3R - 090

GWMR

JUN 2013

2012 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

315 Johnstone Avenue

Bartlesville, OK, 74004

JUNE 2013
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1.0 INTRODUCTION

This report presents the results of quarterly groundwater monitoring events conducted by Conestoga-Rovers & Associates (CRA) on March 7, 2012, June 4, 2012, September 20, 2012, and December 28, 2012 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 BACKGROUND

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, and 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).

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

2.0 GROUNDWATER MONITORING METHODOLOGY AND ANALYTICAL RESULTS

2.1 GROUNDWATER MONITORING METHODOLOGY

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 2012 quarterly sampling events are presented as **Figures 4, 5, 6** and **7,** respectively.

Hydrographs illustrating groundwater level fluctuations since March 2004 in Monitor Wells MW-5 and MW-6 are presented as **Figure 8** and **Figure 9**, 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**). Additionally, there is an irrigation ditch to the east of the site which may also influence groundwater gradient. Annual variation in groundwater elevation fluctuates approximately 18 feet over the course of a year. Groundwater flow direction at the site also varies in direction from south to southeast.

Groundwater Sampling

Groundwater samples were collected from Monitor Wells MW-4, MW-5 and MW-6 during the 2012 sampling events. Approximately three well volumes were purged from each monitor well with a dedicated, polyethylene, 1.5-inch, disposable bailer prior to sampling or monitor wells were bailed dry and sampled following recharge. 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, KS.

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.

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.

March 2012

Benzene

- The NMWQCC domestic water supply groundwater quality standard for benzene is 0.01 milligrams per liter (mg/L). The groundwater sample collected in March 2012 from Monitor Well MW-6 exceeded this standard with a concentration of 0.0477 mg/L.

Dissolved Iron

- The groundwater quality standard for dissolved iron is 1.0 mg/L. The groundwater sample collected in March 2012 from Monitor Well MW-6 was found to contain dissolved iron at a concentration of 22.50 mg/L.

June 2012

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 2012 from Monitor Well MW-6 exceeded this standard with a concentration of 0.649 mg/L.

Dissolved Iron

- The groundwater quality standard for dissolved iron is 1.0 mg/L. The groundwater samples collected in June 2012 from Monitor Wells MW-4 and MW-6 contained dissolved iron at concentrations of 1.17 mg/L and 19.20 mg/L, respectively.

September 2012

Benzene

- The NMWQCC domestic water supply groundwater quality standard for benzene is 0.01 milligrams per liter (mg/L). The groundwater sample collected in September 2012 from Monitor Well MW-6 exceeded this standard with a concentration of 0.266 mg/L.

Dissolved Iron

- The groundwater quality standard for dissolved iron is 1.0 mg/L. The groundwater sample collected in September 2012 from Monitor Well MW-6 contained dissolved iron at a concentration of 9.53 mg/L.

December 2012

Benzene

- The NMWQCC domestic water supply groundwater quality standard for benzene is 0.01 milligrams per liter (mg/L). The groundwater sample collected in December 2012 from Monitor Well MW-6 exceeded this standard with a concentration of 0.319 mg/L.

Dissolved Iron

- The groundwater quality standard for dissolved iron is 1.0 mg/L. The groundwater sample collected in December 2012 from Monitor Well MW-6 contained dissolved iron at a concentration of 8.06 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 10**.

Benzene concentration maps for 2012 quarterly sampling events are presented as **Figures 11, 12, 13** and **14**, 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 2012 quarterly 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.

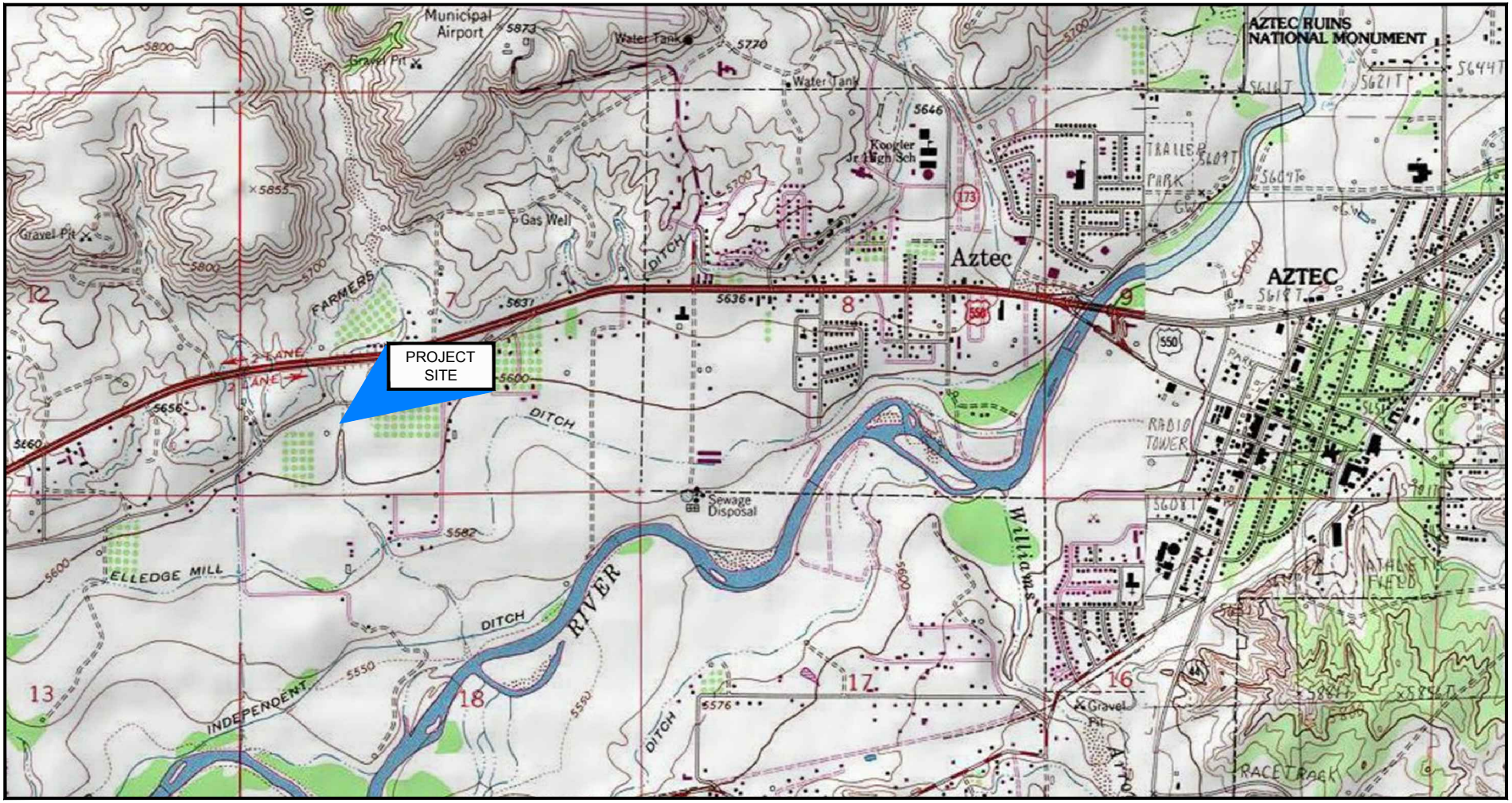
All Site monitor wells will be gauged quarterly. Monitor Wells MW-4, MW-5, and MW-6 will be sampled when possible due to the fluctuating groundwater levels at the Site.

In addition to future groundwater sampling at the site, CRA recommends the installation of additional monitor wells to further delineate groundwater impacts associated with Monitor Well MW-6. A total of three additional monitor wells are being recommended with location of the wells to the west, south, and southeast of MW-6. Proposed boring locations for additional monitor well installation are presented on **Figure 15**.

4.0 REFERENCES

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

FIGURES



SOURCE: USGS 7.5 MINUTE QUADS
"FLORA VISTA AND AZTEC, NEW MEXICO"

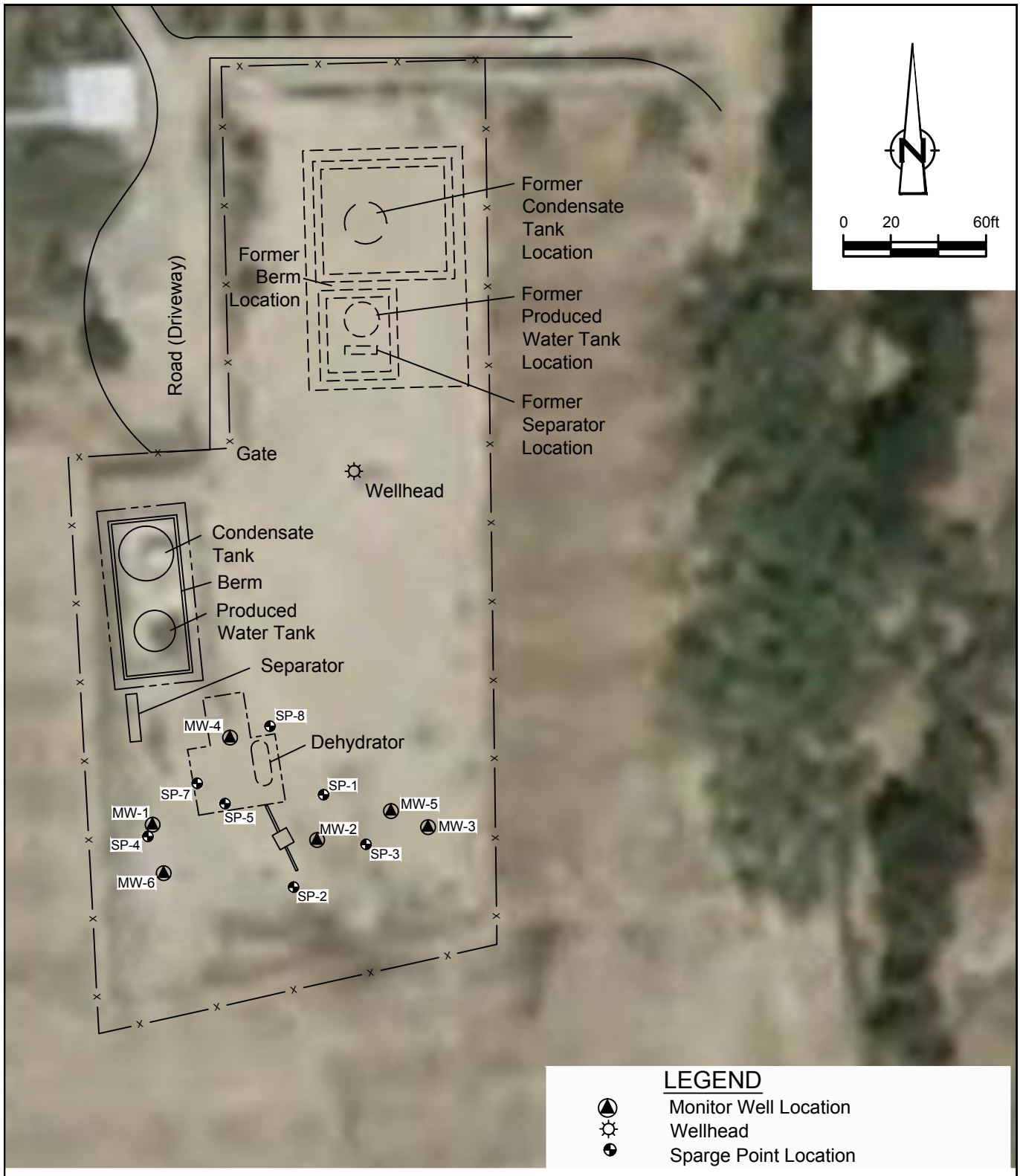
N

0 1000 2000ft

Figure 1

SITE VICINITY MAP
NELL HALL NO. 1 NATURAL GAS WELL SITE
SECTION 07, T30N-R11W, SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

074941-95(003)GN-DL004 DEC 7/2011



ConocoPhillips high resolution aerial imagery 2008.

Figure 2

SITE PLAN
NELL HALL NO. 1 NATURAL GAS WELL SITE
SECTION 07, T30N-R11W, SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

074941-95(003)GN-DL001 DEC 7/2011

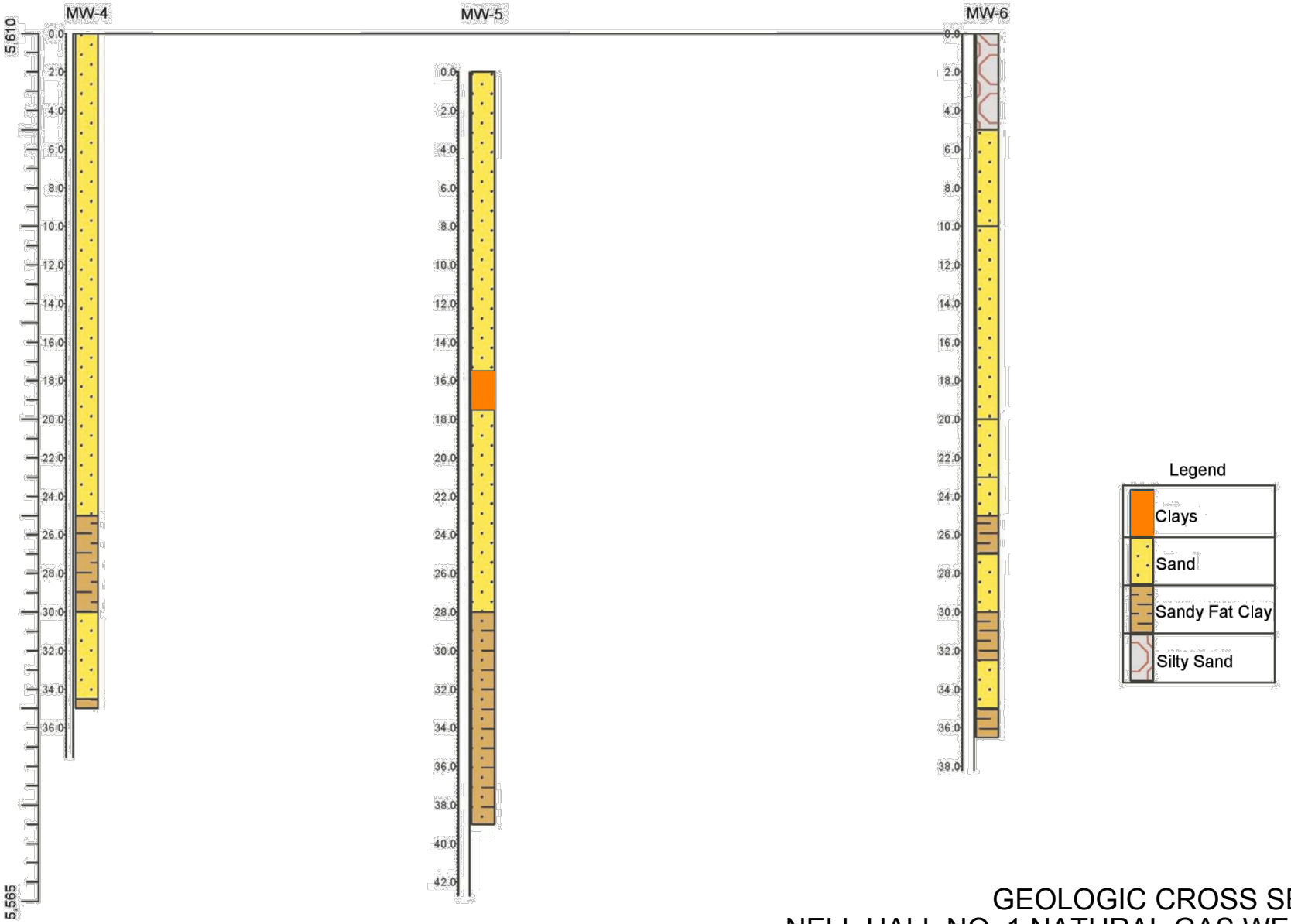


Figure 3

GEOLOGIC CROSS SECTION
NELL HALL NO. 1 NATURAL GAS WELL SITE
SECTION 07, T30N-R11W, SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

