11632
60111194001	S-075035-112911-JP-MW-5(40-41)	EPA 5035A/5030B	GCV/3963	EPA 8015B	GCV/3964
60111194002	S-075035-112911-JP-MW-5(48.5-4	EPA 5035A/5030B	GCV/3963	EPA 8015B	GCV/3964
60111194003	S-075035-112911-JP-MW-5(49-50)	EPA 5035A/5030B	GCV/3963	EPA 8015B	GCV/3964
60111194004	S-075035-112911-JP-MW-6(40-45)	EPA 5035A/5030B	GCV/3963	EPA 8015B	GCV/3964
60111194005	S-075035-112911-JP-MW-6(55-57)	EPA 5035A/5030B	GCV/3963	EPA 8015B	GCV/3965
60111194006	S-075035-112911-JP-MW-6(57-60)	EPA 5035A/5030B	GCV/3963	EPA 8015B	GCV/3965
60111194007	S-075035-113011-JP-MW-7(35-40)	EPA 5035A/5030B	GCV/3963	EPA 8015B	GCV/3965
60111194008	S-075035-113011-JP-MW-7(50-53)	EPA 5035A/5030B	GCV/3963	EPA 8015B	GCV/3965
60111194001	S-075035-112911-JP-MW-5(40-41)	EPA 5035A/8260	MSV/42162		
60111194002	S-075035-112911-JP-MW-5(48.5-4	EPA 5035A/8260	MSV/42162		
60111194003	S-075035-112911-JP-MW-5(49-50)	EPA 5035A/8260	MSV/42162		
60111194004	S-075035-112911-JP-MW-6(40-45)	EPA 5035A/8260	MSV/42162		
60111194005	S-075035-112911-JP-MW-6(55-57)	EPA 5035A/8260	MSV/42162		
60111194006	S-075035-112911-JP-MW-6(57-60)	EPA 5035A/8260	MSV/42162		
60111194007	S-075035-113011-JP-MW-7(35-40)	EPA 5035A/8260	MSV/42162		
60111194008	S-075035-113011-JP-MW-7(50-53)	EPA 5035A/8260	MSV/42162		
60111194009	TB-113011-JP-001	EPA 5035A/8260	MSV/42162		
60111194001	S-075035-112911-JP-MW-5(40-41)	ASTM D2974-87	PMST/6804		
60111194002	S-075035-112911-JP-MW-5(48.5-4	ASTM D2974-87	PMST/6804		
60111194003	S-075035-112911-JP-MW-5(49-50)	ASTM D2974-87	PMST/6804		
60111194004	S-075035-112911-JP-MW-6(40-45)	ASTM D2974-87	PMST/6804		
60111194005	S-075035-112911-JP-MW-6(55-57)	ASTM D2974-87	PMST/6804		
60111194006	S-075035-112911-JP-MW-6(57-60)	ASTM D2974-87	PMST/6804		
60111194007	S-075035-113011-JP-MW-7(35-40)	ASTM D2974-87	PMST/6804		
60111194008	S-075035-113011-JP-MW-7(50-53)	ASTM D2974-87	PMST/6804		

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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: CRA
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.:
Project Name: Martin 34 No. 2
Project Number: 075035/95/

Section C
Invoice Information:

Attention: ENFOS
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: Anna Custer
Pace Profile #:

REGULATORY AGENCY

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

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.: 60111194

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START (GRAB) DATE	TIME	COMPOSITE END/GRAB DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test↓	EPA 8260 BTEX	EPA 8015B GRO	EPA 8015B DRO	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	S-075035-112911-JP-mw-5(40-41)	SL	G	~~11/28~~	835	11/29		~~8~~	8	X						X	X		X	X	X		001 2(WEFu) 1(WEZn) 2(VG9u) 2(DG9B) 1(DG9m)
2	S-075035-112911-JP-mw-5(48.5-49)	SL	G	~~11/28~~	0950	11/29		~~8~~	8	X						X	X		X	X	X		002
3	S-075035-112911-JP-MW-5(49-50)	SL	G	~~11/28~~	0950	11/29		~~8~~	8	X						X	X		X	X	X		003
4	S-075035-112911-JP mw-6(40-45)	SL	G	11/29	1450				8	X						X	X		X	X	X		004
5	S-075035-112911-JP-mw-6(55-57)	SL	G	11/29	1600				8	X						X	X		X	X	X		005
6	S-075035-112911-JP-mw-6(57-60)	SL	G	11/29	1600				8	X						X	X		X	X	X		006
7	S-075035-113011-JP-mw-7(35-40)	SL	G	11/30	1135				8	X						X	X		X	X	X		007
8	S-075035-113011-JP-mw-7(50-53)	SL	G	11/30	1220				8	X						X	X		X	X	X		008
9	~~S~~																		X	X	X		
10	TB-113011-JP-001	WT		11/30	1600				3	X									X				3(VG9u) 009
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	[signature]	11/30/11	1600	[signature] / Pace	12/1/11	900	0.2	Y	Y	Y
							0.5	Y	Y	Y
							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): 11/30/11

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

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

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Sample Condition Upon Receipt – ESI Tech Specs

Client Name: CoP CRA NM Project #: 60111194

Courier: Fed Ex ☒ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ☐ _____

Optional 12/13
Proj Due Date:
Proj Name: Martin 24 No. 2

Tracking #: 8758 2981 8634 Pace Shipping Label Used? Yes ☐ No ☒

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

Packing Material: Bubble Wrap ☒ Bubble Bags ☐ Foam ☐ None ☐ Other ☐ _____

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

Cooler Temperature: 05, 0.2

Temperature should be above freezing to 6°C

Date and initials of person examining contents: JS 12/1/11 1108

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. unpreserved vials frozen @ 11:00 12/1/11
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: Soil		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:	☒Yes ☐No ☐N/A	
Pace Trip Blank lot # (if purchased): 090511.1		15.
Headspace in VOA vials (>6mm):	☐Yes ☐No ☒N/A	16.
Project sampled in USDA Regulated Area:	☐Yes ☐No ☒N/A	17. List State: NM

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: 12/1/11

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

Start:	Start:
End:	End:
Temp:	Temp:

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

F-KS-C-004-Rev.0, 02February2011

APPENDIX C

GROUNDWATER SAMPLING FIELD FORMS

WELL SAMPLING FIELD INFORMATION FORM

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

SAMPLE ID: GW-075035-093011-CM-009 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)
9-30-11	9-30-11	1140	.32 as measured on 9/29/11	0.50 on 9/30/11

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	C - VACUUM	0.45 micron filter for metals.

FIELD MEASUREMENTS

DEPTH TO WATER	40.23 (feet)	WELL ELEVATION	93.09 (feet)
WELL DEPTH	41.08 (feet)	GROUNDWATER ELEVATION	52.86 (feet)

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

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy ODOR: hydrocarbon COLOR: dark gray SHEEN Y (N)

WEATHER CONDITIONS: TEMPERATURE 850 WINDY Y/N (N) PRECIPITATION Y/N (IF Y TYPE)

SPECIFIC COMMENTS: No parameters due to low well volume & slow recharge

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

DATE	PRINT	SIGNATURE
9.30.11	Jason Hines	

WELL SAMPLING FIELD INFORMATION FORM

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

SAMPLE ID: GW-075035-093011-CM-007 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)
9-30-11	9-30-11	1130	.474	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	C - VACUUM	

FIELD MEASUREMENTS

DEPTH TO WATER 37.68 (feet) WELL ELEVATION 87.45 (feet)

WELL DEPTH 48.64 (feet) GROUNDWATER ELEVATION 49.77 (feet)

TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
16.77 (°C)	7.46 (std)	16.91 (g/L)	21932 (µS/cm)	-195.0 (mV)	1.0 (gal)
16.54 (°C)	7.45 (std)	16.59 (g/L)	21759 (µS/cm)	-176.5 (mV)	1.25 (gal)
16.35 (°C)	7.45 (std)	16.80 (g/L)	21568 (µS/cm)	-168.7 (mV)	1.50 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy ODOR: hydrocarbon/PID COLOR: dark gray SHEEN Y/N (Y) very slight spotty

WEATHER CONDITIONS: TEMPERATURE 85° WINDY Y/N (N) PRECIPITATION Y/N (IF Y TYPE) (N)

SPECIFIC COMMENTS:

Duplicate GW-075035-093011-CM-010 @ 1135

2.96' X 0.16 = .474 X 3 = 1.42

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

9.30.11 DATE Jason Hicks PRINT SIGNATURE

WELL SAMPLING FIELD INFORMATION FORM

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

SAMPLE ID: GW-075035-093011-GM-006 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)
9.30.11	9.30.11	1300	1.38	4.25

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	C - VACUUM	

FIELD MEASUREMENTS

DEPTH TO WATER 36.98 (feet) WELL ELEVATION 87.19 (feet)

WELL DEPTH 45.62 (feet) GROUNDWATER ELEVATION 50.21 (feet)

TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
16.16 (°C)	7.65 (std)	17.81 (g/L)	22779 (µS/cm)	-4.4 (mV)	2.75 (gal)
16.45 (°C)	7.65 (std)	17.15 (g/L)	22019 (µS/cm)	-3.4 (mV)	3.25 (gal)
16.16 (°C)	7.55 (std)	17.03 (g/L)	21759 (µS/cm)	9.0 (mV)	3.75 (gal)
16.18 (°C)	7.60 (std)	17.11 (g/L)	21909 (µS/cm)	14.3 (mV)	4.25 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy ODOR: none COLOR: Lt brown SHEEN Y (N)

WEATHER CONDITIONS: TEMPERATURE 85° WINDY Y (N) PRECIPITATION Y/N (IF Y TYPE)

SPECIFIC COMMENTS:

Bailed dry @ 3 gallons

8.64 x 0.16 = 1.38 x 3 = 4.147

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

9.30.11 DATE | Jason Voss PRINT | SIGNATURE

WELL SAMPLING FIELD INFORMATION FORM

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

SAMPLE ID: GW-075035-093011-CM-008 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)
9.30.11	9.30.11	1240	1.79	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	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	C - VACUUM	

FIELD MEASUREMENTS

DEPTH TO WATER 44.40 (feet) WELL ELEVATION 99.63 (feet)

WELL DEPTH 55.62 (feet) GROUNDWATER ELEVATION 55.23 (feet)

TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
16.03 (°C)	7.48 (std)	21.96 (g/L)	27,998 (µS/cm)	-42.4 (mV)	4.5 (gal)
15.98 (°C)	7.46 (std)	22.12 (g/L)	28,168 (µS/cm)	-45.9 (mV)	5.0 (gal)
16.02 (°C)	7.43 (std)	22.17 (g/L)	28,274 (µS/cm)	-48.1 (mV)	5.5 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy ODOR: very slight hydrocarbon COLOR: light gray/brown SHEEN Y (N)

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

SPECIFIC COMMENTS:

1.22 X 0.46 = 1.79 X 3 = 5.38

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

9.30.11 Jason Ross

DATE PRINT SIGNATURE

WELL SAMPLING FIELD INFORMATION FORM

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

SAMPLE ID: GW075035-121311-CB-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)
12-12-11	12-13-11	1335	0.44	bailed dry

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	C - VACUUM	

FIELD MEASUREMENTS

DEPTH TO WATER	39.23 (feet)		WELL ELEVATION	93.28 (feet)	
WELL DEPTH	42.00 (feet)		GROUNDWATER ELEVATION	54.05 (feet)	

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

FIELD COMMENTS

SAMPLE APPEARANCE: slightly cloudy ODOR: hydrocarbon COLOR: slightly milky SHEEN Y/N spotty

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

SPECIFIC COMMENTS:

Bailed dry on 12-12-11, No parameters due to low well volume.

