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JUNE, SEPTEMBER, AND DECEMBER 2011 QUARTERLY GROUNDWATER MONITORING REPORT

CONOCOPHILLIPS NELL HALL No. 1 SAN JUAN COUNTY, NEW MEXICO API# 30-045-09619 NMOCD# 3R-090

Prepared For:

CONOCOPHILLIPS COMPANY

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

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1.0 INTRODUCTION

This report presents the results of quarterly groundwater monitoring events conducted by Conestoga-Rovers & Associates (CRA) on June 21, September 27, and December 13, 2011 at the ConocoPhillips Company (ConocoPhillips) Nell Hall No. 1 remediation site (Site), located on private land in Section 07, Township 30N, Range 11W of San Juan County, New Mexico, approximately 2 miles west of the city of Aztec. Geographical coordinates for the Site are 36.821659° North, 108.037319° West. The Site consists of a natural gas well and associated equipment. The location and Site layout are presented as **Figures 1** and **2**, respectively.

1.1 <u>BACKGROUND</u>

The history of the Site is presented in **Table 1** and is summarized in the following paragraphs.

Environmental investigation at the Site began when closure of an unlined dehydrator discharge pit was attempted in the early 1990's. Soil impacts were discovered during earthmoving activities and groundwater Monitor Wells MW-1, MW-2, and MW-3 were subsequently installed to determine if hydrocarbons had impacted groundwater beneath the Site. An ongoing drought caused the water table to fall below the screened intervals of MW-1, MW-2, and MW-3. On February 17 and 18, 2004, Souder Miller and Associates (SMA) installed Monitor Wells MW-4, MW-5, and MW-6 at sufficient depths to intersect the water table and to account for the effects of further seasonal or drought-based water table fluctuations (Souder Miller and Associates, 2004). Boring log data from MW-4 and MW-6 were used to create a geologic cross-section for the Site (Figure 3).

Tetra Tech, Inc. (Tetra Tech) began quarterly sampling of Monitor Wells MW-4, MW-5, and MW-6 in 2004, then adjusted the sampling schedule to a semi-annual basis in 2005, and then annually beginning in 2006. Semi-annual sampling was resumed in 2007 due to seasonal groundwater fluctuations.

It should be noted that the March 2004 groundwater sample was collected immediately following installation of MW-6 in February 2004, in which soil samples collected at 25 and 30 feet below ground surface each resulted in an exceedence of the 50 milligram per kilogram (mg/kg) regulatory limit for BTEX, and soil samples collected at 25, 30, and 35 feet bgs were found to contain total petroleum hydrocarbons (TPH) at levels greater than the 100 mg/kg regulatory limit (SMA, 2004).

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On June 15, 2011, Site consulting responsibilities were transferred from Tetra Tech to CRA of Albuquerque, NM.

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CONESTOGA-ROVERS & ASSOCIATES

2.0 GROUNDWATER MONITORING METHODOLOGY AND ANALYTICAL RESULTS

2.1 <u>GROUNDWATER MONITORING METHODOLOGY</u>

Groundwater Elevation Measurements

Depth to groundwater was gauged at Monitor Wells MW-1, MW-2, MW-3, MW-4, MW-5, and MW-6 using an oil/water interface probe prior to sampling. Groundwater elevations were recorded in a hard bound field book and on CRA well sampling field information forms (**Appendix A**) and are presented in **Table 2**.

Groundwater potentiometric surface maps detailing groundwater elevations, groundwater flow direction, and gradient, using data collected during the June, September, and December 2011 sampling events are presented as **Figures 4**, **5** and **6**, respectively.

Hydrographs illustrating groundwater level fluctuations since March 2004 in Monitor Wells MW-5 and MW-6 are presented as **Figure 7** and **Figure 8**, respectively. These data indicate that groundwater elevations are consistently lowest during the late winter and early spring months. Historically, the groundwater flow direction and gradient vary from season to season. These fluctuations are believed to be the result of changes in irrigation rates and/or baseflow conditions in the Animas River, which, at its closest point, lies approximately 0.6 mile to the south/southeast of the Site (**Figure 1**).

Groundwater Sampling

Groundwater samples were collected from Monitor Wells MW-4, MW-5 and MW-6 during the June, September, and December 2011 sampling events. Approximately three well volumes were purged from each monitor well with a dedicated, polyethylene, 1.5-inch, disposable bailer prior to sampling. Purge water generated during the event was disposed of in the on-Site produced water tank (Figure 2). Groundwater samples were placed in laboratory prepared bottles, packed on ice, and shipped under chain-of-custody documentation to Pace Analytical Services Inc. of Lenexa, Kansas.

The samples were analyzed for the presence of benzene, toluene, ethylbenzene and xylenes (BTEX) by Environmental Protection Agency (EPA) Method 8260 and for dissolved iron by EPA Method 6010.

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2.2 GROUNDWATER MONITORING ANALYTICAL RESULTS

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

June 2011

Benzene

 The NMWQCC domestic water supply groundwater quality standard for benzene is 0.01 milligrams per liter (mg/L). The groundwater sample collected in June 2011 from Monitor Well MW-6 exceeded this standard with a concentration of 0.461 mg/L.

Xylenes (total)

• The groundwater quality standard for total xylenes is 0.620 mg/L. The groundwater sample collected in June 2011 from MW-6 was found to contain total xylenes at a concentration of 0.677 mg/L.

Dissolved Iron

 The groundwater quality standard for dissolved iron is 1.0 mg/L. Groundwater samples collected in June 2011 from Monitor Wells MW-4 and MW-6 were found to contain dissolved iron at concentrations of 1.21 mg/L, and 9.45 mg/L, respectively.

September 2011

Benzene

 The NMWQCC domestic water supply groundwater quality standard for benzene is 0.01 mg/L. The groundwater sample collected in September 2011 from Monitor Well MW-6 exceeded this standard with a concentration of 0.237 mg/L.

Dissolved Iron

The groundwater quality standard for dissolved iron is 1.0 mg/L. The groundwater sample collected in September 2011 from Monitor Well MW-6 was found to contain dissolved iron at a concentration of 19.6 mg/L.

December 2011

Benzene

 The NMWQCC domestic water supply groundwater quality standard for benzene is 0.01 mg/L. The groundwater sample collected in December 2011 from Monitor Well MW-6 exceeded this standard with a concentration of 0.298 mg/L.

Dissolved Iron

• The groundwater quality standard for dissolved iron is 1.0 mg/L. The groundwater sample collected in December 2011 from Monitor Well MW-6 was found to contain dissolved iron at a concentration of 11.6 mg/L.

Benzene concentrations in MW-6 have fluctuated regularly since monitoring began in March 2004. An inverse correlation between water levels and benzene concentrations was observed in the past. A graph detailing this relationship is presented as **Figure 9**.

Benzene concentration maps for the June, September, and December 2011 sampling events are presented as Figures 10, 11, and 12, respectively.

A summary of historical laboratory analytical results is presented as **Table 3**. Groundwater laboratory analytical reports can be found in **Appendix B**.

3.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the detection of BTEX and dissolved iron in MW-6 during the June, September, and December 2011 sampling events, CRA recommends continued groundwater quality monitoring for BTEX and dissolved iron in order to move toward remediation Site closure with NMOCD. Remediation Site closure will be requested when all groundwater quality parameters are below NMWQCC groundwater quality standards, are stable, or are representative of background conditions at the Site.

All Site monitor wells will be gauged quarterly. Monitor Wells MW-4, MW-5, and MW-6 will be sampled when possible due to the fluctuating groundwater levels at the Site. Historically, sampling has been possible semi-annually.

4.0 <u>REFERENCES</u>

Souder Miller and Associates (2004). *Nell Hall Monitor Well Installation Report*. Prepared for ConocoPhillips Company Report Dated May 7. 64 pp.

FIGURES

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DECEMBER 2011 BENZENE CONCENTRATION MAP NELL HALL No. 1 NATURAL GAS WELL SITE SECTION 07, T30N-R11W, SAN JUAN COUNTY, NEW MEXICO *ConocoPhillips Company*

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SITE HISTORY TIMELINE CONOCO PHILLIPS COMPANY NELL HALL NO. 1 SAN JUAN COUNTY

1

| Date/Time Period | Event/Action | Description/Comments |
|---|--|---|
| February 20, 1961 | Well Spudded | Southwest Production Company spudded the Nell Hall No. 1 natural gas |
| September 1, 1963 | Operator Change | Beta Development Company acquired the Nell Hall No. 1 site from Southwest Production Company. |
| September 15, 1988 | Operator Change | Mesa Operating Limited Partnership acquired the Nell Hall No. 1 site from Beta Development Company. |
| July 1, 1991 | Operator Change | Conoco Inc. acquired the Nell Hall No. 1 from Mesa Operating Limited Partnership. |
| May 3, 1994 | Pit Remediation | Conoco stopped flow to the dehydrator, sampled the soil in the unlined dehydrator pit and encountered hydrocarbon-impacted soil. |
| August 31 through September 1, 1994 | Pit Remediation | Conoco removed the dehydrator and Flint Engineering & Construction Co. excavated soil in the vicinity of the former dehydrator pit to a depth of 16 feet. A soil sample at the bottom of the excavation revealed TPH of 380 ppm. |
| September 21 through October 7, 1994 | Pit Remediation | Flint Engineering & Construction Co. landfarmed the excavated soil on site. |
| June 1 and 2, 1995 | Soil Borings and Groundwater Sampling | Phillip Environmental Services Corp. completed initial subsurface assesment (3 temporary monitor wells and 3 additional borings). |
| June 15, 1995 | Soil Borings and Groundwater Sampling | Phillip Environmental Services Corp. completed an additional soil boring. |
| March 27, 1997 | Monitor Well Sampling | On Site Technologies, LTD found insufficient water in the 3 monitor wells for sampling. |
| June 19, 2002 | Groundwater sampling | Souder Miller and Associates (SMA) conducted groundwater sampling at the Site. Samples were collected from MW-1, and sparge points SP-6, SP-7 and SP-8. The only constituent over the NMWQCC standard was benzene in SP-7 at a concentration of 0.018 milligrams per liter (mg/L). |
| September 17, 2002 | Groundwater sampling | SMA conducted groundwater sampling at the Site. Samples were collected from MW-1, and sparge points SP-6, SP-7 and SP-8. The only constituent over the NMWQCC standard was benzene in SP-7 at a concentration of 0.021 mg/L. |
| January 1, 2003 | Operator Name Change | Conoco Inc. and Phillips Petroleum Company merged to form ConocoPhillips Company. |
| February 17 and 18, 2004 | Monitor Well Installation | Monitor Wells MW-4, MW-5, and MW-6 were installed at deeper depths (35 to 39 feet BGS) to adequately intersect the water table, since previously installed groundwater monitoring wells continually went dry. The lowest water levels at the site are found to occur in early spring and late winter. 30 to 35 feet of screen was installed in each well to allow for seasonal groundwater fluctuations of up to 25 feet. |
| March 8 through December 27, 2004 | Monitor Well Sampling | Quarterly groundwater sampling of Monitor Wells MW-4, MW-5, and MW-6; benzene spike in March (MW-6) coincides with MW-6 well installation and discovery of BTEX and TPH impacts to soil at 25-35 feet bgs in MW-6 soil samples collected during drilling. |
| May 11 through November 22, 2005 November 15, 2006 | Monitor Well Sampling Monitor Well Sampling | Semi-annual sampling of monitor wells MW-4, MW-5, and MW-6. |
| February 21, 2007 through October 22, 2008 | Monitor Well Sampling | Resumption of semi-annual sampling of Monitor Wells MW-4, MW-5, and MW-6 during summer and fall months when water is most likely to be present in wells. |
| February 6, 2009 | BTEX vs. depth to water plotted for MW-6 | BTEX concentrations show inverse relationship to water column thickness in MW- 6; plotted from 2/21/07 to 10/22/08. |
| March 30, 2009 | Monitor Well sampling | Monitor Wells MW-5 and MW-6 were sampled. MW-4 was found to be dry during the sampling event. Benzene was reported at a concentration above the groundwater quality standard in MW-6 with a concentration of 0.042 mg/L. |
| September 30, 2009 | Monitor Well Sampling | Groundwater samples were collected from MW-4, MW-5 and MW-6. MW-6 indicated a benzene concentration of 0.096 mg/L and a dissolved iron concentration of 1.06 mg/L. |
| March 31 and April 1, 2010 | Monitor Well Sampling | Groundwater samples collected from MW-5 and MW-6; MW-4 was dry. MW-6 indicated a benzene concentration of 0.480 mg/L and a sample for dissolved iron was not obtained due to low water levels in MW-6. |

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TABLE 1

SITE HISTORY TIMELINE CONOCO PHILLIPS COMPANY NELL HALL NO. 1 SAN JUAN COUNTY

| Date/Time Period | Event/Action | Description/Comments |
|--------------------|---|--|
| June 9, 2010 | Monitor Well Sampling | Groundwater samples collected from MW-4, MW-5 and MW-6 as a continuation of semi-annual sampling event. MW-6 indicated a benzene concentration of 0.710 mg/L and a dissolved iron concentration of 11.4 mg/L. |
| September 27, 2010 | Monitor Well Sampling | Groundwater samples collected from MW-4, MW-5 and MW-6. MW-6 indicated a benzene concentration of 0.30 mg/L and a dissolved iron concentration of 0.676 mg/L. |
| March 16, 2011 | Monitor Well Sampling | Groundwater samples collected from MW-5 and MW-6. MW-4 was observed to be dry during this monitoring event. Laboratory analysis of the groundwater sample from MW-6 indicated a benzene concentration of 0.18 mg/L and a dissolved iron concentration of 8.66 mg/L; however, during the March 2011 sampling event MW- 6 contained a very low volume of water and the sample collected may not be representative of actual aquifer conditions. |
| June 15, 2011 | Transfer of Consulting Responsibilities to CRA | On June 15, 2011, Site consulting responsibilities were transferred from Tetra Tech of Albuquerque, NM to CRA of Albuquerque, NM. |
| June 21, 2011 | Monitor Well Sampling | Groundwater samples collected from MW-4, MW-5 and MW-6. Groundwater sampled from MW-6 indicated a benzene concentration of 0.461 mg/L, a xylenes concentration of 0.677 mg/L, and a dissolved iron concentration of 9.45 mg/L. |
| September 27, 2011 | Monitor Well Sampling | Groundwater samples collected from MW-4, MW-5 and MW-6. Groundwater sampled from MW-6 indicated a benzene concentration of 0.237 mg/L, and a dissolved iron concentration of 19.6 mg/L. |
| December 13, 2011 | Monitor Well Sampling | Groundwater samples collected from MW-4, MW-5 and MW-6. Groundwater sampled from MW-6 indicated a benzene concentration of 0.298 mg/L, and a dissolved iron concentration of 11.6 mg/L. |

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MONITOR WELL SPECIFICATIONS AND GROUNDWATER ELEVATIONS MARCH 2004 - DECEMBER 2011 CONOCOPHILLIPS COMPANY NELL HALL NO.1 SAN JUAN COUNTY, NM

| Well ID | Total Depth (ft below TOC) | Surface Elevation (amsl) | Screen Interval (ft bgs) | Date Measured | Depth to Groundwater (ft below TOC) | Relative Water Level |
|---------|-------------------------------|-----------------------------|-----------------------------|---------------|--|----------------------|
| | | | | 05/10/05 | DRY | NA |
| | | • | | 10/20/05 | 19.25 | 5596.47 |
| | | | | 11/22/05 | 24,15 | 5591.57 |
| | | | | 05/17/06 | NM | NM |
| | | | | 11/15/06 | 21.40 | 5594.32 |
| | | | | 02/19/07 | DRY | NA |
| | | | | 05/14/07 | 24.85 | 5590.87 |
| | | 5615.72 | | 08/22/07 | 24.61 | 5591 11 |
| | | | | 11/06/07 | 20.87 | 5594.85 |
| | | | | 03/17/08 | DRY | NA |
| MW-1 | 28.55 | | Unknown | 10/22/08 | 10.38 | 5596.34 |
| | | | | 02 (20 /00 | 19.36 | 5590.54 |
| | | | | 00/30/09 | 26.25 | 5507.47 |
| | | | | 09/30/09 | 10.56 | 5599.10 |
| • | | | | 03/31/10 | | NA |
| | | | | 06/09/10 | 24,16 | 5591.56 |
| | | | | 09/27/10 | 20.00 | 77.95 |
| | | | | 03/16/11 | DRY | NA |
| | | 97.95 | | 06/21/11 | 26.80 | 71.15 |
| | • | | | 09/27/11 | 17.85 | 80.10 |
| | | | | 12/13/2011 | 25.39 | 72.56 |
| | | | | 5/10/2005 | DRY | NA |
| | | | | 10/20/2005 | 18.81 | 559 <u>6.13</u> |
| | | | | 11/22/2005 | 23.74 | 5591.20 |
| | | | | 5/17/2006 | 22.06 | 5592.88 |
| | | | | 11/15/2006 | 21.01 | 5593.93 |
| | | | | 2/19/2007 | DRY | NA |
| | | | | 5/14/2007 | DRY | NA |
| | | 5614.94 | | 8/22/2007 | 18.03 | 5596.91 |
| | | | | 11/6/2007 | 20.43 | 5594.51 |
| | 07.00 | | | 3/17/2008 | DRY | NA |
| MW-2 | 27.32 | | Unknown | 10/22/2008 | 18.83 | 5596.11 |
| | | | | 3/30/2009 | 27.15 | 5587.79 |
| | | | | 9/30/2009 | 16.01 | 5598.93 |
| | | | | 3/31/2010 | DRY | NA |
| | | | | 6/9/2010 | 23.36 | 5591.58 |
| | | | | 9/27/2010 | 19.42 | 77 74 |
| | | | | 3/16/2011 | DRV | NΔ |
| | | 9716 | | 6/21/2011 | 26.43 | 70 73 |
| | | 77.10 | | 0/27/2011 | 17.28 | 70,73 |
| | | | | 7/2//2011 | 25.10 | 77.00 |
| | | | | E /10 /2011 | 25.10 | 72,00 NIA |
| | | | | 5/ 10/ 2005 | | NA |
| | | | | 10/20/2005 | 19.36 | 5596.17 |
| | | | | F /17/22/2005 | 24.24 | 5591.29 |
| | | | | 5/17/2006 | 22,82 | 5592.71 |
| | | | | 11/15/2006 | 21.53 | 5594.00 |
| | | | | 2/19/2007 | DRY | NA |
| | | | | 5/14/2007 | DRY | NA |
| | | 5615.53 | | 8/22/2007 | 18.36 | 5597.17 |
| | | | | 11/6/2007 | 20.95 | 5594.58 |
| MW-3 | 27.45 | | Unknown | 3/17/2008 | DRY | NA |
| | | | | 10/22/2008 | 19.34 | 5596.19 |
| • | | | | 3/30/2009 | DRY | NA |
| | | | | 9/30/2009 | NM | NM |
| | | | | 3/31/2010 | DRY | NA |
| | | | | 6/9/2010 | 23.87 | 5591.66 |
| • | | | | 9/27/2010 | 19.93 | 77.84 |
| | | | | 3/16/2011 | DRY | NA |
| | | 97.77 | | 6/21/2011 | 27.06 | 70.71 |
| | | | | 9/27/2011 | 17.82 | 79.95 |
| | | | | 12/13/2011 | 25.66 | 72.11 |