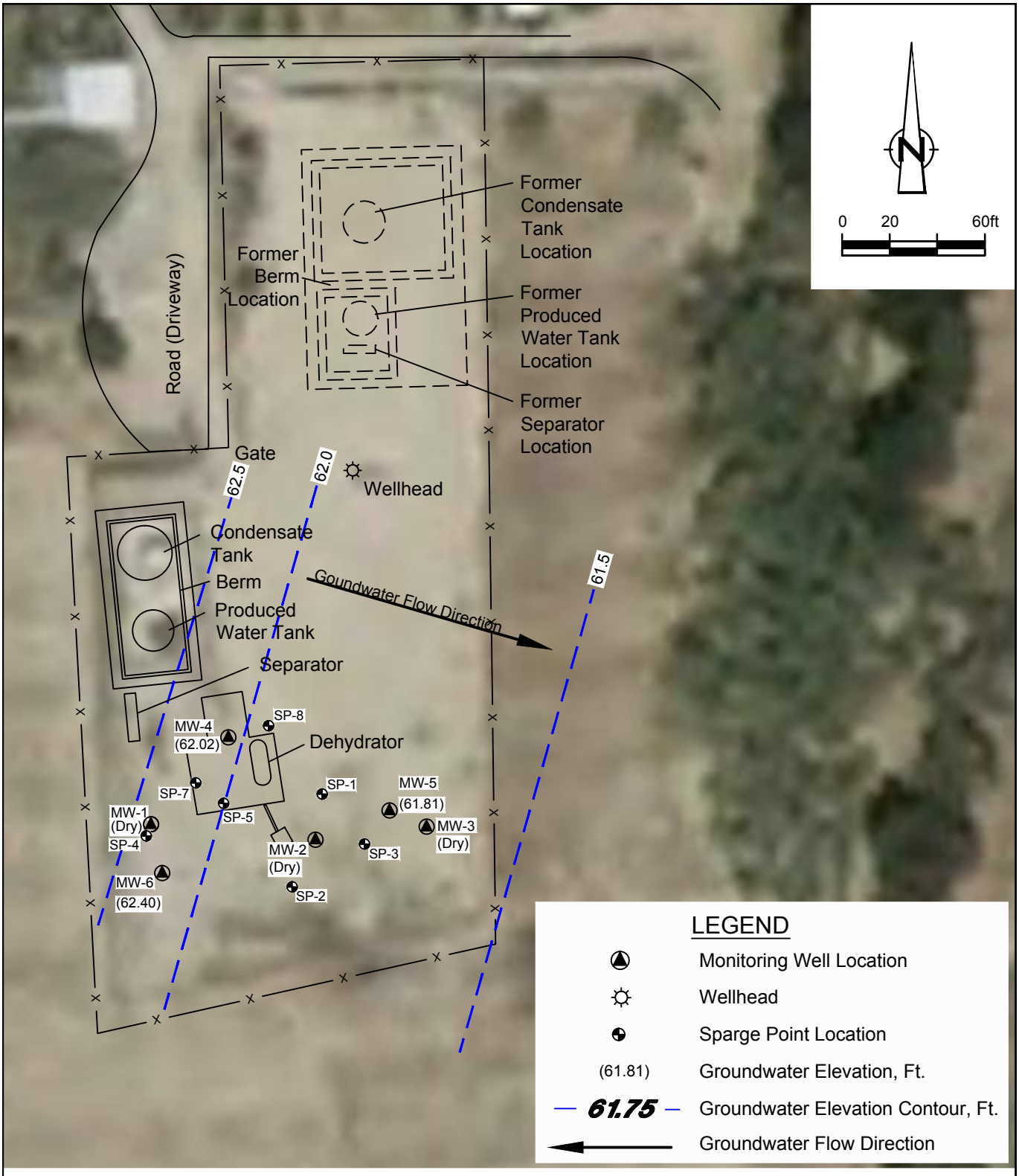


Figure 4

MARCH 2012 GROUNDWATER POTENTIOMETRIC SURFACE MAP
NELL HALL NO. 1 NATURAL GAS WELL SITE
SECTION 07, T30N-R11W, SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

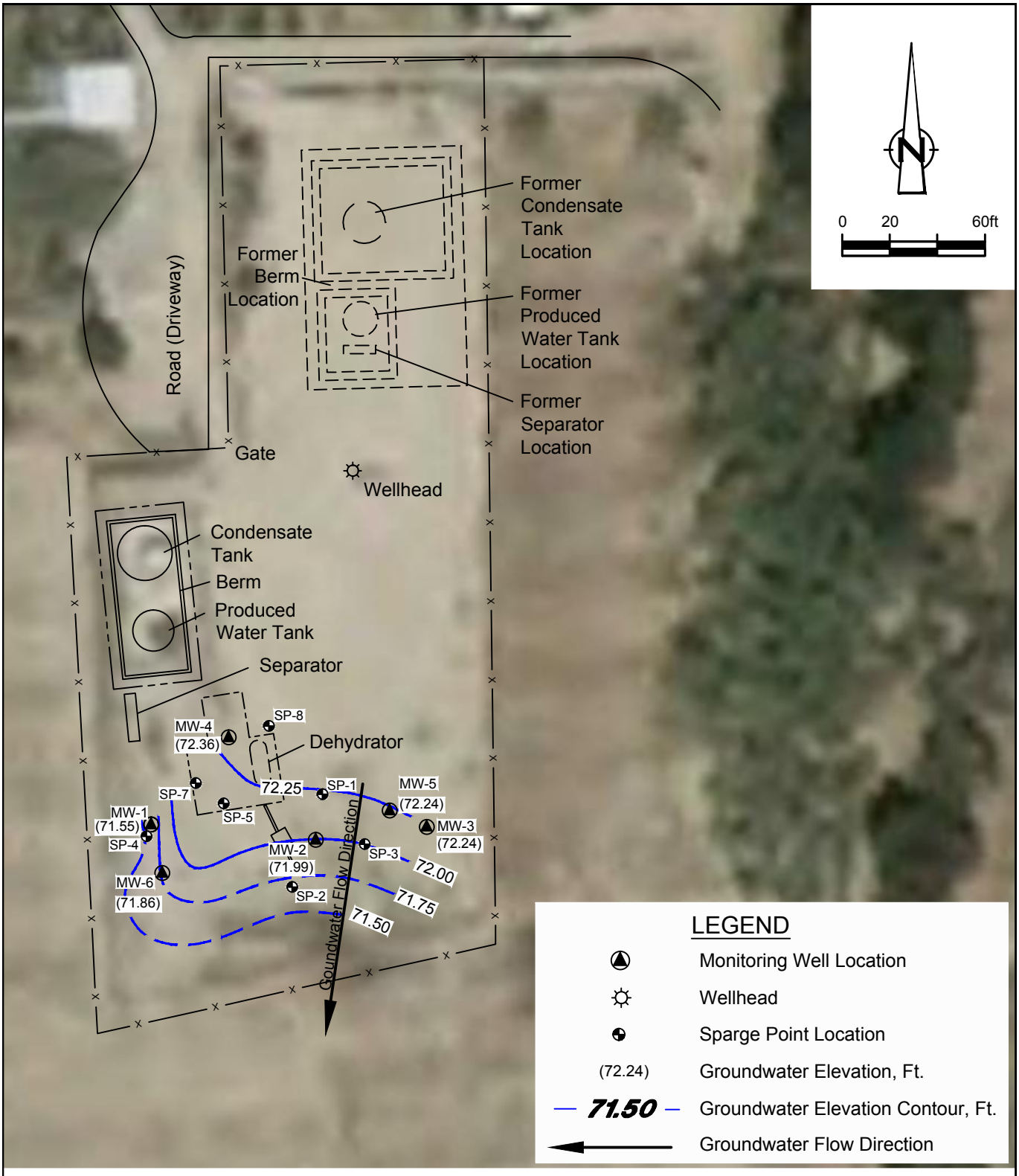


Figure 5

JUNE 2012 GROUNDWATER POTENTIOMETRIC SURFACE MAP
NELL HALL NO. 1 NATURAL GAS WELL SITE
SECTION 07, T30N-R11W, SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

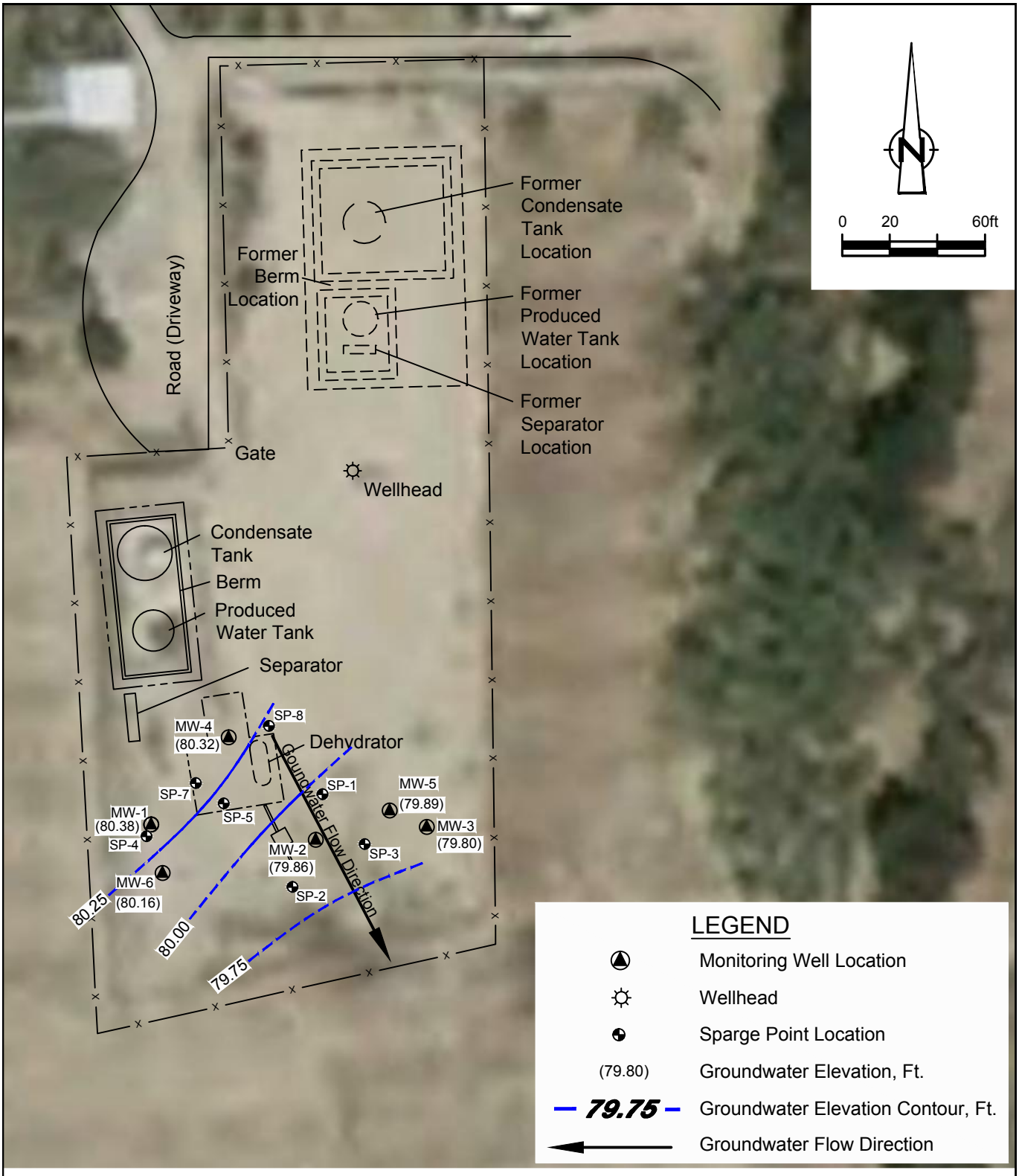


Figure 6

SEPTEMBER 2012 GROUNDWATER POTENTIOMETRIC SURFACE MAP
NELL HALL NO. 1 NATURAL GAS WELL SITE
SECTION 07, T30N-R11W, SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

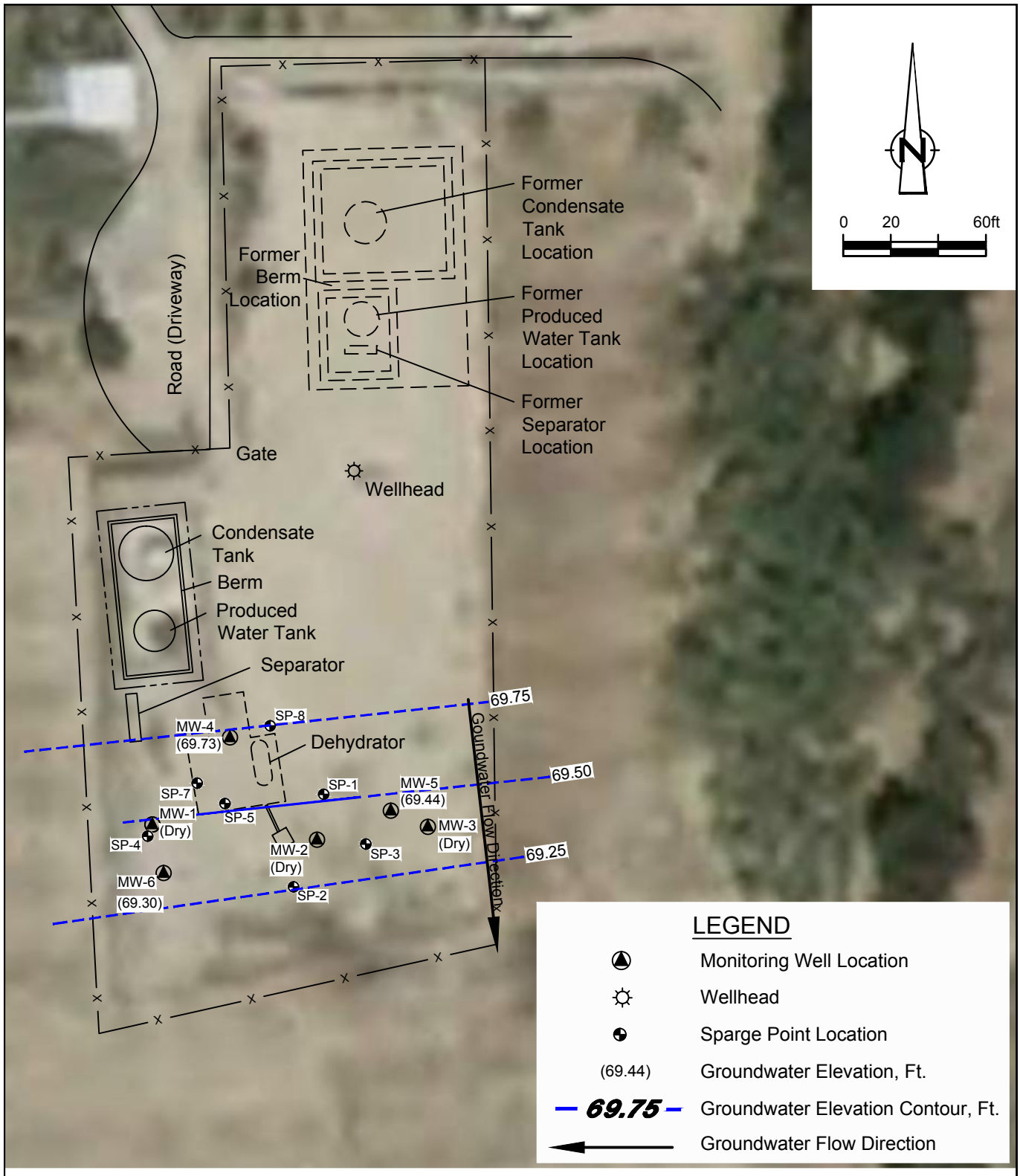


Figure 7

DECEMBER 2012 GROUNDWATER POTENTIOMETRIC SURFACE MAP
NELL HALL NO. 1 NATURAL GAS WELL SITE
SECTION 07, T30N-R11W, SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