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

12-13-11 DATE | Cassie Brown PRINT | Cassie Brown SIGNATURE

duplicate at 1340
GW-075035-121311-CB-DUP

WELL SAMPLING FIELD INFORMATION FORM

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

SAMPLE ID: GW-075035-12311-CB-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)
12311	12311	1425	0.49	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	C - VACUUM	

FIELD MEASUREMENTS

DEPTH TO WATER 37.51 (feet) WELL ELEVATION 87.59 (feet)

WELL DEPTH 40.58 (feet) GROUNDWATER ELEVATION 50.08 (feet)

	TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
14:19	15.10 (°C)	7.59 (std)	16.16 (g/L)	2267 (µS/cm)	-186.4 (mV)	0.75 (gal)
14:21	15.30 (°C)	7.67 (std)	17.91 (g/L)	22436 (µS/cm)	-220.7 (mV)	1.25 (gal)
14:22	15.29 (°C)	7.67 (std)	17.85 (g/L)	32361 (µS/cm)	-226.7 (mV)	1.50 (gal)
	(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)
	(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)

FIELD COMMENTS

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

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

SPECIFIC COMMENTS:

0.49x3 = 1.47

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

12.13.11 Cassie Brown Cassie Brown

DATE PRINT SIGNATURE

WELL SAMPLING FIELD INFORMATION FORM

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

SAMPLE ID: GW075035-12811-CB 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)
12-12-11	12-13-11	1455	1.42	1.42

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	C - VACUUM	

FIELD MEASUREMENTS

DEPTH TO WATER 36.70 (feet) WELL ELEVATION 87.32 (feet)

WELL DEPTH 45.60 (feet) GROUNDWATER ELEVATION 50.62 (feet)

	TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
1451	15.00 (°C)	7.67 (std)	17.79 (g/L)	22126 (µS/cm)	-66.6 (mV)	3.25 (gal)
1453	15.10 (°C)	7.61 (std)	17.69 (g/L)	22062 (µS/cm)	-66.2 (mV)	3.5 (gal)
1455	15.05 (°C)	7.59 (std)	17.70 (g/L)	22063 (µS/cm)	-56.7 (mV)	4.25 (gal)
	(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)
	(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy ODOR: None COLOR: light brown SHEEN Y/(N)

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

SPECIFIC COMMENTS:

1.42 x 3 = (4.27) purged of 3.5 gallons on 12-12-11.

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

12-13-11 Cassie Brown (Cassie Brown)

DATE PRINT SIGNATURE

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: Martin 3A No. 2 JOB# 075035

SAMPLE ID: GW-075035-12131-CB-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)
12-13-11	12-13-11	1550	1.81	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	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	C - VACUUM	

FIELD MEASUREMENTS

DEPTH TO WATER	44.18 (feet)		WELL ELEVATION	99.82 (feet)	
WELL DEPTH	55.53 (feet)		GROUNDWATER ELEVATION	55.64 (feet)	

TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
14.95 (°C)	7.74 (std)	22.94 (g/L)	28505 (µS/cm)	-77.9 (mV)	4.5 (gal)
15.34 (°C)	7.65 (std)	22.67 (g/L)	28525 (µS/cm)	-82.7 (mV)	5.0 (gal)
15.58 (°C)	7.60 (std)	22.90 (g/L)	28908 (µS/cm)	-84.4 (mV)	5.5 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy ODOR: — COLOR: light brown/gray SHEEN Y/(N)

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

SPECIFIC COMMENTS:

1.81 x 3 = 5.44

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

12-13-11 DATE | Cassie Brown PRINT | Cassie Brown SIGNATURE

WELL SAMPLING FIELD INFORMATION FORM

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

SAMPLE ID: GW-075035-12131-CB-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)
12.12.11	12.13.11	1645	0.08	

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	C - VACUUM	

FIELD MEASUREMENTS

DEPTH TO WATER 47.61 (feet) WELL ELEVATION 98.27 (feet)

WELL DEPTH 48.16 (feet) GROUNDWATER ELEVATION 50.66 (feet)

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

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy ODOR: None COLOR: light brown SHEEN Y/(N)

WEATHER CONDITIONS: TEMPERATURE 23° WINDY Y/N PRECIPITATION Y/(N) IF Y TYPE)

SPECIFIC COMMENTS:

0.08 x 3 = 0.24 gal
bailed dry on 12.12.11. No parameters due to low well volume.
1 VOC vial filled on 12.13.11

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

12.13.11 DATE | Gabrielle Brown PRINT | Gabrielle Brown SIGNATURE

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: Martin 3A No. 2 JOB# 075035

SAMPLE ID: GW-075035-12311-CB-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)
12-13-11	12-13-11	1010	2.74	8.5

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	C - VACUUM	

FIELD MEASUREMENTS

DEPTH TO WATER 41.01 (feet) WELL ELEVATION 94.80 (feet)

WELL DEPTH 58.15 (feet) GROUNDWATER ELEVATION 53.79 (feet)

TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
15.50 (°C)	8.22 (std)	22.43 (g/L)	28,287 (µS/cm)	-362.9 (mV)	8.0 (gal)
15.59 (°C)	8.19 (std)	22.42 (g/L)	28,300 (µS/cm)	-371.3 (mV)	8.25 (gal)
15.61 (°C)	8.18 (std)	22.35 (g/L)	28,249 (µS/cm)	-373.9 (mV)	8.5 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: black ODOR: ~~bio~~/hydrocarbon COLOR: black SHEEN Y/N Spotty

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

SPECIFIC COMMENTS:

2.74 x 3 = 8.22

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

12-13-11 DATE | Cassie Brown PRINT | Cassie Brown SIGNATURE

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: Martin 3A No. 2 JOB# 075035

SAMPLE ID: GW-075035-12311-CB-MW-7 WELL# MW-7

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
12-13-11	12-13-11	1440	1.85	6.0

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	C - VACUUM	

FIELD MEASUREMENTS

DEPTH TO WATER: 40.49 (feet) WELL ELEVATION: 86.49 (feet)

WELL DEPTH: 52.10 (feet) GROUNDWATER ELEVATION: 46.00 (feet)

TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
14.04 (°C)	7.90 (std)	14.79 (g/L)	17,984 (µS/cm)	-128.9 (mV)	5.0 (gal)
14.87 (°C)	7.80 (std)	14.95 (g/L)	18,533 (µS/cm)	-133.0 (mV)	5.5 (gal)
14.91 (°C)	7.75 (std)	15.79 (g/L)	19,624 (µS/cm)	-129.7 (mV)	6.0 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy ODOR: none COLOR: light brown SHEEN Y/(N)

WEATHER CONDITIONS: TEMPERATURE ~ 38° WIND (Y)N breezy PRECIPITATION Y/(N) IF Y TYPE)

SPECIFIC COMMENTS:

1.86x3 = 5.57

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

DATE	PRINT	SIGNATURE
12-13-11	Cassie Brown	Cassie Brown

APPENDIX D

GROUNDWATER LABORATORY ANALYTICAL REPORTS

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

December 06, 2011

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

RE: Project: Martin 34 No. 2 (075035)
Pace Project No.: 60110109

Dear Christine Matthews:
Enclosed are the analytical results for sample(s) received by the laboratory on November 11, 2011. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Ammended report rev 1: 12/06/11 revised sample ID's per client request.

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

Sincerely,

Anna Custer

anna.custer@pacelabs.com
Project Manager

Enclosures

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

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CERTIFICATIONS

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60110109

Kansas Certification IDs
9608 Loiret Boulevard, Lenexa, KS 66219
A2LA Certification #: 2456.01
Arkansas Certification #: 05-008-0
Illinois Certification #: 001191
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212008A
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407-08-TX
Utah Certification #: 9135995665

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SAMPLE SUMMARY

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60110109

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60110109001	**GW-075035-110911-B4**	Water	11/09/11 13:20	11/11/11 09:00
60110109002	**GW-075035-110911-B5**	Water	11/09/11 17:25	11/11/11 09:00
60110109003	**TB-111011-001**	Water	11/10/11 16:30	11/11/11 09:00

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SAMPLE ANALYTE COUNT

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60110109

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60110109001	**GW-075035-110911-B4**	EPA 6010	SMW	3
		EPA 5030B/8260	HMW	12
		SM 2540C	KLB	1
		EPA 300.0	JPF	3
60110109002	**GW-075035-110911-B5**	EPA 6010	SMW	3
		EPA 5030B/8260	HMW	12
		SM 2540C	KLB	1
		EPA 300.0	JPF	3
60110109003	**TB-111011-001**	EPA 5030B/8260	HMW	12

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PROJECT NARRATIVE

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60110109

Method: **EPA 6010**
Description: 6010 MET ICP, Dissolved (LF)
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: December 06, 2011

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

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

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

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60110109

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: December 06, 2011

General Information:
3 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.

QC Batch: MSV/41799

L0: Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

- LCS (Lab ID: 912413)
  - 1,1,2,2-Tetrachloroethane

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

QC Batch: MSV/41799

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60110109

Method: SM 2540C
Description: 2540C Total Dissolved Solids
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: December 06, 2011

General Information:
2 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: Martin 34 No. 2 (075035)
Pace Project No.: 60110109

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: December 06, 2011

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

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

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

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

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

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

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

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

Additional Comments:

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

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ANALYTICAL RESULTS

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60110109

Sample: GW-075035-110911-B4 **Lab ID: 60110109001** Collected: 11/09/11 13:20 Received: 11/11/11 09:00 Matrix: Water

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	**960**	ug/L	100	1	11/16/11 13:40	11/17/11 15:15	7440-42-8	
Iron, Dissolved	ND	ug/L	50.0	1	11/16/11 13:40	11/17/11 15:15	7439-89-6	
Manganese, Dissolved	**134**	ug/L	5.0	1	11/16/11 13:40	11/17/11 15:15	7439-96-5	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		11/16/11 15:16	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		11/16/11 15:16	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		11/16/11 15:16	75-09-2	
Naphthalene	ND	ug/L	10.0	1		11/16/11 15:16	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/16/11 15:16	79-34-5	L2
Toluene	ND	ug/L	1.0	1		11/16/11 15:16	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		11/16/11 15:16	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	98	%	87-113	1		11/16/11 15:16	460-00-4	
Dibromofluoromethane (S)	106	%	86-112	1		11/16/11 15:16	1868-53-7	
1,2-Dichloroethane-d4 (S)	108	%	82-119	1		11/16/11 15:16	17060-07-0	
Toluene-d8 (S)	103	%	90-110	1		11/16/11 15:16	2037-26-5	
Preservation pH	**1.0**		0.10	1		11/16/11 15:16		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**7030**	mg/L	5.0	1		11/14/11 12:44		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Chloride	**12.1**	mg/L	1.0	1		11/20/11 21:12	16887-00-6	
Fluoride	**2.2**	mg/L	0.20	1		11/20/11 21:12	16984-48-8	
Sulfate	**5610**	mg/L	1000	1000		11/21/11 11:42	14808-79-8	

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ANALYTICAL RESULTS

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60110109

Sample: GW-075035-110911-B5 **Lab ID: 60110109002** Collected: 11/09/11 17:25 Received: 11/11/11 09:00 Matrix: Water

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	**977**	ug/L	200	2	11/16/11 13:40	11/17/11 16:10	7440-42-8	
Iron, Dissolved	ND	ug/L	50.0	1	11/16/11 13:40	11/17/11 15:17	7439-89-6	
Manganese, Dissolved	**5030**	ug/L	10.0	2	11/16/11 13:40	11/17/11 16:10	7439-96-5	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		11/16/11 15:32	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		11/16/11 15:32	100-41-4	
Methylene chloride	**1.2**	ug/L	1.0	1		11/16/11 15:32	75-09-2	Z3
Naphthalene	ND	ug/L	10.0	1		11/16/11 15:32	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/16/11 15:32	79-34-5	L2
Toluene	ND	ug/L	1.0	1		11/16/11 15:32	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		11/16/11 15:32	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	104	%	87-113	1		11/16/11 15:32	460-00-4	
Dibromofluoromethane (S)	107	%	86-112	1		11/16/11 15:32	1868-53-7	
1,2-Dichloroethane-d4 (S)	112	%	82-119	1		11/16/11 15:32	17060-07-0	
Toluene-d8 (S)	105	%	90-110	1		11/16/11 15:32	2037-26-5	
Preservation pH	**1.0**		0.10	1		11/16/11 15:32		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**26000**	mg/L	5.0	1		11/14/11 12:45		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Chloride	**509**	mg/L	50.0	50		11/21/11 11:58	16887-00-6	
Fluoride	**2.2**	mg/L	0.20	1		11/20/11 22:18	16984-48-8	
Sulfate	**20500**	mg/L	2000	2000		11/21/11 17:46	14808-79-8	

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ANALYTICAL RESULTS

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60110109

Sample: TB-111011-001 **Lab ID: 60110109003** Collected: 11/10/11 16:30 Received: 11/11/11 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		11/16/11 15:49	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		11/16/11 15:49	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		11/16/11 15:49	75-09-2	
Naphthalene	ND	ug/L	10.0	1		11/16/11 15:49	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/16/11 15:49	79-34-5	L2
Toluene	ND	ug/L	1.0	1		11/16/11 15:49	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		11/16/11 15:49	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	101	%	87-113	1		11/16/11 15:49	460-00-4	
Dibromofluoromethane (S)	104	%	86-112	1		11/16/11 15:49	1868-53-7	
1,2-Dichloroethane-d4 (S)	101	%	82-119	1		11/16/11 15:49	17060-07-0	
Toluene-d8 (S)	100	%	90-110	1		11/16/11 15:49	2037-26-5	
Preservation pH	**1.0**		0.10	1		11/16/11 15:49		