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MONITOR WELL SPECIFICATIONS AND GROUNDWATER ELEVATIONS MARCH 2004 - DECEMBER 2011 CONOCOPHILLIPS COMPANY NELL HALL NO.1 SAN JUAN COUNTY, NM

| Well ID | Total Depth (ft | Surface Elevation | Screen Interval | Date Measured | Depth to Groundwater (ft | Relative Water Level |
|---------|-----------------|-------------------|-----------------|----------------|--------------------------|----------------------|
| Weitib | below TOC) | (amsl) | (ft bgs) | Ditte Mensuren | below TOC) | Kennive whier Level |
| | | | | 3/8/2004 | 36.04 | 5578.83 |
| | | | | 7/19/2004 | 8.44 | 5606.43 |
| | | | | 10/27/2004 | 19.69 | 5595.18 |
| | | | | 12/27/2004 | 27.58 | 5587.29 |
| | | | | 5/10/2005 | DRY | NA |
| | | | | 10/20/2005 | 18.87 | 5596.00 |
| | | | | 11/22/2005 | 23.93 | 5590.94 |
| | | | | 5/17/2006 | NM | NM |
| | | | | 11/15/2006 | 21.02 | 5593.85 |
| | | 5614.87 | | 2/19/2007 | 34.40 | 5580.47 |
| | | | l . | 5/14/2007 | 27.56 | 5587.31 |
| MW_4 | 37 57 | | 7 57 - 37 57 | 8/22/2007 | 18.18 | 5596.69 |
| 11111-1 | 57.57 | | 1.07 - 01.01 | 11/6/2007 | 20.48 | 5594.39 |
| | | | | 3/17/2008 | 36.08 | 5578.79 |
| | | | | 10/22/2008 | 18.96 | 5595.91 |
| | | | | 3/30/2009 | 37.36 | 5577.51 |
| | | | • | 9/30/2009 | 16.15 | 5598.72 |
| | | | | 3/31/2010 | DRY | NA |
| | · | | | 6/9/2010 | 23.61 | 5591.26 |
| | | | | 9/27/2010 | 19.61 | 78.14 |
| | | | Į – | 3/16/2011 | DRY | NA |
| | | 97.75 | | 6/21/2011 | 26.79 | 70.96 |
| | | | | 9/27/2011 | 17.47 | 80.28 |
| | | | | 12/13/2011 | 25.35 | 72.40 |
| | | | | 3/8/2004 | 37.19 | 5578.67 |
| | | | | 7/19/2004 | 9.38 | 5606.48 |
| | | | | 10/27/2004 | 21.07 | 5594.79 |
| | | | | 12/27/2004 | 28.99 | 5586.87 |
| | | | | 5/10/2005 | 39.79 | 5576.07 |
| | | | | 10/20/2005 | 20.34 | 5595.52 |
| | Į į | | | 11/22/2005 | 25.23 | 5590.63 |
| | | | | 5/17/2006 | 23.80 | 5592.06 |
| | | | | 11/15/2006 | 22.51 | 5593.35 |
| | | 5615.86 | | 2/19/2007 | 35.31 | 5580.55 |
| | | | | 5/14/2007 | 27.59 | 5588.27 |
| MW-5 | 42.7 | | 77-427 | 8/22/2007 | 19.45 | 5596.41 |
| | 12.7 | | ,,, 12 | 11/6/2007 | 21.94 | 5593.92 |
| | | | | 3/17/2008 | 37.33 | 5578.53 |
| | | | | 10/22/2008 | 19.30 | 5596.56 |
| | | | | 3/30/2009 | 38.68 | 5577.18 |
| | | | | 9/30/2009 | 17.54 | 5598.32 |
| | | | | 3/31/2010 | 39.05 | 5576.81 |
| | | | | 6/9/2010 | 24.91 | 5590.95 |
| | | | | 9/27/2010 | 20.92 | 77.89 |
| | | | | 3/16/2011 | 39.25 | 59.56 |
| | | 98.81 | | 6/21/2011 | 28.02 | 70.79 |
| | | | | 9/27/2011 | 18.79 | 80.02 |
| | 1 | | | 12/13/2011 | 26.62 | 72.19 |

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MONITOR WELL SPECIFICATIONS AND GROUNDWATER ELEVATIONS MARCH 2004 - DECEMBER 2011 CONOCOPHILLIPS COMPANY NELL HALL NO.1 SAN JUAN COUNTY, NM

| Well ID | Total Depth (ft below TOC) | Surface Elevation (amsl) | Screen Interval (ft bgs) | Date Measured | Depth to Groundwater (ft below TOC) | Relative Water Level |
|---------|-------------------------------|-----------------------------|-----------------------------|---------------|--|----------------------|
| | | | | 3/8/2004 | 36.27 | 5579.17 |
| | | | | 7/19/2004 | 9.43 | 5606.01 |
| | | | | 10/27/2004 | 19.33 | 5596.11 |
| | | | | 12/27/2004 | 28.62 | 5586.82 |
| | | | | 5/10/2005 | DRY | NA |
| | | | | 10/20/2005 | 19.94 | 5595.50 |
| | | | | 11/22/2005 | 25.02 | 5590.42 |
| | | | | 5/17/2006 | NM | NM |
| • | | | | 11/15/2006 | 21.12 | 5594.32 |
| | | 5615.44 | | 2/19/2007 | 34.82 | 5580.62 |
| | | | | 5/14/2007 | 26.12 | 5589.32 |
| MW-6 | 38.21 | | 8 21 - 38 21 | 8/22/2007 | 19.41 | 5596.03 |
| | 50.21 | | 0.21 - 00.21 | 11/6/2007 | 21.51 | 5593.93 |
| | | | | 3/17/2008 | 36.34 | 5579.10 |
| | | | | 10/22/2008 | 19.99 | 5595.45 |
| | | | | 3/30/2009 | 37.04 | 5578.40 |
| | | • | | 9/30/2009 | 17.26 | 5598.18 |
| | | | | 3/31/2010 | 37.24 | 5578.20 |
| | | | | 6/9/2010 | 24.43 | 5591.01 |
| | | | | 9/27/2010 | 20.79 | 77.62 |
| | | | | 3/16/2011 | DRY | NA |
| | | 98.41 | | 6/21/2011 | 27.56 | 70.85 |
| | | | | 9/27/2011 | 18.58 | 79.83 |
| | | | | 12/13/2011 | 26.32 | 72.09 |

Notes:

amsl = Above mean sea level bgs = Below ground surface ft = Feet

NM = Not measured NA = Not available

TOC = Top of casing * = Top of casing elevation based on an arbitrary reference elevation of 100 feet

GROUNDWATER ANALYTICAL RESULTS SUMMARY (MARCH 2004-DECEMBER 2011) CONOCOPHILLIPS COMPANY NELL HALL NO. 1

| Well ID | Sample ID | Date | Sample Type | Benzene (mg/L) | Toluene (mg/L) | Ethylbenzene (mg/L) | Xylenes (total) (mg/L) | Sulfate (mg/L) | Iron (dissolved) _(mg/L) | Nitrate (as N) (mg/L) |
|--------------|--------------------------|------------|-------------|-------------------|-------------------|------------------------|------------------------------|-------------------|--------------------------------|--------------------------|
| | MW-4 | 3/8/2004 | (orig) | 0.013 | 0.012 | 0.064 | 1.4 | - | - | - |
| 1 [| | 7/19/2004 | (orig) | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | | |
| [| MW-4 | 10/27/2004 | (orig) | 0.011 | 0.008 | 0.021 | 0.13 | | | - |
| [| MW-4 | 12/27/2004 | (orig) | < 0.0025 | < 0.0025 | < 0.0025 | < 0.0005 | | | |
| | MW-4 | 11/22/2005 | (orig) | < 0.0005 | < 0.0007 | < 0.0008 | < 0.0008 | 105 | - | < 0.40 |
| | MW-4 | 11/15/2006 | (orig) | < 0.0005 | < 0.0007 | < 0.0008 | < 0.0008 | 110 | + | < 0.25 |
| | MW-4 | 2/21/2007 | (orig) | < 0.0005 | < 0.0007 | < 0.0008 | < 0.0008 | 59.6 | - | < 0.25 |
| | MW-4 | 8/22/2007 | (orig) | < 0.0005 | < 0.0007 | < 0.0008 | < 0.0008 | 96.5 | - | < 0.25 |
| MW-4 | MW-4 | 11/6/2007 | (orig) | < 0.0005 | < 0.0007 | < 0.0008 | < 0.0008 | 111 | - | 3.3 |
| [| MW-4 | 3/17/2008 | (orig) | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 64.5 | - | < 0.5 |
| 1 [| MW-4 | 10/22/2008 | (orig) | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 93.8 | - | 1.9 |
| | MW-4 | 9/30/2009 | (orig) | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.02 | 1 |
| | MW-4 | 6/9/2010 | (orig) | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.02 | |
| | MW-4 | 9/27/2010 | (orig) | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.02 | |
| | GW-74941-062111-CMB-001 | 6/21/2011 | (orig) | < 0.0010 | < 0.0010 | < 0.0010 | < 0.0030 | | 1.21 | |
| · [| GW-074941-092711-CM-007 | 9/27/2011 | (orig) | < 0.001 | < 0.001 | < 0.001 | < 0.003 | - | < 0.05 | |
| | GW-074941-121311-CB-MW-4 | 12/13/2011 | (orig) | < 0.001 | < 0.001 | < 0.001 | < 0.003 | | 0.201 | |

Page 2 of 3

TABLE 3

GROUNDWATER ANALYTICAL RESULTS SUMMARY (MARCH 2004-DECEMBER 2011) CONOCOPHILLIPS COMPANY NELL HALL NO. 1

| Well ID | Sample ID | Date | Sample Type | Benzene (mg/L) | Toluene (mg/L) | Ethylbenzene (mg/L) | Xylenes (total) (mg/L) | Sulfate (mg/L) | Iron (dissolved) (mg/L) | Nitrate (as N) (mg/L) |
|---------|--------------------------|------------|-------------|-------------------|-------------------|------------------------|------------------------------|-------------------|-------------------------------|--------------------------|
| | MW-5 | 3/8/2004 | (orig) | 0.0011 | < 0.0005 | 0.001 | 0.017 | | | |
| | MW-5 | 7/19/2004 | (orig) | < 0.0005 | 0.00055 | < 0.0005 | 0.00072 | | | |
| | MW-5 | 10/27/2004 | (orig) | < 0.0005 | < 0.0005 | < 0.0005 | < 0.001 | | | |
| | MW-5 | 12/27/2004 | (orig) | < 0.0005 | < 0.0005 | < 0.0005 | < 0.001 | | | - |
| | MW-5 | 5/11/2005 | (orig) | < 0.0005 | < 0.0007 | < 0.0008 | < 0.0008 | 139 | | 2.3 |
| | MW-5 | 11/22/2005 | (orig) | < 0.0005 | < 0.0007 | < 0.0008 | < 0.0008 | 38 | | < 0.40 |
| | MW-5 | 11/15/2006 | (orig) | < 0.0005 | < 0.0007 | < 0.0008 | < 0.0008 | 77.9 | | 2.3 |
| | MW-5 | 2/21/2007 | (orig) | < 0.0005 | < 0.0007 | < 0.0008 | < 0.0008 | 83.3 | | 1.3 |
| | MW-5 | 8/22/2007 | (orig) | < 0.0005 | < 0.0007 | < 0.0008 | < 0.0008 | 125 | | 5.6 |
| | MW-5 | 11/6/2007 | (orig) | < 0.0005 | < 0.0007 | < 0.0008 | < 0.0008 | 59 | | 4 |
| MW-5 | MW-5 | 3/17/2008 | (orig) | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 69.7 | ' | 0.986 |
| | MW-5 | 10/22/2008 | (orig) | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 105 | | 0.532 |
| | MW-5 | 3/30/2009 | (orig) | < 0.005 | < 0.005 | < 0.005 | < 0.005 | | | |
| | MW-5 | 9/30/2009 | (orig) | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.02 | |
| | MW-5 | 3/31/2010 | (orig) | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.02 | |
| | MW-5 | 6/9/2010 | (orig) | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.02 | |
| | MW-5 | 9/27/2010 | (orig) | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.02 | |
| | MW-5 | 3/16/2011 | (orig) | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.02 | 1 |
| | GW-74941-062111-CMB-002 | 6/21/2011 | (orig) | < 0.0010 | < 0.0010 | < 0.0010 | < 0.0030 | | < 0.1 | |
| | GW-074941-092711-CM-005 | 9/27/2011 | (orig) | < 0.001 | < 0.001 | < 0.001 | < 0.003 | | 0.0835 | - · |
| | GW-074941-121311-CB-MW-5 | 12/13/2011 | (orig) | < 0.001 | < 0.001 | < 0.001 | < 0.003 | - | 0.0212 J | |

CRA 074941-RPT3-TBLS

Page 3 of 3

TABLE 3

GROUNDWATER ANALYTICAL RESULTS SUMMARY (MARCH 2004-DECEMBER 2011) CONOCOPHILLIPS COMPANY NELL HALL NO. 1

| Well ID | Sample ID | Date | Sample Type | Benzene (mg/L) | Toluene (mg/L) | Ethylbenzene (mg/L) | Xylenes (total) (mg/L) | Sulfate (mg/L) | Iron (dissolved) (mg/L) | Nitrate (as N) (mg/L) |
|------------|--------------------------|-----------------|-------------|-------------------|-------------------|------------------------|------------------------------|-------------------|-------------------------------|--------------------------|
| | MW-6 | 3/8/2004 | (orig) | 2.5 | 0.014 | 1.6 | 21.031 | | | |
| [| MW-6 | 7/19/2004 | (orig) | < 0.0005 | < 0.0005 | 0.00098 | 0.0026 | | | |
| [| MW-6 | 10/27/2004 | (orig) | 0.0004 | 0.0003 | 0.0005 | 0.0021 | | | |
| [| MW-6 | 12/27/2004 | (orig) | 0.045 | 0.0068 | 0.014 | 0.0717 | | | |
|] [| MW-6 | 11/22/2005 | (orig) | 0.01 | 0.0007 | 0.016 | 0.15 | 3.4 | | < 0.40 |
| | MW-6 | 11/15/2006 | (orig) | < 0.0005 | < 0.0007 | < 0.0008 | < 0.0008 | 41.3 | | < 0.25 |
| [| MW-6 | 2/21/2007 | (orig) | 0.54 | < 0.001 | 0.076 | 0.81 | 1.8 | | < 0.25 |
| A.P. 1. W. | MW-6 | 8/22/2007 | (orig) | < 0.0005 | < 0.0007 | < 0.0008 | < 0.0008 | 12.6 | | < 0.25 |
| | MW-6 | 11/6/2007 | (orig) | 0.015 | < 0.0007 | 0.047 | 0.39 | 5.6 | | < 0.25 |
| | MW-6 | 3/18/2008 | (orig) | 0.16 | < 0.005 | < 0.005 | 0.033 | | | · |
| | MW-6 | 10/22/2008 | (orig) | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 5.15 | | < 1.0 |
| MW-6 | MW-6 | 3/30/2009 | (orig) | 0.042 | < 0.005 | < 0.005 | 0.01 | | | |
| | MW-6 | 9/30/2009 | (orig) | 0.096 | 0.0047 | 0.062 | 0.12 | | 1.06 | |
| | MW-6 | 4/1/2010 | (orig) | 0.48 | < 0.001 | 0.078 | 0.2 | | | |
| | MW-6 | 6/9/2010 | (orig) | 0.71 | < 0.001 | 0.42 | 0.52 | | 11.4 | |
| | MW-6 | 9/27/2010 | (orig) | 0.3 | < 0.001 | 0.25 | 0.41 | | 0.676 | |
|] [| MW-6 | 3/16/2011 | (orig) | 0.18 | < 0.001 | 0.044 | 0.072 | | 8.66 | |
| [| GW-74941-062111-CMB-003 | 6/21/2011 | (orig) | 0.461 | 0.00048 | 0.454 | 0.677 | · | 9.45 | |
| 1 | GW-74941-062111-CMB-DUP | 6/21/2011 | (Duplicate) | 0.383 | 0.00057 | 0.407 | 0.607 | | | |
| | GW-074941-092711-CM-006 | 9/27/2011 | (orig) | 0.237 | < 0.005 | 0.197 | 0.225 | | 19.6 | |
| | GW-074941-092711-CM-008 | 9/27/2011 | (Duplicate) | 0.249 | < 0.005 | 0.216 | 0.248 | | | |
| | GW-074941-121311-CB-MW-6 | 12/13/2011 | (orig) | 0.298 | 0.0083 | 0.154 | 0.141 | | 11.6 | · |
| | GW-074941-121311-CB-DUP | 12/13/2011 | (Duplicate) | 0.359 | 0.0061 | 0.19 | 0.183 | | | - |
| | NMWQCC Groundwater Qu | ality Standards | 3 | 0.01 | 0.75 | 0.75 | 0.62 | 600 | 1 | 10 |

Explanation

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

NA = Not Analyzed

NE = Not Established

NMWQCC = New Mexico Water Quality Control Commission

APPENDIX A

JUNE 2011 QUARTERLY GROUNDWATER SAMPLING FIELD FORMS

| W site/project name: sample id: | ELL SAMPLIN <u>Nell Hall</u> G <u>W-74941-06</u> | G FIELD INFORN X 2(11 - CMB-001 | IATION FO JOB# WELL# | DRM 7494/ Iw-4 | |
|--|---|--|---|---|--|
| 6.2(.() PURGE DATE (MM DD YY) | 6.2(.// SAMPLE DATE (MM DD YY) PUR | WELL PURGING INFORMAT [| ION 1.75 WATER VOL. IN C (GALLONS) IPMENT | ASING ACTUAL VC (GALI | DL. PURGED LONS) |
| PURGING EQUIPMENTDEDICA | ATED D N (CIRCLE ONE) A - SUBMERSIBLE PUMP B - PERISTALTIC PUMP C - BLADDER PUMP | D - GAS LIFT PUMP G - BAILE E - PURGE PUMP H - WATE F - DIPPER BOTTLE X - OTHEI | SAMPLIN R RRA® R | IG EQUIPMENTDEDIC X= PURGING DEVICE OTH X= | CATED (ON) (CIRCLE ONE) HER (SPECIFY) |
| PURGING MATERIAL | A - TEFLON B - STAINLESS STEEL C - POLYPROPYLENE | D - PVC E - POLYETHYLENE X - OTHER | | SAMPLING DEVICE OT X= PURGING MATERIAL O X= SAMPLING MATERIAL | THER (SPECIFY) OTHER (SPECIFY) OTHER (SPECIFY) |
| PURGE TUBING | A - TEFLON B - TYGON C - ROPE | D - POLYPROPYLENE G - COMB E - POLYETHYLENE TEFLO F - SILICONE X - OTHER | INATION N/POLYPROPYLENE | X= PURGE TUBING OTHEN X= SAMPLING TUBING OT | R (SPECIFY) THER (SPECIFY) |
| DEPTH TO WATER WELL DEPTH TEMPERATURE 16.68 (°C) (616.13 (°C) (615.90 (°C) (615.90 (°C) (615.87 (°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C) | 2.6.79 pH 5.70 (std) [5.70 (std) [] 5.70 (std) [5.70 (std) [] 5.70 (std) [_] 5.70 (s | FIELD MEASUREMENTS (feet) WELL ELE (feet) GROUNDWATER EL TDS CONDUCT (g/L) \$ FIELD COMMENTS \$ WINDY Y/N \$ | VATION EVATION TVITY 5(μS/cm) 32(μS/cm) 8(μS/cm) 8(μS/cm) 6 (μS/cm) | 97.75 70.96 ORP (mV) (mV) (mV) (mV) (mV) SHEEN Y/N SHEEN Y/N CATION Y/N (IF Y TYPE) | (feet) (feet) VOLUME |