Figure 8
MW-5 Hydrograph (March 2004 - December 2012)
ConocoPhillips Company Nell Hall No. 1 Site

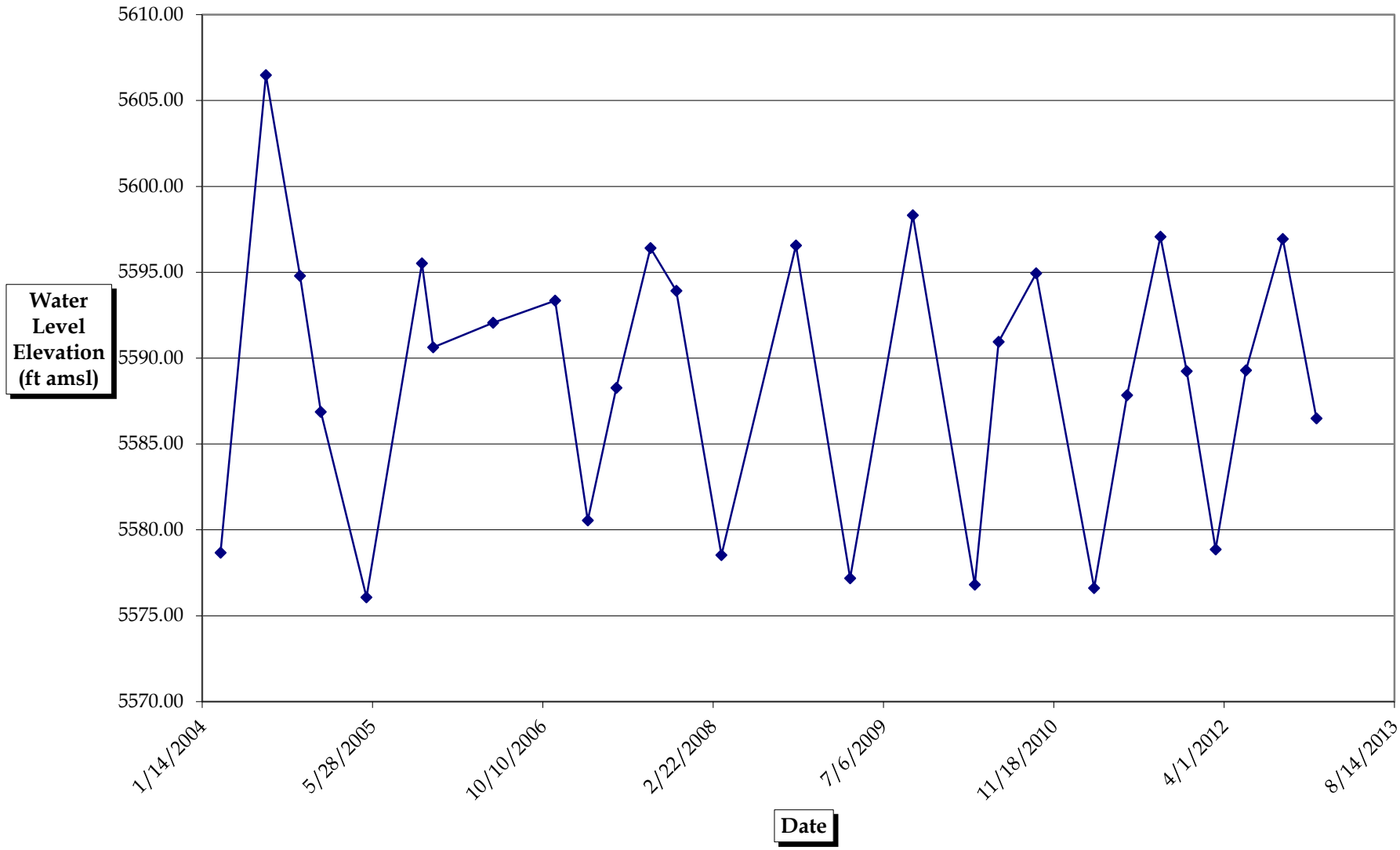


Figure 9
MW-6 Hydrograph (March 2004 - December 2012)
ConocoPhillips Company Nell Hall No. 1 Site

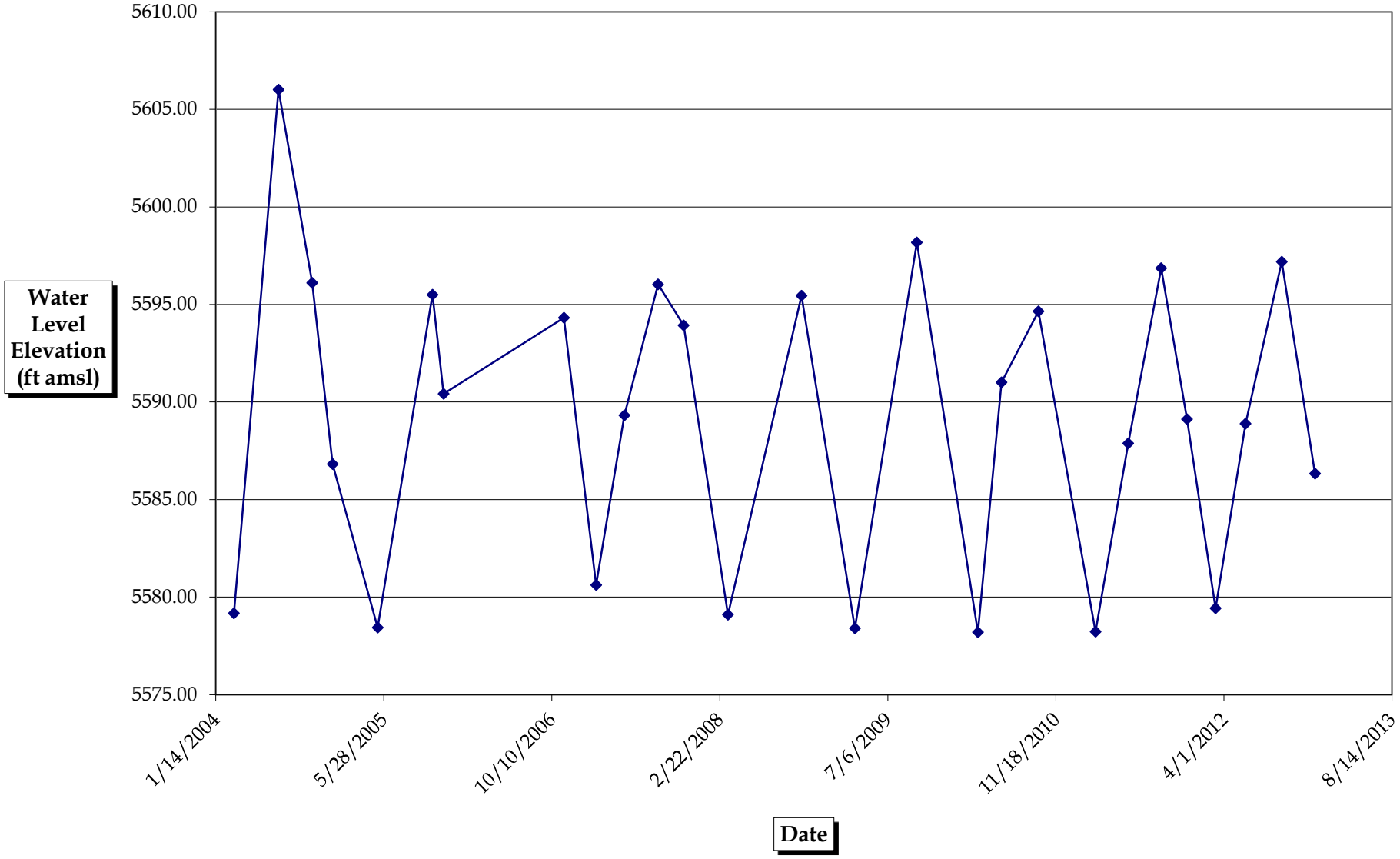
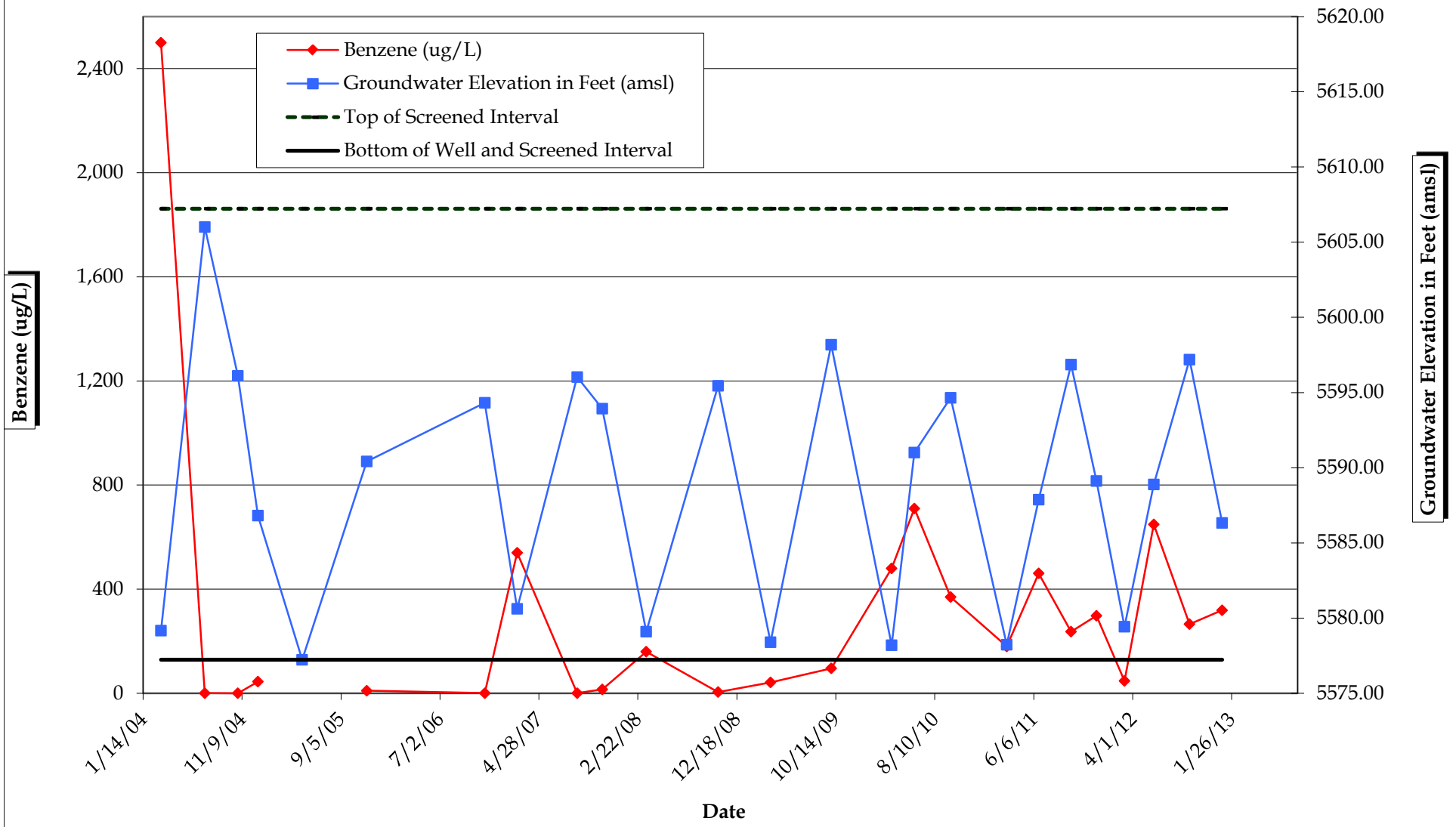


Figure 10
Graph of Benzene Concentrations and Groundwater Elevations in MW-6
ConocoPhillips Company Nell Hall No. 1 Site



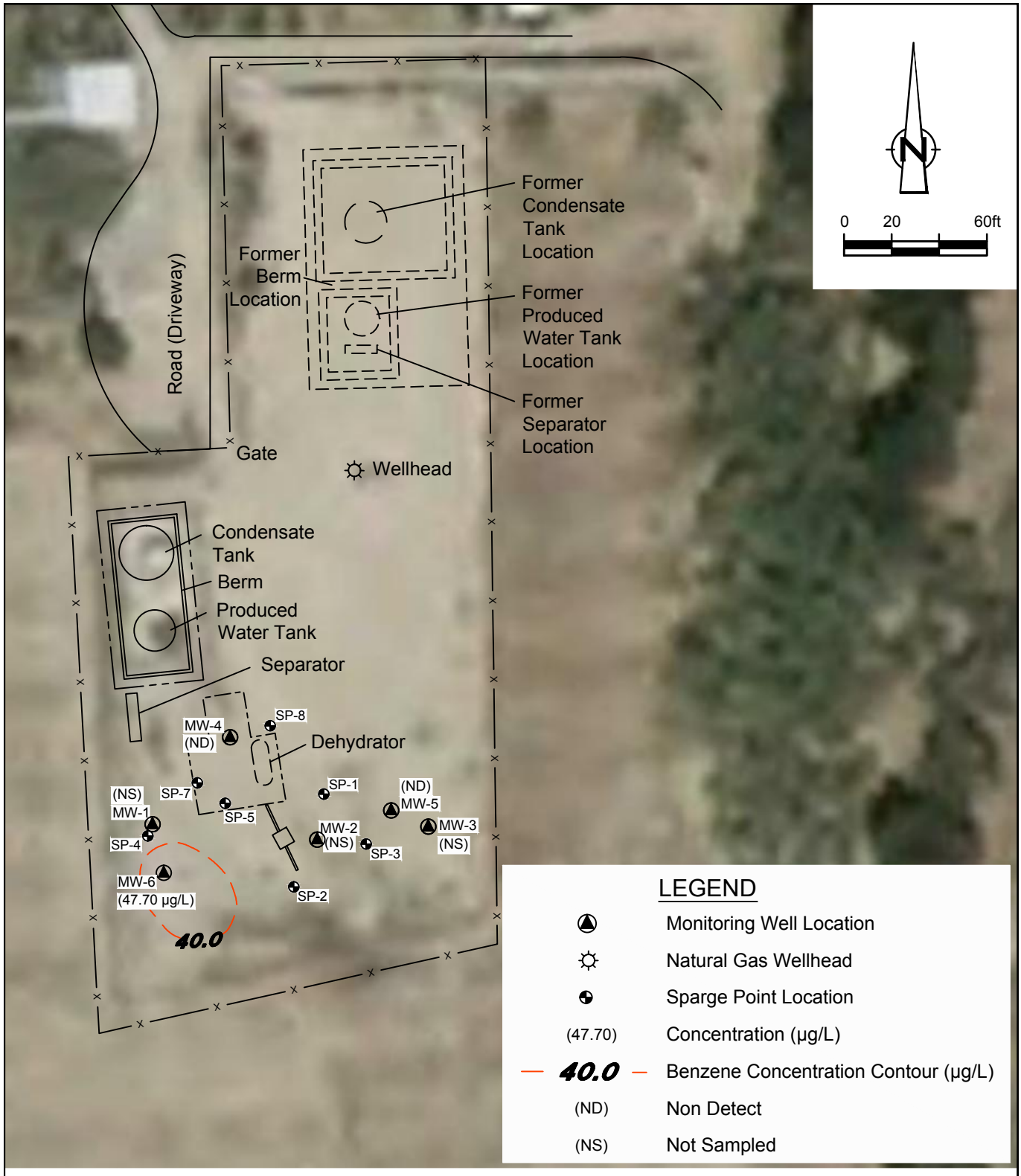


Figure 11

MARCH 2012 BENZENE CONCENTRATION MAP
NELL HALL NO. 1 NATURAL GAS WELL SITE
SECTION 07, T30N-R11W, SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