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QUALITY CONTROL DATA

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60110109

QC Batch: MPRP/16132
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Associated Lab Samples: 60110109001, 60110109002

METHOD BLANK: 912509
Matrix: Water
Associated Lab Samples: 60110109001, 60110109002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	11/17/11 15:09	
Iron, Dissolved	ug/L	ND	50.0	11/17/11 15:09	
Manganese, Dissolved	ug/L	ND	5.0	11/17/11 15:09	

LABORATORY CONTROL SAMPLE: 912510

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	992	99	80-120	
Iron, Dissolved	ug/L	10000	10100	101	80-120	
Manganese, Dissolved	ug/L	1000	1050	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 912511 912512

Parameter	Units	60110160004 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	2000	2000	1950	1930	94	93	75-125	1	20	
Iron, Dissolved	ug/L	ND	20000	20000	18600	18500	93	92	75-125	1	20	
Manganese, Dissolved	ug/L	507	2000	2000	2380	2340	94	92	75-125	2	20	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60110109

QC Batch: MSV/41799 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60110109001, 60110109002, 60110109003

METHOD BLANK: 912412 Matrix: Water
Associated Lab Samples: 60110109001, 60110109002, 60110109003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	11/16/11 11:44	
Benzene	ug/L	ND	1.0	11/16/11 11:44	
Ethylbenzene	ug/L	ND	1.0	11/16/11 11:44	
Methylene chloride	ug/L	ND	1.0	11/16/11 11:44	
Naphthalene	ug/L	ND	10.0	11/16/11 11:44	
Toluene	ug/L	ND	1.0	11/16/11 11:44	
Xylene (Total)	ug/L	ND	3.0	11/16/11 11:44	
1,2-Dichloroethane-d4 (S)	%	101	82-119	11/16/11 11:44	
4-Bromofluorobenzene (S)	%	101	87-113	11/16/11 11:44	
Dibromofluoromethane (S)	%	102	86-112	11/16/11 11:44	
Toluene-d8 (S)	%	94	90-110	11/16/11 11:44	

LABORATORY CONTROL SAMPLE: 912413

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	15.0	75	78-124	L0
Benzene	ug/L	20	20.5	102	82-117	
Ethylbenzene	ug/L	20	20.4	102	79-121	
Methylene chloride	ug/L	20	22.6	113	75-118	
Naphthalene	ug/L	20	17.3	87	66-133	
Toluene	ug/L	20	20.2	101	80-120	
Xylene (Total)	ug/L	60	59.2	99	75-120	
1,2-Dichloroethane-d4 (S)	%			108	82-119	
4-Bromofluorobenzene (S)	%			105	87-113	
Dibromofluoromethane (S)	%			108	86-112	
Toluene-d8 (S)	%			107	90-110	

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QUALITY CONTROL DATA

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60110109

QC Batch: WET/32058 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 60110109001, 60110109002

METHOD BLANK: 911122 Matrix: Water
Associated Lab Samples: 60110109001, 60110109002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	11/14/11 12:43	

SAMPLE DUPLICATE: 911123

Parameter	Units	60110109001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	7030	6710	5	17	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60110109

QC Batch: WETA/18398 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60110109001, 60110109002

METHOD BLANK: 915403 Matrix: Water
Associated Lab Samples: 60110109001, 60110109002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	11/20/11 13:12	
Fluoride	mg/L	ND	0.20	11/20/11 13:12	

METHOD BLANK: 916015 Matrix: Water
Associated Lab Samples: 60110109001, 60110109002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	11/21/11 11:09	
Sulfate	mg/L	ND	1.0	11/21/11 11:09	

LABORATORY CONTROL SAMPLE: 915404

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

LABORATORY CONTROL SAMPLE: 916016

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.9	99	90-110	
Sulfate	mg/L	5	4.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 915405 915406

Parameter	Units	60109995004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.1	5	5	7.1	6.9	102	97	64-118	3	12	
Fluoride	mg/L	0.28	2.5	2.5	2.9	2.7	104	97	75-110	7	10	
Sulfate	mg/L	20.7	5	5	25.1	24.9	89	84	61-119	1	10	

MATRIX SPIKE SAMPLE: 915407

Parameter	Units	60109995013 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	ND	100	104	96	64-118	
Fluoride	mg/L	ND	50	52.8	101	75-110	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60110109

MATRIX SPIKE SAMPLE: 915407

Parameter	Units	60109995013 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	173	100	270	97	61-119	

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QUALIFIERS

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60110109

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

BATCH QUALIFIERS

Batch: MSV/41799

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

ANALYTE QUALIFIERS

L0 Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

L2 Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

Z3 Methylene chloride is a common laboratory contaminant. Results for this analyte should be considered estimated unless the amount found in the sample is 3 to 5 times higher than that found in the method blank.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Martin 34 No. 2 (075035)
Pace Project No.: 60110109

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60110109001	**GW-075035-110911-B4**	EPA 3010	MPRP/16132	EPA 6010	ICP/13924
60110109002	**GW-075035-110911-B5**	EPA 3010	MPRP/16132	EPA 6010	ICP/13924
60110109001	**GW-075035-110911-B4**	EPA 5030B/8260	MSV/41799		
60110109002	**GW-075035-110911-B5**	EPA 5030B/8260	MSV/41799		
60110109003	**TB-111011-001**	EPA 5030B/8260	MSV/41799		
60110109001	**GW-075035-110911-B4**	SM 2540C	WET/32058		
60110109002	**GW-075035-110911-B5**	SM 2540C	WET/32058		
60110109001	**GW-075035-110911-B4**	EPA 300.0	WETA/18398		
60110109002	**GW-075035-110911-B5**	EPA 300.0	WETA/18398		

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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: CRA
- Address: 6121 Indian School #200, Albuquerque, NM 87110
- Email To: Kelly Keblanchard@craworld.com
- Phone: 505-884-0672 Fax:
- Requested Due Date/TAT: Standard

Section B Required Project Information:

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

Section C Invoice Information:

- Attention: ENFOS
- Company Name: Conoco Phillips
- Address:
- Pace Quote Reference:
- Pace Project Manager: Anna Custer
- Pace Profile #:

REGULATORY AGENCY

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

SITE LOCATION: ☐ GA ☐ IL ☐ IN ☐ MI ☐ NC ☐ OH ☐ SC ☐ WI ☒ OTHER NM

Filtered (Y/N)

Requested Analysis: 8260B VOCs, 6010B Metals, 2540D TDS, 300 Chem/Ions

Pace Project No./Lab I.D.: 6011009

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 — One Character per box. (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

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	8260B VOCs	6010B Metals	2540D TDS	300 Chem/Ions	Residual Chlorine (Y/N)	Pace Project No./Lab I.D.
1	GW-075035-110911-B4	WT	G	11-9-11	1320				5				X					X	X	X	X		2(BP2U) 3(DG9H) 001
2	GW-075035-110911-B5	WT	G	11-9-11	1725				5				X					X	X	X	X		↓ 002
3	TB-111011-001	WT		11-10-11	1630				3				X					X					3(DG9H) 003
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

Additional Comments:

* PLEASE FILTER & PRESERVE METALS @ LAB. DID NOT FILTER IN FIELD & USED UNPRESERVE CONTAINERS THANKS!

** VOCs = BTEX, Naphthalene, Methylene Chloride, 1,1,2,2 Tetrachloroethane
metals = Dissolved Manganese, Iron, Boron
Chem/Ions = TDS, Chloride, Fluoride, sulfate

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
[signature]	11.10.11	1635	[signature]	11/11/11	900	2.7	Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N
						Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact

SAMPLER NAME AND SIGNATURE

- PRINT Name of SAMPLER: Christine Mathews
- SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 11.10.11

e-File(ALLQ020rev.3,31Mar05))22Jun2005

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Sample Condition Upon Receipt – ESI Tech Specs

Client Name: Col CRA Project #: 60110109

Courier: Fed Ex ☒ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ☐ _____

Optional
Proj Due Date: 11/23
Proj Name: Martin 34

Tracking #: 749760023770 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-193) / T-194 **Type of Ice:** (Wet) Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 2-7

Temperature should be above freezing to 6°C

Date and initials of person examining contents: JJD 11/11/14 7020

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. NO_2 NO_3 ?
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 MA / Lot # of added preservative
Trip Blank present:	☑Yes ☐No ☐N/A	
Pace Trip Blank lot # (if purchased): 101711-3		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: _____

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

Project Manager Review: Newton (ACH) Date: 11/12/14

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

F-KS-C-004-Rev.0, 02February2011

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(913)599-5665

October 18, 2011

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

RE: Project: MARTIN 34 NO. 2
Pace Project No.: 60107344

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

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

Sincerely,

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

Enclosures

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

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CERTIFICATIONS

Project: MARTIN 34 NO. 2
Pace Project No.: 60107344

Kansas Certification IDs
9608 Loiret Boulevard, Lenexa, KS 66219
A2LA Certification #: 2456.01
Arkansas Certification #: 05-008-0
Illinois Certification #: 001191
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212008A
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407-08-TX
Utah Certification #: 9135995665

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SAMPLE SUMMARY

Project: MARTIN 34 NO. 2
Pace Project No.: 60107344

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60107344001	**GW-075035-093011-CM-006**	Water	09/30/11 13:00	10/01/11 08:00
60107344002	**GW-075035-093011-CM-007**	Water	09/30/11 11:30	10/01/11 08:00
60107344003	**GW-075035-093011-CM-008**	Water	09/30/11 12:40	10/01/11 08:00
60107344004	**GW-075035-093011-CM-009**	Water	09/30/11 11:40	10/01/11 08:00
60107344005	**GW-075035-093011-CM-010**	Water	09/30/11 11:35	10/01/11 08:00
60107344006	**TB-093011-001**	Water	09/30/11 17:20	10/01/11 08:00

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SAMPLE ANALYTE COUNT

Project: MARTIN 34 NO. 2
Pace Project No.: 60107344

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60107344001	GW-075035-093011-CM-006	EPA 6010	JGP	3
		EPA 5030B/8260	PRG	12
		SM 2540C	KLB	1
		EPA 300.0	AJM, JPF	3
60107344002	GW-075035-093011-CM-007	EPA 6010	JGP	3
		EPA 5030B/8260	JDM, PRG	12
		SM 2540C	KLB	1
		EPA 300.0	AJM, JPF	3
60107344003	GW-075035-093011-CM-008	EPA 6010	JGP	3
		EPA 5030B/8260	PRG	12
		SM 2540C	KLB	1
		EPA 300.0	AJM, JPF	3
60107344004	GW-075035-093011-CM-009	EPA 5030B/8260	JDM	12
		SM 2540C	KLB	1
		EPA 300.0	AJM, JML, JPF	3
60107344005	GW-075035-093011-CM-010	EPA 5030B/8260	JDM	12
60107344006	TB-093011-001	EPA 5030B/8260	JDM	12

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PROJECT NARRATIVE

Project: MARTIN 34 NO. 2
Pace Project No.: 60107344

Method: **EPA 6010**
Description: 6010 MET ICP, Dissolved
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: October 18, 2011

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

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

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

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: MARTIN 34 NO. 2
Pace Project No.: 60107344

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: October 18, 2011

General Information:
6 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-075035-093011-CM-007 (Lab ID: 60107344002)
- GW-075035-093011-CM-008 (Lab ID: 60107344003)
- GW-075035-093011-CM-009 (Lab ID: 60107344004)

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/40755

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

QC Batch: MSV/40813

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60107195001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- MS (Lab ID: 890117)
  - Naphthalene
- MSD (Lab ID: 890118)
  - Naphthalene

QC Batch: MSV/40840

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

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PROJECT NARRATIVE

Project: MARTIN 34 NO. 2
Pace Project No.: 60107344

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: October 18, 2011

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: MARTIN 34 NO. 2
Pace Project No.: 60107344

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: October 18, 2011

General Information:
4 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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(913)599-5665

PROJECT NARRATIVE

Project: MARTIN 34 NO. 2
Pace Project No.: 60107344

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: October 18, 2011

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

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

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

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

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

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

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

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

Additional Comments:

Analyte Comments:

QC Batch: WETA/17924

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

- GW-075035-093011-CM-006 (Lab ID: 60107344001)
  - Fluoride
- GW-075035-093011-CM-007 (Lab ID: 60107344002)
  - Fluoride
- GW-075035-093011-CM-009 (Lab ID: 60107344004)
  - 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: MARTIN 34 NO. 2
Pace Project No.: 60107344