| SAMPLE ID: 6.2(.1(6.6 PURGE DATE 5 MM DD YY) S PURGING EQUIPMENTDEDICATED (Y PURGING DEVICE 6 SAMPLING DEVICE 6 PURGING MATERIAL 6 SAMPLING MATERIAL 6 PURGE TUBING 6 SAMPLING TUBING 6 FILTERING DEVICES 0.45 8 DEPTH TO WATER 8 WELL DEPTH 9 15.37 (°C) 16.02 (°C) (°C) 7.05 (°C) 7.05 | C. W 7494/-0 21.01 SAMPLE DATE (MM DD YY) PUR() N (CIRCLE ONE) SUBMERSIBLE PUMP PERISTALTIC PUMP BLADDER PUMP DELADDER PUMP TEFLON STAINLESS STEEL POLYPROPYLENE TEFLON TYGON ROPE A - IN-LINE DISPOSABLE 28.02 | C 62/11 - C.4 WELL PURGING SAMPLE (24 HO GING AND SAM D - GAS LIFT PUMP E - PURGE PUMP F - DIPPER BOTTLE D - PVC E - POLYETHYLENN X - OTHER D - POLYPROPYLEN E - POLYETHYLENN F - SILICONE LE B - PRESS FIELD MEAS (feet) | 1B-002 WI INFORMATION | ELL# // | YWS CASING CASING NG EQUIPMENT X= PURGING DEN X= SAMPLING DE X= PURGING MAX X= SAMPLING MAX X= SAMPLING MAX X= SAMPLING MAX X= SAMPLING TU | CIRCLE ONE) WICE OTHER (SPECIFY) EVICE OTHER (SPECIFY) TERIAL OTHER (SPECIFY) ATERIAL OTHER (SPECIFY) IG OTHER (SPECIFY) JBING OTHER (SPECIFY) |
|---|--|---|---|---|--|---|
| $\begin{array}{c c} 6 \cdot 2 (\cdot ((\\ PURGE DATE \\ (MM DD YY) \end{array} \\ \begin{array}{c} PURGING EQUIPMENTDEDICATED \\ (Y \\ PURGING DEVICE \\ G \\ A \\ B \\ SAMPLING DEVICE \\ G \\ C \\ \hline \\ PURGING MATERIAL \\ \hline \\ SAMPLING MATERIAL \\ \hline \\ C \\ \hline \\ PURGE TUBING \\ \hline \\ SAMPLING TUBING \\ \hline \\ SAMPLING TUBING \\ \hline \\ C \\ \hline \\ FILTERING DEVICES 0.45 \\ \hline \\ \hline \\ DEPTH TO WATER \\ WELL DEPTH \\ \hline \\ TEMPERATURE \\ WELL DEPTH \\ \hline \\ TEMPERATURE \\ PH \\ \hline \\ 15, 37 \\ (C) \\ \hline \\ 16, 02 \\ (C) \\ \hline \\ \end{array} $ | 2(· () AMPLE DATE (MM DD YY) PUR() N (CIRCLE ONE) - SUBMERSIBLE PUMP - SUBMERSIBLE PUMP - BLADDER PUMP - BLADDER PUMP - TEFLON STAINLESS STEEL POLYPROPYLENE - TEFLON TYGON ROPE A - IN-LINE DISPOSABLE 28 02 | WELL PURGING SAMPLE (24 HO GING AND SAM D - GAS LIFT PUMP E - PURGE PUMP F - DIPPER BOTTLE D - PVC E - POLYETHYLENI X - OTHER D - POLYPROPYLEN E - POLYETHYLENI F - SILICONE LE B - PRESS FIELD MEAS | INFORMATION INFORMATION ITIME UR IPLING EQUIPME G - BAILER H - WATERRA® X - OTHER IF G - COMBINATE G URE G - COMBINATE URE C - VACUU UREMENTS | Z.Z. WATER VOL. IN C (GALLONS) ENT SAMPLIN SAMPLIN | ASING AC | LUAL VOI. PURGED (GALLONS) DEDICATED S N (CIRCLE ONE) VICE OTHER (SPECIFY) EVICE OTHER (SPECIFY) TERIAL OTHER (SPECIFY) ATERIAL OTHER (SPECIFY) IG OTHER (SPECIFY) JBING OTHER (SPECIFY) |
| PURGING EQUIPMENTDEDICATED (x) PURGING DEVICE G A SAMPLING DEVICE G C PURGING MATERIAL E A SAMPLING MATERIAL E C PURGE TUBING C A SAMPLING TUBING C C FILTERING DEVICES 0.45 DEPTH TO WATER WELL DEPTH DEPTH DEPTH DEPTH DEPTH DEPTH DEPTH DEPTH DEVICES 0.45 LS. S6 (°C) 7.05 LS. S6 (°C) 7.05 | PURG N (CIRCLE ONE) -SUBMERSIBLE FUMP PERISTALTIC PUMP -BLADDER PUMP -TEFLON STAINLESS STEEL POLYPROPYLENE -TEFLON TYGON ROPE A - IN-LINE DISPOSABI | GING AND SAM D - GAS LIFT PUMP E - PURGE PUMP F - DIPPER BOTTLE D - PVC E - POLYETHYLENH X - OTHER D - POLYPROPYLEN E - POLYETHYLENH F - SILICONE LE B - PRESS FIELD MEAS (feet) | G - BAILER H - WATERRA® X - OTHER G - COMBINATH G - COMBINATH TEFLON/PO X - OTHER URE C - VACUU | SAMPLIN SAMPLIN | X= PURGING DEN X= SAMPLING DEN X= PURGING MA X= SAMPLING MA X= PURGE TUBIN X= SAMPLING TU | DEDICATED (N (CIRCLE ONE) VICE OTHER (SPECIFY) EVICE OTHER (SPECIFY) TERIAL OTHER (SPECIFY) ATERIAL OTHER (SPECIFY) IG OTHER (SPECIFY) JBING OTHER (SPECIFY) |
| PURGING DEVICE G A SAMPLING DEVICE G C PURGING MATERIAL E A SAMPLING MATERIAL E A SAMPLING MATERIAL E C PURGE TUBING C C PURGE TUBING C C FILTERING DEVICES 0.45 B DEPTH TO WATER B WELL DEPTH B TEMPERATURE PH $15, 56$ (°C) 7.05 16.02 (°C) 7.05 | SUBMERSIBLE PUMP PERISTALTIC PUMP BLADDER PUMP TEFLON STAINLESS STEEL POLYPROPYLENE TEFLON TYGON ROPE A - IN-LINE DISPOSABI | D - GAS LIFT PUMP E - PURGE PUMP F - DIPPER BOTTLE D - PVC E - POLYETHYLENN X - OTHER D - POLYPROPYLEN E - POLYETHYLENN F - SILICONE LE B - PRESS FIELD MEAS | G - BAILER H - WATERRA® X - OTHER G - COMBINATH G - COMBINATH TEFLON/PO X - OTHER URE C - VACUU | ON Lypropylene M | X= PURGING DEV X= SAMPLING DEV X= PURGING MA X= SAMPLING MA X= PURGE TUBIN X= SAMPLING TUBIN | VICE OTHER (SPECIFY) EVICE OTHER (SPECIFY) TERIAL OTHER (SPECIFY) ATERIAL OTHER (SPECIFY) IG OTHER (SPECIFY) JBING OTHER (SPECIFY) |
| SAMPLING DEVICE $[c]$ C- PURGING MATERIAL $[c]$ A- SAMPLING MATERIAL $[c]$ C- PURGE TUBING $[c]$ A- B- SAMPLING TUBING $[c]$ A- B- SAMPLING TUBING $[c]$ A- B- SAMPLING TUBING $[c]$ A- B- SAMPLING TUBING $[c]$ C- FILTERING DEVICES 0.45 DEPTH TO WATER [UEPTH TO WATER PH [5.37](C) 7.05 [6.02](C) 7.05 | TEFLON STAINLESS STEEL POLYPROPYLENE TEFLON TYGON ROPE A - IN-LINE DISPOSABI | F - DIPPER BOTTLE D - PVC E - POLYETHYLENE X - OTHER D - POLYPROPYLEN E - POLYETHYLENE F - SILICONE LE B - PRESS FIELD MEAS (feet) | X - OTHER E JE G - COMBINATH 3 TEFLON/PO X - OTHER URE C - VACUU UREMENTS | ON Lypropylene M | X= SAMPI.ING DE X= PURGENG MA X= SAMPLING M. X= PURGE TUBIN X= SAMPLING TU | EVICE OTHER (SPECIFY) TERIAL OTHER (SPECIFY) ATERIAL OTHER (SPECIFY) IG OTHER (SPECIFY) JBING OTHER (SPECIFY) |
| SAMPLING MATERIAL PURGE TUBING SAMPLING TUBING (A - B - B - B - B - B - B - B - B - B - | STAINLESS STEEL POLYPROPYLENE TEFLON TYGON ROPE A - IN-LINE DISPOSABL | E - POLYETHYLENI X - OTHER D - POLYPROPYLEN E - POLYETHYLENI F - SILICONE LE B - PRESS FIELD MEAS | E G - COMBINATH TEFLON/PO X - OTHER URE C - VACUU | ON LYPROPYLENE M | PURGING MA X= | TERIAL OTHER (SPECIFY) ATERIAL OTHER (SPECIFY) IG OTHER (SPECIFY) JBING OTHER (SPECIFY) |
| PURGE TUBING $(\ A \ B \ B \ C \ C \ C \ C \ C \ C \ C \ C$ | TEFLON TYGON ROPE A - IN-LINE DISPOSABI | D - POLYPROPYLEN E - POLYETHYLEN F - SILICONE LE B - PRESS FIELD MEAS | JE G-COMBINATH TEFLON/PO X-OTHER URE C-VACUU | ON LYPROPYLENE M | X= PURGE TUBIN X= SAMPLING TU | IG OTHER (SPECIFY) |
| FILTERING DEVICES 0.45 DEPTH TO WATER WELL DEPTH TEMPERATURE pH 15.37 (°C) $7.1115.56$ (°C) $7.0516.02$ (°C) 7.05 | A - IN-LINE DISPOSABI | LE B - PRESS FIELD MEAS | URE C-VACUU | M | | |
| DEPTH TO WATER | 28.02 | (feet) | UREMENTS | | | |
| WELL DEPTH pH TEMPERATURE pH [5, 37] (°G) 7.05 [5, 56] (°G) 7.05 [6.02] (°G) 7.05 [6.02] (°G) 7.05 | | | WELL ELEVATION | ом | 98_8 | (feet) |
| TEMPERATURE pH 15.37 (°C) 15.56 (°C) 16.02 (°C) (°C) 7.05 | | (feet) GROU | JNDWATER ELEVAT | тон | 70 7 | 9 (feet) |
| 15.37 (°) 7.11 15.56 (°) 7.05 16.02 (°) 7.05 | Т | TDS | CONDUCTIVIT | Y | ORP | VOLUME |
| [<u>15</u> ,56](c) 7.05 [<u>16.02</u>](c) 7.05 | (std) | (g/L) | 44727 | (µS/cm) | | (mV) 4.5 (gal |
| [<u>[6.02</u>](c) [<u>7.05</u>] | (std) | (g/L) | 44980 | (µS/cm) | | (mV) 5.5 (gal |
| (°C) | (std) | (g/L) | 45575 | (µS/cm) | | (mV) 6.5 (gal |
| • | (std) | (g/L) | | (µS/cm) | | (mV)(gal |
| (°C) | (std) | (g/L) | | (µS/cm) | Ĺ | (mV)(gal |
| AMPLE APPEARANCE: <u>cloud</u> | ODOR: | FIELD CO | MMENTS COLOR: | fan PRECIPI | _SHEEN Y/N TATION Y/N (IF Y TY | (PE) |
| PECIFIC COMMENTS: | <u></u> | | | | | ` |
| | ····· | | ······································ | | | |
| / | | | 1 | | ····· | |

]
| SITE/PROJECT NAME: | Nell Hall XI | JOB#07 | 4941 |
|--|--|---|--|
| SAMPLE ID: | GW-74941-062111-CM | <u>B-003</u> WELL# <u>M</u> | W-6 |
| 6.21. (1 PURGE DATE (MM DD YY) | WELL PURGIN 6.2(.1) 1.72 SAMPLE DATE (MM DD YY) 241 | G INFORMATION | ACTUAL VOL. PURGED (GALLONS) |
| PURGING EQUIPMENTDEDICAT | PURGING AND SA | MPLING EQUIPMENT SAMPLII | NG EQUIPMENTDEDICATED 🖉 N (CIRCLE ONE) |
| PURGING DEVICE | A - SUBMERSIBLE PUMP D - GAS LIFT PU B - PERISTALTIC PUMP E - PURGE PUMI C - BLADDER PUMP F - DIPPER BOTT | MP G - BAILER H - WATERRA® LE X - OTHER | X= PURGING DEVICE OTHER (SPECIFY) X= |
| PURGING MATERIAL | A - TEFLON D - PVC B - STAINLESS STEEL E - POLYETHYLE C - POLYPROPYLENE X - OTHER | NE | SAMPLING DEVICE OTHER (SPECIFY) X= PURGING MATERIAL OTHER (SPECIFY) X= CAMPLING MATERIAL OTHER (SPECIFY) |
| AMPLING TUBING | A - TEFLON D - POLYPROPYI B - TYGON E - POLYETHYLE C - ROPE F - SILICONE A - IN-LINE DISPOSABLE B - PRI | ENE G - COMBINATION NE TEFLON/POLYPROPYLENE X - OTHER SSURE C - VACUUM | X= PURGE TUBING OTHER (SPECIFY) X= SAMPLING TUBING OTHER (SPECIFY) |
| DEPTH TO WATER | FIELD ME | ASUREMENTS WELL ELEVATION | 98 41 (feet) |
| Well DEPTH TEMPERATURE 15.97 (°) (5.66 (°) (°) (°) (°) (°) (°) (°) | pH TDS 5 (std) 5 (std) 7 (std) (std) (g/L) (std) (g/L) (std) (g/L) (std) (g/L) | CONDUCTIVITY 62.69/ (μS/cm) 60075 (μS/cm) (μS/cm) (μS/cm) (μS/cm) (μS/cm) (μS/cm) | ZO 85 (feet) ORP VOLUME (mV) 3.5 (gal) (mV) 4.5 (gal) (mV) 5.5 (gal) (mV) (gal) (mV) (gal) |
| AMPLE APPEARANCE: TEATHER CONDITIONS: TEMPER TEMPER TEMPER TEMPER TEMPER TEMPER TEMPER | ATURE ODOR: 6.0 ATURE WIND G.W - 7494/- 063 | COLOR: <u>Clear</u> (Y/N | _sheen&/n <u>slight</u> , <u>spatty</u> <u>shaan</u> tation y/n (if y type) |

| WELL SAMPLING FIELD INFORMATION FO | RM |
|--|--|
| $\begin{bmatrix} VVELE SAIVIT LING FIELD INFORMATION FO \\ A[1] \end{bmatrix} \begin{bmatrix} 1 \\ 1 \end{bmatrix} \begin{bmatrix} 1 $ | |
| $ITE/PROJECT NAME: \qquad (V P) [[] (U)] JOB# _ (U)]]] JOB# _ (U)]]] JOB# _ (U)]]]]]]]]]]]]]]]]]] $ | 0 14941 |
| SAMPLE ID: $6.0.0.1494 - 0.0271 - 0.00 / WELL#$ | <u>W-4</u> |
| PURGE DATE (MM DD YY) 9.27-11 (MM DD YY) WELL PURGING INFORMATION (MM DD YY) 3.24 (MEL PURGING INFORMATION (MEL PURGING INFORMATION (MEL PURGING INFORMATION (ALLONS) | SENG ACTUAL VOL. PURGED (GALLONS) |
| PURGING EQUIPMENTDEDICATED | EQUIPMENTDEDICATED Y N (CIRCLE ONE) |
| PURGING DEVICE G - BAILER | X= |
| SAMPLING DEVICE B - PERISTALTIC PUMP E - PURGE PUMP H - WATERRA® C - BLADDER PUMP F - DIPPER BOTTLE X - OTHER | PURGING DEVICE OTHER (SPECIFY) X= |
| PURGING MATERIAL E A-TEFLON D-PVC | SAMPLING DEVICE OTHER (SPECIFY) X= |
| SAMPLING MATERIAL E - POLYETHYLENE C - POLYETHYLENE X - OTHER | PURGING MATERIAL OTHER (SPECIFY) X= |
| PURGE TUBING D - POLYPROPYLENE G - COMBINATION | SAMPLING MATERIAL OTHER (SPECIFY) X= |
| SAMPLING TUBING B - TYGON E - POLYETHYLENE TEFLON/POLYPROPYLENE C - ROPE F - SILICONE X - OTHER | PURGE TUBING OTHER (SPECIFY) X= |
| FILTERING DEVICES 0.45 A - IN-LINE DISPOSABLE B - PRESSURE C - VACUUM 0,45 r | SAMPLING TUBING OTHER (SPECIFY) |
| FIELD MEASUREMENTS | |
| DEPTH TO WATER 1/47 (feet) WELL ELEVATION | 9 5 (feet) 60 9 61 (i) |
| TEMPERATURE PH (TOS CONDUCTIVITY | ORP KOLUME |
| $ \begin{bmatrix} 1,94 \\ (^{\circ}C) \\ 1,24 \\ (^{\circ}Std) \\ 1,24 \\ (^{\circ}Std) \\ (^{\circ}S$ | 36.7 (mV) 10 (gal) |
| $\begin{bmatrix} 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 &$ | $\frac{377}{29} (mV) = \frac{7}{10} (gal)$ |
| | (mV) (gal) |
| (°C) (std) (g/L) (µS/cm) | (nìV) (gal) |
| FIELD COMMENTS | |
| VEATHER CONDITIONS: TEMPERATURE | TION Y N (JF Y TYPE) |
| $\frac{1}{2} \frac{1}{2} \frac{1}$ | · · · · · · · · · · · · · · · · · · · |
| $20, 27 \times 0, 16 = 5.27 \times 3 = 1.12$ | |
| | |
| I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOCOLS | |
| DATE TRINT (SCNATURE | |
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| | WELL SAMPLING FIELD INFORMATION FORM |
|---|--|
| .ITE/PROJECT NA SAMPLI | ме: <u>Nell ITall No.</u> јов# <u>07494</u>] сто: GW-074941-092711-CM-005well# MW-5 |
| 9-27-11 PURGE DATE (MM DD YY) | 9-27- Well PURGING INFORMATION 2.95% 11.75 SAMPLE DATE (MM DD YY) SKMPLE TIME (24 HOUR) WATER VOL IN CASING (GALLONS) ACTUAL VOL PURGED (GALLONS) PURGING AND SAMPLING EQUIPMENT 0 |
| PURGING EQUIPMENT | DEDICATED (Y) N SAMPLING EQUIPMENTDEDICATED () N (CIRCLE ONE) (CIRCLE ONE) |
| PURGING DEVICE | A - SUBMERSIBLE PUMP D - GAS LIFT PUMP G - BAILER X= B - PERISTALTIC PUMP E - PURGE PUMP H - WATERRA® PURGING DEVICE OTHER (SPECIFY) C - BLADDER PUMP F - DIPPER BOTTLE X - OTHER X= |
| URGING MATERIAL AMPLING MATERIAL | A - TEFLON D - PVC X= B - STAINLESS STEEL E - POLYETHYLENE PURGING MATERIAL OTHER (SPECIFY) C - POLYPROPYLENE X - OTHER X= |
| URGE TUBING AMPLING TUBING | A - TEFLON D - POLYPROPYLENE G - COMBINATION X= B - TYGON E - POLYETHYLENE TEFLON/POLYPROPYLENE PURGE TUBING OTHER (SPECIFY) C - ROPE F - SILKCONE X - OTHER X= |
| ILTERING DEVICES 0.45 | A-IN-LINE DISPOSABLE B-PRESSURE C-VACUUM (), 45 MICHON FOR METALS CM/4 |
| DEPTH TO WAT | ER 18 79 (feet) WELL ELEVATION 98 81 (feet) H 47.90 (feet) GROUNDWATER ELEVATION 60 07 (feet) |
| TEMPERATURE 1010 (°C) 10158 (°C) 10172 (°C) (°C) (°C) (°C) (°C) | $\begin{array}{c c c c c c c c c c c c c c c c c c c $ |
| MPLE APPEARANCE: EATHER CONDITIONS: ECIFIC COMMENTS: | FIELD COMMENTS ODOR: MNL COLOR: OLQV SHEEN Y/D TEMPERATURE OF WINDY Y/N PRECIPITATION Y/N (FY TYPE) |
| 24.11 x O. | 16 = 3,858X 3 = 11.57 |