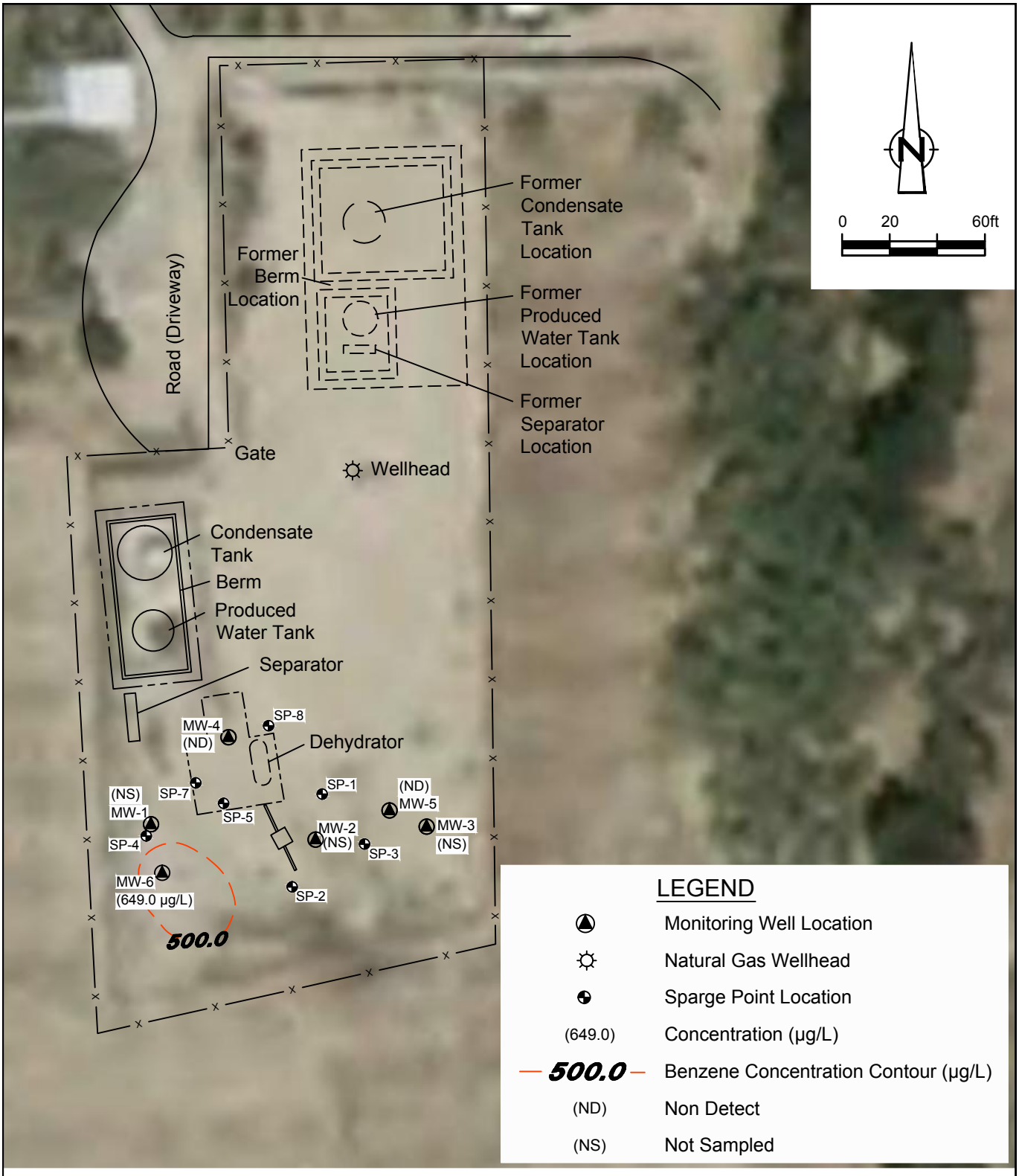


Figure 12

JUNE 2012 BENZENE CONCENTRATION MAP
NELL HALL NO. 1 NATURAL GAS WELL SITE
SECTION 07, T30N-R11W, SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

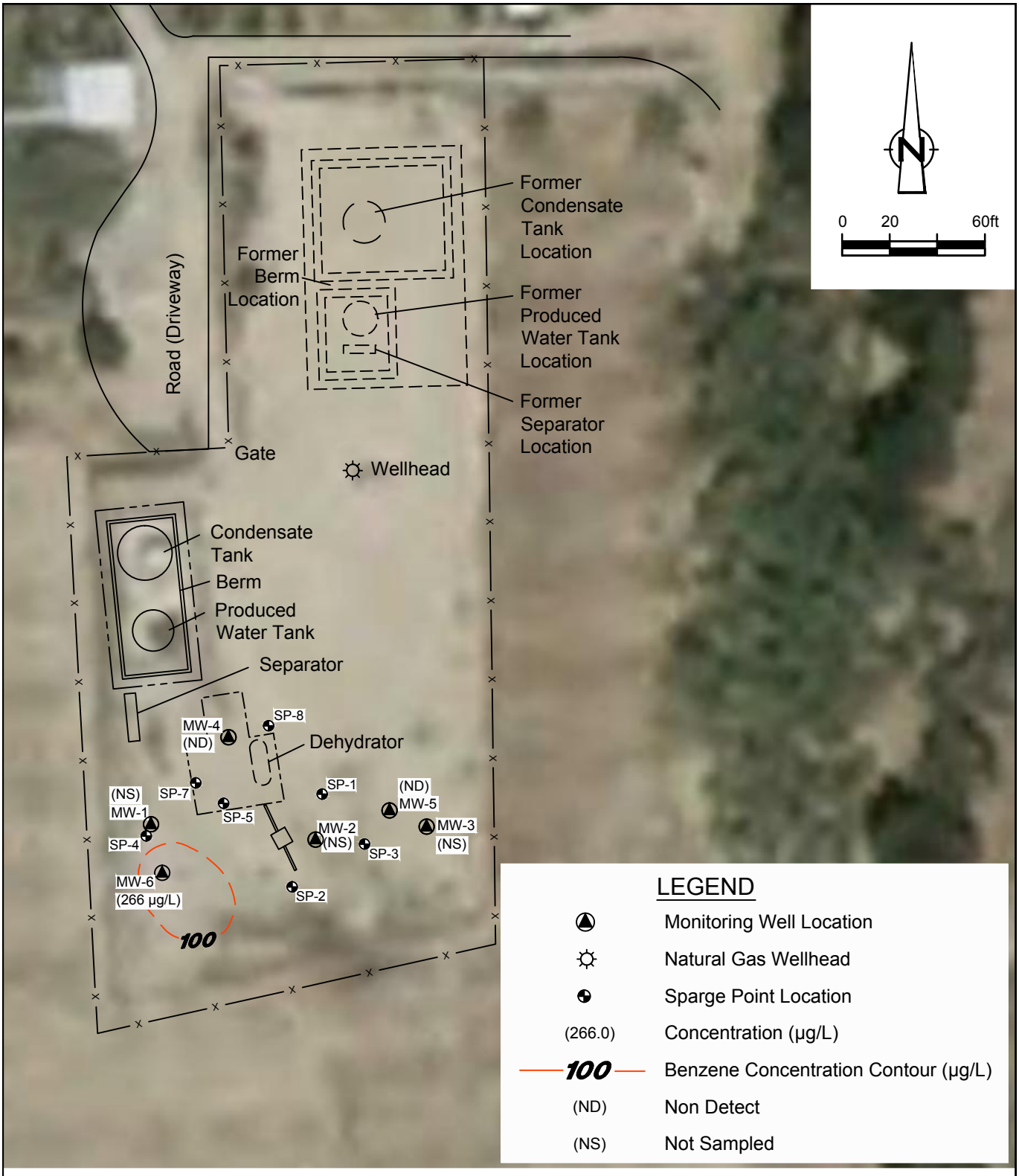


Figure 13

SEPTEMBER 2012 BENZENE CONCENTRATION MAP
NELL HALL NO. 1 NATURAL GAS WELL SITE
SECTION 07, T30N-R11W, SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

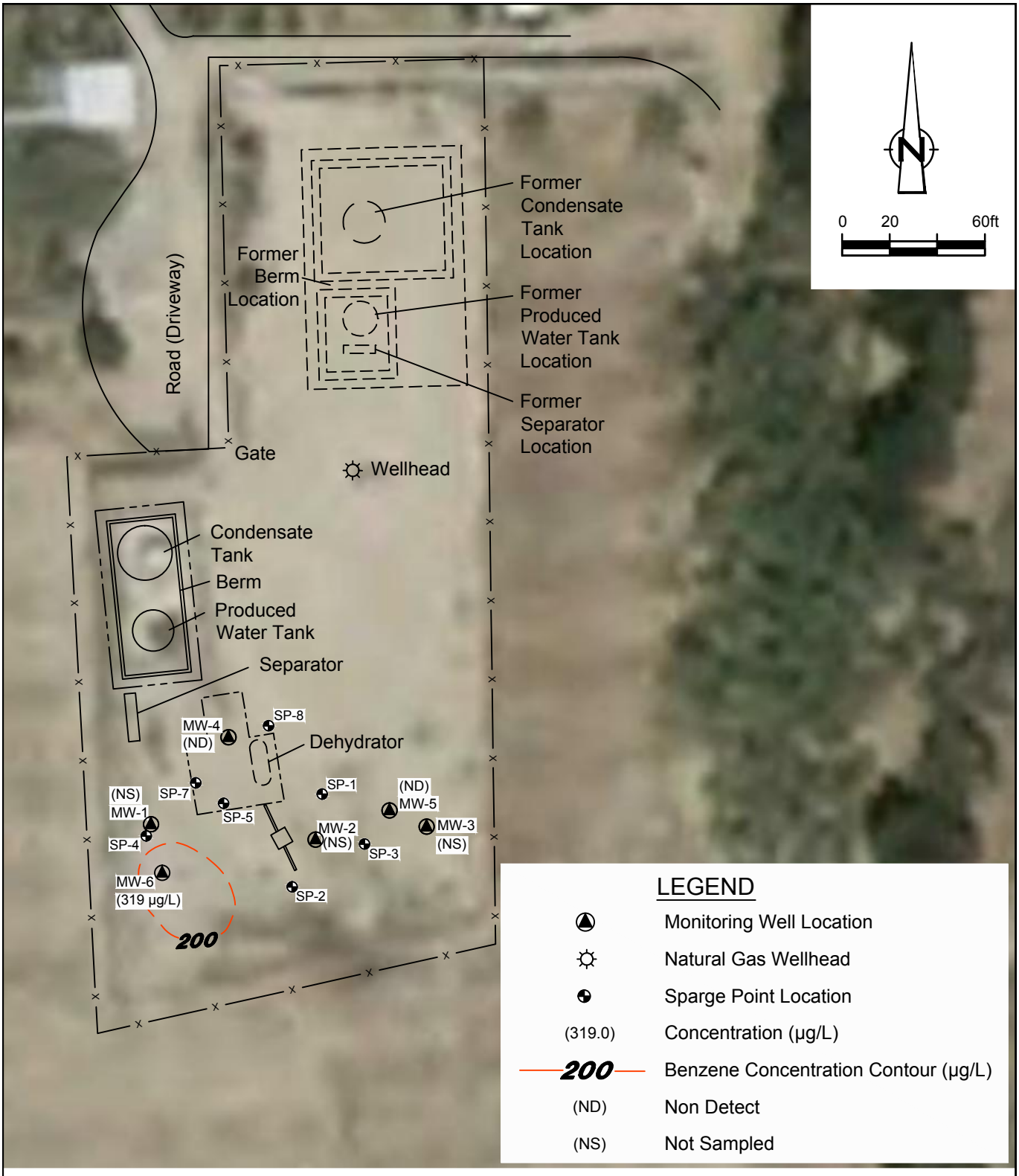
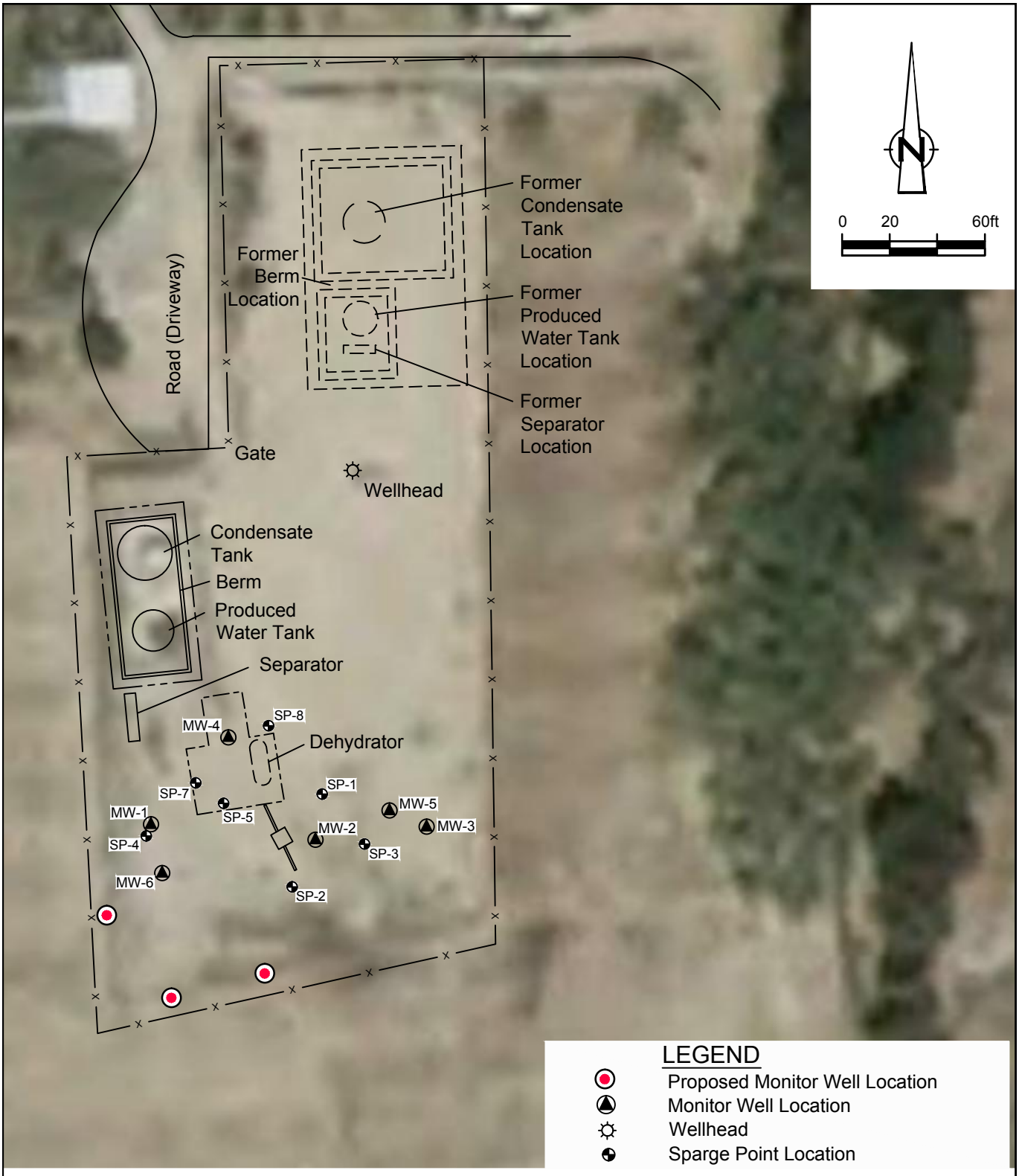


Figure 14

DECEMBER 2012 BENZENE CONCENTRATION MAP
NELL HALL NO. 1 NATURAL GAS WELL SITE
SECTION 07, T30N-R11W, SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company



ConocoPhillips high resolution aerial imagery 2008.