Sample: GW-075035-093011-CM-006 **Lab ID: 60107344001** Collected: 09/30/11 13:00 Received: 10/01/11 08:00 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	**914**	ug/L	500	11.5	5	10/03/11 13:37	10/07/11 14:34	7440-42-8	
Iron, Dissolved	ND	ug/L	50.0	6.0	1	10/03/11 13:37	10/07/11 11:39	7439-89-6	
Manganese, Dissolved	**3740**	ug/L	25.0	4.5	5	10/03/11 13:37	10/07/11 14:34	7439-96-5	
8260 MSV	Analytical Method: EPA 5030B/8260								
Benzene	ND	ug/L	1.0	0.070	1		10/11/11 05:46	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.078	1		10/11/11 05:46	100-41-4	
Methylene chloride	ND	ug/L	1.0	0.12	1		10/11/11 05:46	75-09-2	
Naphthalene	ND	ug/L	10.0	0.14	1		10/11/11 05:46	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.12	1		10/11/11 05:46	79-34-5	
Toluene	ND	ug/L	1.0	0.064	1		10/11/11 05:46	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.15	1		10/11/11 05:46	1330-20-7	
4-Bromofluorobenzene (S)	101	%	87-113		1		10/11/11 05:46	460-00-4	
Dibromofluoromethane (S)	102	%	86-112		1		10/11/11 05:46	1868-53-7	
1,2-Dichloroethane-d4 (S)	107	%	82-119		1		10/11/11 05:46	17060-07-0	
Toluene-d8 (S)	94	%	90-110		1		10/11/11 05:46	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/11/11 05:46		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**26800**	mg/L	5.0	5.0	1		10/05/11 11:38		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**399**	mg/L	100	7.2	100		10/15/11 16:17	16887-00-6	
Fluoride	ND	mg/L	2.0	0.17	10		10/15/11 16:02	16984-48-8	D3
Sulfate	**19500**	mg/L	2000	320	2000		10/16/11 09:36	14808-79-8	

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ANALYTICAL RESULTS

Project: MARTIN 34 NO. 2
Pace Project No.: 60107344

Sample: GW-075035-093011-CM-007 **Lab ID: 60107344002** Collected: 09/30/11 11:30 Received: 10/01/11 08:00 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	**1080**	ug/L	500	11.5	5	10/03/11 13:37	10/07/11 14:47	7440-42-8	
Iron, Dissolved	**3590**	ug/L	50.0	6.0	1	10/03/11 13:37	10/07/11 11:53	7439-89-6	
Manganese, Dissolved	**2540**	ug/L	25.0	4.5	5	10/03/11 13:37	10/07/11 14:47	7439-96-5	
8260 MSV	Analytical Method: EPA 5030B/8260								
Benzene	**197**	ug/L	2.0	0.14	2		10/12/11 13:19	71-43-2	
Ethylbenzene	**155**	ug/L	2.0	0.16	2		10/12/11 13:19	100-41-4	
Methylene chloride	ND	ug/L	1.0	0.12	1		10/11/11 06:02	75-09-2	
Naphthalene	**72.7**	ug/L	10.0	0.14	1		10/11/11 06:02	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.12	1		10/11/11 06:02	79-34-5	
Toluene	ND	ug/L	1.0	0.064	1		10/11/11 06:02	108-88-3	
Xylene (Total)	**112**	ug/L	3.0	0.15	1		10/11/11 06:02	1330-20-7	
4-Bromofluorobenzene (S)	101	%	87-113		1		10/11/11 06:02	460-00-4	
Dibromofluoromethane (S)	98	%	86-112		1		10/11/11 06:02	1868-53-7	
1,2-Dichloroethane-d4 (S)	110	%	82-119		1		10/11/11 06:02	17060-07-0	
Toluene-d8 (S)	97	%	90-110		1		10/11/11 06:02	2037-26-5	
Preservation pH	**3.0**		0.10	0.10	1		10/11/11 06:02		pH
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**26000**	mg/L	5.0	5.0	1		10/05/11 11:38		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**328**	mg/L	50.0	3.6	50		10/15/11 17:03	16887-00-6	
Fluoride	ND	mg/L	2.0	0.17	10		10/15/11 16:48	16984-48-8	D3
Sulfate	**19100**	mg/L	2000	320	2000		10/16/11 10:22	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MARTIN 34 NO. 2
Pace Project No.: 60107344

Sample: GW-075035-093011-CM-008 **Lab ID: 60107344003** Collected: 09/30/11 12:40 Received: 10/01/11 08:00 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	**664**	ug/L	500	11.5	5	10/03/11 13:37	10/07/11 14:50	7440-42-8	
Iron, Dissolved	**1130**	ug/L	50.0	6.0	1	10/03/11 13:37	10/07/11 11:57	7439-89-6	
Manganese, Dissolved	**10800**	ug/L	25.0	4.5	5	10/03/11 13:37	10/07/11 14:50	7439-96-5	
8260 MSV	Analytical Method: EPA 5030B/8260								
Benzene	**2.7**	ug/L	1.0	0.070	1		10/11/11 06:17	71-43-2	
Ethylbenzene	**3.7**	ug/L	1.0	0.078	1		10/11/11 06:17	100-41-4	
Methylene chloride	ND	ug/L	1.0	0.12	1		10/11/11 06:17	75-09-2	
Naphthalene	ND	ug/L	10.0	0.14	1		10/11/11 06:17	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.12	1		10/11/11 06:17	79-34-5	
Toluene	**1.4**	ug/L	1.0	0.064	1		10/11/11 06:17	108-88-3	
Xylene (Total)	**81.5**	ug/L	3.0	0.15	1		10/11/11 06:17	1330-20-7	
4-Bromofluorobenzene (S)	100	%	87-113		1		10/11/11 06:17	460-00-4	
Dibromofluoromethane (S)	106	%	86-112		1		10/11/11 06:17	1868-53-7	
1,2-Dichloroethane-d4 (S)	112	%	82-119		1		10/11/11 06:17	17060-07-0	
Toluene-d8 (S)	91	%	90-110		1		10/11/11 06:17	2037-26-5	
Preservation pH	**3.0**		0.10	0.10	1		10/11/11 06:17		pH
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**37200**	mg/L	5.0	5.0	1		10/05/11 11:38		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**449**	mg/L	50.0	3.6	50		10/15/11 17:49	16887-00-6	
Fluoride	**2.8**	mg/L	2.0	0.17	10		10/15/11 17:33	16984-48-8	
Sulfate	**27400**	mg/L	5000	800	5000		10/16/11 10:37	14808-79-8	

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ANALYTICAL RESULTS

Project: MARTIN 34 NO. 2
Pace Project No.: 60107344

Sample: GW-075035-093011-CM-009 **Lab ID: 60107344004** Collected: 09/30/11 11:40 Received: 10/01/11 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Benzene	**4470**	ug/L	50.0	3.5	50		10/13/11 10:28	71-43-2	
Ethylbenzene	**772**	ug/L	20.0	1.6	20		10/12/11 13:34	100-41-4	
Methylene chloride	ND	ug/L	20.0	2.4	20		10/12/11 13:34	75-09-2	
Naphthalene	ND	ug/L	200	2.8	20		10/12/11 13:34	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	20.0	2.4	20		10/12/11 13:34	79-34-5	
Toluene	**9480**	ug/L	50.0	3.2	50		10/13/11 10:28	108-88-3	
Xylene (Total)	**8330**	ug/L	60.0	3.0	20		10/12/11 13:34	1330-20-7	
4-Bromofluorobenzene (S)	99	%	87-113		20		10/12/11 13:34	460-00-4	
Dibromofluoromethane (S)	99	%	86-112		20		10/12/11 13:34	1868-53-7	
1,2-Dichloroethane-d4 (S)	96	%	82-119		20		10/12/11 13:34	17060-07-0	
Toluene-d8 (S)	95	%	90-110		20		10/12/11 13:34	2037-26-5	
Preservation pH	**4.0**		0.10	0.10	20		10/12/11 13:34		pH
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**21000**	mg/L	5.0	5.0	1		10/05/11 11:39		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**287**	mg/L	50.0	3.6	50		10/17/11 14:55	16887-00-6	
Fluoride	ND	mg/L	2.0	0.17	10		10/15/11 18:50	16984-48-8	D3
Sulfate	**13300**	mg/L	1000	160	1000		10/16/11 11:08	14808-79-8	

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ANALYTICAL RESULTS

Project: MARTIN 34 NO. 2
Pace Project No.: 60107344

Sample: GW-075035-093011-CM-010 **Lab ID: 60107344005** Collected: 09/30/11 11:35 Received: 10/01/11 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Benzene	**258**	ug/L	5.0	0.35	5		10/12/11 13:50	71-43-2	
Ethylbenzene	**189**	ug/L	5.0	0.39	5		10/12/11 13:50	100-41-4	
Methylene chloride	**14.4**	ug/L	5.0	0.60	5		10/12/11 13:50	75-09-2	
Naphthalene	**71.5**	ug/L	50.0	0.70	5		10/12/11 13:50	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	0.60	5		10/12/11 13:50	79-34-5	
Toluene	ND	ug/L	5.0	0.32	5		10/12/11 13:50	108-88-3	
Xylene (Total)	**113**	ug/L	15.0	0.75	5		10/12/11 13:50	1330-20-7	
4-Bromofluorobenzene (S)	97	%	87-113		5		10/12/11 13:50	460-00-4	
Dibromofluoromethane (S)	99	%	86-112		5		10/12/11 13:50	1868-53-7	
1,2-Dichloroethane-d4 (S)	100	%	82-119		5		10/12/11 13:50	17060-07-0	
Toluene-d8 (S)	96	%	90-110		5		10/12/11 13:50	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	5		10/12/11 13:50		

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ANALYTICAL RESULTS

Project: MARTIN 34 NO. 2
Pace Project No.: 60107344

Sample: TB-093011-001 **Lab ID: 60107344006** Collected: 09/30/11 17:20 Received: 10/01/11 08:00 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	0.070	1		10/12/11 14:06	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.078	1		10/12/11 14:06	100-41-4	
Methylene chloride	ND	ug/L	1.0	0.12	1		10/12/11 14:06	75-09-2	
Naphthalene	ND	ug/L	10.0	0.14	1		10/12/11 14:06	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.12	1		10/12/11 14:06	79-34-5	
Toluene	ND	ug/L	1.0	0.064	1		10/12/11 14:06	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.15	1		10/12/11 14:06	1330-20-7	
4-Bromofluorobenzene (S)	101	%	87-113		1		10/12/11 14:06	460-00-4	
Dibromofluoromethane (S)	102	%	86-112		1		10/12/11 14:06	1868-53-7	
1,2-Dichloroethane-d4 (S)	102	%	82-119		1		10/12/11 14:06	17060-07-0	
Toluene-d8 (S)	100	%	90-110		1		10/12/11 14:06	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		10/12/11 14:06		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MARTIN 34 NO. 2
Pace Project No.: 60107344

QC Batch: MPRP/15528 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved
Associated Lab Samples: 60107344001, 60107344002, 60107344003

METHOD BLANK: 885406 Matrix: Water
Associated Lab Samples: 60107344001, 60107344002, 60107344003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	10/07/11 11:33	
Iron, Dissolved	ug/L	ND	50.0	10/07/11 11:33	
Manganese, Dissolved	ug/L	ND	5.0	10/07/11 11:33	

LABORATORY CONTROL SAMPLE: 885407

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	1000	100	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: 885408 885409

Parameter	Units	60107344001 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	914	1000	1000	1920	1940	101	103	75-125	1	20	
Iron, Dissolved	ug/L	ND	10000	10000	8990	9020	90	90	75-125	0	20	
Manganese, Dissolved	ug/L	3740	1000	1000	4670	4710	94	98	75-125	1	20	

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QUALITY CONTROL DATA

Project: MARTIN 34 NO. 2
Pace Project No.: 60107344

QC Batch: MSV/40755 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60107344001, 60107344002, 60107344003