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| WELL SAMPLING FIELD INFORMATION FORM | M |
|--|---|
| лергојест NAME: <u>Nell Hall No.l</u> јов# <u>07</u> SAMPLE ID: <u>GU)</u> -07494[-0927]]-07-00-00-00-00-00-00-00-00-00-00-00-00- | 4941 |
| 9-27-11 9-27-11 Well Purging Information Purge date (MM dd Yy) Sample date (MM dd Yy) Sample date (MM dd Yy) Sample date (MM dd Yy) | 9.75 ACTUAL VOL. PURGED (GALLONS) |
| PURGING EQUIPMENTDEDICATED N SAMPLING EQUIPMENT | JIPMENTDEDICATED 🔗 N |
| (CIRCLE ONE) PURGING DEVICE A - SUBMERSIBLE PUMP D - GAS LIFT PUMP G - BAILER X= B - PERISTALTIC PUMP E - PURGE PUMP H - WATERRA® X= SAMPLING DEVICE C - BLADDER PUMP F - DIPPER BOTTLE X - OTHER X= | (CIRCLE ONE) |
| PURGING MATERIAL Image: Comparison of the product | SAMPLING DEVICE OTHER (SPECIFY) |
| PURGE TUBING A - TEFLON D - POLYPROPYLENE G - COMBINATION X= B - TYGON E - POLYETHYLENE TEFLON/POLYPROPYLENE SAMPLING TUBING C - ROPE F - SILICONE X - OTHER X= | PURGE TUBING OTHER (SPECIFY) |
| FILTERING DEVICES 0.45 A - IN-LINE DISPOSABLE B - PRESSURE C - VACUUM (),45 Mi | GAMPLING TUBING OTHER (SPECIFY) |
| FIELD MEASUREMENTS DEPTH TO WATER 18 58 (feet) WELL ELEVATION 7 WELL DEPTH 38 44 (feet) GROUNDWATER ELEVATION 7 TEMPERATURE pH TDS CONDUCTIVITY 7.24 (°C) 6.79 (std) 0.925 (g/L) 12.4 (µS/cm) -12.4 7.18 (°C) 6.794 (std) 0.925 (g/L) 12.00 (µS/cm) -12.1 (°C) 6.794 (std) 0.925 (g/L) 12.00 (µS/cm) -12.1 (°C) $(6.794$ (std) 0.9477 (g/L) $(µS/cm)$ -12.00 (°C) (std) (g/L) $(µS/cm)$ -12.00 $(µS/cm)$ -12.00 (°C) (std) (g/L) $(µS/cm)$ -12.00 $(µS/cm)$ -12.00 (°C) (std) (g/L) $(µS/cm)$ -12.00 $(µS/cm)$ -12.00 | $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ |
| SAMPLE APPEARANCE: WEATHER CONDITIONS: SPECIFIC COMMENTS: SPECIFIC COMMENTS: SPECI | N Y/XO Y/XXIF Y TYPE) |
| 19.83 × 0.16 = 3.173 × 3 = 9.52 | |
| ICERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CRA PROTOSOLS | @ 1850 |
| DATE PRINT V SIGNATORE | |
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| | WELL SAMPLIN | G FIELD INFO | ORMATION 1 | FORM | |
|--|---|---|--|--|---|
| .TE/PROJECT NAM | TE: <u>Nell Hall</u> | 16.1 | JOB# | 74941 | |
| SAMPLE | 1D: (10-074941-12 | 1311-CB-MW4 | WELL# | MW-9 | |
| ار کہ اڑے۔ اڑے PURGE DATE (MM DD YY) | SAMPLE DATE (MM DD YY) | WELL PURGING INFOR 0405 SAMPLE TIME (24 HOUR) | | ACTUAL NS) (G4 | D VOL. PURGED ALLONS) |
| | PUR | GING AND SAMPLING | EQUIPMENT | | |
| FORGING EQUIPMENTD. | (CIRCLE ONE) | | SAMPI | JING EQUIPMENTDEL | (CIRCLE ONE) |
| PURGING DEVICE | G A - SUBMERSIBLE PUMP B - PERISTALTIC PUMP C - BLADDER PUMP | D - GAS LIFT PUMP G - E - PURGE PUMP H F - DIPPER BOTTLE X - | BAILER WATERRA® OTHER | X= PURGING DEVICE O X== | THER (SPECIFY) |
| PURGING MATERIAL | A - TEFLON | D - PVC | | X= | |
| AMPLING MATERIAL | C - POLYPROPYLENE | X - OTHER | | X= SAMPLING MATERIA | AL OTHER (SPECIFY) |
| PURGE TUBING | A - TEFLON | D - POLYPROPYLENE G - | COMBINATION TEFLON/POLYPROPYLENE | | |
| AMPLING TUBING | C-ROPE | F - SILICONE X - | OTHER | X= 5AMPLING TUBING | OTHER (SPECIFY) |
| ILTERING DEVICES 0.45 | A - IN-LINE DISPOSAB | LE B - PRESSURE | C-VACUUM | | ····· |
| DEPTH TO WATER WELL DEPTH TEMPERATURE [15.78](°C) [15.78](°C) [15.88](°C) [16.00](°C) [16.00](°C) | pH 6.34 (std) 0.7 6.45 (std) 0.7 6.67 (std) 0.7 6.67 (std) 0.7 (std) 0.7 | FIELD MEASUREMI (feet) WEI (feet) GROUNDWAT TDS CON [[2] 2] (g/L) 9 [2] 0.7 (g/L) 9 [g/L] (g/L) 9 [g/L] [g/L] 1 [g/L] [g/L] 1 | ENTS L ELEVATION ER ELEVATION DUCTIVITY 0 3 (μS/cm) 0 (μS/cm) (μS/cm) (μS/cm) | 97 75 ORP (39, 4 (mV) (736.0 (mV) (mV) (mV) (mV) (mV) | (feet) (feet) VOLUME 4.75 (gal) 5.25 (gal) 5.75 (gal) (gal) (gal) |
| | class and | FIELD COMMENT | rs | | |
| EATHER CONDITIONS: PECIFIC COMMENTS: | TEMPERATURE 35° | WINDYY/N A | PRECI | SHEEN Y/O | · · · · · · |
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| | WELL SAM | PLING FIELD II | NFORMATION | N FORM | |
|------------------------|---------------------------------------|--|---|--|--|
| TE/PROJECT N | аме: <u> </u> | hall | JOB# _ | 074941 | |
| SAMP. | LEID: <u>GW-</u> | 574941-121311-18- | MW-G WELL# | NW.5 | |
| UL 2.13.1 | (7. 13. 1 SAMPLE DAT (MM DD YY) | WELL PURGING D E SAMPLE T (24 HOL | INFORMATION 2. IME WATER VO IR (GAI | LIN CASING ACTUAL V LIONS) (GAU | OL, PURGED |
| PURGING EOUIPMENT | DEDICATED | PURGING AND SAM | PLING EQUIPMENT SA | MPLING EOUIPMENTDEDI | CATED A N |
| | (CIRCLE | EONE) | | | (CIRCLE ONE) |
| PURGING DEVICE | A - SUBMERSIE B - PERISTALTI | LE PUMP D - GAS LIFT PUMP C PUMP E - PURGE PUMP | G - BAILER H - WATERRA® | X= PURGING DEVICE OI | HER (SPECIFY) |
| SAMPLING DEVICE | G C-BLADDER F | PUMP F - DIPPER BOTTLE | X - OTHER | X= SAMPLING DEVICE C | THER (SPECIFY) |
| PURGING MATERIAL | B-STAINLESS | D - PVC STEEL E - POLYETHYLENE | , | X= PURGING MATERIAL | OTHER (SPECIFY) |
| SAMPLING MATERIAL | C - POLYPROP | ILENE X - OTHER | | X= SAMPLING MATERIA | L OTHER (SPECIFY) |
| PURGE TUBING | C A - TEFLON B - TYGON | D - POLYPROPYLEN E - POLYETHYLENE | G - COMBINATION TEFLON/POLYPROPYL | X= ENE PURGE TUBING OTH | ER (SPECIFY) |
| SAMPLING TUBING | C-ROPE | F - SILICONE | X - OTHER | X= SAMPLING TUBING O | THER (SPECIFY) |
| FILTERING DEVICES 0.45 | A-IN-LIN | E DISPOSABLE B - PRESSU | RE C-VACUUM | | |
| | | FIELD MEASU | JREMENTS | | |
| DEPTH TO W | ATER 2(0. | (feet) | WELL ELEVATION | 98-81 | (feet) |
| WELL D | ертн <u>42</u> | (feet) GROUI | NDWATER ELEVATION | | (feet) |
| 1 16.57 100 | hag (std) | 0.789 (0/1) | 1019 10s/c | (mV) | |
| 16.54 100 |) 6.99 (std) | 0, 740 (g/L) | (0/9 (us/c | m) 50.7 (mV) | 7.5 (gal) |
| (6. 37 cc | 9.98 (std) | 0.788 (g/L) | (µS/cr | m) 54.3 (mV) | 8.0 (gal) |
| (°C |) (std) | (g/L) | (µS/cr | m) (mV) | (gal) |
| (°C |)(std) | (g/L) | (μS/cr | n) (mV) | (gal) |
| | | FIELD COM | IMENTS 1111 | , , | |
| SAMPLE APPEARANCE: 5 | temperature | ODOR: Jone WINDY V | COLOR: I'y (<u>I brown</u> | SHEEN Y/O | · |
| SPECIFIC COMMENTS: | <u>a</u> | | · | | |
| | ·01 | · · · · · · · · · · · · · · · · · · · | · | | |
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| I CERTIFY THAT SAMPL | ING PROCED GRES WERE IN ACC | DRDANCE WITH APPLICABLE CRA | PROTOCOM ROW | L | |
| DATE | PKINT | | IGNATURE | | |

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| V | VELL SAMPLING FIE | LD INFORMA | FION FOR | M | |
|---|---|--|---|---|--|
| .TE/PROJECT NAME: | Nell hall | J | ов# <u>(774</u> | 1941 | |
| SAMPLE ID: | (-10-074941.1213) | · (B·MW-6 WI | ell# <u>M</u> W | <u>- 6</u> | |
| URGE DATE (MM DD YY) | WELL PU SAMPLE DATE (MM DD YY) PURGING AN | CONCINFORMATION | L. 92 VATER VOL. IN CASING (GALLONS) | G ACTUAL VG | OL. PURGED LONS) |
| PURGING EQUIPMENTDEDIC | CATED Ø N (CIRCLE ONE) | ~~~ | SAMPLING EQ | QUIPMENTDEDIC | CATED () N (CIRCLE ONE) |
| PURGING DEVICE | A - SUBMERSIBLE PUMP D - GAS L | FT PUMP G - BAILER | X= | | |
| SAMPLING DEVICE | G - BLADDER PUMP F - DIPPER | PUMP H - WATERRA® BOTTLE X - OTHER | X= | PURGING DEVICE OTH | IER (SPECIFY) |
| PURGING MATERIAL | A-TEFLON D-PVC B-STAINLESS STEEL E-POLYE | THY FNE | X= | SAMPLING DEVICE OT | THER (SPECIFY) |
| SAMPLING MATERIAL | C POLYPROPYLENE X OTHER | | X⊧ | | |
| PURGE TUBING | C A - TEFLON D - POLYP B - TYGON E - POLYE | ROPYLENE G - COMBINATIO THYLENE TEFLON/POL | DN X= .YPROPYLENE | SAMPLING MATERIAL | R (SPECIFY) |
| SAMPLING TUBING | C-ROPE F-SILICO | JE X - OTHER | X= | SAMPLING TUBING O | THER (SPECIFY) |
| FILTERING DEVICES 0.45 | A - IN-LINE DISPOSABLE | 3 - PRESSURE C - VACUUM | ví | | |
| $\begin{array}{c c} \text{TEMPERATURE} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\ \hline & \underline{ \left[\left(\rho \cdot \left[\mathcal{B} \right] \right]^{(C)} \right]} \\$ | $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ | CONDUCTIVITY g/L) <u>940</u> g/L) <u>926</u> g/L) <u>921</u> g/L) <u>921</u> | (μS/cm) (μS/cm) (μS/cm) (μS/cm) (μS/cm) | ORP <u>69.2</u> (mV) <u>71.7</u> (mV) <u>73.6</u> (mV) (mV) (mV) | VOLUME [<u>G 1 5</u> [(gal [<u>G 7 5</u>](gal [[gal] [[gal] |
| SAMPLE APPEARANCE: | OUTV. ODOR: Bio /Hal | LD COMMENTS | ap of black | ENGIN VEN | Very sty |
| WEATHER CONDITIONS: TEN SPECIFIC COMMENTS: | IPERATURE ~35° | | PRECIPITATIO | NY YOHFY TYPE) | 10.0 |
| 1.92,3= 5.70 | · · · · · · · · · · · · · · · · · · · | | | | , |
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| · · · · · · · · · · · · · · · · · · · | | A | | | |
| I CERTIFY THAT GAMPLING PROC | EDURYS WERE IN ACCORDATE CE WITH APPLIC | ABLE CRA PROTOCOLS | Been | <u> </u> | |
| duplicat | e collected & 092 | 25 | | | |
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APPENDIX B

JUNE 2011 QUARTERLY GROUNDWATER LABORATORY ANALYTICAL REPORT

e-Hardcopy 2.0 **Automated Report**

07/07/11

Gulf Coast

ABORATORI



Technical Report for

Conoco Phillips

Nell Hall #1

Nell Hall #1 - Aztec, NM

Accutest Job Number: T79406

Sampling Date: 06/21/11

Report to:

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

Total number of pages in report: 27



Paul K Canevand

s Paul Canevaro Laboratory Director

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

Client Service contact: Erica Cardenas 713-271-4700

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

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Gulf Coast • 10165 Harwin Drive • Suite 150 • Houston, TX 77036 • tel: 713-271-4700 • fax: 713-271-4770 • http://www.accutest.com



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Sample Summary

Conoco Phillips

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Job No: T79406

Nell Hall #1 Project No: Nell Hall #1 - Aztec, NM

| Sample Number | Collected Date | Time By | Received | Matri Code | х Туре | Client Sample ID |
|------------------|-------------------|---------|---------------|---------------|----------------------|---|
| T79406-1 | 06/21/11 | 12:30 | 06/23/11 | AQ | Ground Water | GW=74941=0621111-CMB=001 |
| -T79406-1F | 06/21/11 | 12:30 | 06/23/11 | AQ | Groundwater Filtered | GW#74941-0621111-CMB-001 (DISSOLVED) |
| T79406-2 | 06/21/11 | 15:30 | 06/23/11 | AQ | Ground Water | GW=74941=062111=CMB=002 |
| T79406-2F | 06/21/11 | 15:30 | 06/23/11 | AQ | Groundwater Filtered | GW-74941-0621111-CMB-002 (DISSOLVED) |
| T79406-3 | 06/21/11 | 17:30 | 06/23/11 | AQ | Ground Water | GW=74941-0621111=CMB=003 |
| T79406-3F | 06/21/11 | 17:30 | 06/23/11 | AQ | Groundwater Filtered | GW474941-0621111=CMB-003 (DISSOEVED) |
| T79406-4 | 06/21/11 | 00:00 | 06/23/11 | AQ | Trip Blank Water | TRIP BLANK |
| T79406=5 | 06/21/11 | 17:35 | , 06/23/11 | AQ | Ground Water | GW=74941-062111=CMB=DUP |



Section 2



Sample Results

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Report of Analysis

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| | | Report of Analysis | | | | | | | |
|---|---------------------------|---|--|--------------------------|-----------------|--|--------------------------|----------------------------------|--|
| Client Sample ID: Lab Sample ID: Matrix: Method: Project: | | GW-74 T7940 AQ - C SW840 Nell H | 4941-0621 6-1 Ground Wa 5 8260B all #1 | 11-CMB-001 ater | | Date Sampled: Date Received: Percent Solids: | | | |
| Run #1 Run #2 | File ID E000874 | 46.D | DF 1 | Analyzed 06/24/11 | By LT | Prep Date n/a | Prep Batch n/a | Analytical Batch VE438 | |
| Run #1 Run #2 | Purge V 5.0 ml | olume | | | | | | | |
| | | | | | | | | | |

Purgeable Aromatics

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| CAS No. | Compound | Result | RL | MDL | Units | Q |
|------------|-----------------------|--------|--------|---------|-------|---|
| 71-43-2 | Benzene | ND | 0.0010 | 0.00025 | mg/l | |
| 108-88-3 | Toluene | ND | 0.0010 | 0.00026 | mg/l | |
| 100-41-4 | Ethylbenzene | ND | 0.0010 | 0.00025 | mg/l | |
| 1330-20-7 | Xylene (total) | ND | 0.0030 | 0.00071 | mg/l | |
| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limit | 5 | |
| 1868-53-7 | Dibromofluoromethane | 98% | | 79-12 | 2% | |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 99% | | 75-12 | 1% | |
| 2037-26-5 | Toluene-D8 | 93% | | 87-11 | 9% | |
| 460-00-4 | 4-Bromofluorobenzene | 94% | | 80-13 | 3% | |

ND = Not detected MDL - Method Detection Limit RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Report of Analysis

| Client Sample I Lab Sample ID Matrix: | ID: GW-749 : T79406 AQ - G | GW-74941-062111-CMB-001 (DISSOLVED) T79406-1F AQ - Groundwater Filtered | | | | |) Date Sampled: 06/21/11 Date Received: 06/23/11 Percent Solids: p/a | | | | |
|---|----------------------------------|---|-------|----|----------|----------|---|--------------------------|--------------------------|--|--|
| Project: Nell Hall #1 | | | | | | | | | | | |
| Dissolved Meta | ls Analysis | | | | | | | | | | |
| Analyte | Result | RL | Units | DF | Prep | Analyzed | By | Method | Prep Method | | |
| Iron | 1210 | 100 | ug/l | 1 | 06/24/11 | 06/30/11 | EG | SW846 6010B ¹ | SW846 3010A ² | | |

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



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| | Page 1 of 1 | | | | | | | | | |
|--|--|---------------------------------|---------------------|--|----------------------|--------------------------------------|--|----------------------------------|-----------------------------|----------------------------------|
| Client Sam Lab Samp Matrix: Method: Project: | ple ID: GW-74941-062111 e ID: T79406-2 AQ - Ground Wate SW846 8260B Nell Hall #1 | | | | B-002 | | Date S Date R Percen | ampled: eceived: t Solids: | 06/21/11 06/23/11 n/a | |
| Run #1 Run #2 | File ID E0008747.D | | DF 47.D 1 | | nalyzed /24/11 | By LT | Prep Date n/a | | Prep Batch n/a | Analytical Batch VE438 |
| Run #1 Run #2 | Purge 5.0 ml | Volume | | | | | | | | |
| Purgeable | Aromati | cs | | | | | | | | |
| CAS No. | Comp | ound | | | Result | RL | MDL | Units | Q | |
| 71-43-2 108-88-3 100-41-4 1330-20-7 | Benzer Toluer Ethylb Xylene | ne ne enzene e (total) | | | ND ND ND ND | 0.0010 0.0010 0.0010 0.0030 | 0.00025 0.00026 0.00025 0.00071 | mg/l mg/l mg/l mg/l | | |
| CAS No. | Surrog | gate Ree | coveries | | Run# 1 | Run# 2 | Limi | ts | | |

| 1868-53-7 | Dibromofluoromethane | 98% | 79-122% |
|------------|-----------------------|------|---------|
| 17060-07-0 | 1,2-Dichloroethane-D4 | 96% | 75-121% |
| 2037-26-5 | Toluene-D8 | 95%* | 87-119% |
| 460-00-4 | 4-Bromofluorobenzene | 95% | 80-133% |

ND = Not detected MDL - Method Detection Limit

- RL = Reporting Limit
- E = Indicates value exceeds calibration range
- J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

| Dissolved Metals A | nalysis | | |
|--|--|---------------------|----------|
| Project: | Nell Hall #1 | | |
| wattix. | AQ - Oroundwater Fintered | Percent Solids: | n/a |
| Client Sample ID: Lab Sample ID: Matrix: | GW-74941-062111-CMB-002 (DISSOLVE T79406-2F | D) Date Sampled: | 06/21/11 |

| Analyte | Result | RL | Units | DF | Prep | Analyzed By | Method | Prep Method |
|---------|--------|-----|-------|----|----------|-------------|--------------------------|--------------------------|
| Iron | <100 | 100 | ug/l | 1 | 06/24/11 | 06/30/11 EG | SW846 6010B ¹ | SW846 3010A ² |

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

| | | | Repo | ort of A | alysis | | Page 1 of 1 |
|--|---|--|--------------------------|----------|--|--------------------------|---------------------------|
| Client Sar Lab Samp Matrix: Method: Project: | nple ID: GW ble ID: T79 AQ SW Nel | 7-74941-0621 9406-3 - Ground W 846 8260B I Hall #1 | 11-CMB-003 ater | | Date Sample Date Receiv Percent Soli | | |
| Run #1 | File ID E0008757.1 | DF 0 1 | Analyzed 06/24/11 | By LT | Prep Date n/a | Prep Batch n/a | Analytical Batch VE438 |
| Run #2 | E0008752.L |) 10 | 06/24/11 | LT | n/a | n/a | VE438 |
| Run #1 Run #2 | Purge Volu 5.0 ml 5.0 ml | me | | | | | |
| Purgeable | Aromatics | | | | | | , |
| CAS No. | Compound | 1 | Result | RL | MDL Unit | s Q | |

0.010

0.0010

Run# 2

96% 96%

96%

94%

0.010

0.0025 mg/l

0.00026 mg/l

0.0025 mg/l

Limits

79-122%

75-121%

87-119%

80-133%

mg/l

0.0071

J

0.461 ^a

0.00048 0.454 ^a

Run#1

99%

95%

102%

0.677 ^a . 0.030

(a) Result is from Run# 2

Benzene

Toluene

Ethylbenzene

Xylene (total)

Toluene-D8

Surrogate Recoveries

Dibromofluoromethane

1,2-Dichloroethane-D4

4-Bromofluorobenzene

71-43-2

108-88-3

100-41-4

1330-20-7

CAS No.