Figure 15

PROPOSED MONITOR WELL LOCATION MAP
NELL HALL NO. 1 NATURAL GAS WELL SITE
SECTION 07, T30N-R11W, SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

TABLES

TABLE 1

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

Date/Time Period	*Event/Action*	*Description/Comments*
February 20, 1961	Well Spudded	Southwest Production Company spudded the Nell Hall No. 1 natural gas production well.
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	Monitor Well Sampling	Semi-annual sampling of monitor wells MW-4, MW-5, and MW-6.
November 15, 2006	Monitor Well Sampling	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.

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.
March 7, 2012	Monitor Well Sampling	Groundwater samples collected from MW-4, MW-5 and MW-6. Groundwater sampled from MW-6 indicated a benzene concentration of 0.0477 mg/L, and a dissolved iron concentration of 22.50 mg/L.
June 4, 2012	Monitor Well Sampling	Groundwater samples collected from MW-4, MW-5 and MW-6. Groundwater sampled from MW-6 indicated a benzene concentration of 0.649 mg/L, and a dissolved iron concentration of 19.2 mg/L. The sample from MW-4 indicated a dissolved iron concentration of 1.17 mg/L.
September 20, 2012	Monitor Well Sampling	Groundwater samples collected from MW-4, MW-5 and MW-6. Groundwater sampled from MW-6 indicated a benzene concentration of 0.266 mg/L, and a dissolved iron concentration of 9.53 mg/L.
December 28, 2012	Monitor Well Sampling	Groundwater samples collected from MW-4, MW-5 and MW-6. Groundwater sampled from MW-6 indicated a benzene concentration of 0.319 mg/L, and a dissolved iron concentration of 8.06 mg/L.

TABLE 2

MONITOR WELL SPECIFICATIONS AND GROUNDWATER ELEVATIONS
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*
MW-1	28.55	5615.72	Unknown	5/10/2005	DRY	NA
				10/20/2005	19.25	5596.47
				11/22/2005	24.15	5591.57
				5/17/2006	NM	NM
				11/15/2006	21.40	5594.32
				2/19/2007	DRY	NA
				5/14/2007	24.85	5590.87
				8/22/2007	24.61	5591.11
				11/6/2007	20.87	5594.85
				3/17/2008	DRY	NA
				10/22/2008	19.38	5596.34
				3/30/2009	28.25	5587.47
				9/30/2009	16.56	5599.16
				3/31/2010	DRY	NA
				6/9/2010	24.16	5591.56
		97.95		9/27/2010	20.00	77.95
				3/16/2011	DRY	NA
				6/21/2011	26.80	71.15
				9/27/2011	17.85	80.10
				12/13/2011	25.39	72.56
				3/7/2012	DRY	NA
				6/4/2012	26.40	71.55
				9/20/2012	17.57	80.38
				12/28/2012	DRY	NA
MW-2	27.32	5614.94	Unknown	5/10/2005	DRY	NA
				10/20/2005	18.81	5596.13
				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
				8/22/2007	18.03	5596.91
				11/6/2007	20.43	5594.51
				3/17/2008	DRY	NA
				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
		97.16		9/27/2010	19.42	77.74
				3/16/2011	DRY	NA
				6/21/2011	26.43	70.73
				9/27/2011	17.28	79.88
				12/13/2011	25.10	72.06
				3/7/2012	DRY	NA
				6/4/2012	25.17	71.99
				9/20/2012	17.30	79.86
				12/28/2012	DRY	NA
MW-3	27.45	5615.53	Unknown	5/10/2005	DRY	NA
				10/20/2005	19.36	5596.17
				11/22/2005	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
				8/22/2007	18.36	5597.17
				11/6/2007	20.95	5594.58
				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
		97.77		9/27/2010	19.93	77.84
				3/16/2011	DRY	NA
				6/21/2011	27.06	70.71
				9/27/2011	17.82	79.95
				12/13/2011	25.66	72.11
				3/7/2012	DRY	NA
				6/4/2012	25.53	72.24
				9/20/2012	17.97	79.80
				12/28/2012	DRY	NA

TABLE 2

MONITOR WELL SPECIFICATIONS AND GROUNDWATER ELEVATIONS
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*
MW-4	37.57	5614.87	7.57 - 37.57	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
				2/19/2007	34.40	5580.47
				5/14/2007	27.56	5587.31
				8/22/2007	18.18	5596.69
				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
		97.75		9/27/2010	19.61	78.14
				3/16/2011	DRY	NA
				6/21/2011	26.79	70.96
				9/27/2011	17.47	80.28
				12/13/2011	25.35	72.40
				3/7/2012	35.73	62.02
				6/4/2012	25.39	72.36
				9/20/2012	17.43	80.32
				12/28/2012	28.02	69.73
MW-5	42.7	5615.86	7.7 - 42.7	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
				11/22/2005	25.23	5590.63
				5/17/2006	23.80	5592.06
				11/15/2006	22.51	5593.35
				2/19/2007	35.31	5580.55
				5/14/2007	27.59	5588.27
				8/22/2007	19.45	5596.41
				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
		98.81		9/27/2010	20.92	77.89
				3/16/2011	39.25	59.56
				6/21/2011	28.02	70.79
				9/27/2011	18.79	80.02
				12/13/2011	26.62	72.19
				3/7/2012	37.00	61.81
				6/4/2012	26.57	72.24
				9/20/2012	18.92	79.89
				12/28/2012	29.37	69.44

TABLE 2

MONITOR WELL SPECIFICATIONS AND GROUNDWATER ELEVATIONS
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*
MW-6	38.21	5615.44	8.21 - 38.21	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
				2/19/2007	34.82	5580.62
				5/14/2007	26.12	5589.32
				8/22/2007	19.41	5596.03
				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
		98.41		9/27/2010	20.79	77.62
				3/16/2011	DRY	NA
				6/21/2011	27.56	70.85
				9/27/2011	18.58	79.83
				12/13/2011	26.32	72.09
				3/7/2012	36.01	62.40
				6/4/2012	26.55	71.86
				9/20/2012	18.25	80.16
				12/28/2012	29.11	69.30

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

TABLE 3

GROUNDWATER ANALYTICAL RESULTS SUMMARY
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	MW-4	3/8/2004	(orig)	**0.013**	0.012	0.064	**1.4**	--	--	--
	MW-4	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	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
	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	--
	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	--
	GW-074941-3712-CB-MW-4	3/7/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	< 0.25	--
	GW-074941-3712-CB-DUP	3/7/2012	(Duplicate)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	--
	GW-074941-060412-CB-MW-4	6/4/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	**1.17**	--
	GW-074941-092012-JP-MW-4	9/20/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	< 0.25	--
	GW-074941-122812-JMK-MW4	12/28/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	0.748	--
	GW-074941-122812-JMK-DUP	12/28/2012	(Duplicate)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	--

TABLE 3

GROUNDWATER ANALYTICAL RESULTS SUMMARY
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	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	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	--
	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	--	< 0.05	--
	GW-074941-3712-CB-MW-5	3/7/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	< 0.05	--
	GW-074941-060412-CB-MW-5	6/4/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	< 0.05	--
	GW-074941-092012-JP-MW-5	9/20/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	< 0.05	--
	GW-074941-122812-JMK-MW5	12/28/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	< 0.05	--

TABLE 3

GROUNDWATER ANALYTICAL RESULTS SUMMARY
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	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
	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	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**	--
	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	--	**--**	--
	GW-074941-3712-CB-MW-6	3/7/2012	(orig)	**0.0477**	< 0.001	0.0073	0.0192	--	**22.5**	--
	GW-074941-060412-CB-MW-6	6/4/2012	(orig)	**0.649**	< 0.01	0.309	0.314	--	**19.2**	--
	GW-074941-060412-CB-DUP	6/4/2012	(Duplicate)	**0.62**	< 0.01	0.267	0.266	--	**--**	--
	GW-074941-092012-JP-MW-6	9/20/2012	(orig)	**0.266**	< 0.005	0.065	0.0355	--	**9.53**	--
	GW-074941-092012-JP-DUP	9/20/2012	(Duplicate)	**0.282**	< 0.005	0.0634	0.0348	--	--	--
	GW-074941-122812-JMK-MW6	12/28/2012	(orig)	**0.319**	< 0.005	0.0764	0.0452	--	**8.06**	--
NMWQCC Groundwater Quality Standards				**0.01**	**0.75**	**0.75**	**0.62**	**600**	**1**	**10**

Explanation
mg/L = milligrams per liter (parts per million)
NA = Not Analyzed
NMWQCC = New Mexico Water Quality Control Commission

APPENDIX A

2012 QUARTERLY GROUNDWATER SAMPLING FIELD FORMS

WELL SAMPLING FIELD INFORMATION FORM

TE/PROJECT NAME: Nell Hall No. 1 **JOB#** 074941

SAMPLE ID: GW-074941-3712-CB-MW-4 **WELL#** MW-4

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
3.7.12	3.7.12	1735	0.31	1.0

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER	35.73	(feet)	WELL ELEVATION	97.75	(feet)
WELL DEPTH	37.69	(feet)	GROUNDWATER ELEVATION	62.02	(feet)

TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
15.35 (°C)	6.87 (std)	0.565 (g/L)	709 (µS/cm)	-62.6 (mV)	0.5 (gal)
15.31 (°C)	6.90 (std)	0.563 (g/L)	706 (µS/cm)	-58.4 (mV)	0.75 (gal)
15.37 (°C)	6.91 (std)	0.561 (g/L)	705 (µS/cm)	-56.9 (mV)	1.00 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: Particulates, cloudy ODOR: slight COLOR: H. gray SHEEN Y/N N

WEATHER CONDITIONS: TEMPERATURE 50 WINDY Y/N N PRECIPITATION Y/N (IF Y TYPE) N

SPECIFIC COMMENTS:

1.96 x .16 = 0.31 x3 = 0.94

Dup collected at 1740

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

DATE	PRINT	SIGNATURE
3.7.12	Cassie Brown	Cassie Brown

WELL SAMPLING FIELD INFORMATION FORM

ITE/PROJECT NAME: Nell Hall No. 1 **JOB#** 074941

SAMPLE ID: Cdw-074941-3712-CB-MW-5 **WELL#** MW-5

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
3.7.12	3.7.12	1745	0.92	2.75

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER 37.00 (feet) WELL ELEVATION 98.81 (feet)

WELL DEPTH 42.72 (feet) GROUNDWATER ELEVATION 61.81 (feet)

TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
15.10 (°C)	7.06 (std)	0.649 (g/L)	809 (µS/cm)	0.2 (mV)	2.25 (gal)
15.26 (°C)	7.09 (std)	0.644 (g/L)	806 (µS/cm)	20.5 (mV)	2.5 (gal)
15.25 (°C)	7.13 (std)	0.640 (g/L)	801 (µS/cm)	31.7 (mV)	2.75 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: slightly cloudy ODOR: none COLOR: tan SHEEN Y/(N)

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

SPECIFIC COMMENTS:

5.72 K .16 = 0.92 x 3 = 2.75

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

3.7.12 Jason Moss

DATE PRINT SIGNATURE

WELL SAMPLING FIELD INFORMATION FORM

TE/PROJECT NAME: Nell Hall No. 1 JOB# 074941

SAMPLE ID: GW-074941-3812-CB-MW-6 WELL# MW-6

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
3.7.12	3.8.12	1645	0.32	0.6

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER 36.01 (feet) WELL ELEVATION 98.41 (feet)

WELL DEPTH 38.03 (feet) GROUNDWATER ELEVATION 62.40 (feet)

TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
14.78 (°C)	6.54 (std)	0.707 (g/L)	873 (µS/cm)	-57.9 (mV)	0.5 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: slightly cloudy ODOR: hydrocarbon COLOR: clear SHEEN Y/(N)

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

SPECIFIC COMMENTS:

2.02 x .16 = .32 x 3 = 0.96

Well bailed dry on 3.7.12

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

3.8.12 Jason Hoss

DATE PRINT SIGNATURE

WELL SAMPLING FIELD INFORMATION FORM

ITE/PROJECT NAME: Nell Hall No. 1 JOB# 074941

SAMPLE ID: GW-074941-20012-CB-MW-1 WELL# MW-4

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
6·4·12	6·4·12	1805	1.98	6.0

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER 25.39 (feet) WELL ELEVATION 97.75 (feet)

WELL DEPTH 37.78 (feet) GROUNDWATER ELEVATION 72.36 (feet)

TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
15.78 (°C)	6.72 (std)	0.630 (g/L)	799 (µS/cm)	-39.8 (mV)	5.0 (gal)
15.79 (°C)	6.79 (std)	0.631 (g/L)	800 (µS/cm)	-54.0 (mV)	5.5 (gal)
15.74 (°C)	6.69 (std)	0.633 (g/L)	802 (µS/cm)	-56.6 (mV)	6.0 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: clear w/white particulates ODOR: None COLOR: clear/white SHEEN Y/(N)

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

SPECIFIC COMMENTS:

12.33 x .16 = 1.98 x 3 = 5.94

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

6·4·12 Cassi Brown Cassi Brown

DATE PRINT SIGNATURE

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: Nell Hall No. 1 JOB# 071941

SAMPLE ID: GW-071941-060412-CB-MW-5 WELL# MW-5

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
6/4/12	6/4/12	1740	2.6	8.0

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER 26.57 (feet) WELL ELEVATION 98.81 (feet)

WELL DEPTH 92.92 (feet) GROUNDWATER ELEVATION 72.24 (feet)

TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
15.16 (°C)	6.76 (std)	0.625 (g/L)	780 (µS/cm)	9.3 (mV)	7.0 (gal)
15.26 (°C)	6.69 (std)	0.623 (g/L)	780 (µS/cm)	21.7 (mV)	7.5 (gal)
15.19 (°C)	6.74 (std)	0.623 (g/L)	779 (µS/cm)	28.2 (mV)	8.0 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy ODOR: none COLOR: clear/turbid SHEEN Y/N No

WEATHER CONDITIONS: TEMPERATURE ex WINDY Y/N breezy PRECIPITATION Y/N (IF Y TYPE) No

SPECIFIC COMMENTS:

16.35x1.6 = 2.6x3 = 7.84

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

6.4.12 DATE | Cassie Brown PRINT | Cassie Brown SIGNATURE

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: Nell Hall No. 1 JOB# 074941

SAMPLE ID: GW-074941-060412-CB-MW-6 WELL# MW-6

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
6/4/12	6/4/12	1725	1.80	6.25