METHOD BLANK: 889115 Matrix: Water
Associated Lab Samples: 60107344001, 60107344002, 60107344003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	10/11/11 03:57	
Benzene	ug/L	ND	1.0	10/11/11 03:57	
Ethylbenzene	ug/L	ND	1.0	10/11/11 03:57	
Methylene chloride	ug/L	ND	1.0	10/11/11 03:57	
Naphthalene	ug/L	ND	10.0	10/11/11 03:57	
Toluene	ug/L	ND	1.0	10/11/11 03:57	
Xylene (Total)	ug/L	ND	3.0	10/11/11 03:57	
1,2-Dichloroethane-d4 (S)	%	100	82-119	10/11/11 03:57	
4-Bromofluorobenzene (S)	%	99	87-113	10/11/11 03:57	
Dibromofluoromethane (S)	%	99	86-112	10/11/11 03:57	
Toluene-d8 (S)	%	97	90-110	10/11/11 03:57	

LABORATORY CONTROL SAMPLE: 889116

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	18.8	94	78-124	
Benzene	ug/L	20	19.6	98	82-117	
Ethylbenzene	ug/L	20	18.8	94	79-121	
Methylene chloride	ug/L	20	21.0	105	75-118	
Naphthalene	ug/L	20	16.3	82	66-133	
Toluene	ug/L	20	18.7	94	80-120	
Xylene (Total)	ug/L	60	55.5	92	75-120	
1,2-Dichloroethane-d4 (S)	%			97	82-119	
4-Bromofluorobenzene (S)	%			102	87-113	
Dibromofluoromethane (S)	%			99	86-112	
Toluene-d8 (S)	%			92	90-110	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MARTIN 34 NO. 2
Pace Project No.: 60107344

QC Batch: MSV/40813 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60107344002, 60107344004, 60107344005, 60107344006

METHOD BLANK: 890115 Matrix: Water
Associated Lab Samples: 60107344002, 60107344004, 60107344005, 60107344006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	10/12/11 11:46	
Benzene	ug/L	ND	1.0	10/12/11 11:46	
Ethylbenzene	ug/L	ND	1.0	10/12/11 11:46	
Methylene chloride	ug/L	ND	1.0	10/12/11 11:46	
Naphthalene	ug/L	ND	10.0	10/12/11 11:46	
Toluene	ug/L	ND	1.0	10/12/11 11:46	
Xylene (Total)	ug/L	ND	3.0	10/12/11 11:46	
1,2-Dichloroethane-d4 (S)	%	104	82-119	10/12/11 11:46	
4-Bromofluorobenzene (S)	%	98	87-113	10/12/11 11:46	
Dibromofluoromethane (S)	%	107	86-112	10/12/11 11:46	
Toluene-d8 (S)	%	98	90-110	10/12/11 11:46	

LABORATORY CONTROL SAMPLE: 890116

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	20.2	101	78-124	
Benzene	ug/L	20	20.9	104	82-117	
Ethylbenzene	ug/L	20	19.8	99	79-121	
Methylene chloride	ug/L	20	22.1	110	75-118	
Naphthalene	ug/L	20	18.7	94	66-133	
Toluene	ug/L	20	19.1	96	80-120	
Xylene (Total)	ug/L	60	58.7	98	75-120	
1,2-Dichloroethane-d4 (S)	%			99	82-119	
4-Bromofluorobenzene (S)	%			99	87-113	
Dibromofluoromethane (S)	%			100	86-112	
Toluene-d8 (S)	%			94	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 890117 890118

Parameter	Units	60107195001 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	ND	20	20	18.0	19.9	90	99	48-137	10	26	
Benzene	ug/L	ND	20	20	21.0	22.5	105	113	58-139	7	21	
Ethylbenzene	ug/L	ND	20	20	19.2	20.8	96	104	56-138	8	19	
Methylene chloride	ug/L	ND	20	20	21.7	23.7	108	118	44-133	9	27	
Naphthalene	ug/L	167	20	20	15.6	17.9	-755	-744	26-159	14	34	M1
Toluene	ug/L	ND	20	20	18.8	20.4	94	102	59-140	8	19	
Xylene (Total)	ug/L	ND	60	60	56.5	59.7	94	99	52-146	5	19	
1,2-Dichloroethane-d4 (S)	%						100	102	82-119			
4-Bromofluorobenzene (S)	%						101	102	87-113			

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QUALITY CONTROL DATA

Project: MARTIN 34 NO. 2
Pace Project No.: 60107344

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 890117 890118

Parameter	Units	60107195001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dibromofluoromethane (S)	%						100	103	86-112			
Toluene-d8 (S)	%						95	95	90-110			
Preservation pH		1.0			1.0	1.0				0		

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QUALITY CONTROL DATA

Project: MARTIN 34 NO. 2
Pace Project No.: 60107344

QC Batch: MSV/40840
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60107344004

METHOD BLANK: 890682
Matrix: Water
Associated Lab Samples: 60107344004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	10/13/11 09:22	
Toluene	ug/L	ND	1.0	10/13/11 09:22	
1,2-Dichloroethane-d4 (S)	%	105	82-119	10/13/11 09:22	
4-Bromofluorobenzene (S)	%	100	87-113	10/13/11 09:22	
Dibromofluoromethane (S)	%	98	86-112	10/13/11 09:22	
Toluene-d8 (S)	%	103	90-110	10/13/11 09:22	

LABORATORY CONTROL SAMPLE: 890683

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	19.4	97	82-117	
Toluene	ug/L	20	20.6	103	80-120	
1,2-Dichloroethane-d4 (S)	%			100	82-119	
4-Bromofluorobenzene (S)	%			103	87-113	
Dibromofluoromethane (S)	%			95	86-112	
Toluene-d8 (S)	%			102	90-110	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MARTIN 34 NO. 2
Pace Project No.: 60107344

QC Batch: WET/31340 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 60107344001, 60107344002, 60107344003, 60107344004

METHOD BLANK: 886301 Matrix: Water
Associated Lab Samples: 60107344001, 60107344002, 60107344003, 60107344004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	10/05/11 11:35	

SAMPLE DUPLICATE: 886302

Parameter	Units	60107419001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1010	1030	1	17	

SAMPLE DUPLICATE: 886303

Parameter	Units	60107344002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	26000	29200	11	17	

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QUALITY CONTROL DATA

Project: MARTIN 34 NO. 2
Pace Project No.: 60107344

QC Batch: WETA/17924 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60107344001, 60107344002, 60107344003, 60107344004

METHOD BLANK: 891580 Matrix: Water
Associated Lab Samples: 60107344001, 60107344002, 60107344003, 60107344004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	10/14/11 16:32	
Fluoride	mg/L	ND	0.20	10/14/11 16:32	
Sulfate	mg/L	ND	1.0	10/14/11 16:32	

METHOD BLANK: 892363 Matrix: Water
Associated Lab Samples: 60107344001, 60107344002, 60107344003, 60107344004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	10/15/11 14:00	
Fluoride	mg/L	ND	0.20	10/15/11 14:00	
Sulfate	mg/L	ND	1.0	10/15/11 14:00	

METHOD BLANK: 892836 Matrix: Water
Associated Lab Samples: 60107344001, 60107344002, 60107344003, 60107344004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	10/16/11 08:35	
Fluoride	mg/L	ND	0.20	10/16/11 08:35	
Sulfate	mg/L	ND	1.0	10/16/11 08:35	

METHOD BLANK: 893264 Matrix: Water
Associated Lab Samples: 60107344001, 60107344002, 60107344003, 60107344004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	10/17/11 14:24	
Fluoride	mg/L	ND	0.20	10/17/11 14:24	
Sulfate	mg/L	ND	1.0	10/17/11 14:24	

LABORATORY CONTROL SAMPLE: 891581

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	97	90-110	
Fluoride	mg/L	2.5	2.4	97	90-110	
Sulfate	mg/L	5	4.9	98	90-110	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MARTIN 34 NO. 2
Pace Project No.: 60107344

LABORATORY CONTROL SAMPLE: 892376

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.6	91	90-110	
Fluoride	mg/L	2.5	2.3	92	90-110	

LABORATORY CONTROL SAMPLE: 892837

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.6	104	90-110	
Sulfate	mg/L	5	4.7	94	90-110	

LABORATORY CONTROL SAMPLE: 893265

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	96	90-110	
Fluoride	mg/L	2.5	2.4	97	90-110	
Sulfate	mg/L	5	5.4	107	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 891582 891583

Parameter	Units	60107157001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	44500	50000	50000	95700	95900	102	103	64-118	0	12	
Fluoride	mg/L	ND	25000	25000	24200	24000	93	93	75-110	1	10	
Sulfate	mg/L	26000	50000	50000	72000	72400	92	93	61-119	1	10	

MATRIX SPIKE SAMPLE: 891584

Parameter	Units	60107347002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20.7	50	70.6	100	64-118	
Fluoride	mg/L	ND	25	25.4	98	75-110	
Sulfate	mg/L	160	50	214	108	61-119	

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QUALIFIERS

Project: MARTIN 34 NO. 2
Pace Project No.: 60107344

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

BATCH QUALIFIERS

Batch: MSV/40755

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

Batch: MSV/40840

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

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
pH	Post-analysis pH measurement indicates insufficient VOA sample preservation.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: MARTIN 34 NO. 2
Pace Project No.: 60107344

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60107344001	GW-075035-093011-CM-006	EPA 3010	MPRP/15528	EPA 6010	ICP/13480
60107344002	GW-075035-093011-CM-007	EPA 3010	MPRP/15528	EPA 6010	ICP/13480
60107344003	GW-075035-093011-CM-008	EPA 3010	MPRP/15528	EPA 6010	ICP/13480
60107344001	GW-075035-093011-CM-006	EPA 5030B/8260	MSV/40755		
60107344002	GW-075035-093011-CM-007	EPA 5030B/8260	MSV/40755		
60107344002	GW-075035-093011-CM-007	EPA 5030B/8260	MSV/40813		
60107344003	GW-075035-093011-CM-008	EPA 5030B/8260	MSV/40755		
60107344004	GW-075035-093011-CM-009	EPA 5030B/8260	MSV/40813		
60107344004	GW-075035-093011-CM-009	EPA 5030B/8260	MSV/40840		
60107344005	GW-075035-093011-CM-010	EPA 5030B/8260	MSV/40813		
60107344006	TB-093011-001	EPA 5030B/8260	MSV/40813		
60107344001	GW-075035-093011-CM-006	SM 2540C	WET/31340		
60107344002	GW-075035-093011-CM-007	SM 2540C	WET/31340		
60107344003	GW-075035-093011-CM-008	SM 2540C	WET/31340		
60107344004	GW-075035-093011-CM-009	SM 2540C	WET/31340		
60107344001	GW-075035-093011-CM-006	EPA 300.0	WETA/17924		
60107344002	GW-075035-093011-CM-007	EPA 300.0	WETA/17924		
60107344003	GW-075035-093011-CM-008	EPA 300.0	WETA/17924		
60107344004	GW-075035-093011-CM-009	EPA 300.0	WETA/17924		

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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.:		Pace Quote Reference:	
Phone: (505)884-0672	Fax: (505)884-4932	Project Name:	Martin 34 No. 2	Pace Project Manager:	Colleen Koporc
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

Section D – Required Client Information

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

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

Requested Analysis Filtered (Y/N)

Pace Project No./ Lab I.D.: 6067344

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	8260 VOCs *	300.0 Sulfate	300.0 Chloride	300.0 Flouride	Dissolved Fe, Mn, B	TDS					Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	GW-075035-093011-CM-006	WT	G			9.30.11	1300		5	X		X	X		3 DI49			H	X	X	X	X	X	X	1BP3U	~~1BP3U~~				1BP3F1.5 001
2	GW-075035-093011-CM-007	WT	G			9.30.11	1130		5	X		X	X		↓				X	X	X	X	X	X	↓			↓	10/1/11	↓ 002
3	GW-075035-093011-CM-008	WT	G			9.30.11	1240		5	X		X	X						X	X	X	X	X	X						003
4	GW-075035-093011-CM-009	WT	G			9.30.11	1140		4	X			X						X	X	X	X		X	↓					004
5	GW-075035-093011-CM-010	WT	G			9.30.11	1135		3				X		↓				X											005
6	~~TB-0930~~																													
7	TB-093011-001	WT				9.30.11	1720		2				X	2 DFA (HCl TB)					X											006
8																														
9																														
10																														
11																														
12																														

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Include MDLs on report - J-flag	Christine Mathews	9/30/11	1730	E Brackett	10/1	0800	0.3	Y	Y	Y
*8260 VOCs: BTEX, N, Methylene Chloride, 1,1,2,2,-										
Tetrachloroethane										
*metals filtered in the field										
							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: Christine Mathews DATE Signed (MM/DD/YY): 9/30/11

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

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

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Sample Condition Upon Receipt – ESI Tech Specs

Client Name: COP CRA Project #: 60107344

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

Optional
Proj Due Date: 10/13/11
Proj Name:

Tracking #: 876800246771 Pace Shipping Label Used? Yes ☑ No ☐

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

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

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

Cooler Temperature: 0.3

Date and initials of person examining contents: 10/11/11 CB

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: WT		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:	☑Yes ☐No ☐N/A	
Pace Trip Blank lot # (if purchased): Covered		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 DKM

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

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

Start: 1008	Start:
End: 1012	End:
Temp:	Temp:

Project Manager Review: DKM Date: 10/13/11

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

F-KS-C-004-Rev.0, 02February2011

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January 03, 2012

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

RE: Project: MARTIN 34 NO 2 (075035)
Pace Project No.: 60112216

Dear Christine Matthews:
Enclosed are the analytical results for sample(s) received by the laboratory on December 15, 2011. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Anna Custer

anna.custer@pacelabs.com
Project Manager

Enclosures

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

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CERTIFICATIONS

Project: MARTIN 34 NO 2 (075035)
Pace Project No.: 60112216

Kansas Certification IDs
9608 Loiret Boulevard, Lenexa, KS 66219
A2LA Certification #: 2456.01
Arkansas Certification #: 05-008-0
Illinois Certification #: 001191
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212008A
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407-08-TX
Utah Certification #: 9135995665

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SAMPLE SUMMARY

Project: MARTIN 34 NO 2 (075035)
Pace Project No.: 60112216

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60112216001	GW-075036-121311-CB-MW-1	Water	12/13/11 13:35	12/15/11 09:00
60112216002	GW-075036-121311-CB-MW-2	Water	12/13/11 14:25	12/15/11 09:00
60112216003	GW-075036-121311-CB-MW-3	Water	12/13/11 14:55	12/15/11 09:00
60112216004	GW-075036-121311-CB-MW-4	Water	12/13/11 15:50	12/15/11 09:00
60112216005	GW-075036-121311-CB-MW-5	Water	12/13/11 16:45	12/15/11 09:00
60112216006	GW-075036-121311-CB-MW-6	Water	12/13/11 16:10	12/15/11 09:00
60112216007	GW-075036-121311-CB-MW-7	Water	12/13/11 14:40	12/15/11 09:00
60112216008	GW-075036-121311-CB-DUP	Water	12/13/11 13:40	12/15/11 09:00
60112216009	TB-075036-121311-CB-TB1	Water	12/13/11 00:00	12/15/11 09:00

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SAMPLE ANALYTE COUNT

Project: MARTIN 34 NO 2 (075035)
Pace Project No.: 60112216

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60112216001	GW-075036-121311-CB-MW-1	EPA 6010	JDH	3
		EPA 5030B/8260	JDM	12
		SM 2540C	BGM	1
		EPA 300.0	JML	3
60112216002	GW-075036-121311-CB-MW-2	EPA 6010	JDH	3
		EPA 5030B/8260	JDM	12
		SM 2540C	BGM	1
		EPA 300.0	JML	3
60112216003	GW-075036-121311-CB-MW-3	EPA 6010	JDH	3
		EPA 5030B/8260	JDM	12
		SM 2540C	BGM	1
		EPA 300.0	JML	3
60112216004	GW-075036-121311-CB-MW-4	EPA 6010	JDH	3
		EPA 5030B/8260	JDM	12
		SM 2540C	BGM	1
		EPA 300.0	JML	3
60112216005	GW-075036-121311-CB-MW-5	EPA 5030B/8260	JDM	12
60112216006	GW-075036-121311-CB-MW-6	EPA 6010	JDH	3
		EPA 5030B/8260	JDM, PRG	12
		SM 2540C	BGM	1
		EPA 300.0	JML	3
60112216007	GW-075036-121311-CB-MW-7	EPA 6010	JDH	3
		EPA 5030B/8260	JDM, PRG	12
		SM 2540C	BGM	1
		EPA 300.0	JML	3
60112216008	GW-075036-121311-CB-DUP	EPA 8260	PRG	9
60112216009	TB-075036-121311-CB-TB1	EPA 8260	PRG	9

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PROJECT NARRATIVE

Project: MARTIN 34 NO 2 (075035)
Pace Project No.: 60112216

Method: EPA 6010
Description: 6010 MET ICP, Dissolved
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: January 03, 2012

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

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

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

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: MARTIN 34 NO 2 (075035)
Pace Project No.: 60112216

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: January 03, 2012

General Information:
7 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-075036-121311-CB-MW-1 (Lab ID: 60112216001)

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/42637

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

QC Batch: MSV/42644

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

QC Batch: MSV/42671

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: MARTIN 34 NO 2 (075035)
Pace Project No.: 60112216

Method: **EPA 8260**
Description: 8260 MSV UST, Water
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: January 03, 2012

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

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

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

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

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

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

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

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

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

QC Batch: MSV/42550

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60112233002

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

- MS (Lab ID: 927961)
  - Ethylbenzene
  - Toluene
- MSD (Lab ID: 927962)
  - Benzene
  - Ethylbenzene
  - Toluene

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: MARTIN 34 NO 2 (075035)
Pace Project No.: 60112216

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: January 03, 2012

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

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: MARTIN 34 NO 2 (075035)
Pace Project No.: 60112216

Method: EPA 300.0
Description: 300.0 IC Anions 28 Days
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: January 03, 2012

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

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

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

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

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

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

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

QC Batch: WETA/18792

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60112265001,60112265002

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

- MS (Lab ID: 932046)
  - Fluoride
- MS (Lab ID: 932048)
  - Fluoride
- MSD (Lab ID: 932047)
  - Fluoride

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

Additional Comments:

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

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ANALYTICAL RESULTS

Project: MARTIN 34 NO 2 (075035)
Pace Project No.: 60112216

Sample: GW-075036-121311-CB-MW-1 **Lab ID: 60112216001** Collected: 12/13/11 13:35 Received: 12/15/11 09:00 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	**1120**	ug/L	200	2	12/22/11 09:00	12/23/11 13:35	7440-42-8	
Iron, Dissolved	**8940**	ug/L	50.0	1	12/22/11 09:00	12/23/11 10:18	7439-89-6	
Manganese, Dissolved	**4170**	ug/L	10.0	2	12/22/11 09:00	12/23/11 13:35	7439-96-5	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**4440**	ug/L	100	100		12/23/11 05:01	71-43-2	
Ethylbenzene	**751**	ug/L	100	100		12/23/11 05:01	100-41-4	
Methylene chloride	ND	ug/L	100	100		12/23/11 05:01	75-09-2	
Naphthalene	ND	ug/L	1000	100		12/23/11 05:01	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	100	100		12/23/11 05:01	79-34-5	
Toluene	**6230**	ug/L	100	100		12/23/11 05:01	108-88-3	
Xylene (Total)	**9040**	ug/L	300	100		12/23/11 05:01	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	95	%	87-113	100		12/23/11 05:01	460-00-4	
Dibromofluoromethane (S)	100	%	86-112	100		12/23/11 05:01	1868-53-7	
1,2-Dichloroethane-d4 (S)	96	%	82-119	100		12/23/11 05:01	17060-07-0	
Toluene-d8 (S)	103	%	90-110	100		12/23/11 05:01	2037-26-5	
Preservation pH	**7.0**		0.10	100		12/23/11 05:01		pH
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**20700**	mg/L	5.0	1		12/19/11 08:42		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Chloride	**270**	mg/L	20.0	20		12/28/11 13:27	16887-00-6	
Fluoride	**2.1**	mg/L	0.20	1		12/29/11 13:35	16984-48-8	
Sulfate	**12300**	mg/L	1000	1000		12/28/11 13:44	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MARTIN 34 NO 2 (075035)
Pace Project No.: 60112216

Sample: GW-075036-121311-CB-MW-2 **Lab ID: 60112216002** Collected: 12/13/11 14:25 Received: 12/15/11 09:00 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	**1120**	ug/L	200	2	12/22/11 09:00	12/23/11 13:37	7440-42-8	
Iron, Dissolved	**4160**	ug/L	50.0	1	12/22/11 09:00	12/23/11 10:21	7439-89-6	
Manganese, Dissolved	**2280**	ug/L	10.0	2	12/22/11 09:00	12/23/11 13:37	7439-96-5	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**249**	ug/L	10.0	10		12/21/11 14:29	71-43-2	
Ethylbenzene	**199**	ug/L	10.0	10		12/21/11 14:29	100-41-4	
Methylene chloride	ND	ug/L	10.0	10		12/21/11 14:29	75-09-2	
Naphthalene	ND	ug/L	100	10		12/21/11 14:29	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	10.0	10		12/21/11 14:29	79-34-5	
Toluene	**26.6**	ug/L	10.0	10		12/21/11 14:29	108-88-3	
Xylene (Total)	**143**	ug/L	30.0	10		12/21/11 14:29	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	99	%	87-113	10		12/21/11 14:29	460-00-4	
Dibromofluoromethane (S)	97	%	86-112	10		12/21/11 14:29	1868-53-7	
1,2-Dichloroethane-d4 (S)	97	%	82-119	10		12/21/11 14:29	17060-07-0	
Toluene-d8 (S)	102	%	90-110	10		12/21/11 14:29	2037-26-5	
Preservation pH	**1.0**		0.10	10		12/21/11 14:29		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**26600**	mg/L	5.0	1		12/19/11 08:43		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Chloride	**348**	mg/L	20.0	20		12/28/11 16:05	16887-00-6	
Fluoride	**0.75**	mg/L	0.20	1		12/29/11 13:51	16984-48-8	
Sulfate	**16800**	mg/L	1000	1000		12/28/11 16:22	14808-79-8	

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ANALYTICAL RESULTS

Project: MARTIN 34 NO 2 (075035)
Pace Project No.: 60112216

Sample: GW-075036-121311-CB-MW-3 **Lab ID: 60112216003** Collected: 12/13/11 14:55 Received: 12/15/11 09:00 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	**997**	ug/L	200	2	12/22/11 09:00	12/23/11 13:40	7440-42-8	
Iron, Dissolved	**1020**	ug/L	50.0	1	12/22/11 09:00	12/23/11 10:29	7439-89-6	
Manganese, Dissolved	**776**	ug/L	10.0	2	12/22/11 09:00	12/23/11 13:40	7439-96-5	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		12/23/11 05:17	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/23/11 05:17	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		12/23/11 05:17	75-09-2	
Naphthalene	ND	ug/L	10.0	1		12/23/11 05:17	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		12/23/11 05:17	79-34-5	
Toluene	ND	ug/L	1.0	1		12/23/11 05:17	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/23/11 05:17	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	95	%	87-113	1		12/23/11 05:17	460-00-4	
Dibromofluoromethane (S)	101	%	86-112	1		12/23/11 05:17	1868-53-7	
1,2-Dichloroethane-d4 (S)	109	%	82-119	1		12/23/11 05:17	17060-07-0	
Toluene-d8 (S)	100	%	90-110	1		12/23/11 05:17	2037-26-5	
Preservation pH	**1.0**		0.10	1		12/23/11 05:17		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**27500**	mg/L	5.0	1		12/19/11 08:43		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Chloride	**375**	mg/L	50.0	50		12/28/11 16:55	16887-00-6	
Fluoride	ND	mg/L	0.20	1		12/29/11 14:08	16984-48-8	
Sulfate	**17100**	mg/L	1000	1000		12/28/11 17:12	14808-79-8	

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ANALYTICAL RESULTS

Project: MARTIN 34 NO 2 (075035)
Pace Project No.: 60112216

Sample: GW-075036-121311-CB-MW-4 **Lab ID: 60112216004** Collected: 12/13/11 15:50 Received: 12/15/11 09:00 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	**651**	ug/L	200	2	12/22/11 09:00	12/23/11 13:43	7440-42-8	
Iron, Dissolved	**1430**	ug/L	50.0	1	12/22/11 09:00	12/23/11 10:31	7439-89-6	
Manganese, Dissolved	**8500**	ug/L	10.0	2	12/22/11 09:00	12/23/11 13:43	7439-96-5	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**2.4**	ug/L	1.0	1		12/23/11 05:32	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/23/11 05:32	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		12/23/11 05:32	75-09-2	
Naphthalene	ND	ug/L	10.0	1		12/23/11 05:32	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		12/23/11 05:32	79-34-5	
Toluene	ND	ug/L	1.0	1		12/23/11 05:32	108-88-3	
Xylene (Total)	**9.9**	ug/L	3.0	1		12/23/11 05:32	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	103	%	87-113	1		12/23/11 05:32	460-00-4	
Dibromofluoromethane (S)	104	%	86-112	1		12/23/11 05:32	1868-53-7	
1,2-Dichloroethane-d4 (S)	108	%	82-119	1		12/23/11 05:32	17060-07-0	
Toluene-d8 (S)	101	%	90-110	1		12/23/11 05:32	2037-26-5	
Preservation pH	**1.0**		0.10	1		12/23/11 05:32		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**40700**	mg/L	5.0	1		12/19/11 08:44		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Chloride	**344**	mg/L	50.0	50		12/28/11 17:45	16887-00-6	
Fluoride	ND	mg/L	0.20	1		12/29/11 15:14	16984-48-8	
Sulfate	**26900**	mg/L	5000	5000		12/30/11 11:35	14808-79-8	