1868-53-7

2037-26-5

460-00-4

17060-07-0

ND = Not detected MDL - Method Detection Limit

- RL = Reporting Limit
- E = Indicates value exceeds calibration range
- J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound





Report of Analysis

| Client Sample ID: | GW-74941-062111-CMB-003 (DISSOLVED) | | | |
|-------------------|-------------------------------------|------------------------|----------|--|
| Lab Sample ID: | T79406-3F | Date Sampled: | 06/21/11 | |
| Matrix: | AQ - Groundwater Filtered | Date Received: | 06/23/11 | |
| | | Percent Solids: | n/a | |
| Project: | Nell Hall #1 | | | |
| | | | | |

Dissolved Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed By | Method | Prep Method |
|---------|--------|-----|-------|----|----------|-------------|--------------------------|--------------------------|
| Iron | 9450 | 100 | ug/l | 1 | 06/24/11 | 06/30/11 EG | SW846 6010B ¹ | SW846 3010A ² |

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

Page 1 of 1



Report of Analysis

Client Sample ID: TRIP BLANK Lab Sample ID: T79406-4 Date Sampled: 06/21/11 Matrix: AQ - Trip Blank Water Date Received: 06/23/11 Method: SW846 8260B Percent Solids: n/a **Project:** Nell Hall #1 File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By E0008738.D Run #1 06/24/11 LT 1 **VE438** n/a n/a Run #2 **Purge Volume** Run #1 5.0 ml Run #2

Purgeable Aromatics

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|------------|-----------------------|--------|--------|---------|-------|---|
| 71-43-2 | Benzene | ND | 0.0010 | 0.00025 | mg/l | |
| 108-88-3 | Toluene | ŇD | 0.0010 | 0.00026 | mg/l | |
| 100-41-4 | Ethylbenzene | ND. | 0.0010 | 0.00025 | mg/l | |
| 1330-20-7 | Xylene (total) | ND. | 0.0030 | 0.00071 | mg/l | |
| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limit | S | |
| 1868-53-7 | Dibromofluoromethane | 98% | | 79-12 | 2% | |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 97% | | 75-12 | 1% | |
| 2037-26-5 | Toluene-D8 | 94% | | 87-11 | 9% | |
| 460-00-4 | 4-Bromofluorobenzene | 94% | | 80-13 | 3% | |

ND = Not detected MDL - Method Detection Limit RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Page 1 of 1

11 of 27 ACCUTEST. 179406

| | | | Repo | rt of An | alysis | | | Page 1 of 1 |
|--|--|--|---|-----------------------------------|---------------------------------------|--------------------------------|---------------------------------|------------------------------------|
| Client Sam Lab Samp Matrix: Method: Project: | nple ID: GW le ID: T79 AQ SW Ne | V-74941-0621 9406-5 9 - Ground W 7846 8260B 11 Hall #1 | 11-CMB-DUP ater | | Date Sa Date R Percen | ampled: eceived t Solids | 06/21/11 : 06/23/11 : n/a | |
| Run #1 Run #2 | File ID E0008758.1 E0008753.1 | DF D 1 D 10 | Analyzed 06/24/11 06/24/11 | By LT LT | Prep Da n/a n/a | te | Prep Batch n/a n/a | Analytical Batch VE438 VE438 |
| Run #1 Run #2 | Purge Volu 5.0 ml 5.0 ml | ime | | | | | | |
| Purgeable | Aromatics | | | | | | | |
| CAS No. | Compound | d | Result | RL | MDL | Units | Q | |
| 71-43-2 108-88-3 100-41-4 1330-20-7 | Benzene Toluene Ethylbenze Xylene (to | ene tal) | 0:383 ^a 0:00057 0:407 ^a 0:607 ^a | 0.010 0.0010 0.010 0.030 | 0.0025 0.00026 0.0025 0.0071 | mg/l mg/l mg/l mg/l | J | |

Run# 2

Limits

| | • | | , | |
|---------|--------|--------|------------|--|
| CAS No. | Surrog | gate l | Recoveries | |

| 1868-53-7 | Dibromofluoromethane | 95% | 95% | 79-122% |
|------------|-----------------------|------|-----|---------|
| 17060-07-0 | 1,2-Dichloroethane-D4 | 9.7% | 96% | 75-121% |
| 2037-26-5 | Toluene-D8 | 101% | 99% | 87-119% |
| 460-00-4 | 4-Bromofluorobenzene | 97% | 94% | 80-133% |

Run# 1

(a) Result is from Run# 2

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ND = Not detected MDL - Method Detection Limit RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

• Chain of Custody

Gulf Coast

ABORATORIES

CCUTEST



| ing and | | | | | | | | | | | | | | | | | | | | | | | ч. р Б |
|---|------------------------------|--|----------------|---------------------|------------------|----------------|----------------------|-----------|--------|------------------------------|-------------|---------------------------|--------------------|--------------|--|----------------|------------------------|---------|-----------|--------------|---------------------|-----------|---------------------------------|
| | | CHA | IN (| OF | CI | JS | то | D | Y | | | | | | | | | PAGE OF | | | | | |
| MACCUTE | ST. | Accutest Gulf Coast/SPL Environmental | | | | | | | | | P | ED-EX | Tracking | , | | | Botila Order Control # | | | | | | |
| Laborat | ories | ies TEL.713-271-4700 FAX: 713-271-4770 | | | | | | 70 | | | | Accutesi Quele # | | | | | | | व्य २०० व | | पगर्न | | |
| Client / Reporting Information | | Project Information | | | | | | | 93ê | | | R | que | sted | Analyses | | | | | Matrix Codes | | | |
| Company Nama | Project Name: | | | | | | | | | | | | | | | | | | . | | | | |
| Street Address | Nell Hall #1 | | 生 工作/26 | Server Start St | Activ | 伝え | 81.92 | Section | - | | 100 C | 2003 | | | | | | | | | | | DW - Drinking Water |
| 6121 Indian School Rd. NE, Ste. 200 | | | Billing | nformatio | on (if | differ | ent fro | m Rej | port t | 0) | | | | | | | | | | | | | WW - Water |
| City State Zip | "hale | IM | Cempan | y Name co Dh U | line | | | | | | | | | | | | | | ļ | | | | SO - Sol |
| Project Contact YP blath har E-mail | Project | | Street A | dress | nps | | | | | | | - | | | | | | ĺ | | | | | SED-Sediment |
| Kelly Blanchard OCra wort Clietratesh.com | - 1494 | | 1358 Cliv | Phillip | s B | dg., | , 420 | S. F | Kee | er A | ve. | _ | | | | | | 1 | | | | | LIQ - Other Liquid AIR - Air |
| 505-237-8440 505-237-8650 | Silent Bellar onter a | | Bartie | sville | | | c | ж | | 74 | 004 | | | _ | | | | | | | | | SOL - Other Solid WP - Wipe |
| Sampler(s) Neme(s) Phone # | Project Mapager | and in al | Attention | c | | | | | | | | | 826(| 2 | | | | | | | | | FB-Field Blank |
| Usse Brun | HOUND D | Collection | Terry | Lauch | | | Numbe | r of pres | served | Bottles | | | à | Vec | | | | | | | | | |
| Ascuret | | | | # of | | HON | 8 3 | μų | Vater | | 201 CORE | Ê | Ĕ | isso | | | | | | | | | |
| Server Field ID / Point of Collection | Date | Time | Matrix | bottles | Ŷ | 23 | Ŧ | 2 | E S | 121 | 23 | 6 | 8 | - | | _ | | | | | | | LAB USE ONLY |
| 1 E-W-74941-042111-(mBC | d (0.21.11 | 1230 | GW | 4 | V | 1 | 4 | | _ | | | | $\underline{\vee}$ | ν | | | | | ļ | | | | |
| 2 (JW-74941 -04211-(MB-0 | 02 4.21.11 | 1630 | Gw | 4 | И | | 4 | | | | | | ν | 4 | | | | | | | | | |
| 3 GW-74941-062111-LMB-00 | 3 (1.21.11 | 1730 | GW | 4 | Ч | | 4 | | | | | | ν | ~ | | | | | | | · | | |
| 4 triphlank | ſ <u> </u> | | RL | 2 | 1 | | | | Τ | | | | 7 | | | | | | | | | | |
| 5 Lun 744Ab Nogula wat | 11.21.11 | 1725 | 1710 | 2 | V | Τ | \square | | | \square | | | | | | | | | - · · | | | | |
| Char wie chiptin | | | | | | | $ \uparrow$ | | ┢ | † | | 11 | ~ | | | | | | | | | | |
| | | | | | | - | \square | + | ╈ | $^{++}$ | + | H | | | | | | | | | | | |
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| Turnerrand Time /Business daws | | | 125-527 | | Ц | | | | | | | | | -300-000 M | | - | 6.0- | | | al Instat | rtions 19 | Granetter | |
| Standard | Approved By (Acculast PM): | / Date: | | Commerc | ial "A | " (Le | vel 1) | | | TRI | ٩P | 173 | 10.0060 | | ************************************** | 50_ <u>0</u> _ | Ro-Gr | ments / | n opecu | -Piz M | coons ₁₈ | tillen. | ArrZnebis |
| 5 Day RUSH | | | | Commerc SULT1 (L | lai "O evei 2 | "(Le 1 & 4) | vel 2} | | |] ED] OII | D For | mat | | H | 417 | | ſι | 11. | | | | 100 | |
| 3 Day RUSH | | | | REDT1 (L | evel | 3 & 4) | | | - | J | | | | | <u>-116</u> | l¥. | 1 | Her | α | n | M | -81 | vc. |
| 2 Day RUSH | | | | Commerc | lat "C C | " omm | ercial "A | \" = Ri | esults | Only | | | | | M | et | dς | 6 | | lak |). | | |
| Emergency & Rush T/A data available VIA Lablink | | | | | G | omme | encial " encial " | 3" = Ri | esults | + 00 | Summ | ary ' | Summ | Ì | | | | | | | | | |
| | Sample Ci | istody must be docum | ontad be | ow each | time | sam | ples | hang | e por | 8055 | lon, Ir | -gand ICLUD | ing co | urier d | elivery. | | | 24.33g | | | | | 11 1 |
| 1 MAR KNOW LUN | M U: 22.11 108301 By: 2 F | | | | | | -01 | Le | 5) | <u> </u> | Data | 11ma: 04 23 <u>7</u> 1 | 155 | Roceive 2 | a By: | M | The | rla | 1000 | | | | |
| Relinquished by Sampler: Data Time: | | Received By: Relinquished By; 4 | | | | | | , | | Date Time: Received By: 4 | | | | | | | | | | | | | |
| Relinquished by: Date Time: 5 | | Received By: 5 | | | | | Custo | ly Seal | " | | | | tect of intact | F | 'reserved wi | ere applit | able | | | Cn ka | / | Cooler | Temp. / 0°C |

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i Cur T79406: Chain of Custody Page 1 of 4



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Accutest Laboratories Sample Receipt Summary

Page 1 of 3

3.1 3.1

| Date / Time Received: 6/23/2011 09:55 Delivery Method: FedEx Airbill #*s: 486899904910 No. Coolers: 1 Therm ID: 110; Temp Adjustment Factor: -0.5; Cooler Security Y or N Y or N Sample Integrity - Documentation Y or N 1. Custody Seals Present: Image: Sample Integrity - Documentation Y or N Image: Sample Integrity - Documentation Y or N 2. Custody Seals Intact: Image: Sample Integrity - Documentation Y or N Image: Sample Integrity - Documentation Y or N 1. Custody Seals Intact: Image: Sample Integrity - Documentation Y or N Image: Sample Integrity - Documentation Y or N 2. Custody Seals Intact: Image: Sample Integrity - Documentation Y or N Image: Sample Integrity - Documentation Y or N 2. Custody Seals Intact: Image: Sample Integrity - Documentation Y or N Image: Sample Integrity - Documentation Y or N 2. Custody Seals Intact: Image: Sample Integrity - Condition Y or N Image: Sample Integrity - Condition Y or N 3. Cooler mem verification: Image: Sample Integrity - Condition Y or N Image: Sample Integrity - Image: Sample Integrity - Image: Sample Integrity - Image: Sample Integrity - Image: Sam |
|--|
| No. Coolers: 1 Therm ID: 110; Temp Adjustment Factor: -0.5; Cooler Temps (Initial/Adjusted): #1: (1.5/1); Sample Integrity - Documentation Y or N 1. Custody Seals Present: Image: Cooler Temperature Y or N Sample Integrity - Documentation Y or N 1. Custody Seals Intact: Image: Cooler Temperature Y or N Y or N Sample Integrity - Condition Y or N 2. Custody Seals Intact: Image: Cooler Temperature Y or N Image: Cooler Temperature Y or N Image: Cooler Temperature Y or N 1. Temp criteria achieved: Image: Cooler Temperature Y or N N/A Image: Cooler Temperature Y or N 2. Cooler temp verification: Glass Thermometer Image: Cooler Temperature Y or N N/A Image: Cooler Temperature Y or N 2. Cooler media: Image: Cooler Temperature Y or N N/A Image: Cooler Temperature Y or N N/A Image: Cooler Temperature Y or N Image: Cooler Temperature Image: Cooler Temperature Image |
| Cooler Temps (Initial/Adjusted): #1: (1.5/1); Cooler Security Y or N 1. Custody Seals Present: 3. COC Present: 1 2. Custody Seals Present: 3. COC Present: 1 3. Cooler Temperature Y or N 1. Temp criteria achieved: 1 4. Smpl Dates/Time OK 2. Cooler Temperature Y or N 1. Temp criteria achieved: 1 2 2. Cooler remp verification: Glass Thermometer 3. Sample Integrity - Condition Y or N 3. Cooler media: Ice (Bag) 1 Sample Integrity - Condition Y or N 1. Trip Blank present / cooler: Y or N N/A WTB STB 3. Condition of sample: Intact 3. Samples preserved properly: 1 1 Sample Integrity - Instructions Y or N N/A 4. VOCs headspace free: Y 1 1 Analysis requested is clear: Y 1 4. VOCs headspace free: Y 1 1 1 1 1 1 5. Eitledign instructions clear: Y 1 1 1 1 1 1 1. VoCs headspace free: |
| Cooler Security V or N Y or N Sample Integrity - Documentation Y or N 1. Custody Seals Present: |
| 3. Samples preserved properly: Image: Constraint of the second secon |
| |

T79406: Chain of Custody Page 2 of 4





Problem Resolution

Response Date:

6/28/2011

Page 2 of 3

3. 3

Accutest Job Number: T79406

CSR: ERICA CARDENAS

Response: LOGGED IN USING ID ON COC.

T79406: Chain of Custody Page 3 of 4





Sample Receipt Log

Page 3 of 3

Job #: T79406

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

Initials: DARRELLH

Client: CONOCO PHILLIPS

| Cooler # | Sample ID: | Sample ID: Vol Bot # Location Pres pH | | Bot # Location Pres pH | | ot # Location Pres pH | | Therm ID | Initial Temp | Therm CF | Corrected Temp |
|----------|------------------|---------------------------------------|----|------------------------|------|---|-----|----------|-----------------|-------------|-------------------|
| 1 | T79406-1 | 500 ml | 1 | 1 AA | N/P | Note #2 - Preservative check not applicable. | 110 | 1.5 | -0.5 | 1 | |
| 1 | T79406-1 | 40 ml | 2 | VR | HCL | Note #1 - Preservative to be checked by analyst at the instrument. | 110 | 1.5 | -0.5 | 1 | |
| 1 | T79406- 1 | 40 mi | 3 | VR | HCL | Note #1 - Preservative to be checked by analyst at the instrument | 110 | 1.5 | -0.5 | 1 | |
| 1 | T79406-1 | 40 ml | 4 | VR | HCL | Note #1 - Preservative to be checked by analyst at the instrument. | 110 | 1.5 | -0.5 | 1 | |
| 1 | T79406-2 | 500 ml | 1 | 1 AA | N/P | Note #2 - Preservative check not applicable. | 110 | 1.5 | -0.5 | 1 | |
| 1 | T79406-2 | 40 mi | 2 | VR | HCL | Note #1 - Preservative to be checked by analyst at the instrument. | 110 | 1.5 | -0.5 | 1 | |
| 1 | T79406-2 | 40 ml | З. | VR | HCL | Note #1 - Preservative to be checked by analyst at the instrument | 110 | 1.5 | -0.5 | 1 | |
| 1 | T79406-2 | 40 ml | 4 | VR | HCL | Note #1 - Preservative to be checked by analyst at the Instrument | 110 | 1.5 | -0.5 | 1 | |
| 1 | T79406-3 | 500 ml | 1 | 1 AA | N/P | Note #2 - Preservative check not applicable. | 110 | 1.5 | -0.5 | 1 | |
| 1 | T79405-3 | 40 ml | 2 | VR | HCL | Note #1 - Preservative to be checked by analyst at the instrument. | 110 | 1.5 | -0.5 | 1 | |
| 1 | T79406-3 | 40 ml | 3 | VR | HCL | Note #1 - Preservative to be checked by analyst at the instrument | 110 | 1.5 | -0.5 | 1 | |
| 1 | T79406-3 | 40 ml | 4 | VR | HCL | Note #1 - Preservative to be checked by analyst at the instrument. | 110 | 1.5 | -0.5 | 1 | |
| 1 | T79406-4 | 40 mi | 1 | VR | HCL | Note #1 - Preservative to be checked by analyst at the instrument | 110 | 1.5 | -0.5 | 1 | |
| 1 | T79406-4 | 40 ml | 2 | VR | HCL | Note #1 - Preservative to be checked by analyst | 110 | 1.5 | -0.5 | 1 | |
| 1 | T79406-5 | 40 ml | 1 | VR | HCL | Note #1 - Preservative to be checked by analyst at the instrument | 110 | 1.5 | -0.5 | 1 | |
| 1 | T79406-5 | 40 ml | 2 | VR | HCL. | Note #1 - Preservative to be checked by analyst at the Instrument | 110 | 1.5 | -0.5 | 1 | |
| 1 | T79406-5 | 40 ml | з | VR | HCL | Note #1 - Preservative to be checked by analyst | 110 | 1.5 | -0.5 | 1 | |

T79406: Chain of Custody Page 4 of 4



Section 4

Gulf Coast

LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

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





Method Blank Summary

| Job Number: | T79406 |
|-------------|------------------------|
| Account: | CONOCO Conoco Phillips |
| Project: | Nell Hall #1 |

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

The QC reported here applies to the following samples:

Method: SW846 8260B

T79406-1, T79406-2, T79406-3, T79406-4, T79406-5

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

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

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19 of 27 ACCUTEST. T79406

Blank Spike Summary

ł

| Job Number: Account: Project: | T79406 CONOCO Conc Nell Hall #1 | oco Phill | ips | | | | | 4 |
|-------------------------------------|---------------------------------------|----------------|-----------------------------|----------|-------------------------|--------------------------|----------------------------------|-------|
| Sample VE438-BS | File ID E0008734.D | DF 1 | Analyzed 06/24/11 | By LT | Prep Date n/a | Prep Batch n/a | Analytical Batch VE438 | 2.1 4 |
| The QC repor | ted here applies t | to the fo | llowing sample | s: |] | Method: SW840 | | |

T79406-1, T79406-2, T79406-3, T79406-4, T79406-5

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

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

Page 1 of 1



Matrix Spike/Matrix Spike Duplicate Summary

| T79406 |
|------------------------|
| CONOCO Conoco Phillips |
| Nell Hall #1 |
| |

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

The QC reported here applies to the following samples:

Method: SW846 8260B

T79406-1, T79406-2, T79406-3, T79406-4, T79406-5

| CAS No. | Compound | T78978-1 ug/l | 3 Q | Spike ug/l | MS ug/l | MS % | MSD ug/l | MSD % | RPD | Limits Rec/RPD |
|------------|-----------------------|--------------------|--------|---------------|------------|---------|-------------|----------|-----|-------------------|
| 71-43-2 | Benzene | 3730 | | 1250 | 4710 | 78 | 4520 | 63*,a | 4 | 76-118/16 |
| 100-41-4 | Ethylbenzene | 712 | • | 1250 | 1850 | 91 | 1760 | 84 | 5 | 75-112/12 |
| 108-88-3 | Toluene | ND | | 1250 | 1150 | 92 | 1140 | 91 | 1 | 77-114/12 |
| 1330-20-7 | Xylene (total) | 2490 | | 3750 | 5860 | 90 | 5660 | 85 | 3 | 75-111/12 |
| CAS No. | Surrogate Recoveries | MS | | MSD | Т7 | 8978-13 | Limits | | | |
| 1868-53-7 | Dibromofluoromethane | 165%* b | | 159%* | b | % | 79-122% | 6 | | , |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 165%* ^b | | 165%* | b. 99 | % | 75-121% | 6 | | |
| 2037-26-5 | Toluene-D8 | 160%* ^b | | 160%* | b 98 | % | 87-119% | 6 | | |
| 460-00-4 | 4-Bromofluorobenzene | 161%* ^b | | 157%* | b. 95 | % | 80-133% | 6 | | |

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

4.3.1



Page 1 of 1

Metals Analysis

Gulf Coast

LABORATORIES

ACCUTEST

QC Data Summaries

Includes the following where applicable:

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



BLANK RESULTS SUMMARY Part 2 - Method Blanks

Login Number: T79406 Account: CONOCO - Conoco Phillips Project: Nell Hall #1

QC Batch ID: MP15062 Matrix Type: AQUEOUS

| Methods: | SW846 | 6010E |
|----------|-------|-------|
| Units: | ug/l | |

| Prep Date: | | | | | 106//24//11 |
|------------|------|------|-----|-----------|---|
| Metal | RL | IDL | MDL | MB raw | final |
| Aluminum | 200 | 8.3 | 12 | | |
| Antimony | 5.0 | 1 | 1 | | |
| Arsenic | 5.0 | 1.7 | 1 | | |
| Barium | 200 | .97 | 3.4 | | |
| Beryllium | 5.0 | .056 | .16 | | |
| Boron | 100 | 1.4 | 7.8 | | |
| Cadmium | 4.0 | .11 | .09 | | |
| Calcium | 5000 | 7.4 | 25 | | |
| Chromium | 10 | .23 | .27 | | |
| Cobalt | 50 | .15 | .22 | | |
| Copper | 25 | 1.1 | 5.9 | | |
| Iron | 100 | 1.1 | 23 | 5.9 | <100 |
| Lead | 3.0 | 1 | 1.8 | | des |
| Lithium | 300 | 2 | 2 | | |
| Magnesium | 5000 | 7.7 | 7.9 | | |
| Manganese | 15 | .054 | 1.9 | | |
| Molybdenum | 10 | .39 | .2 | | |
| Nickel | 40 | .69 | 1.4 | | |
| Potassium | 5000 | 39 | 45 | | |
| Selenium | 5.0 | 1.5 | .98 | | |
| Silver | 10 | 1.2 | .24 | | |
| Sodium | 5000 | 9.2 | 100 | | |
| Strontium | 10 | .061 | . 4 | | |
| Thallium | 10 | .67 | 1.2 | | |
| Tin | 20 | .69 | 2.8 | | |
| Titanium | 20 | .29 | .3 | | |
| Vanadium | 50 | .3 | .3 | | |
| Zinc | 20 | .51 | 3.5 | | |

Associated samples MP15062: T79406-1F, T79406-2F, T79406-3F

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested 5.1.1 5

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T79406 Account: CONOCO - Conoco Phillips Project: Nell Hall #1

| QC Batch ID: M Matrix Type: A | P15062 QUEOUS | | Methods: SW846 6010B Units: ug/l | | | | | | |
|----------------------------------|-----------------------|------|-------------------------------------|--------------|-----------------------|-------|--|----------|--------------|
| Prep Date: | | | 06724711 | | | | • | 06/24/11 | |
| Metal | T79318-11 Original | DUP | RPD | QC Limits | T79318-11 Original | MS | Spikelot MPTW4 | % Rec | QC Limits |
| Aluminum | | | | | | | | | |
| Antimony | | | | | | | | | |
| Arsenic | anr | | | | | | | | |
| Barium | anr | | | | | | | | |
| Beryllium | | | | | | | | | |
| Boron | | | | | | | | | |
| Cadmium | anr | | | | | | | | |
| Calcium | | | | | | | | | |
| Chromium | | | | | | | | | |
| Cobalt | | | | | | | | | |
| Copper | | | | | | | | | |
| Iron | 7.3 | 11.2 | 42.2 (a) | 0-20 | 7.3 | 53500 | 50000 | 107.10 | 80-120 |
| Lead | anr | | | | | | | | |
| Lithium | | | | | | | | | |
| Magnesium | | | | | | | | | |
| Manganese | anr | | | | | | | | |
| Molybdenum | | | | | | | | | |
| Nickel | | | | | | | | | |
| Potassium | | | | | | | | | |
| Selenium | anr | | | • | | | | | |
| Silver | | | | | | | | | |
| Sodium | | | | | | | | | |
| Strontium | | | | | | | | | |
| Thallium | | | | | | | 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | | |
| Tin | | | | | | | | | |
| Titanium | | | | | | | | | |
| Vanadium | | | | | | | | | |
| Zinc | | | | | | | 400 A | | |

Associated samples MP15062: T79406-1F, T79406-2F, T79406-3F

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

(a) RPD acceptable due to low duplicate and sample concentrations.

5.1.2

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T79406 Account: CONOCO - Conoco Phillips Project: Nell Hall #1

QC Batch ID: MP15062 Matrix Type: AQUEOUS

1

i

Methods: SW846 6010B Units: ug/l

| Prep Date: | | | | | 06/24/11 | · |
|-----------------|-------------------------|---------|-------------------|----------|----------------------|-------------|
| Metal. | T79318-1F Original I | MSD | Spikelot MPTW4 | * Rec | MSD RPD | QC Limit |
| Aluminum | | | | | | |
| Antimony | | | | | | |
| Arsenic | anr | | | | | |
| Barium | anr | | | | | |
| Beryllium | | | | | | |
| Boron | | | | | | |
| Cadmium | anr | | | | | |
| Calcium | | | | | | |
| Chromium | | | | | | |
| Cobalt | | | | | | |
| Copper | | | | | | |
| Iron | 7.3 5 | 51800 | 50000 | 103.6 | 3.2 | 20 |
| Lead | anr | | | | | |
| Lithium | | | | | | |
| Magnesium | | | | | | |
| Manganese | anr | | | | 2. 2. 1993 - 1983 | |
| Molybdenum | | | | | | |
| Nickel | | | | | | |
| Potassium | | | | | | |
| Selenium | anr | | | | | |
| Silver | | | | | | |
| Sodium | | | | | | |
| Strontium | | | | | | |
| Challium | | | | | | |
| ſin | | | | | | |
| fitanium | | | | | | |
| Vanadium | | | | | | |
| linc | | | | | | |
| Associated sa | amples MP1506 | 52: T79 | 406-1F, T7 | 9406-2F, | T79406-3F | |
| Results < IDI | are shown a | as zero | for calcu | lation p | ourposes | |

(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested



Page 2

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: T79406 Account: CONOCO - Conoco Phillips Project: Nell Hall #1

06/24/11

QC Batch ID: MP15062 Matrix Type: AQUEOUS

Prep Date:

1

1

Methods: SW846 6010B Units: ug/l

| Metal | BSP Result | Spikelo MPTW4 | ot % Rec | QC Limits |
|------------|---------------|------------------|-------------|---------------------------------------|
| Aluminum | | | | |
| Antimony | | | | |
| Arsenic | anr | ., | | |
| Barium | anr | | | |
| Beryllium | | | | |
| Boron | | | | |
| Cadmium | anr ' | | | |
| Calcium | | | | |
| Chromium | | | | |
| Cobalt | | | | · · · · · · · · · · · · · · · · · · · |
| Copper | | | | |
| Iron | 53100 | 50000 | 106:2 | 80-120 |
| Lead | anr | | | |
| Lithium | | | | |
| Magnesium | | | | |
| Manganese | anr | | | |
| Molybdenum | | | | |
| Nickel | | | | |
| Potassium | | | | |
| Selenium | anr | | | |
| Silver | | | | |
| Sødium | | | | |
| Strontium | | | | |
| Thallium | | | | |
| Tin | | | | |
| Titanium | | | | |
| Vanadium | | | | |
| Zinc | | | | |

Associated samples MP15062: T79406-1F, T79406-2F, T79406-3F

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

5.1.3

SERIAL DILUTION RESULTS SUMMARY

Login Number: T79406 Account: CONOCO - Conoco Phillips Project: Nell Hall #1

QC Batch ID: MP15062 Matrix Type: AQUEOUS

Methods: SW846 6010B Units: ug/l

| Matrix Type: | AQUEOUS | | | Units: ug/l | | |
|---------------|----------------------|----------------|-----------|-------------------|---|-------|
| Prep Date: | | • | 06/24//1 | | | |
| Metal | T79318-1 Original | LF LSDL 1:5 | %DIF | QC Limits | | 5.1.4 |
| Aluminum | | ···· | | | | 257 |
| Antimony | | | | | | |
| Arsenic | anr | | | | • | |
| Barium | anr | | | | | |
| Beryllium | | | | | | |
| Boron | | | | | | |
| Cadmium | anr | | | | | |
| Calcium | | | | | | |
| Chromium | | | | | | |
| Cobalt | | | | | | |
| Copper | | | | | | |
| Iron | 7.28 | 7.20 | 1.1. | 0-10 | | |
| Lead | anr | | | | | |
| Lithium | | | | | | |
| Magnesium | | | | | | |
| Manganese | anr | | | | · | |
| Molybdenum | | | | | | |
| Nickel | | | | | | |
| Potassium | | | | | | |
| Selenium | anr | | | | | |
| Silver | | | | | | |
| Sodium | | | | | | |
| Strontium | | | | • | | |
| Thallium | | | | | | |
| Tin | | | | | | |
| Titanium | | | | | | |
| Vanadium | | | | | | |
| Zinc | | | | | | |
| Associated sa | moles MD15 | 062 · T70/ | 106-18 77 | 0406-2F T79406-3F | | |

Associated samples MP15062: T79406-1F, T79406-2F, T79406-3F

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

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Page 1



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

October 11, 2011

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

RE: Project: NELL HALL NO.1 Pace Project No.: 60107158

Dear Christine Matthews:

Enclosed are the analytical results for sample(s) received by the laboratory on September 29, 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,

Colleen Koporc for Dianna Meier dianna meier@pacelabs.com Project Manager

Enclosures

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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: NELL HALL NO.1 Pace Project No.: 60107158

Kansas Certification IDs

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: NELL HALL NO.1 Pace Project No.: 60107158

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|-------------------------|--------|----------------|----------------|
| 60107158001 | GW-074941-092711-CM-007 | Water | 09/27/11 18:10 | 09/29/11 09:00 |
| 60107158002 | GW-074941-092711-CM-005 | Water | 09/27/11 18:20 | 09/29/11 09:00 |
| 60107158003 | GW-074941-092711-CM-006 | Water | 09/27/11 18:45 | 09/29/11 09:00 |
| 60107158004 | GW-074941-092711-CM-008 | Water | 09/27/11 18:50 | 09/29/11 09:00 |
| 60107158005 | TB-092711-001 | Water | 09/27/11 19:00 | 09/29/11 09:00 |

REPORT OF LABORATORY ANALYSIS

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1

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SAMPLE ANALYTE COUNT

Project: NELL HALL NO.1 Pace Project No.: 60107158

| Lab ID | Sample ID | Method | Analysts | Analytes Reported |
|-------------|-------------------------|----------|----------|----------------------|
| 60107158001 | GW-074941-092711-CM-007 | EPA 6010 | SMW | 1 |
| | | EPA 8260 | BRM | 9 |
| 60107158002 | GW-074941-092711-CM-005 | EPA 6010 | SMW | 1 |
| | | EPA 8260 | BRM | 9 |
| 60107158003 | GW-074941-092711-CM-006 | EPA 6010 | SMW | 1 |
| | | EPA 8260 | BRM | 9 |
| 60107158004 | GW-074941-092711-CM-008 | EPA 8260 | BRM | 9 |
| 60107158005 | TB-092711-001 | EPA 8260 | BRM | 9 |

REPORT OF LABORATORY ANALYSIS

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Analvtica

PROJECT NARRATIVE

Project:NELL HALL NO.1Pace Project No.:60107158

Method: EPA 6010

 Description:
 6010 MET ICP, Dissolved

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

 Date:
 October 11, 2011

General Information:

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

Hold Time:

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

Sample Preparation:

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

Initial Calibrations (including MS Tune as applicable):

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

Continuing Calibration:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

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

Additional Comments:

REPORT OF LABORATORY ANALYSIS

Page 5 of 15

PROJECT NARRATIVE

Project: NELL HALL NO.1 Pace Project No.: 60107158

Method: EPA 8260

 Description:
 8260 MSV UST, Water

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

 Date:
 October 11, 2011

General Information:

5 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/40680

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

Duplicate Sample:

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

Additional Comments:

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

REPORT OF LABORATORY ANALYSIS

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Project: NELL HALL NO.1

Pace Project No.: 60107158

| Sample: GW-074941-092711-CM-007 | Lab ID: | 60107158001 | Collected | l: 09/27/11 | 18:10 | Received: 09/ | 29/11 09:00 Ma | atrix: Water | |
|---------------------------------|--------------|---------------|------------|-------------|---------|----------------|----------------|--------------|------|
| | | | Report | | | | | | |
| Parameters | Results | Units | Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
| 6010 MET ICP, Dissolved | Analytical I | Method: EPA 6 | 010 Prepar | ation Meth | od: EPA | 3010 | | | |
| Iron, Dissolved | ND ug | J∕L | 50.0 | 6.0 | 1 | 10/03/11 13:37 | 10/06/11 09:38 | 7439-89-6 | |
| 8260 MSV UST, Water | Analytical I | Method: EPA 8 | 260 | | | | | | |
| Benzene | ND ug | g/L | 1.0 | 0.055 | 1 | | 10/08/11 02:18 | 71-43-2 | |
| Ethylbenzene | ND ug | g/L | 1.0 | 0.056 | 1 | | 10/08/11 02:18 | 100-41-4 | |
| Toluene | ND ug | g/L | 1.0 | 0.066 | 1 | | 10/08/11 02:18 | 108-88-3 | |
| Xylene (Total) | ND ug | j/L | 3.0 | 0.12 | 1 | | 10/08/11 02:18 | 1330-20-7 | |
| Dibromofluoromethane (S) | 109 % | | 86-112 | | 1 | | 10/08/11 02:18 | 1868-53-7 | |
| Toluene-d8 (S) | 98 % | | 90-110 | | 1 | | 10/08/11 02:18 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 100 % | | 87-113 | | 1 | | 10/08/11 02:18 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 108 % | | 82-119 | | 1 | | 10/08/11 02:18 | 17060-07-0 | |
| Preservation pH | 1.0 | | 1.0 | 0.10 | 1 | | 10/08/11 02:18 | | |

Date: 10/11/2011 09:15 AM

REPORT OF LABORATORY ANALYSIS

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Project: NELL HALL NO.1

 \land

Pace Project No.: 60107158

| Sample: GW-074941-092711-CM-00 | 5 Lab ID: 6 | 0107158002 | Collected | d: 09/27/11 | 18:20 | Received: 09/ | 29/11 09:00 Ma | atrix: Water | |
|--------------------------------|-----------------|---------------|-----------------|-------------|---------|----------------|----------------|--------------|------|
| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
| 6010 MET ICP, Dissolved | Analytical N | lethod: EPA 6 | 010 Prepar | ration Meth | od: EPA | 3010 | | | |
| Iron, Dissolved | 83.5 ug/ | ۲L | 50.0 | 6.0 | 1 | 10/03/11 13:37 | 10/06/11 09:47 | 7439-89-6 | |
| 8260 MSV UST, Water | Analytical N | lethod: EPA 8 | 260 | | | | | | |
| Benzene | ND ug/ | ″L | 1.0 | 0.055 | 1 | | 10/08/11 02:35 | 71-43-2 | |
| Ethylbenzene | ND ug/ | 'L | 1.0 | 0.056 | 1 | | 10/08/11 02:35 | 100-41-4 | |
| Toluene | ND ug/ | ۲L | 1.0 | 0.066 | 1 | | 10/08/11 02:35 | 108-88-3 | |
| Xylene (Total) | ND ug/ | ۲L | 3.0 | 0.12 | 1 | | 10/08/11 02:35 | 1330-20-7 | |
| Dibromofluoromethane (S) | 107 % | | 86-112 | | 1 | | 10/08/11 02:35 | 1868-53-7 | |
| Toluene-d8 (S) | 98 % | | 90-110 | | 1 | | 10/08/11 02:35 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 98 % | | 87-113 | | 1 | | 10/08/11 02:35 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 103 % | | 82-119 | | 1 | | 10/08/11 02:35 | 17060-07-0 | |
| Preservation pH | 1.0 | | 1.0 | 0.10 | 1 | | 10/08/11 02:35 | | |

Date: 10/11/2011 09:15 AM

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REPORT OF LABORATORY ANALYSIS

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Project: NELL HALL NO.1 Pace Project No.: 60107158

| Sample: GW-074941-092711-CM-006 | 6 LabiD: 6 | 0107158003 | Collected | d: 09/27/11 | 18:45 | Received: 09/ | 29/11 09:00 Ma | atrix: Water | |
|---------------------------------|------------------|---------------|-----------------|--------------|---------|----------------|----------------|--------------|------|
| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
| 6010 MET ICP, Dissolved | Analytical N | 1ethod: EPA 6 | 010 Prepar | ration Metho | od: EPA | 3010 | | | |
| Iron, Dissolved | 19600 ug/ | ſĽ | 50.0 | 6.0 | 1 | 10/03/11 13:37 | 10/06/11 09:49 | 7439-89-6 | |
| 8260 MSV UST, Water | Analytical N | lethod: EPA 8 | 260 | | | | | | |
| Benzene | 237 ug/ | ۲L | 5.0 | 0.28 | 5 | | 10/08/11 02:51 | 71-43-2 | |
| Ethylbenzene | 197 ug/ | ′L | 5.0 | 0.28 | 5 | | 10/08/11 02:51 | 100-41-4 | |
| Toluene | ND ug/ | <u>ال</u> | 5.0 | 0.33 | 5 | | 10/08/11 02:51 | 108-88-3 | |
| Xylene (Total) | 225 ug/ | ۲L | 15.0 | 0.60 | 5 | | 10/08/11 02:51 | 1330-20-7 | |
| Dibromofluoromethane (S) | 108 % | | 86-112 | | 5 | | 10/08/11 02:51 | 1868-53-7 | |
| Toluene-d8 (S) | 100 % | | 90-110 | | 5 | | 10/08/11 02:51 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 101 % | | 87-113 | | 5 | | 10/08/11 02:51 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 107 % | | 82-119 | | 5 | | 10/08/11 02:51 | 17060-07-0 | |
| Preservation pH | 1.0 | | 1.0 | 0.10 | 5 | | 10/08/11 02:51 | | |

Date: 10/11/2011 09:15 AM

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REPORT OF LABORATORY ANALYSIS

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Project: NELL HALL NO.1

Pace Project No.: 60107158

| Sample: GW-074941-092711-CM-00 | 8 Lab ID | : 60107158004 | Collecter | d: 09/27/11 | 18:50 | Received: 09 | /29/11 09:00 Ma | atrix: Water | |
|--------------------------------|----------|------------------|-----------|-------------|-------|--------------|-----------------|--------------|------|
| | | | Report | | | | | | |
| Parameters | Results | Units | Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
| 8260 MSV UST, Water | Analytic | al Method: EPA 8 | 260 | | | | | | |
| Benzene | 249 | ug/L | 5.0 | 0.28 | 5 | | 10/08/11 03:08 | 71-43-2 | |
| Ethylbenzene | 216 | ug/L | 5.0 | 0.28 | 5 | | 10/08/11 03:08 | 100-41-4 | |
| Toluene | ND | ug/L | 5.0 | 0.33 | 5 | | 10/08/11 03:08 | 108-88-3 | |
| Xylene (Total) | 248 | ug/L | 15.0 | 0.60 | 5 | | 10/08/11 03:08 | 1330-20-7 | |
| Dibromofluoromethane (S) | 110 | % | 86-112 | | 5 | | 10/08/11 03:08 | 1868-53-7 | |
| Toluene-d8 (S) | 99 | % | 90-110 | | 5 | | 10/08/11 03:08 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 101 | % | 87-113 | | 5 | | 10/08/11 03:08 | 460-00-4 | • |
| 1,2-Dichloroethane-d4 (S) | 111 | % | 82-119 | | 5 | | 10/08/11 03:08 | 17060-07-0 | |
| Preservation pH | 1.0 | | 1.0 | 0.10 | 5 | | 10/08/11 03:08 | | |

Date: 10/11/2011 09:15 AM

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Project: NELL HALL NO.1

Pace Project No.: 60107158

| Sample: TB-092711-001 | Lab ID: | 60107158005 | Collecte | d: 09/27/11 | 19:00 | Received: 09 | /29/11 09:00 M | atrix: Water | |
|---------------------------|------------|---------------|----------|-------------|-------|--------------|----------------|--------------|------|
| | | | Report | | | | | | |
| Parameters | Results | Units | Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
| 8260 MSV UST, Water | Analytical | Method: EPA 8 | 260 | | | | | | |
| Benzene | ND u | g/L | 1.0 | 0.055 | 1 | | 10/08/11 03:24 | 71-43-2 | |
| Ethylbenzene | ND u | g/L | 1.0 | 0.056 | 1 | | 10/08/11 03:24 | 100-41-4 | |
| Toluene | ND u | g/L | 1.0 | 0.066 | 1 | | 10/08/11 03:24 | 108-88-3 | |
| Xylene (Total) | ND u | g/L | 3.0 | 0.12 | 1 | | 10/08/11 03:24 | 1330-20-7 | |
| Dibromofluoromethane (S) | 109 % | , D | 86-112 | | 1 | | 10/08/11 03:24 | 1868-53-7 | |
| Toluene-d8 (S) | 97 % | | 90-110 | | 1 | | 10/08/11 03:24 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 99 % | b | 87-113 | | 1 | | 10/08/11 03:24 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 108 % | D | 82-119 | | 1 | | 10/08/11 03:24 | 17060-07-0 | |
| Preservation pH | 1.0 | | 1.0 | 0.10 | 1 | | 10/08/11 03:24 | | |