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER 26.55 (feet) WELL ELEVATION 98.41 (feet)

WELL DEPTH 38.23 (feet) GROUNDWATER ELEVATION 71.86 (feet)

TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
15.82 (°C)	6.02 (std)	0.733 (g/L)	930 (µS/cm)	-57.4 (mV)	5.5 (gal)
15.48 (°C)	6.24 (std)	0.711 (g/L)	895 (µS/cm)	-65.1 (mV)	6.25 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: slightly cloudy ODOR: hydrocarbon/5.0 COLOR: clear SHEEN Y/(N)

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

SPECIFIC COMMENTS:

11.68x.16= 1.80x3=(5.6)

Dup @ 1730

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

6/4/12 DATE Corbin Brown PRINT Corbin Brown SIGNATURE

WELL SAMPLING FIELD INFORMATION FORM

TE/PROJECT NAME: Nell Hall No. 1 JOB# 074941

SAMPLE ID: GW-074941-092012-JP-MW-4 WELL# ~~MW-5~~ MW-4

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
9.20.12	9.20.12	1800	3.25	10.0

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER 17.43 (feet) WELL ELEVATION 97.75 (feet)

WELL DEPTH 37.75 (feet) GROUNDWATER ELEVATION 80.32 (feet)

DO mg/L	TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
1.70	18.50 (°C)	7.02 (std)	0.720 (g/L)	970 (µS/cm)	-29.5 (mV)	9.0 (gal)
1.60	18.25 (°C)	7.00 (std)	0.703 (g/L)	941 (µS/cm)	-10.4 (mV)	9.5 (gal)
1.54	18.35 (°C)	6.96 (std)	0.714 (g/L)	958 (µS/cm)	4.6 (mV)	10.0 (gal)
	(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)
	(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: cloudy ODOR: None COLOR: slight orange SHEEN Y (N)

WEATHER CONDITIONS: TEMPERATURE ~75 WINDY Y (N) PRECIPITATION Y (N) (IF Y TYPE)

SPECIFIC COMMENTS:

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

9.20.12 Jason Ross

DATE PRINT SIGNATURE

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: Nell Hall No.1 JOB# 074941

SAMPLE ID: GW-074941-092012-SP-MW-5 WELL# ~~MW-4~~ MW-5

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
9.20.12	9.20.12	1735	3.83	12.25

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER 18.92 (feet) WELL ELEVATION 98.81 (feet)

WELL DEPTH 42.91 (feet) GROUNDWATER ELEVATION 79.89 (feet)

DO (mg/L)	TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
3.20	17.50 (°C)	6.81 (std)	0.867 (g/L)	1143 (µS/cm)	20.9 (mV)	11.75 (gal)
2.44	17.41 (°C)	6.84 (std)	0.890 (g/L)	1172 (µS/cm)	23.9 (mV)	12.00 (gal)
2.28	17.65 (°C)	6.85 (std)	0.863 (g/L)	1141 (µS/cm)	27.4 (mV)	12.25 (gal)
	(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)
	(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)

FIELD COMMENTS

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

WEATHER CONDITIONS: TEMPERATURE ~75° WINDY Y/N breezy PRECIPITATION Y/N (IF Y TYPE)

SPECIFIC COMMENTS:

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

9-20-12 Jason Plows

DATE PRINT SIGNATURE

WELL SAMPLING FIELD INFORMATION FORM

TE/PROJECT NAME: Nell Hall No. 1 JOB# 074941

SAMPLE ID: GW-074941-092012-JP-MW-6 WELL# MW-6

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
9.20.12	9.20.12	1730	3.22	10.0

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER 18.25 (feet) WELL ELEVATION 98.41 (feet)

WELL DEPTH 38.41 (feet) GROUNDWATER ELEVATION 80.16 (feet)

DO mg/L	TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
0.79	17.14 (°C)	6.03 (std)	1.155 (g/L)	1510 (µS/cm)	-91.5 (mV)	9.0 (gal)
0.82	16.99 (°C)	6.08 (std)	1.139 (g/L)	1486 (µS/cm)	-99.2 (mV)	9.5 (gal)
0.81	17.02 (°C)	6.13 (std)	1.147 (g/L)	1497 (µS/cm)	-104.3 (mV)	10.0 (gal)
	(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)
	(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)

FIELD COMMENTS

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

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

SPECIFIC COMMENTS:

Dup @ 1740

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

9.20.12 Jason Pless

DATE PRINT SIGNATURE

WELL SAMPLING FIELD INFORMATION FORM

SITE/PROJECT NAME: Nell Hall No. 1 **JOB#** 074941

SAMPLE ID: GW-074941-122812-JMK-MW4 **WELL#** 4

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
12-28	12-28	1130	1.557	5

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER 28.02 (feet) WELL ELEVATION 97.75 (feet)

WELL DEPTH 37.~~57~~75 (feet) GROUNDWATER ELEVATION 69.73 (feet)

TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
15.95 (°C)	7.19 (std)	.707 (g/L)	900 (µS/cm)	-75.3 (mV)	3.5 (gal)
16.07 (°C)	7.13 (std)	.688 (g/L)	877 (µS/cm)	-82.7 (mV)	4 (gal)
16.28 (°C)	7.17 (std)	.670 (g/L)	860 (µS/cm)	-90.6 (mV)	4.5 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: ODOR: COLOR: SHEEN Y/N

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

SPECIFIC COMMENTS:

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

DATE PRINT SIGNATURE

WELL SAMPLING FIELD INFORMATION FORM

'ITE/PROJECT NAME: Nell Hall No. 1 JOB# 074941

SAMPLE ID: GV-074941-122812-JMK-MW5 WELL# 5

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
12-28	12-28	1215	2.166	6.5

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER	29.37	(feet)	WELL ELEVATION	98.81	(feet)
WELL DEPTH	42.99	(feet)	GROUNDWATER ELEVATION	69.44	(feet)

TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
16.43 (°C)	7.27 (std)	0.648 (g/L)	834 (µS/cm)	6.2 (mV)	5.5 (gal)
16.39 (°C)	7.24 (std)	0.665 (g/L)	857 (µS/cm)	12.0 (mV)	6.0 (gal)
16.36 (°C)	7.25 (std)	0.675 (g/L)	867 (µS/cm)	11.2 (mV)	6.5 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: ODOR: COLOR: SHEEN Y/N

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

SPECIFIC COMMENTS:

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

DATE PRINT SIGNATURE

WELL SAMPLING FIELD INFORMATION FORM

'ITE/PROJECT NAME: Nell Hall No. 1 JOB# 074941

SAMPLE ID: GW-074941-122812-SMK-MW6 WELL# 6

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	SAMPLE TIME (24 HOUR)	WATER VOL. IN CASING (GALLONS)	ACTUAL VOL. PURGED (GALLONS)
12-28	12-28	1300	1.456	4.5

PURGING AND SAMPLING EQUIPMENT

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

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

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

FIELD MEASUREMENTS

DEPTH TO WATER	29.11	(feet)	WELL ELEVATION	98.41	(feet)
WELL DEPTH	38.21	(feet)	GROUNDWATER ELEVATION	69.30	(feet)

TEMPERATURE	pH	TDS	CONDUCTIVITY	ORP	VOLUME
15.60 (°C)	6.87 (std)	.782 (g/L)	785 (µS/cm)	-123.9 (mV)	3.25 (gal)
15.95 (°C)	6.87 (std)	.792 (g/L)	1008 (µS/cm)	-134.8 (mV)	3.75 (gal)
15.99 (°C)	6.83 (std)	.792 (g/L)	1009 (µS/cm)	-130.0 (mV)	4.25 (gal)
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)
(°C)	(std)	(g/L)	(µS/cm)	(mV)	(gal)

FIELD COMMENTS

SAMPLE APPEARANCE: ODOR: COLOR: SHEEN Y/N

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

SPECIFIC COMMENTS:

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

DATE PRINT SIGNATURE

APPENDIX B

2012 QUARTERLY GROUNDWATER LABORATORY ANALYTICAL REPORTS

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

March 23, 2012

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

RE: Project: NELL HALL NO. 1 (074941)
Pace Project No.: 60117007

Dear Christine Matthews:
Enclosed are the analytical results for sample(s) received by the laboratory on March 10, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Alice Tracy

alice.tracy@pacelabs.com
Project Manager

Enclosures

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

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CERTIFICATIONS

Project: NELL HALL NO. 1 (074941)
Pace Project No.: 60117007

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

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SAMPLE SUMMARY

Project: NELL HALL NO. 1 (074941)
Pace Project No.: 60117007

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60117007001	**GW-074941-3712-CB-MW-4**	Water	03/07/12 17:35	03/10/12 09:00
60117007002	**GW-074941-3712-CB-MW-5**	Water	03/07/12 17:45	03/10/12 09:00
60117007003	**GW-074941-3712-CB-MW-6**	Water	03/08/12 16:45	03/10/12 09:00
60117007004	**GW-074941-3712-CB-DUP**	Water	03/07/12 17:40	03/10/12 09:00
60117007005	**TRIP BLANK**	Water	03/08/12 18:45	03/10/12 09:00

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SAMPLE ANALYTE COUNT

Project: NELL HALL NO. 1 (074941)
Pace Project No.: 60117007

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60117007001	**GW-074941-3712-CB-MW-4**	EPA 6010	JGP	1
		EPA 8260	RNS	9
60117007002	**GW-074941-3712-CB-MW-5**	EPA 6010	JGP	1
		EPA 8260	RNS	9
60117007003	**GW-074941-3712-CB-MW-6**	EPA 6010	JGP	1
		EPA 8260	RNS	9
60117007004	**GW-074941-3712-CB-DUP**	EPA 8260	RNS	9
60117007005	**TRIP BLANK**	EPA 8260	RNS	9

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PROJECT NARRATIVE

Project: NELL HALL NO. 1 (074941)
Pace Project No.: 60117007

Method: **EPA 6010**
Description: 6010 MET ICP, Dissolved
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: March 23, 2012

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

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

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

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

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: NELL HALL NO. 1 (074941)
Pace Project No.: 60117007

Method: **EPA 8260**
Description: 8260 MSV UST, Water
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: March 23, 2012

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/44313
A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: MSV/44314
A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: MSV/44384
A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

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

Additional Comments:

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PROJECT NARRATIVE

Project: NELL HALL NO. 1 (074941)
Pace Project No.: 60117007

Method: **EPA 8260**
Description: 8260 MSV UST, Water
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: March 23, 2012

Analyte Comments:

QC Batch: MSV/44314

B: Analyte was detected in the associated method blank.

- TRIP BLANK (Lab ID: 60117007005)
  - Toluene

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

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ANALYTICAL RESULTS

Project: NELL HALL NO. 1 (074941)
Pace Project No.: 60117007

Sample: GW-074941-3712-CB-MW-4 **Lab ID: 60117007001** Collected: 03/07/12 17:35 Received: 03/10/12 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron, Dissolved	**782**	ug/L	50.0	6.0	1	03/14/12 16:35	03/20/12 12:19	7439-89-6	
8260 MSV UST, Water	Analytical Method: EPA 8260								
Benzene	ND	ug/L	1.0	0.040	1		03/21/12 12:59	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.10	1		03/21/12 12:59	100-41-4	
Toluene	ND	ug/L	1.0	0.10	1		03/21/12 12:59	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.30	1		03/21/12 12:59	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	96	%	86-112		1		03/21/12 12:59	1868-53-7	
Toluene-d8 (S)	99	%	90-110		1		03/21/12 12:59	2037-26-5	
4-Bromofluorobenzene (S)	100	%	87-113		1		03/21/12 12:59	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%	82-119		1		03/21/12 12:59	17060-07-0	
Preservation pH	**1.0**		1.0	0.10	1		03/21/12 12:59		

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ANALYTICAL RESULTS

Project: NELL HALL NO. 1 (074941)
Pace Project No.: 60117007

Sample: GW-074941-3712-CB-MW-5 **Lab ID: 60117007002** Collected: 03/07/12 17:45 Received: 03/10/12 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron, Dissolved	**9.0J**	ug/L	50.0	6.0	1	03/14/12 16:35	03/20/12 12:29	7439-89-6	
8260 MSV UST, Water	Analytical Method: EPA 8260								
Benzene	ND	ug/L	1.0	0.040	1		03/21/12 13:16	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.10	1		03/21/12 13:16	100-41-4	
Toluene	ND	ug/L	1.0	0.10	1		03/21/12 13:16	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.30	1		03/21/12 13:16	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	97	%	86-112		1		03/21/12 13:16	1868-53-7	
Toluene-d8 (S)	98	%	90-110		1		03/21/12 13:16	2037-26-5	
4-Bromofluorobenzene (S)	102	%	87-113		1		03/21/12 13:16	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	82-119		1		03/21/12 13:16	17060-07-0	
Preservation pH	**1.0**		1.0	0.10	1		03/21/12 13:16		

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ANALYTICAL RESULTS

Project: NELL HALL NO. 1 (074941)
Pace Project No.: 60117007

Sample: GW-074941-3712-CB-MW-6 **Lab ID: 60117007003** Collected: 03/08/12 16:45 Received: 03/10/12 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron, Dissolved	**22500**	ug/L	50.0	6.0	1	03/14/12 16:35	03/20/12 12:33	7439-89-6	
8260 MSV UST, Water	Analytical Method: EPA 8260								
Benzene	**47.7**	ug/L	1.0	0.040	1		03/21/12 15:02	71-43-2	
Ethylbenzene	**7.3**	ug/L	1.0	0.10	1		03/21/12 15:02	100-41-4	
Toluene	ND	ug/L	1.0	0.10	1		03/21/12 15:02	108-88-3	
Xylene (Total)	**19.2**	ug/L	3.0	0.30	1		03/21/12 15:02	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	95	%	86-112		1		03/21/12 15:02	1868-53-7	
Toluene-d8 (S)	102	%	90-110		1		03/21/12 15:02	2037-26-5	
4-Bromofluorobenzene (S)	99	%	87-113		1		03/21/12 15:02	460-00-4	
1,2-Dichloroethane-d4 (S)	92	%	82-119		1		03/21/12 15:02	17060-07-0	
Preservation pH	**1.0**		1.0	0.10	1		03/21/12 15:02		

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ANALYTICAL RESULTS

Project: NELL HALL NO. 1 (074941)
Pace Project No.: 60117007

Sample: GW-074941-3712-CB-DUP **Lab ID: 60117007004** Collected: 03/07/12 17:40 Received: 03/10/12 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water	Analytical Method: EPA 8260								
Benzene	ND	ug/L	1.0	0.040	1		03/21/12 15:19	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.10	1		03/21/12 15:19	100-41-4	
Toluene	ND	ug/L	1.0	0.10	1		03/21/12 15:19	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.30	1		03/21/12 15:19	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	98	%	86-112		1		03/21/12 15:19	1868-53-7	
Toluene-d8 (S)	100	%	90-110		1		03/21/12 15:19	2037-26-5	
4-Bromofluorobenzene (S)	102	%	87-113		1		03/21/12 15:19	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	82-119		1		03/21/12 15:19	17060-07-0	
Preservation pH	**1.0**		1.0	0.10	1		03/21/12 15:19		