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ANALYTICAL RESULTS

Project: MARTIN 34 NO 2 (075035)
Pace Project No.: 60112216

Sample: GW-075036-121311-CB-MW-5 **Lab ID: 60112216005** Collected: 12/13/11 16:45 Received: 12/15/11 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**195**	ug/L	1.0	1		12/23/11 05:47	71-43-2	
Ethylbenzene	**2.7**	ug/L	1.0	1		12/23/11 05:47	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		12/23/11 05:47	75-09-2	
Naphthalene	ND	ug/L	10.0	1		12/23/11 05:47	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		12/23/11 05:47	79-34-5	
Toluene	ND	ug/L	1.0	1		12/23/11 05:47	108-88-3	
Xylene (Total)	**8.1**	ug/L	3.0	1		12/23/11 05:47	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	97	%	87-113	1		12/23/11 05:47	460-00-4	
Dibromofluoromethane (S)	100	%	86-112	1		12/23/11 05:47	1868-53-7	
1,2-Dichloroethane-d4 (S)	97	%	82-119	1		12/23/11 05:47	17060-07-0	
Toluene-d8 (S)	102	%	90-110	1		12/23/11 05:47	2037-26-5	
Preservation pH	**1.0**		0.10	1		12/23/11 05:47		

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ANALYTICAL RESULTS

Project: MARTIN 34 NO 2 (075035)
Pace Project No.: 60112216

Sample: GW-075036-121311-CB-MW-6 **Lab ID: 60112216006** Collected: 12/13/11 16:10 Received: 12/15/11 09:00 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	**681**	ug/L	200	2	12/22/11 09:00	12/23/11 13:45	7440-42-8	
Iron, Dissolved	**4100**	ug/L	50.0	1	12/22/11 09:00	12/23/11 10:34	7439-89-6	
Manganese, Dissolved	**2930**	ug/L	10.0	2	12/22/11 09:00	12/23/11 13:45	7439-96-5	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**24.7**	ug/L	5.0	5		12/21/11 17:29	71-43-2	
Ethylbenzene	**191**	ug/L	5.0	5		12/21/11 17:29	100-41-4	
Methylene chloride	ND	ug/L	5.0	5		12/21/11 17:29	75-09-2	
Naphthalene	ND	ug/L	50.0	5		12/21/11 17:29	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	5		12/21/11 17:29	79-34-5	
Toluene	ND	ug/L	5.0	5		12/21/11 17:29	108-88-3	
Xylene (Total)	**2650**	ug/L	60.0	20		12/23/11 06:03	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	103	%	87-113	5		12/21/11 17:29	460-00-4	
Dibromofluoromethane (S)	106	%	86-112	5		12/21/11 17:29	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	82-119	5		12/21/11 17:29	17060-07-0	
Toluene-d8 (S)	100	%	90-110	5		12/21/11 17:29	2037-26-5	
Preservation pH	**1.0**		0.10	5		12/21/11 17:29		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**37800**	mg/L	5.0	1		12/19/11 08:45		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Chloride	**288**	mg/L	50.0	50		12/28/11 18:18	16887-00-6	
Fluoride	ND	mg/L	0.20	1		12/29/11 15:31	16984-48-8	
Sulfate	**24900**	mg/L	5000	5000		12/30/11 11:52	14808-79-8	

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ANALYTICAL RESULTS

Project: MARTIN 34 NO 2 (075035)
Pace Project No.: 60112216

Sample: GW-075036-121311-CB-MW-7 **Lab ID: 60112216007** Collected: 12/13/11 14:40 Received: 12/15/11 09:00 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	**772**	ug/L	200	2	12/22/11 09:00	12/23/11 13:48	7440-42-8	
Iron, Dissolved	**76.0**	ug/L	50.0	1	12/22/11 09:00	12/23/11 10:37	7439-89-6	
Manganese, Dissolved	**2280**	ug/L	10.0	2	12/22/11 09:00	12/23/11 13:48	7439-96-5	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**19.6**	ug/L	1.0	1		12/21/11 17:43	71-43-2	
Ethylbenzene	**351**	ug/L	5.0	5		12/23/11 06:18	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		12/21/11 17:43	75-09-2	
Naphthalene	**32.9**	ug/L	10.0	1		12/21/11 17:43	91-20-3	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		12/21/11 17:43	79-34-5	
Toluene	ND	ug/L	1.0	1		12/21/11 17:43	108-88-3	
Xylene (Total)	**40.5**	ug/L	3.0	1		12/21/11 17:43	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	105	%	87-113	1		12/21/11 17:43	460-00-4	
Dibromofluoromethane (S)	103	%	86-112	1		12/21/11 17:43	1868-53-7	
1,2-Dichloroethane-d4 (S)	110	%	82-119	1		12/21/11 17:43	17060-07-0	
Toluene-d8 (S)	97	%	90-110	1		12/21/11 17:43	2037-26-5	
Preservation pH	**1.0**		0.10	1		12/21/11 17:43		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**21400**	mg/L	5.0	1		12/19/11 08:45		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Chloride	**269**	mg/L	50.0	50		12/28/11 19:58	16887-00-6	
Fluoride	**1.5**	mg/L	0.20	1		12/29/11 16:04	16984-48-8	
Sulfate	**17800**	mg/L	1000	1000		12/28/11 20:14	14808-79-8	

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ANALYTICAL RESULTS

Project: MARTIN 34 NO 2 (075035)
Pace Project No.: 60112216

Sample: GW-075036-121311-CB-DUP **Lab ID: 60112216008** Collected: 12/13/11 13:40 Received: 12/15/11 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water	Analytical Method: EPA 8260							
Benzene	**4310**	ug/L	25.0	25		12/17/11 01:34	71-43-2	
Ethylbenzene	**812**	ug/L	25.0	25		12/17/11 01:34	100-41-4	
Toluene	**4980**	ug/L	25.0	25		12/17/11 01:34	108-88-3	
Xylene (Total)	**9570**	ug/L	75.0	25		12/17/11 01:34	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	105	%	86-112	25		12/17/11 01:34	1868-53-7	
Toluene-d8 (S)	102	%	90-110	25		12/17/11 01:34	2037-26-5	
4-Bromofluorobenzene (S)	104	%	87-113	25		12/17/11 01:34	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	82-119	25		12/17/11 01:34	17060-07-0	
Preservation pH	**1.0**		1.0	25		12/17/11 01:34		

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ANALYTICAL RESULTS

Project: MARTIN 34 NO 2 (075035)
Pace Project No.: 60112216

Sample: TB-075036-121311-CB-TB1 **Lab ID: 60112216009** Collected: 12/13/11 00:00 Received: 12/15/11 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		12/17/11 01:48	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/17/11 01:48	100-41-4	
Toluene	ND	ug/L	1.0	1		12/17/11 01:48	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/17/11 01:48	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	105	%	86-112	1		12/17/11 01:48	1868-53-7	
Toluene-d8 (S)	97	%	90-110	1		12/17/11 01:48	2037-26-5	
4-Bromofluorobenzene (S)	102	%	87-113	1		12/17/11 01:48	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	82-119	1		12/17/11 01:48	17060-07-0	
Preservation pH	**1.0**		1.0	1		12/17/11 01:48		

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QUALITY CONTROL DATA

Project: MARTIN 34 NO 2 (075035)
Pace Project No.: 60112216

QC Batch: MPRP/16530 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved
Associated Lab Samples: 60112216001, 60112216002, 60112216003, 60112216004, 60112216006, 60112216007

METHOD BLANK: 930306 Matrix: Water
Associated Lab Samples: 60112216001, 60112216002, 60112216003, 60112216004, 60112216006, 60112216007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	12/23/11 09:58	
Iron, Dissolved	ug/L	ND	50.0	12/23/11 09:58	
Manganese, Dissolved	ug/L	ND	5.0	12/23/11 09:58	

LABORATORY CONTROL SAMPLE: 930307

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	946	95	80-120	
Iron, Dissolved	ug/L	10000	9770	98	80-120	
Manganese, Dissolved	ug/L	1000	992	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 930308 930309

Parameter	Units	60112207001 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	83.5J	1000	1000	1060	1050	98	97	75-125	1	20	
Iron, Dissolved	ug/L	201	10000	10000	9880	9790	97	96	75-125	1	20	
Manganese, Dissolved	ug/L	278	1000	1000	1260	1240	98	97	75-125	1	20	

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QUALITY CONTROL DATA

Project: MARTIN 34 NO 2 (075035)
Pace Project No.: 60112216

QC Batch: MSV/42637
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60112216002

METHOD BLANK: 930077
Matrix: Water
Associated Lab Samples: 60112216002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	12/21/11 09:51	
Benzene	ug/L	ND	1.0	12/21/11 09:51	
Ethylbenzene	ug/L	ND	1.0	12/21/11 09:51	
Methylene chloride	ug/L	ND	1.0	12/21/11 09:51	
Naphthalene	ug/L	ND	10.0	12/21/11 09:51	
Toluene	ug/L	ND	1.0	12/21/11 09:51	
Xylene (Total)	ug/L	ND	3.0	12/21/11 09:51	
1,2-Dichloroethane-d4 (S)	%	98	82-119	12/21/11 09:51	
4-Bromofluorobenzene (S)	%	99	87-113	12/21/11 09:51	
Dibromofluoromethane (S)	%	99	86-112	12/21/11 09:51	
Toluene-d8 (S)	%	103	90-110	12/21/11 09:51	

LABORATORY CONTROL SAMPLE: 930078

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	21.6	108	78-124	
Benzene	ug/L	20	17.5	88	82-117	
Ethylbenzene	ug/L	20	18.6	93	79-121	
Methylene chloride	ug/L	20	19.4	97	75-118	
Naphthalene	ug/L	20	24.1	120	66-133	
Toluene	ug/L	20	18.0	90	80-120	
Xylene (Total)	ug/L	60	55.5	93	75-120	
1,2-Dichloroethane-d4 (S)	%			95	82-119	
4-Bromofluorobenzene (S)	%			99	87-113	
Dibromofluoromethane (S)	%			100	86-112	
Toluene-d8 (S)	%			103	90-110	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MARTIN 34 NO 2 (075035)
Pace Project No.: 60112216

QC Batch: MSV/42644
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60112216006, 60112216007

METHOD BLANK: 930189
Matrix: Water
Associated Lab Samples: 60112216006, 60112216007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	12/21/11 12:59	
Benzene	ug/L	ND	1.0	12/21/11 12:59	
Ethylbenzene	ug/L	ND	1.0	12/21/11 12:59	
Methylene chloride	ug/L	ND	1.0	12/21/11 12:59	
Naphthalene	ug/L	ND	10.0	12/21/11 12:59	
Toluene	ug/L	ND	1.0	12/21/11 12:59	
Xylene (Total)	ug/L	ND	3.0	12/21/11 12:59	
1,2-Dichloroethane-d4 (S)	%	101	82-119	12/21/11 12:59	
4-Bromofluorobenzene (S)	%	101	87-113	12/21/11 12:59	
Dibromofluoromethane (S)	%	102	86-112	12/21/11 12:59	
Toluene-d8 (S)	%	100	90-110	12/21/11 12:59	

LABORATORY CONTROL SAMPLE: 930190

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	20.5	103	78-124	
Benzene	ug/L	20	19.7	98	82-117	
Ethylbenzene	ug/L	20	19.3	97	79-121	
Methylene chloride	ug/L	20	22.4	112	75-118	
Naphthalene	ug/L	20	20.1	101	66-133	
Toluene	ug/L	20	19.3	96	80-120	
Xylene (Total)	ug/L	60	58.4	97	75-120	
1,2-Dichloroethane-d4 (S)	%			102	82-119	
4-Bromofluorobenzene (S)	%			98	87-113	
Dibromofluoromethane (S)	%			101	86-112	
Toluene-d8 (S)	%			95	90-110	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MARTIN 34 NO 2 (075035)
Pace Project No.: 60112216

QC Batch: MSV/42671 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60112216001, 60112216003, 60112216004, 60112216005, 60112216006, 60112216007