Date: 10/11/2011 09:15 AM

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QUALITY CONTROL DATA

| Project: | NELL HALL | NO.1 | | | | | | | | | | | |
|--------------------|-------------|--------------|------------|------------|-------------|----------|-------------|---------|----------------|-----------|-----|-----|-------|
| Pace Project No.: | 60107158 | | | | | | | | | | | | |
| QC Batch: | MPRP/155 | 522 | | Analys | is Method: | | EPA 6010 | | - | | | | |
| QC Batch Method: | EPA 3010 | | | Analys | is Descript | tion: 6 | 6010 MET Di | ssolved | | | | | |
| Associated Lab Sar | mples: 601 | 07158001, 60 | 0107158002 | , 60107158 | 003 | | | | | | | | |
| METHOD BLANK: | 885377 | | | N | Aatrix: Wat | ter | | | | | | | |
| Associated Lab Sa | mples: 601 | 07158001, 60 | 0107158002 | , 60107158 | 003 | | | | | | | | |
| | | | | Blank | R | eporting | | | | | | | |
| Para | neter | | Units | Resul | t | Limit | Analyz | ed | Qualifiers | | | | |
| Iron, Dissolved | | ug/L | | | ND | 50. | 0 10/06/11 | 09:34 | | | | | |
| | | | | | | | | | | | | | |
| LABORATORY CO | NTROL SAMP | PLE: 88537 | '8 | | | | | | | · | | | ··· , |
| | | | | Spike | LCS | 5 | LCS | % Red | с [.] | | | | |
| Para | neter | | Units | Conc. | Resu | lt | % Rec | Limits | ; Qi | ualifiers | | | |
| Iron, Dissolved | | ug/L | | 10000 | | 10200 | 102 | 80 |)-120 | | | | |
| | | | | | | | | | | | | | |
| MATRIX SPIKE & M | ATRIX SPIKI | E DUPLICAT | E: 88537 | 9 | | 885380 | | | | | | | |
| | | | | MS | MSD | | | | | | | | |
| | | 601 | 07158001 | Spike | Spike | MS | MSD | MS | MSD | % Rec | | Max | |
| Parame | ter | Units | Result | Conc. | Conc. | Result | Result | % Rec | % Rec | Limits | RPD | RPD | Qual |
| Iron Dissolved | | ua/l | ND | 10000 | 10000 | 10100 | 10200 | 100 | 101 | 75-125 | 1 | 20 | |

Date: 10/11/2011 09:15 AM

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QUALITY CONTROL DATA

Project: NELL HALL NO.1
Pace Project No.: 60107158
QC Batch: MSV/40680

EPA 8260

Analysis Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER

Associated Lab Samples: 60107158001, 60107158002, 60107158003, 60107158004, 60107158005

METHOD BLANK: 887910

QC Batch Method:

Matrix: Water

Associated Lab Samples: 60107158001, 60107158002, 60107158003, 60107158004, 60107158005

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---------------------------|-------|-----------------|--------------------|----------------|------------|
| Benzene | ug/L | ND | 1.0 | 10/08/11 00:56 | |
| Ethylbenzene | ug/L | ND | 1.0 | 10/08/11 00:56 | |
| Toluene | ug/L | ND | 1.0 | 10/08/11 00:56 | |
| Xylene (Total) | ug/L | ND | 3.0 | 10/08/11 00:56 | |
| 1,2-Dichloroethane-d4 (S) | % | 109 | 82-119 | 10/08/11 00:56 | |
| 4-Bromofluorobenzene (S) | % | 100 | 87-113 | 10/08/11 00:56 | |
| Dibromofluoromethane (S) | % | 108 | 86-112 | 10/08/11 00:56 | |
| Toluene-d8 (S) | % | 98 | 90-110 | 10/08/11 00:56 | |

LABORATORY CONTROL SAMPLE: 887911

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---------------------------|-------|----------------|---------------|--------------|-----------------|------------|
| Benzene | ug/L | | 20.2 | 101 | 82-117 | |
| Ethylbenzene | ug/L | . 20 | 21.5 | 108 | 79-121 | |
| Toluene | ug/L | 20 | 20.5 | 102 | 80-120 | |
| Xylene (Total) | ug/L | 60 | 62.8 | 105 | 79-120 | |
| 1,2-Dichloroethane-d4 (S) | % | | | 107 | 82-119 | |
| 4-Bromofluorobenzene (S) | % | | | 101 | 87-113 | |
| Dibromofluoromethane (S) | % | | | 108 | 86-112 | |
| Toluene-d8 (S) | % | | | 99 | 90-110 | |

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: NELL HALL NO.1 Pace Project No.: 60107158

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/40680

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

Date: 10/11/2011 09:15 AM

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NELL HALL NO.1 Pace Project No.: 60107158

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-------------------------|-----------------|------------|-------------------|---------------------|
| 60107158001 | GW-074941-092711-CM-007 | EPA 3010 | MPRP/15522 | EPA 6010 | ICP/13475 |
| 60107158002 | GW-074941-092711-CM-005 | EPA 3010 | MPRP/15522 | EPA 6010 | ICP/13475 |
| 60107158003 | GW-074941-092711-CM-006 | EPA 3010 | MPRP/15522 | EPA 6010 | ICP/13475 |
| 60107158001 | GW-074941-092711-CM-007 | EPA 8260 | MSV/40680 | | |
| 60107158002 | GW-074941-092711-CM-005 | EPA 8260 | MSV/40680 | | N + |
| 60107158003 | GW-074941-092711-CM-006 | EPA 8260 | MSV/40680 | | |
| 60107158004 | GW-074941-092711-CM-008 | EPA 8260 | MSV/40680 | | |
| 60107158005 | TB-092711-001 | EPA 8260 | MSV/40680 | | |

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ace Analytical

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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.

| 1 | | | | : | | | | 0 | |
|--|--|---------------------------------------|--|--|--------------------------|-------------------------|-----------------------------------|----------------|--|
| Section A Required Client Information: | Section B Regulated Project Information: | | Section C | | | Page: | of | 0 | |
| Company: COP CRA NM | Report To: Christine Mathew | /s | Attention: ENFOS | | 7 | L | | · | |
| Address: 6121 Indian School Rd NE, Ste 200 | Copy To: Kelly Blanchard, | Angela Bown | Company Name: | | REGULATORY AGENCY | | | | |
| Albequerque, NM 87110 | | | Addrass: | <u>.</u> | | | | | |
| Email To: cmathews@craworld.com | Purchase Order No.: | | Pace Cuote | | | | | | |
| Phone: (505)884-0672 Fax: (505)884-4932 | Project Name: Nell Hall No. | .1 | Pace Project Colleen K | oporc | Site Location | ł | | 77777777 | |
| Requested Due Date/TAT: standard | Project Number: 1729 | 41 | Pace Profile #: 5341, 4 | | STATE: | NM | | | |
| | | | | Requeste | d Analysis Filtered (Y/N |) // | | | |
| Section D Valid Matrix C Required Client Information MATRIX | Codes | COLLECTED | Preservati | ves Z | | | | | |
| BRINKING WATER WATER WASTE WATER PRODUCT SOLLSOLD OIL WIPE (A-Z, 0-97,-) Sample IDS MUST BE UNIQUE TISSUE | A MATRIX CODE (See valid codes the matrix CODE (See valid codes the number of the numb | | SAMPLE TEMP AT COLLECTION The area of Contrainers Unpreserves: HNO3 HOO3 NaOH | Na ₂ S ₂ O ₃ Methanol Other Other Analysis Test4 8260 BTEX X6010 Dissolved Fe | 303 N 45 3 0496 | Residual Chlorine (Y/N) | GO 1071E Pace Project No./ | | |
| 2 (GW) - 074941-092711- CN | 1-005WIG | 12/11 1820 | 14 XX | | | | | m. | |
| 3 Kgul-074941-092711-CM | -006 WIG | 127/11 1845 | 4 XX | | | | | 07 | |
| 4 Ku1-074941-092711, CM | -008 WT G | 8 27 11 1850 | 3 X | | | | (| 24 | |
| 5 TB-097711-001 | W1 | <u> 9/27/11 1900</u> | 1 X | | 1 26214 | 273) | 7 | 25 | |
| 6 | | | | ╺╍┼┼┨╵┠╍┥╍┼┼┥╍ | ╺╋╍┥╼┝╼┝╸┝ | | | | |
| . 7 | | <u></u> | ╶╂╾着╉╎╎┼ | ╺┼┽┫╠╧┽┽┽ | ┼┼┼┼┥ | ┝╌┼╼┠╌┧ | | | |
| 8 | | | ╺╋╼┼╴┼╶┼╴┼ | ╾┼┼┨╵┣╾╁╾┼╌┼╸ | ╶┼╾┼╾┼╍╀╾╇╍╸ | ╺┼╾╂╌┨ | | | |
| 9 | | | | ╾┼╍┼╌┨ _╶ ┠╼┼╸┼╶┼ | ╶┼╶┼╼┼╸┼╶┼╶┼ | ┝╾┠╌┠╌┨ | | | |
| 10 | | + | ╾╉╌╌╬╌╬╾╬╾┼╌┼╌╸ | ╺┥╾┥╴╢┊╢╾┼╾┽╸ | ┽┼┼┼┿┽┼ | | | | |
| | | + | ┉┨──┤┈┼╍┼╌┼╍┨━╸ | | ┽┽┼┼┼┼┼ | ┝╍┼╍╋╼╊ | | | |
| ADDITIONAL COMMENTS | RELINQUISHED BY | AFFILIATION | TIME | ACCEPTED BY / AFFILIATION | DATE TIME | | SAMPLE CONDITIONS | | |
| Include MDLs on report - J-flag | 6/110/19/00 | CMMAIN ALLEY2211 | 10730 EB | orlett | 9/79 040 | 0 06 | | | |
| * Metals were fillered in | 7 Channe | a mar aller | | | | | 4 4 | - \ | |
| the tield. | 1 | | | | | | | | |
| | | | | | • | | | | |
| | | SAMPLER NAME AND SIGNAT | | | | · · · | | itact | |
| | | PRINT Name of SAMPLE | R: LANSTMO | Matteres | -1 1 | , ie | (Y/N) (Y/N) dy Se er (Y/ | YN) | |
| | | SIGNATURE of SAMPLE | RATION ON N | | 9/27/11 | Ter | Reci los Cool | Samp (| |
| | | · · · · · · · · · · · · · · · · · · · | New . | | | | | | |

*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 to and invo:ces not paid within 30 days.

| Client Name: <u>Cop</u> | CRA | Project | #: 600 | 7158 |
|---|----------------------------|-----------------|---------------------------------------|---|
| courier: Fed Ex 🗹 UPS 🗆 USPS 🗆 Cli | ient 🗅 Commercial 🗆 Pac | e 🗆 Other 🗆 | | Optional |
| racking #: 576803375910 | Pace Shipping Label Us | ed? Yes A | io 🗆 🛛 | Proj Due Date: 10 (11 /M |
| Custody Seal on Cooler/Box Present: Yes | No 🗆 Seals intact: Ye | s No 🗆 | - | |
| acking Material: Bubble Wrap 🗆 Bu | , bble Bags 🗆 🛛 Foam, Z | None 🗆 | Other 🗆 | |
| hermometer Used: T-191 / T-194 | Type of Ice: Wet Blue | e None 🗆 Samp | oles received on ice. | cooling process has begu |
| cooler Temperature: | (circle | one) | Date and initials | of person examining |
| emperature should be above freezing to 6°C | | · . | contents: 91 | <u>(411 · 8</u> |
| hain of Custody present: | Yes No N/A | l <u>.</u> | | |
| hain of Custody filled out: | Yes INO IN/A | 2. | | |
| hain of Custody relinquished: | Yes INO IN/A | 3. | | |
| Sampler name & signature on COC: | DYës □No □N/A | ł | | |
| amples arrived within holding time: | Uyes ONO ON/A E | 5. | - | |
| hort Hold Time analyses (<72hr): | | ð. | | |
| Push Turn Around Time requested: | | 7 | · | |
| | | | | |
| correct containers used: | | · | | |
| | | 2 | | |
| | | <u>.</u> | | |
| | | 10. | | , |
| npreserved 5035A solis frozen with 48nrs? | | | • | · · · · · |
| iltered volume received for dissolved tests? | | 12. | · · · · · · · · · · · · · · · · · · · | |
| ample labels match COC: | | | · | |
| Includes date/time/ID/analyses Matrix: | <u>ul</u> | 13. | | |
| All containers needing preservation have been check All containers needing preservation are found to be it | in Tres INo IN/A | | | |
| compliance with EPA recommendation. | | 14. | h at # of | addod |
| Phenolics | Valer), Yes, DNo | completed | preserva | tive |
| rip Blank present: | DYes □No □N/A | | | |
| Pace Trip Blank lot # (if purchased): Cover- | en i | 15 | | |
| readspace in VOA viais (>omm): | | | | |
| | | 16. | | |
| Project sampled in USDA Regulated Area: | | 17. List State: | | |
| Client Notification/ Resolution: | Copy COC to Client? Y / N | Field Data | Required? Y / | N |
| Person Contacted: | Date/Time: | | Temp Log: F when unpact | Record start and finish time ing cooler, if >20 min. |
| Comments/ Resolution: | | | recheck sam | ple temps. |
| | | | Start: 10 0 | O Start: |
| | | | IEnd: 10.2.5 | End ¹ |

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



December 27, 2011

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

RE: Project: Nell Hall No.1 (074941) Pace Project No.: 60112207

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,

alice Racy-

Alice Tracy

alice.tracy@pacelabs.com Project Manager

Enclosures

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



REPORT OF LABORATORY ANALYSIS

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Pace Package 1 of 17



CERTIFICATIONS

Nell Hall No.1 (074941) Project: Pace Project No.: 60112207

Kansas Certification IDs 9608 Loiret Boulevard, Lenexa, KS 66219 A2LA Certification #: 2456.01 Arkansas Certification #: 05-008-0 Illinois Certification #: 001191 lowa 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:Nell Hall No.1 (074941)Pace Project No.:60112207

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|--------------------------|--------|----------------|----------------|
| 60112207001 | GW-074941-121311-CB-MW-4 | Water | 12/13/11 09:05 | 12/15/11 09:00 |
| 60112207002 | GW-074941-121311-CB-MW-5 | Water | 12/13/11 09:45 | 12/15/11 09:00 |
| 60112207003 | GW-074941-121311-CB-MW-6 | Water | 12/13/11 09:20 | 12/15/11 09:00 |
| 60112207004 | GW-074941-121311-CB-DUP | Water | 12/13/11 09:25 | 12/15/11 09:00 |
| 60112207005 | GW-074941-121311-TB1 | Water | 12/13/11 08:00 | 12/15/11 09:00 |

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SAMPLE ANALYTE COUNT

Project:Nell Hall No.1 (074941)Pace Project No.:60112207

| Lab ID | Sample ID | Method | Analysts | Analytes Reported |
|-------------|--------------------------|----------|----------|----------------------|
| 60112207001 | GW-074941-121311-CB-MW-4 | EPA 6010 | JDH | 1 |
| | | EPA 8260 | JTŠ | 9 |
| 60112207002 | GW-074941-121311-CB-MW-5 | EPA 6010 | JDH | 1 |
| | | EPA 8260 | JTS | 9 |
| 60112207003 | GW-074941-121311-CB-MW-6 | EPA 6010 | JDH | 1 |
| | | EPA 8260 | JTS | 9 |
| 60112207004 | GW-074941-121311-CB-DUP | EPA 8260 | JTS | 9 |
| 60112207005 | GW-074941-121311-TB1 | EPA 8260 | JTS | 9 |

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project:Nell Hall No.1 (074941)Pace Project No.:60112207

Method:EPA 6010Description:6010 MET ICP, DissolvedClient:COP Conestoga-Rovers & Associates, Inc. NMDate:December 27, 2011

General Information:

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

Hold Time:

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

Sample Preparation:

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

Initial Calibrations (including MS Tune as applicable):

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

Continuing Calibration:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

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

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Nell Hall No.1 (074941) Pace Project No.: 60112207

Method: EPA 8260

 Description:
 8260 MSV UST, Water

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

 Date:
 December 27, 2011

General Information:

5 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/42549

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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Project: Nell Hall No.1 (074941)

Pace Project No.: 60112207

| Sample: GW-074941-121311-CB- MW-4 | Lab ID: (| 60112207001 | Collected | d: 12/13/11 | 09:05 | Received: 12/ | 15/11 09:00 Ma | atrix: Water | |
|--------------------------------------|-------------------|---------------|-----------|--------------|---------|----------------|----------------|--------------|------|
| | | | Report | | | | | | |
| Parameters | Results | Units | Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
| 6010 MET ICP, Dissolved | Analytical N | Method: EPA 6 | 010 Prepa | ration Methe | od: EPA | 3010 | | | |
| Iron, Dissolved | 201 ug | /L | 50.0 | 6.0 | 1 | 12/22/11 09:00 | 12/23/11 10:03 | 7439-89-6 | |
| 8260 MSV UST, Water | Analytical N | Method: EPA 8 | 260 | | | | | | |
| Benzene | ND ug | /L | 1.0 | 0:15 | 1 | | 12/17/11 02:30 | 71-43-2 | |
| Ethylbenzene | ND ug | /L | 1.0 | 0.13 | 1 | | 12/17/11 02:30 | 100-41-4 | |
| Toluene | ND ug | /L | 1.0 | 0.13 | 1 | | 12/17/11 02:30 | 108-88-3 | |
| Xylene (Total) | ND ug | /L | 3.0 | 0.20 | 1 | | 12/17/11 02:30 | 1330-20-7 | |
| Surrogates | | | | | | | | | |
| Dibromofluoromethane (S) | 92 % | | 86-112 | | 1 | | 12/17/11 02:30 | 1868-53-7 | |
| Toluene-d8 (S) | 99 % | | 90-110 | | 1 | | 12/17/11 02:30 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 96 % | | 87-113 | | 1 | | 12/17/11 02:30 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 91 [°] % | | 82-119 | | 1 | | 12/17/11 02:30 | 17060-07-0 | |
| Preservation pH | 1.0 | | 1.0 | 0.10 | 1 | | 12/17/11 02:30 | | |

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Project: Nell Hall No.1 (074941)
Page Project No.1 60112207

| Pace F | Project No.: | 6011 | 2207 |
|--------|--------------|------|------|
|--------|--------------|------|------|

| Sample: GW-074941-121311-CB- MW-5 | Lab ID: | 60112207002 | Collected | d: 12/13/11 | 09:45 | Received: 12/ | 15/11 09:00 Ma | atrix: Water | |
|--------------------------------------|----------------|---------------|-----------|--------------|---------|----------------|----------------|--------------|------|
| | | | Report | | | | | | |
| Parameters | Results | Units | Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
| 6010 MET ICP, Dissolved | Analytical | Method: EPA 6 | 010 Prepa | ration Metho | od: EPA | 3010 | | | |
| Iron, Dissolved | 21.2J u | ıg/L | 50.0 | 6.0 | 1 | 12/22/11 09:00 | 12/23/11 10:13 | 7439-89-6 | |
| 8260 MSV UST, Water | Analytical | Method: EPA 8 | 260 | | | | | | |
| Benzene | ND u | ıg/L | 1.0 | 0.15 | 1 | | 12/17/11 02:48 | 71-43-2 | |
| Ethylbenzene | ND u | ıg/L | 1.0 | 0.13 | 1 | | 12/17/11 02:48 | 100-41-4 | |
| Toluene | ND u | ıg/L | 1.0 | 0.13 | 1 | | 12/17/11 02:48 | 108-88-3 | |
| Xylene (Total) | ND u | ıg/L | 3.0 | 0.20 | 1 | | 12/17/11 02:48 | 1330-20-7 | |
| Surrogates | | | | | | | | | |
| Dibromofluoromethane (S) | 92 % | 6 | 86-112 | | 1 | | 12/17/11 02:48 | 1868-53-7 | |
| Toluene-d8 (S) | 104 % | 6 | 90-110 | | 1 | | 12/17/11 02:48 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 96 % | 6 | 87-113 | | 1 | | 12/17/11 02:48 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 92 % | 6 | 82-119 | | 1 | | 12/17/11 02:48 | 17060-07-0 | |
| Preservation pH | 1.0 | | 1.0 | 0.10 | 1 | | 12/17/11 02:48 | | |