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ANALYTICAL RESULTS

Project: NELL HALL NO. 1 (074941)
Pace Project No.: 60117007

Sample: TRIP BLANK **Lab ID: 60117007005** Collected: 03/08/12 18:45 Received: 03/10/12 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water	Analytical Method: EPA 8260								
Benzene	**0.20J**	ug/L	1.0	0.040	1		03/20/12 11:28	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.10	1		03/20/12 11:28	100-41-4	
Toluene	**0.68J**	ug/L	1.0	0.10	1		03/20/12 11:28	108-88-3	B
Xylene (Total)	ND	ug/L	3.0	0.30	1		03/20/12 11:28	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	98	%	86-112		1		03/20/12 11:28	1868-53-7	
Toluene-d8 (S)	99	%	90-110		1		03/20/12 11:28	2037-26-5	
4-Bromofluorobenzene (S)	101	%	87-113		1		03/20/12 11:28	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	82-119		1		03/20/12 11:28	17060-07-0	
Preservation pH	**1.0**		1.0	0.10	1		03/20/12 11:28		

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QUALITY CONTROL DATA

Project: NELL HALL NO. 1 (074941)
Pace Project No.: 60117007

QC Batch: MPRP/17310 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved
Associated Lab Samples: 60117007001, 60117007002, 60117007003

METHOD BLANK: 965102 Matrix: Water
Associated Lab Samples: 60117007001, 60117007002, 60117007003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron, Dissolved	ug/L	41.8J	50.0	03/20/12 11:47	

LABORATORY CONTROL SAMPLE: 965103

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 965104 965105

Parameter	Units	60117005001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron, Dissolved	ug/L	40.9J	10000	10000	10800	10800	107	107	75-125	0	20	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: NELL HALL NO. 1 (074941)
Pace Project No.: 60117007

QC Batch: MSV/44313 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 60117007001, 60117007002

METHOD BLANK: 967865 Matrix: Water
Associated Lab Samples: 60117007001, 60117007002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	03/21/12 10:21	
Ethylbenzene	ug/L	ND	1.0	03/21/12 10:21	
Toluene	ug/L	0.14J	1.0	03/21/12 10:21	
Xylene (Total)	ug/L	ND	3.0	03/21/12 10:21	
1,2-Dichloroethane-d4 (S)	%	95	82-119	03/21/12 10:21	
4-Bromofluorobenzene (S)	%	102	87-113	03/21/12 10:21	
Dibromofluoromethane (S)	%	96	86-112	03/21/12 10:21	
Toluene-d8 (S)	%	98	90-110	03/21/12 10:21	

LABORATORY CONTROL SAMPLE: 967866

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	21.2	106	82-117	
Ethylbenzene	ug/L	20	21.8	109	79-121	
Toluene	ug/L	20	21.3	107	80-120	
Xylene (Total)	ug/L	60	68.1	113	79-120	
1,2-Dichloroethane-d4 (S)	%			92	82-119	
4-Bromofluorobenzene (S)	%			100	87-113	
Dibromofluoromethane (S)	%			96	86-112	
Toluene-d8 (S)	%			98	90-110	

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QUALITY CONTROL DATA

Project: NELL HALL NO. 1 (074941)
Pace Project No.: 60117007

QC Batch: MSV/44314
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 60117007005

METHOD BLANK: 967867
Matrix: Water
Associated Lab Samples: 60117007005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	03/20/12 10:01	
Ethylbenzene	ug/L	ND	1.0	03/20/12 10:01	
Toluene	ug/L	0.14J	1.0	03/20/12 10:01	
Xylene (Total)	ug/L	ND	3.0	03/20/12 10:01	
1,2-Dichloroethane-d4 (S)	%	96	82-119	03/20/12 10:01	
4-Bromofluorobenzene (S)	%	102	87-113	03/20/12 10:01	
Dibromofluoromethane (S)	%	97	86-112	03/20/12 10:01	
Toluene-d8 (S)	%	100	90-110	03/20/12 10:01	

LABORATORY CONTROL SAMPLE: 967868

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	20.8	104	82-117	
Ethylbenzene	ug/L	20	20.5	102	79-121	
Toluene	ug/L	20	20.3	102	80-120	
Xylene (Total)	ug/L	60	64.1	107	79-120	
1,2-Dichloroethane-d4 (S)	%			95	82-119	
4-Bromofluorobenzene (S)	%			100	87-113	
Dibromofluoromethane (S)	%			99	86-112	
Toluene-d8 (S)	%			100	90-110	

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QUALITY CONTROL DATA

Project: NELL HALL NO. 1 (074941)
Pace Project No.: 60117007

QC Batch: MSV/44384 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 60117007003, 60117007004

METHOD BLANK: 969122 Matrix: Water
Associated Lab Samples: 60117007003, 60117007004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	03/21/12 14:44	
Ethylbenzene	ug/L	ND	1.0	03/21/12 14:44	
Toluene	ug/L	ND	1.0	03/21/12 14:44	
Xylene (Total)	ug/L	ND	3.0	03/21/12 14:44	
1,2-Dichloroethane-d4 (S)	%	94	82-119	03/21/12 14:44	
4-Bromofluorobenzene (S)	%	100	87-113	03/21/12 14:44	
Dibromofluoromethane (S)	%	98	86-112	03/21/12 14:44	
Toluene-d8 (S)	%	99	90-110	03/21/12 14:44	

LABORATORY CONTROL SAMPLE: 969123

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	19.9	99	82-117	
Ethylbenzene	ug/L	20	20.2	101	79-121	
Toluene	ug/L	20	19.9	100	80-120	
Xylene (Total)	ug/L	60	62.8	105	79-120	
1,2-Dichloroethane-d4 (S)	%			95	82-119	
4-Bromofluorobenzene (S)	%			99	87-113	
Dibromofluoromethane (S)	%			98	86-112	
Toluene-d8 (S)	%			100	90-110	

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QUALIFIERS

Project: NELL HALL NO. 1 (074941)
Pace Project No.: 60117007

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: MSV/44313

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

Batch: MSV/44314

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

Batch: MSV/44384

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

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NELL HALL NO. 1 (074941)
Pace Project No.: 60117007

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60117007001	**GW-074941-3712-CB-MW-4**	EPA 3010	MPRP/17310	EPA 6010	ICP/14765
60117007002	**GW-074941-3712-CB-MW-5**	EPA 3010	MPRP/17310	EPA 6010	ICP/14765
60117007003	**GW-074941-3712-CB-MW-6**	EPA 3010	MPRP/17310	EPA 6010	ICP/14765
60117007001	**GW-074941-3712-CB-MW-4**	EPA 8260	MSV/44313		
60117007002	**GW-074941-3712-CB-MW-5**	EPA 8260	MSV/44313		
60117007003	**GW-074941-3712-CB-MW-6**	EPA 8260	MSV/44384		
60117007004	**GW-074941-3712-CB-DUP**	EPA 8260	MSV/44384		
60117007005	**TRIP BLANK**	EPA 8260	MSV/44314		

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	COP CRA NM	Report To:	Christine Mathews	Attention:	ENFOS
Address:	6121 Indian School Rd NE, Ste 200	Copy To:	Kelly Blanchard, Angela Bown	Company Name:	
	Albequerque, NM 87110			Address:	
Email To:	cmathews@craworld.com	Purchase Order No.:	4515860215	Pace Quote Reference:	
Phone:	(505)884-0672 Fax: (505)884-4932	Project Name:	Nell Hall No.1	Pace Project Manager:	Alice Tracy
Requested Due Date/TAT:	standard	Project Number:	074941	Pace Profile #:	5514, 4

REGULATORY AGENCY

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

Site Location STATE: NM

Section D Required Client Information

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

Valid Matrix Codes

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

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	8260 BTEX	6010 Dissolved Fe								Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 60117007
1	GW-074941-3712-CB-MW-4	WT	G			3/7/12	1735		4			X	X						X	X								N	001
2	GW-074941-3712-CB-MW-5	WT	G			3/7/12	1745		4			X	X						X	X									002
3	GW-074941-3812-CB-MW-6	WT	G			3/8/12	1645		4			X	X						X	X									003
4	GW-074941-3712-CB-DUP	WT	G			3/7/12	1740		3				X						X										004
5	trip blank	WT	-			3/8/12	1845		3				X						X										005
6																													
7																													
8																													
9																													
10																													
11																													
12																													

Requested Analysis Filtered (Y/N)

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Cassie Brown / CRA	3.8.12	1730	Fhenday	3-10-12	0900	2-7

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Cassie Brown

SIGNATURE of SAMPLER: Cassie Brown DATE Signed (MM/DD/YY): 3.8.12

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

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

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

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Sample Condition Upon Receipt – ESI Tech Specs

Client Name: COP CRA Project #: L0117007

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

Optional
Proj Due Date: 3/22/12
Proj Name:

Tracking #: 898638321843 Pace Shipping Label Used? Yes ☑ No ☐

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

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

Thermometer Used: (T-19) / T-194 **Type of Ice:** (Wet) Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 2-4

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

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	1.
Chain of Custody filled out:	☑Yes ☐No ☐N/A	2.
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	3.
Sampler name & signature on COC:	☑Yes ☐No ☐N/A	4.
Samples arrived within holding time:	☑Yes ☐No ☐N/A	5.
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	7.
Sufficient volume:	☑Yes ☐No ☐N/A	8.
Correct containers used:	☑Yes ☐No ☐N/A	
-Pace containers used:	☑Yes ☐No ☐N/A	9.
Containers intact:	☑Yes ☐No ☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	12.
Sample labels match COC:	☑Yes ☐No ☐N/A	
-Includes date/time/ID/analyses Matrix:	WT	13.
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	14.
Exceptions: (VOA), coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes ☐No	Initial when completed / Lot # of added preservative
Trip Blank present:	☑Yes ☐No ☐N/A	
Pace Trip Blank lot # (if purchased): 013012-3		15.
Headspace in VOA vials (>6mm):	☐Yes ☑No ☐N/A	16.
Project sampled in USDA Regulated Area:	☐Yes ☐No ☑N/A	17. List State:

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

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

Start: 1243	Start:
End: 1449	End:
Temp:	Temp:

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

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

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June 19, 2012

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

RE: Project: NELL HALL NO 1 074941
Pace Project No.: 60122809

Dear Christine Matthews:
Enclosed are the analytical results for sample(s) received by the laboratory on June 07, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Alice Flanagan

alice.flanagan@pacelabs.com
Project Manager

Enclosures

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

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: NELL HALL NO 1 074941
Pace Project No.: 60122809

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

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SAMPLE SUMMARY

Project: NELL HALL NO 1 074941
Pace Project No.: 60122809

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60122809001	**GW-074941-060412-CB-MW-4**	Water	06/04/12 18:05	06/07/12 09:00
60122809002	**GW-074941-060412-CB-MW-5**	Water	06/04/12 17:40	06/07/12 09:00
60122809003	**GW-074941-060412-CB-MW-6**	Water	06/04/12 17:25	06/07/12 09:00
60122809004	**GW-074941-060412-CB-DUP**	Water	06/04/12 17:30	06/07/12 09:00
60122809005	**TRIP BLANK**	Water	06/04/12 09:00	06/07/12 09:00

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SAMPLE ANALYTE COUNT

Project: NELL HALL NO 1 074941
Pace Project No.: 60122809

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60122809001	**GW-074941-060412-CB-MW-4**	EPA 6010	JDH	1
		EPA 8260	PRG	9
60122809002	**GW-074941-060412-CB-MW-5**	EPA 6010	JDH	1
		EPA 8260	PRG	9
60122809003	**GW-074941-060412-CB-MW-6**	EPA 6010	JDH	1
		EPA 8260	PRG	9
60122809004	**GW-074941-060412-CB-DUP**	EPA 8260	RNS	9
60122809005	**TRIP BLANK**	EPA 8260	PRG	9

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PROJECT NARRATIVE

Project: NELL HALL NO 1 074941
Pace Project No.: 60122809

Method: **EPA 6010**
Description: 6010 MET ICP, Dissolved
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: June 19, 2012

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:

Analyte Comments:

QC Batch: MPRP/18386

B: Analyte was detected in the associated method blank.

- GW-074941-060412-CB-MW-4 (Lab ID: 60122809001)
  - Iron, Dissolved
- GW-074941-060412-CB-MW-6 (Lab ID: 60122809003)
  - Iron, Dissolved

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PROJECT NARRATIVE

Project: NELL HALL NO 1 074941
Pace Project No.: 60122809

Method: **EPA 8260**
Description: 8260 MSV UST, Water
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: June 19, 2012

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.

QC Batch: MSV/46219

S0: Surrogate recovery outside laboratory control limits.

- GW-074941-060412-CB-MW-4 (Lab ID: 60122809001)
  - 4-Bromofluorobenzene (S)

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

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

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

QC Batch: MSV/46219

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

QC Batch: MSV/46307

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: NELL HALL NO 1 074941
Pace Project No.: 60122809

Method: **EPA 8260**
Description: 8260 MSV UST, Water
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: June 19, 2012

Batch Comments:

- QC Batch: MSV / 46346

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

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ANALYTICAL RESULTS

Project: NELL HALL NO 1 074941
Pace Project No.: 60122809

Sample: GW-074941-060412-CB-MW-4 **Lab ID: 60122809001** Collected: 06/04/12 18:05 Received: 06/07/12 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron, Dissolved	**1170**	ug/L	50.0	17.2	1	06/15/12 15:55	06/18/12 12:48	7439-89-6	B
8260 MSV UST, Water	Analytical Method: EPA 8260								
Benzene	ND	ug/L	1.0	0.050	1		06/12/12 07:22	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.080	1		06/12/12 07:22	100-41-4	
Toluene	ND	ug/L	1.0	0.070	1		06/12/12 07:22	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.18	1		06/12/12 07:22	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	104	%	86-112		1		06/12/12 07:22	1868-53-7	
Toluene-d8 (S)	98	%	90-110		1		06/12/12 07:22	2037-26-5	
4-Bromofluorobenzene (S)	119	%	87-113		1		06/12/12 07:22	460-00-4	S0
1,2-Dichloroethane-d4 (S)	101	%	82-119		1		06/12/12 07:22	17060-07-0	
Preservation pH	**1.0**		1.0	0.10	1		06/12/12 07:22		

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ANALYTICAL RESULTS

Project: NELL HALL NO 1 074941
Pace Project No.: 60122809

Sample: GW-074941-060412-CB-MW-5 **Lab ID: 60122809002** Collected: 06/04/12 17:40 Received: 06/07/12 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron, Dissolved	ND	ug/L	50.0	17.2	1	06/15/12 15:55	06/18/12 12:51	7439-89-6	
8260 MSV UST, Water	Analytical Method: EPA 8260								
Benzene	ND	ug/L	1.0	0.050	1		06/12/12 07:36	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.080	1		06/12/12 07:36	100-41-4	
Toluene	ND	ug/L	1.0	0.070	1		06/12/12 07:36	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.18	1		06/12/12 07:36	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	102	%	86-112		1		06/12/12 07:36	1868-53-7	
Toluene-d8 (S)	98	%	90-110		1		06/12/12 07:36	2037-26-5	
4-Bromofluorobenzene (S)	104	%	87-113		1		06/12/12 07:36	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	82-119		1		06/12/12 07:36	17060-07-0	
Preservation pH	**1.0**		1.0	0.10	1		06/12/12 07:36		

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ANALYTICAL RESULTS

Project: NELL HALL NO 1 074941
Pace Project No.: 60122809

Sample: GW-074941-060412-CB-MW-6 **Lab ID: 60122809003** Collected: 06/04/12 17:25 Received: 06/07/12 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron, Dissolved	**19200**	ug/L	50.0	17.2	1	06/15/12 15:55	06/18/12 13:02	7439-89-6	B
8260 MSV UST, Water	Analytical Method: EPA 8260								
Benzene	**649**	ug/L	10.0	0.50	10		06/13/12 17:29	71-43-2	
Ethylbenzene	**309**	ug/L	10.0	0.80	10		06/13/12 17:29	100-41-4	
Toluene	ND	ug/L	10.0	0.70	10		06/13/12 17:29	108-88-3	
Xylene (Total)	**314**	ug/L	30.0	1.8	10		06/13/12 17:29	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	106	%	86-112		10		06/13/12 17:29	1868-53-7	
Toluene-d8 (S)	100	%	90-110		10		06/13/12 17:29	2037-26-5	
4-Bromofluorobenzene (S)	105	%	87-113		10		06/13/12 17:29	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	82-119		10		06/13/12 17:29	17060-07-0	
Preservation pH	**1.0**		1.0	0.10	10		06/13/12 17:29		