METHOD BLANK: 930680 Matrix: Water
Associated Lab Samples: 60112216001, 60112216003, 60112216004, 60112216005, 60112216006, 60112216007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	12/23/11 03:29	
Benzene	ug/L	ND	1.0	12/23/11 03:29	
Ethylbenzene	ug/L	ND	1.0	12/23/11 03:29	
Methylene chloride	ug/L	ND	1.0	12/23/11 03:29	
Naphthalene	ug/L	ND	10.0	12/23/11 03:29	
Toluene	ug/L	ND	1.0	12/23/11 03:29	
Xylene (Total)	ug/L	ND	3.0	12/23/11 03:29	
1,2-Dichloroethane-d4 (S)	%	95	82-119	12/23/11 03:29	
4-Bromofluorobenzene (S)	%	95	87-113	12/23/11 03:29	
Dibromofluoromethane (S)	%	102	86-112	12/23/11 03:29	
Toluene-d8 (S)	%	101	90-110	12/23/11 03:29	

LABORATORY CONTROL SAMPLE: 930681

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	16.9	85	78-124	
Benzene	ug/L	20	17.5	88	82-117	
Ethylbenzene	ug/L	20	18.1	90	79-121	
Methylene chloride	ug/L	20	15.1	75	75-118	
Naphthalene	ug/L	20	16.9	85	66-133	
Toluene	ug/L	20	17.2	86	80-120	
Xylene (Total)	ug/L	60	54.1	90	75-120	
1,2-Dichloroethane-d4 (S)	%			96	82-119	
4-Bromofluorobenzene (S)	%			99	87-113	
Dibromofluoromethane (S)	%			99	86-112	
Toluene-d8 (S)	%			100	90-110	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MARTIN 34 NO 2 (075035)
Pace Project No.: 60112216

QC Batch: MSV/42550
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 60112216008, 60112216009

METHOD BLANK: 927959
Matrix: Water
Associated Lab Samples: 60112216008, 60112216009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	12/17/11 00:51	
Ethylbenzene	ug/L	ND	1.0	12/17/11 00:51	
Toluene	ug/L	ND	1.0	12/17/11 00:51	
Xylene (Total)	ug/L	ND	3.0	12/17/11 00:51	
1,2-Dichloroethane-d4 (S)	%	99	82-119	12/17/11 00:51	
4-Bromofluorobenzene (S)	%	102	87-113	12/17/11 00:51	
Dibromofluoromethane (S)	%	104	86-112	12/17/11 00:51	
Toluene-d8 (S)	%	98	90-110	12/17/11 00:51	

LABORATORY CONTROL SAMPLE: 927960

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	19.3	96	82-117	
Ethylbenzene	ug/L	20	18.6	93	79-121	
Toluene	ug/L	20	18.6	93	80-120	
Xylene (Total)	ug/L	60	56.6	94	79-120	
1,2-Dichloroethane-d4 (S)	%			103	82-119	
4-Bromofluorobenzene (S)	%			99	87-113	
Dibromofluoromethane (S)	%			104	86-112	
Toluene-d8 (S)	%			97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 927961 927962

Parameter	Units	60112233002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	11500	2000	2000	12800	12200	65	37	58-139	5	21	M0
Ethylbenzene	ug/L	208	2000	2000	1130	1140	46	46	56-138	1	19	M0
Toluene	ug/L	ND	2000	2000	953	976	45	47	59-140	2	19	M0
Xylene (Total)	ug/L	ND	6000	6000	3090	3070	47	47	52-146	1	19	ES
1,2-Dichloroethane-d4 (S)	%						106	101	82-119			
4-Bromofluorobenzene (S)	%						99	104	87-113			
Dibromofluoromethane (S)	%						107	104	86-112			
Toluene-d8 (S)	%						97	101	90-110			
Preservation pH		1.0			1.0	1.0				0		

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QUALITY CONTROL DATA

Project: MARTIN 34 NO 2 (075035)
Pace Project No.: 60112216

QC Batch: WET/32640 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 60112216001, 60112216002, 60112216003, 60112216004, 60112216006, 60112216007

METHOD BLANK: 928797 Matrix: Water
Associated Lab Samples: 60112216001, 60112216002, 60112216003, 60112216004, 60112216006, 60112216007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	12/19/11 08:39	

SAMPLE DUPLICATE: 928798

Parameter	Units	60112007002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1590	1580	1	17	

SAMPLE DUPLICATE: 928799

Parameter	Units	60112216003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	27500	25700	7	17	

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QUALITY CONTROL DATA

Project: MARTIN 34 NO 2 (075035)
Pace Project No.: 60112216

QC Batch: WETA/18792 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60112216001, 60112216002, 60112216003, 60112216004, 60112216006, 60112216007

METHOD BLANK: 932044 Matrix: Water
Associated Lab Samples: 60112216001, 60112216002, 60112216003, 60112216004, 60112216006, 60112216007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	12/28/11 00:49	
Fluoride	mg/L	ND	0.20	12/28/11 00:49	
Sulfate	mg/L	ND	1.0	12/28/11 00:49	

METHOD BLANK: 933366 Matrix: Water
Associated Lab Samples: 60112216001, 60112216002, 60112216003, 60112216004, 60112216006, 60112216007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	12/28/11 12:38	
Fluoride	mg/L	ND	0.20	12/28/11 12:38	
Sulfate	mg/L	ND	1.0	12/28/11 12:38	

LABORATORY CONTROL SAMPLE: 932045

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.1	102	90-110	
Sulfate	mg/L	5	5.1	103	90-110	

LABORATORY CONTROL SAMPLE: 933367

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	95	90-110	
Sulfate	mg/L	5	5.1	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 932046 932047

Parameter	Units	60112265001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	14.2	5	5	19.3	18.9	101	94	64-118	2	12	
Fluoride	mg/L	0.18J	2.5	2.5	2.0	1.9	74	69	75-110	7	10	M0
Sulfate	mg/L	8.9	5	5	13.6	13.6	94	94	61-119	0	10	

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QUALITY CONTROL DATA

Project: MARTIN 34 NO 2 (075035)
Pace Project No.: 60112216

MATRIX SPIKE SAMPLE: 932048

Parameter	Units	60112265002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	11.7	5	16.6	97	64-118	
Fluoride	mg/L	0.075J	2.5	1.9	74	75-110	M0
Sulfate	mg/L	2.1	5	7.4	105	61-119	

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QUALIFIERS

Project: MARTIN 34 NO 2 (075035)
Pace Project No.: 60112216

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

BATCH QUALIFIERS

Batch: MSV/42637

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

Batch: MSV/42644

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

Batch: MSV/42671

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

ANALYTE QUALIFIERS

ES	The reported result is estimated because one or more of the constituent results are qualified as such.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
pH	Post-analysis pH measurement indicates insufficient VOA sample preservation.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: MARTIN 34 NO 2 (075035)
Pace Project No.: 60112216

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60112216001	GW-075036-121311-CB-MW-1	EPA 3010	MPRP/16530	EPA 6010	ICP/14221
60112216002	GW-075036-121311-CB-MW-2	EPA 3010	MPRP/16530	EPA 6010	ICP/14221
60112216003	GW-075036-121311-CB-MW-3	EPA 3010	MPRP/16530	EPA 6010	ICP/14221
60112216004	GW-075036-121311-CB-MW-4	EPA 3010	MPRP/16530	EPA 6010	ICP/14221
60112216006	GW-075036-121311-CB-MW-6	EPA 3010	MPRP/16530	EPA 6010	ICP/14221
60112216007	GW-075036-121311-CB-MW-7	EPA 3010	MPRP/16530	EPA 6010	ICP/14221
60112216001	GW-075036-121311-CB-MW-1	EPA 5030B/8260	MSV/42671		
60112216002	GW-075036-121311-CB-MW-2	EPA 5030B/8260	MSV/42637		
60112216003	GW-075036-121311-CB-MW-3	EPA 5030B/8260	MSV/42671		
60112216004	GW-075036-121311-CB-MW-4	EPA 5030B/8260	MSV/42671		
60112216005	GW-075036-121311-CB-MW-5	EPA 5030B/8260	MSV/42671		
60112216006	GW-075036-121311-CB-MW-6	EPA 5030B/8260	MSV/42644		
60112216006	GW-075036-121311-CB-MW-6	EPA 5030B/8260	MSV/42671		
60112216007	GW-075036-121311-CB-MW-7	EPA 5030B/8260	MSV/42644		
60112216007	GW-075036-121311-CB-MW-7	EPA 5030B/8260	MSV/42671		
60112216008	GW-075036-121311-CB-DUP	EPA 8260	MSV/42550		
60112216009	TB-075036-121311-CB-TB1	EPA 8260	MSV/42550		
60112216001	GW-075036-121311-CB-MW-1	SM 2540C	WET/32640		
60112216002	GW-075036-121311-CB-MW-2	SM 2540C	WET/32640		
60112216003	GW-075036-121311-CB-MW-3	SM 2540C	WET/32640		
60112216004	GW-075036-121311-CB-MW-4	SM 2540C	WET/32640		
60112216006	GW-075036-121311-CB-MW-6	SM 2540C	WET/32640		
60112216007	GW-075036-121311-CB-MW-7	SM 2540C	WET/32640		
60112216001	GW-075036-121311-CB-MW-1	EPA 300.0	WETA/18792		
60112216002	GW-075036-121311-CB-MW-2	EPA 300.0	WETA/18792		
60112216003	GW-075036-121311-CB-MW-3	EPA 300.0	WETA/18792		
60112216004	GW-075036-121311-CB-MW-4	EPA 300.0	WETA/18792		
60112216006	GW-075036-121311-CB-MW-6	EPA 300.0	WETA/18792		
60112216007	GW-075036-121311-CB-MW-7	EPA 300.0	WETA/18792		

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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:	Kelly Blanchard, Angela Bown
Purchase Order No.:	
Project Name:	Martin 34 No. 2
Project Number:	075035

Section C Invoice Information:

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

REGULATORY AGENCY

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

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)

60112216

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 VOCs *	300.0 Sulfate	300.0 Chloride	300.0 Flouride	Dissolved Fe, Mn, B	TDS	BTEX	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	GW-075035.121311.CB.MW-1	WT	G	—	—	12.13.11	1335		5	X		X	X						X	X	X	X	X	X			3(DG9H) 1(BP2U) 1(BP3F) 001
2	GW-075035.121311.CB.MW-2	WT	G	—	—	12.13.11	1425		5	X		X	X						X	X	X	X	X	X			002
3	GW-075035.121311.CB.MW-3	WT	G	—	—	12.13.11	1455		5	X		X	X						X	X	X	X	X	X			003
4	GW-075035.121311.CB.MW-4	WT	G	—	—	12.13.11	1520		5	X		X	X						X	X	X	X	X	X			004
5	GW-075035.121311.CB.MW-5	WT	G	—	—	12.13.11	1645		1				X						X								1(DG9H) 005
6	GW-075035.121311.CB.MW-6	WT	G	—	—	12.13.11	1610		5	X		X	X						X	X	X	X	X	X			3(DG9H) 1(BP2U) 1(BP3F) 006
7	GW-075035.121311.CB.MW-7	WT	G	—	—	12.13.11	1440		5	X		X	X						X	X	X	X	X	X			007
8	GW-075035.121311.CB.dup	WT	G	—	—	12.13.11	1340		3				X												X		3(DG9H) 008
9	TB-075035.121311.CB.TB1	WT	G	—	—	12.13.11	0800		3				X												X		009
10	TempBlank																										
11																											
12																											

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Include MDLs on report - J-flag	Cassie Brown/CRA	12.14.11	0900	[signature]	12/15/11	900	0.6	Y	Y	Y
*8260 VOCs: BTEX, N, Methylene Chloride, 1,1,2,2,-										
Tetrachloroethane										
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Note all metals containers have been field filtered.

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Cassie Brown

SIGNATURE of SAMPLER: Cassie Brown

DATE Signed (MM/DD/YY): 12.14.11

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

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

Pace Analytical®
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Sample Condition Upon Receipt – ESI Tech Specs

Client Name: COP CRA NM Project #: 60122216

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

Optional
Proj Due Date: 12/28
Proj Name:

Tracking #: 8986 0891 3518 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-193) / T-194 **Type of Ice:** (Wet) Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 0.6

Temperature should be above freezing to 6°C

Date and initials of person examining contents: JMS 12/15/11 1530

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): 110711-3		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: _____ Date: 12/16/11

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

Start:	1445	Start:	
End:	1455	End:	
Temp:		Temp:	

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

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