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Project: Nell Hall No.1 (074941)

Pace Project No.: 60112207

| Sample: GW-074941-121311-CB- MW-6 | Lab ID: (| 60112207003 | Collected | d: 12/13/11 | 09:20 | Received: 12/ | 15/11 09:00 Ma | atrix: Water | |
|--------------------------------------|-----------------|---------------|------------|-------------|---------|----------------|----------------|--------------|------|
| | | | Report | | | | | | |
| Parameters | Results | Units | Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
| 6010 MET ICP, Dissolved | Analytical M | Method: EPA 6 | 010 Prepar | ration Meth | od: EPA | 3010 | | | |
| Iron, Dissolved | 11600 ug | /L | 50.0 | 6.0 | 1 | 12/22/11 09:00 | 12/23/11 10:16 | 7439-89-6 | |
| 8260 MSV UST, Water | Analytical N | Method: EPA 8 | 260 | | | | | | |
| Benzene | 298 ug | /L | 5.0 | 0.75 | 5 | | 12/17/11 03:05 | 71-43-2 | |
| Ethylbenzene | 154 ug | /L | 5.0 | 0.65 | 5 | | 12/17/11 03:05 | 100-41-4 | |
| Toluene | 8.3 ug | /L | 5.0 | 0.65 | 5 | | 12/17/11 03:05 | 108-88-3 | |
| Xylene (Total) | 141 ug | /L | 15.0 | 1.0 | 5 | | 12/17/11 03:05 | 1330-20-7 | |
| Surrogates | | | | | | | | | |
| Dibromofluoromethane (S) | 98 % | | 86-112 | | 5 | | 12/17/11 03:05 | 1868-53-7 | |
| Toluene-d8 (S) | 99 % | | 90-110 | | 5 | | 12/17/11 03:05 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 96 % | | 87-113 | | 5 | | 12/17/11 03:05 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 89 % | | 82-119 | | 5 | | 12/17/11 03:05 | 17060-07-0 | |
| Preservation pH | 1.0 | | 1.0 | 0.10 | 5 | | 12/17/11 03:05 | | |

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Project: Nell Hall No.1 (074941) 60112207

Pace Project No.:

| Sample: GW-074941-121311-CB- DUP | Lab ID: | 60112207004 | Collecte | d: 12/13/11 | 09:25 | Received: 12 | 2/15/11 09:00 Ma | atrix: Water | |
|-------------------------------------|---------------|---------------|-----------------|-------------|-------|--------------|------------------|------------------|------|
| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
| 8260 MSV UST, Water | Analytical | Method: EPA 8 | 260 | | | | | | |
| Benzene | 359 ug | g/L | 5.0 | 0.75 | 5 | | 12/17/11 03:23 | 71 -4 3-2 | |
| Ethylbenzene | 190 ug | g/L | 5.0 | 0.65 | 5 | | 12/17/11 03:23 | 100-41-4 | |
| Toluene | 6.1 ug | g/L | 5.0 | 0.65 | 5 | | 12/17/11 03:23 | 108-88-3 | |
| Xylene (Total) | 183 ug | g/L | 15.0 | 1.0 | 5 | | 12/17/11 03:23 | 1330-20-7 | |
| Surrogates | | | | | | | | | |
| Dibromofluoromethane (S) | 93 % | • | 86-112 | | 5 | | 12/17/11 03:23 | 1868-53-7 | |
| Toluene-d8 (S) | 91 % | , | 90-110 | | 5 | | 12/17/11 03:23 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 98 % | ı. | 87-113 | | 5 | | 12/17/11 03:23 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 89 % | , | 82-119 | | 5 | | 12/17/11 03:23 | 17060-07-0 | |
| Preservation pH | 1.0 | | 1.0 | 0.10 | 5 | | 12/17/11 03:23 | | |

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Project: Nell Hall No.1 (074941)

Pace Project No.: 60112207

| Sample: GW-074941-121311-TB1 | Lab ID: | 60112207005 | Collected | 1: 12/13/1 | 00:80 | Received: 12 | /15/11 09:00 M | atrix: Water | |
|------------------------------|------------|---------------|-----------------|------------|-------|--------------|----------------|--------------|------|
| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
| 8260 MSV UST, Water | Analytical | Method: EPA 8 | 3260 | | | | | | |
| Benzene | ND u | g/L | 1.0 | 0.15 | 1 | | 12/17/11 00:46 | 71-43-2 | |
| Ethylbenzene | ND u | g/L | 1.0 | 0.13 | 1 | | 12/17/11 00:46 | 100-41-4 | |
| Toluene | ND ug | g/L | 1.0 | 0.13 | 1 | | 12/17/11 00:46 | 108-88-3 | |
| Xylene (Total) | ND u | g/L | 3.0 | 0.20 | 1 | | 12/17/11 00:46 | 1330-20-7 | |
| Surrogates | | - | | | | | | | |
| Dibromofluoromethane (S) | 94 % | 1 | 86-112 | | 1 | | 12/17/11 00:46 | 1868-53-7 | • |
| Toluene-d8 (S) | 96 % |) | 90-110 | | 1 | | 12/17/11 00:46 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 97 % |) | 87-113 | | 1 | | 12/17/11 00:46 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 91 % | , | 82-119 | | 1 | | 12/17/11 00:46 | 17060-07-0 | |
| Preservation pH | 1.0 | | 1.0 | 0.10 | 1 | | 12/17/11 00:46 | | |

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QUALITY CONTROL DATA

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| Project: | Nell Hali No. | 1 (074941) | | | | | | | | | | | |
|--------------------|---------------|-------------|-----------|-------------|------------|--------------------|-------------|---------|------------|-----------|-----|-------|------|
| Pace Project No .: | 60112207 | | | | | | | | | | | | |
| QC Batch: | MPRP/165 | 30 | | Analys | is Method: | : 1 | EPA 6010 | | | <u></u> | | | |
| QC Batch Method: | EPA 3010 | | | Analys | is Descrip | tion: (| 6010 MET Di | ssolved | | | | | |
| Associated Lab Sar | nples: 6011 | 2207001, 60 | 112207002 | , 601122070 | 003 | | | | | | | | |
| METHOD BLANK: | 930306 | | | N | latrix: Wa | ter | • | | | | | · · · | |
| Associated Lab Sar | nples: 6011 | 2207001, 60 | 112207002 | , 601122070 | 003 | | | | | | | | |
| | | | | Blank | R | Reporting | | | | | | | |
| Parar | neter | | Units | Resul | t | Limit | Analyz | ed | Qualifiers | | | | |
| Iron, Dissolved | | ug/L | | | ND | 50. | 0 12/23/11 | 09:58 | | _ | | , | |
| | | | 7 | | | | | | | | | | |
| | | LL. 00000 | • | Snike | LCS | 2 | LCS | % Rec | | | | | |
| Parar | neter | | Units | Conc. | Resu | ult | % Rec | Limits | , Qi | ualifiers | | | |
| Iron, Dissolved | | ug/L | | 10000 | | 9770 | 98 | 80 | -120 | | - | | |
| MATRIX SPIKE & N | ATRIX SPIKE | | E: 93030 | 8 | | 930309 | | | | | | | |
| | | | | MS | MSD | | | | | | | | |
| | | 601 | 12207001 | Spike | Spike | MS | MSD | MS | MSD | % Rec | | Max | |
| Parame | ter | Units | Result | Conc. | Conc. | Result | Result | % Rec | % Rec | Limits | RPD | RPD | Qual |
| Iron, Dissolved | | ug/L | 201 | 10000 | 10000 | 9880 | 9790 | 97 | 96 | 75-125 | 1 | 20 | |

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QUALITY CONTROL DATA

| Project: Pace Project No.: | Nell Hall No.1 (074941) 60112207 | | | |
|-------------------------------|-------------------------------------|---|--------------------|--|
| QC Batch: | MSV/42549 | Analysis Method: | EPA 8260 | |
| QC Batch Method: | EPA 8260 | Analysis Description: | 8260 MSV UST-WATER | |
| Associated Lab Sar | nples: 60112207001, 6011220 | 7002, 60112207003, 6011220700 | 4, 60112207005 | |
| METHOD BLANK: | 927952 | Matrix: Water | | |
| Associated Lab Sar | mples: 60112207001, 6011220 | 7002, 60112207003, 6011220700 Blank Beportir | 4, 60112207005 | |

| | | Blank | Reporting | | |
|---------------------------|-------|--------|-----------|----------------|------------|
| Parameter | Units | Result | Limit | Analyzed | Qualifiers |
| Benzene | ug/L | ND | 1.0 | 12/16/11 23:36 | |
| Ethylbenzene | ug/L | ND | 1.0 | 12/16/11 23:36 | |
| Toluene | ug/L | ND | 1.0 | 12/16/11 23:36 | |
| Xylene (Total) | ug/L | ND | 3.0 | 12/16/11 23:36 | |
| 1,2-Dichloroethane-d4 (S) | % | 94 | 82-119 | 12/16/11 23:36 | |
| 4-Bromofluorobenzene (S) | % | 98 | 87-113 | 12/16/11 23:36 | |
| Dibromofluoromethane (S) | % | · 95 | 86-112 | 12/16/11 23:36 | |
| Toluene-d8 (S) | % | 100 | 90-110 | 12/16/11 23:36 | |

LABORATORY CONTROL SAMPLE: 927953

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---------------------------|-------|----------------|---------------|--------------|-----------------|------------|
| Benzene | ug/L | | 19.1 | 96 | 82-117 | |
| Ethylbenzene | ug/L | 20 | 18.7 | 93 | 79-121 | |
| Toluene | ug/L | 20 | 19.2 | 96 | 80-120 | |
| Xylene (Total) | ug/L | 60 | 58.1 | 97 | 79-120 | |
| 1,2-Dichloroethane-d4 (S) | % | | | 94 | 82-119 | |
| 4-Bromofluorobenzene (S) | % | | | 99 | 87-113 | |
| Dibromofluoromethane (S) | % | | | 95 | 86-112 | |
| Toluene-d8 (S) | % | | | 102 | 90-110 | |

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QUALIFIERS

Project: Nell Hall No.1 (074941) Pace Project No.: 60112207

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/42549

[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:Nell Hall No.1 (074941)Pace Project No.:60112207

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|--------------------------|-----------------|------------|-------------------|---------------------|
| 60112207001 | GW-074941-121311-CB-MW-4 | EPA 3010 | MPRP/16530 | EPA 6010 | ICP/14221 |
| 60112207002 | GW-074941-121311-CB-MW-5 | EPA 3010 | MPRP/16530 | EPA 6010 | ICP/14221 |
| 60112207003 | GW-074941-121311-CB-MW-6 | EPA 3010 | MPRP/16530 | EPA 6010 | ICP/14221 |
| 60112207001 | GW-074941-121311-CB-MW-4 | EPA 8260 | MSV/42549 | | |
| 60112207002 | GW-074941-121311-CB-MW-5 | EPA 8260 | MSV/42549 | | |
| 60112207003 | GW-074941-121311-CB-MW-6 | EPA 8260 | MSV/42549 | | |
| 60112207004 | GW-074941-121311-CB-DUP | EPA 8260 | MSV/42549 | | |
| 60112207005 | GW-074941-121311-TB1 | EPA 8260 | MSV/42549 | | |

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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.

| Company COP CAR NM Meent To Christian Matheway Meent To Ch | Section Required | A Section B Section C equired Client Information: Required Project Information: Invoice Information: | | | | | | | | | Ра | ge: | l | of, | 1 | | | | | | | | | | | | | | | |
|--|------------------------------------|--|---|--|-------------|---------------|--------------------|--------------|--------------------------|------------------|------------------------|----------------|-------------|---------------|---------------------------------------|------------|----------|--------|----------------|--|----------|-------------|-----------|-------|----------|--------------------|------|-------------------|--------|---------------------------------------|
| Addressive of 121 Indian School NN ME, Sie 200 Own To | Company | COP CRA NM | Report To: (| Christin | e Mathew | s | | | | Attention: ENFOS | | | | | · · · · · · · · · · · · · · · · · · · | | | | | | | | | | | | | | | |
| Macquerque, NM 89110 Marcine Construction Automation F voir F Repart Marcine Construction Const | Adaress: | 6121 Indian School Rd NE, Ste 200 | Copy To: K | elly Bl | anchard, / | Angela Bo | wn | 1. <u>.</u> | | Comp | any Na | imo. | | | v | | | | | REGULATORY AGENCY | | | | | | | | | | |
| Exhi Terr Control And States Add States | | Albequerque, NM 87110 | Albequerque, NM 87110 Ad | | | | Address: | | | | | | | r | | | | | | | | | | | | | | | | |
| Prinor (2005)884.4072 Prince (2005)884.4052 Prince Med Hall No.1 Prince (2005)884.4072 Status NM Required Due Did(TATT exclusion Valid Match Codes, marking and the Match | Email To: | cmathews@craworld.com | Purchase Ord | ler No | 4515860 | 0215 | ••••• | | | Pace C Refere | Pace Ouote J" UST J | | | | | | | ٣ | RCRA | | | | | | | | | | | |
| Requested fue bulker AT: Number Order Order Status Number Numer | Phone: | (505)884-0672 Fax: (505)884-4932 | Project Name | : Ne | II Hall No. | 1 | | | Pace Project Alice Tracy | | | | | Site Location | | | | | | | | | | | | | | | | |
| Become Construction Value Number Construction Value Number Construction Construction Preservatives Fille Construction Construction <td>Request</td> <td>ed Due Date/TAT: standard</td> <td>Project Numb</td> <td>er. 074</td> <td>4941</td> <td></td> <td></td> <td></td> <td></td> <td>Pace P</td> <td>Profile #:</td> <td>551</td> <td>4, 4</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1</td> <td colspan="6">STATE:</td> <td></td> | Request | ed Due Date/TAT: standard | Project Numb | er. 074 | 4941 | | | | | Pace P | Profile #: | 551 | 4, 4 | | | | | | | 1 | STATE: | | | | | | | | | |
| Beclano Valuel Music Code music music music br>music | L Requested Analysis Filtered (MN) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NAME Normal Normal <td>\square</td> <td>Section D Valid Matrix C Required Client Information <u>MATRIX</u></td> <td>odes CODE</td> <td>(OMP)</td> <td></td> <td>COLL</td> <td>ECTED</td> <td></td> <td></td> <td></td> <td></td> <td>Pre</td> <td>serva</td> <td>atives</td> <td> S</td> <td>TNIA</td> <td></td> | \square | Section D Valid Matrix C Required Client Information <u>MATRIX</u> | odes CODE | (OMP) | | COLL | ECTED | | | | | Pre | serva | atives | S | TNIA | | | | | | | | | | | | | | |
| Bit Example Ex | | DRINING WATER WATER PRODUCT SOIL/SOLID OIL (A-Z, 0-9 /,-) Sample IDs MUST BE UNIQUE TISSUE | DW WT WW P SL OL WP AR OT TS | IX CODE (see valid codes E TYPE (G=GRAB C=C | | POSITE ART | COMPC END/G | DSITE RAB | E TEMP AT COLLECTION | CONTAINERS | served | | | ő | loi | Ivsis Test | | BTEX | Dissolved Fe | | | | | | | uat Chlorine (Y/N) | 60 | 1/2 | 207 | 7 |
| 1. 6 ((- 0749 4 - 12134 - 0.8 - MW - 4 W - 5 | iTEM # | | | MATR SAMPL | DATE | TIME | DATE | TIME | SAMPL | ЦО 10 # | Unpre | HN03 | HCI | Na2S2 | Metha | LAna | | 82601 | 8010 | | | | | | | Resid | Pace | Projec | t No./ | Lab I.D. |
| 1 | 1 | <u> </u> | 4 1 | vi G | | | 121311 | 0905 | | 4 | | X | X | | Ľ1 | | 4 5 | X. | <u>K </u> | | | | | | | 3 | (019 | 11-4) (1 | (893) | $\sum^{n} \infty$ |
| 3 GW-074941-12.13(1-CB-r/W-0-6 WT G 12.13(1) 0925 3 K | 2 | GW-074941-121311-CB-MW- | <u>5 1</u> | or G | | | 121311 | 0945 | | 4 | | X | ~ | | | | L | X | X_ | | | <u>_</u> | | · | | 1 | | _[| | ool |
| 4. GD-074401-1213(1-CB-4) DUY VT G 1213(1 0925 3 X X X Y Y Y 8. 7. 7. 7. X Y <t< td=""><td>3</td><td>GW-074941-121311-CB-MW-</td><td><u>6 l</u></td><td>VT G</td><td>_</td><td></td><td>121311</td><td>0920</td><td></td><td>4</td><td></td><td>×</td><td><u><</u></td><td></td><td></td><td></td><td></td><td>14</td><td><u>× </u>_</td><td> </td><td></td><td></td><td></td><td></td><td></td><td></td><td>- 4</td><td>×.</td><td></td><td><u>3</u></td></t<> | 3 | GW-074941-121311-CB-MW- | <u>6 l</u> | VT G | _ | | 121311 | 0920 | | 4 | | × | <u><</u> | | | | | 14 | <u>× </u> _ | | | | | | | | - 4 | ×. | | <u>3</u> |
| S. TTB-079991-12.33[-TB4_WT IZ91/ 9800 S. K. H. K. H. | 4 | GW-074941-121311-CB - 40 D | UP F | TG | | | 121311 | 0925 | | 3 | | | <u>X</u> L | _ | | - 8 | L | | | | | 1 | | | | | 3006 | <u>84)</u> | | 4 |
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| Pace Analytical [®] Sample Condit | ion Unon Rossin | ESI Tach Space | |
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| www.pacelebs.com | юп ороп кесер | L – ESI Tech Specs | |
| Client Name: <u>CoR CHA N</u> | lm | Project #:_ | 60/12/07 |
| Courier: Fed Ex 🕅 UPS 🗆 USPS 🗆 Client 🗆 | Commercial 🗆 Pa | ace 🗆 Other 🗆 | Optional |
| Tracking #: <u>8986 069/ 393</u> 0 | Pace Shipping Label L | Jsed? Yes 🗆 No 🗆 | Proj Due Date. Proj Name: Nel1 141 |
| Custody Seal on Cooler/Box Present: Yes 🔊 No | □ Seals intact: Y | ′es1%per No⊡ | Nb.] |
| Packing Material: Bubble Wrap X Bubble Ba | ags 🛛 🛛 🛛 Foam | None | Other 🛛 |
| Thermometer Used: 7-194 / T-194 T | pe of Ice: AVED Bli | ue None 🗆 Samples r | eceived on ice, cooling process has begun. |
| Cooler Temperature: | (circle | e one) Dat | te and initials of person examining |
| Temperature should be above freezing to 6°C | | | 12/13/11 1415 |
| Chain of Custody present: | Yes No N/A | 1 | |
| Chain of Custody filled out: | Pres INO IN/A | 2. | |
| Chain of Custody relinquished: | | 3. | , |
| Sampler name & signature on COC: | ₽Yes □No □N/A | 4. | • |
| Samples arrived within holding time: | Øres □No □N/A | 5. | |
| Short Hold Time analyses (<72hr): | □Yes ØNo □N/A | 6. | |
| Rush Turn Around Time requested: | Yes Mo N/A | 7. | |
| Sufficient volume: | D¢Yes □No □N/A | 8. | |
| Correct containers used: | ØYes □No □N/A | | |
| -Pace containers used: | ' ØYes □No □N/A | 9. | <i>'</i> |
| Containers intact: | Myes □No □N/A | 10 | · · · · · |
| Uppreserved 5035A soils frozen w/in 48hrs? | Yes No Zin/A | 11 | |
| Filtered volume received for dissolved tests? | ØPres □No ØN/A | 12 | |
| Sample labels match COC: | ØYes □No □N/A | | |
| -Includes date/time/ID/analyses Matrix | iter | 13. | |
| All containers needing preservation have been checked. | | | · · · |
| All containers needing preservation are found to be in | | 14 | |
| Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), | | Initial when | Lot # of added |
| Phenolics Trip Blank present: | | completed UVD | preservative |
| Pace Trip Blank lot # (if purchased): | | 15 | |
| Headspace in VOA vials (>6mm): | □Yes ZNo □N/A | | |
| | | 16 | |
| Project sampled in USDA Regulated Area: | OYes No 21/1/A | 17. List State: | |
| Client Notification/ Resolution: | OC to Client? V | N) Field Data Board | ired? Y / N |
| Person Contacted: | ate/Time: | | Temp Log: Record start and finish times |
| Comments/ Resolution: | | | when unpacking cooler, if >20 min, recheck sample temps. |
| · · · · · · · · · · · · · · · · · · · | ······································ | | Start: 14/5 Start: |
| | | ······ | End: 1920 End: |
| Project Manager Review: | | Date: | Temp: Temp: |

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

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