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ANALYTICAL RESULTS

Project: NELL HALL NO 1 074941
Pace Project No.: 60122809

Sample: GW-074941-060412-CB-DUP **Lab ID: 60122809004** Collected: 06/04/12 17:30 Received: 06/07/12 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water	Analytical Method: EPA 8260								
Benzene	**620**	ug/L	10.0	0.40	10		06/14/12 21:53	71-43-2	
Ethylbenzene	**267**	ug/L	10.0	1.0	10		06/14/12 21:53	100-41-4	
Toluene	ND	ug/L	10.0	1.0	10		06/14/12 21:53	108-88-3	
Xylene (Total)	**266**	ug/L	30.0	3.0	10		06/14/12 21:53	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	94	%	86-112		10		06/14/12 21:53	1868-53-7	
Toluene-d8 (S)	100	%	90-110		10		06/14/12 21:53	2037-26-5	
4-Bromofluorobenzene (S)	100	%	87-113		10		06/14/12 21:53	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%	82-119		10		06/14/12 21:53	17060-07-0	
Preservation pH	**1.0**		1.0	0.10	10		06/14/12 21:53		

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ANALYTICAL RESULTS

Project: NELL HALL NO 1 074941
Pace Project No.: 60122809

Sample: TRIP BLANK **Lab ID: 60122809005** Collected: 06/04/12 09:00 Received: 06/07/12 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water	Analytical Method: EPA 8260								
Benzene	ND	ug/L	1.0	0.050	1		06/13/12 16:03	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.080	1		06/13/12 16:03	100-41-4	
Toluene	ND	ug/L	1.0	0.070	1		06/13/12 16:03	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.18	1		06/13/12 16:03	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	103	%	86-112		1		06/13/12 16:03	1868-53-7	
Toluene-d8 (S)	99	%	90-110		1		06/13/12 16:03	2037-26-5	
4-Bromofluorobenzene (S)	106	%	87-113		1		06/13/12 16:03	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	82-119		1		06/13/12 16:03	17060-07-0	
Preservation pH	**1.0**		1.0	0.10	1		06/13/12 16:03		

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QUALITY CONTROL DATA

Project: NELL HALL NO 1 074941
Pace Project No.: 60122809

QC Batch: MPRP/18386 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved
Associated Lab Samples: 60122809001, 60122809002, 60122809003

METHOD BLANK: 1014955 Matrix: Water
Associated Lab Samples: 60122809001, 60122809002, 60122809003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron, Dissolved	ug/L	ND	50.0	06/18/12 10:42	

LABORATORY CONTROL SAMPLE: 1014956

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Dissolved	ug/L	10000	9620	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1014957 1014958

Parameter	Units	60122799001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron, Dissolved	ug/L	7.1 mg/L	10000	10000	16200	16400	92	93	75-125	1	20	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: NELL HALL NO 1 074941
Pace Project No.: 60122809

QC Batch: MSV/46219 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 60122809001, 60122809002

METHOD BLANK: 1012030 Matrix: Water
Associated Lab Samples: 60122809001, 60122809002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	06/12/12 03:32	
Ethylbenzene	ug/L	ND	1.0	06/12/12 03:32	
Toluene	ug/L	ND	1.0	06/12/12 03:32	
Xylene (Total)	ug/L	ND	3.0	06/12/12 03:32	
1,2-Dichloroethane-d4 (S)	%	96	82-119	06/12/12 03:32	
4-Bromofluorobenzene (S)	%	101	87-113	06/12/12 03:32	
Dibromofluoromethane (S)	%	100	86-112	06/12/12 03:32	
Toluene-d8 (S)	%	100	90-110	06/12/12 03:32	

LABORATORY CONTROL SAMPLE: 1012031

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	20.8	104	82-117	
Ethylbenzene	ug/L	20	20.5	102	79-121	
Toluene	ug/L	20	21.2	106	80-120	
Xylene (Total)	ug/L	60	60.9	101	79-120	
1,2-Dichloroethane-d4 (S)	%			102	82-119	
4-Bromofluorobenzene (S)	%			100	87-113	
Dibromofluoromethane (S)	%			106	86-112	
Toluene-d8 (S)	%			102	90-110	

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QUALITY CONTROL DATA

Project: NELL HALL NO 1 074941
Pace Project No.: 60122809

QC Batch: MSV/46307 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 60122809003, 60122809005

METHOD BLANK: 1013449 Matrix: Water
Associated Lab Samples: 60122809003, 60122809005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	06/13/12 15:34	
Ethylbenzene	ug/L	ND	1.0	06/13/12 15:34	
Toluene	ug/L	ND	1.0	06/13/12 15:34	
Xylene (Total)	ug/L	ND	3.0	06/13/12 15:34	
1,2-Dichloroethane-d4 (S)	%	98	82-119	06/13/12 15:34	
4-Bromofluorobenzene (S)	%	101	87-113	06/13/12 15:34	
Dibromofluoromethane (S)	%	99	86-112	06/13/12 15:34	
Toluene-d8 (S)	%	101	90-110	06/13/12 15:34	

LABORATORY CONTROL SAMPLE: 1013450

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	20.8	104	82-117	
Ethylbenzene	ug/L	20	20.0	100	79-121	
Toluene	ug/L	20	20.7	103	80-120	
Xylene (Total)	ug/L	60	61.9	103	79-120	
1,2-Dichloroethane-d4 (S)	%			102	82-119	
4-Bromofluorobenzene (S)	%			102	87-113	
Dibromofluoromethane (S)	%			103	86-112	
Toluene-d8 (S)	%			98	90-110	

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QUALITY CONTROL DATA

Project: NELL HALL NO 1 074941
Pace Project No.: 60122809

QC Batch: MSV/46346
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 60122809004

METHOD BLANK: 1014006 Matrix: Water
Associated Lab Samples: 60122809004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	06/14/12 21:38	
Ethylbenzene	ug/L	ND	1.0	06/14/12 21:38	
Toluene	ug/L	ND	1.0	06/14/12 21:38	
Xylene (Total)	ug/L	ND	3.0	06/14/12 21:38	
1,2-Dichloroethane-d4 (S)	%	95	82-119	06/14/12 21:38	
4-Bromofluorobenzene (S)	%	100	87-113	06/14/12 21:38	
Dibromofluoromethane (S)	%	97	86-112	06/14/12 21:38	
Toluene-d8 (S)	%	101	90-110	06/14/12 21:38	

LABORATORY CONTROL SAMPLE: 1014007

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	20.0	100	82-117	
Ethylbenzene	ug/L	20	18.3	91	79-121	
Toluene	ug/L	20	19.1	96	80-120	
Xylene (Total)	ug/L	60	55.4	92	79-120	
1,2-Dichloroethane-d4 (S)	%			93	82-119	
4-Bromofluorobenzene (S)	%			99	87-113	
Dibromofluoromethane (S)	%			96	86-112	
Toluene-d8 (S)	%			100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1014008 1014009

Parameter	Units	60122831003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	ND	100	100	95.1	111	92	109	58-139	16	21	
Ethylbenzene	ug/L	29.9	100	100	113	127	83	97	56-138	12	19	
Toluene	ug/L	ND	100	100	89.2	106	85	102	59-140	17	19	
Xylene (Total)	ug/L	ND	300	300	249	295	83	98	52-146	17	19	
1,2-Dichloroethane-d4 (S)	%						96	96	82-119			
4-Bromofluorobenzene (S)	%						101	102	87-113			
Dibromofluoromethane (S)	%						99	98	86-112			
Toluene-d8 (S)	%						101	100	90-110			
Preservation pH		1.0			1.0	1.0				0		

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: NELL HALL NO 1 074941
Pace Project No.: 60122809

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: MSV/46219

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

Batch: MSV/46307

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

Batch: MSV/46346

[1]

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

S0 Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NELL HALL NO 1 074941
Pace Project No.: 60122809

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60122809001	**GW-074941-060412-CB-MW-4**	EPA 3010	MPRP/18386	EPA 6010	ICP/15406
60122809002	**GW-074941-060412-CB-MW-5**	EPA 3010	MPRP/18386	EPA 6010	ICP/15406
60122809003	**GW-074941-060412-CB-MW-6**	EPA 3010	MPRP/18386	EPA 6010	ICP/15406
60122809001	**GW-074941-060412-CB-MW-4**	EPA 8260	MSV/46219		
60122809002	**GW-074941-060412-CB-MW-5**	EPA 8260	MSV/46219		
60122809003	**GW-074941-060412-CB-MW-6**	EPA 8260	MSV/46307		
60122809004	**GW-074941-060412-CB-DUP**	EPA 8260	MSV/46346		
60122809005	**TRIP BLANK**	EPA 8260	MSV/46307		

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Sample Condition Upon Receipt – ESI Tech Specs

Client Name: COP- CRA Project #: 60122809

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

Optional
Proj Due Date: 6/19
Proj Name:

Tracking #: 899390016518 Pace Shipping Label Used? Yes ☐ No ☑

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

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

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

Cooler Temperature: 2.7

Date and initials of person examining contents: 6/7/12 AS

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	1.
Chain of Custody filled out:	☑Yes ☐No ☐N/A	2.
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	3.
Sampler name & signature on COC:	☑Yes ☐No ☐N/A	4.
Samples arrived within holding time:	☑Yes ☐No ☐N/A	5.
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	7.
Sufficient volume:	☑Yes ☐No ☐N/A	8.
Correct containers used:	☑Yes ☐No ☐N/A	
-Pace containers used:	☑Yes ☐No ☐N/A	9.
Containers intact:	☑Yes ☐No ☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☑N/A	11.
Filtered volume received for dissolved tests?	☑Yes ☐No ☑N/A	12.
Sample labels match COC:	☑Yes ☐No ☐N/A	
-Includes date/time/ID/analyses Matrix: WT		13.
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes ☐No	Initial when completed / Lot # of added preservative
Trip Blank present:	☑Yes ☐No ☐N/A	
Pace Trip Blank lot # (if purchased): 052112-3		15.
Headspace in VOA vials (>6mm):	☐Yes ☑No ☐N/A	16.
Project sampled in USDA Regulated Area:	☐Yes ☑No ☐N/A	17. List State:

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

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

Start: 1235	Start:
End: 1239	End:
Temp:	Temp:

Project Manager Review: AAF Date: 6/8/12

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

CHAIN-OF-CUSTODY / Analytical Request Document

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

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Page: 1 of 1

Section A Required Client Information:

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

Section B Required Project Information:

Report To:	Christine Mathews
Copy To:	Kelly Blanchard, Angela Bown
Purchase Order No.:	4515860215
Project Name:	Nell Hall No.1
Project Number:	074941

Section C Invoice Information:

Attention:	ENFOS
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Alice Tracy
Pace Profile #:	5514, 4

REGULATORY AGENCY

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

Site Location STATE: NM

Section D Required Client Information

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

Valid Matrix Codes

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: 8260 BTEX	6010 Dissolved Fe	Volatile BTEX + EDB, 3DG9H	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	GW-074941-060412-CB-MW-4	WT	G	—	—	6/4/12	1805		4			X	X					X	X			60122809 01
2	GW-074941-060412-CB-MW-5	WT	G	—	—	6/4/12	1740		4			X	X					X	X	↓		02
3	GW-074941-060412-CB-MW-6	WT	G	—	—	6/4/12	1725		4			X	X					X	X			03
4	GW-07494-060412-CB-dup	WT	G	—	—	6/4/12	1730		3				X					X				04
5	trip blank	—	—	—	—	6/6/12	0900		3				X					X		↓	(TB)	05
6																						
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
*Note: Metals Containers were field-filtered	Cassie Brown/CRA	6/6/12		E Brockett	6/7/12	0900

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

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Cassie Brown

SIGNATURE of SAMPLER: Cassie Brown

DATE Signed (MM/DD/YY): 06/06/12

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

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

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October 01, 2012

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

RE: Project: NELL HALL NO 1
Pace Project No.: 60129629

Dear Christine Matthews:
Enclosed are the analytical results for sample(s) received by the laboratory on September 22, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Alice Flanagan

alice.flanagan@pacelabs.com
Project Manager

Enclosures

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

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CERTIFICATIONS

Project: NELL HALL NO 1
Pace Project No.: 60129629

Kansas Certification IDs
9608 Loiret Boulevard, Lenexa, KS 66219
A2LA Certification #: 2456.01
Arkansas Certification #: 12-019-0
Illinois Certification #: 002885
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212008A
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407-12-3
Utah Certification #: KS000212012-2

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SAMPLE SUMMARY

Project: NELL HALL NO 1
Pace Project No.: 60129629

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60129629001	**GW-074941-092012-JP-MW-4**	Water	09/20/12 17:35	09/22/12 08:50
60129629002	**GW-074941-092012-JP-MW-5**	Water	09/20/12 17:35	09/22/12 08:50
60129629003	**GW-074941-092012-JP-MW-6**	Water	09/20/12 17:30	09/22/12 08:50
60129629004	**GW-074941-092012-JP-DUP**	Water	09/20/12 17:40	09/22/12 08:50
60129629005	**TB-074941-092012**	Water	09/20/12 00:00	09/22/12 08:50

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SAMPLE ANALYTE COUNT

Project: NELL HALL NO 1
Pace Project No.: 60129629

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60129629001	**GW-074941-092012-JP-MW-4**	EPA 6010	SMW	1
		EPA 5030B/8260	JTS	9
60129629002	**GW-074941-092012-JP-MW-5**	EPA 6010	SMW	1
		EPA 5030B/8260	JTS	9
60129629003	**GW-074941-092012-JP-MW-6**	EPA 6010	SMW	1
		EPA 5030B/8260	JTS	9
60129629004	**GW-074941-092012-JP-DUP**	EPA 5030B/8260	JTS	9
60129629005	**TB-074941-092012**	EPA 5030B/8260	JTS	9

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PROJECT NARRATIVE

Project: NELL HALL NO 1
Pace Project No.: 60129629

Method: **EPA 6010**
Description: 6010 MET ICP, Dissolved
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: October 01, 2012

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.

Additional Comments:

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PROJECT NARRATIVE

Project: NELL HALL NO 1
Pace Project No.: 60129629

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: October 01, 2012

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

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

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

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

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

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

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

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

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

QC Batch: MSV/48681

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

Additional Comments:

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

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ANALYTICAL RESULTS

Project: NELL HALL NO 1
Pace Project No.: 60129629

Sample: GW-074941-092012-JP-MW-4 **Lab ID: 60129629001** Collected: 09/20/12 17:35 Received: 09/22/12 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron, Dissolved	ND	ug/L	250	86.0	5	09/24/12 13:45	09/28/12 11:37	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260								
Benzene	ND	ug/L	1.0	0.12	1		09/24/12 21:32	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.060	1		09/24/12 21:32	100-41-4	
Toluene	ND	ug/L	1.0	0.054	1		09/24/12 21:32	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.67	1		09/24/12 21:32	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		1		09/24/12 21:32	460-00-4	
Dibromofluoromethane (S)	101	%	80-120		1		09/24/12 21:32	1868-53-7	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		09/24/12 21:32	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		09/24/12 21:32	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		09/24/12 21:32		

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ANALYTICAL RESULTS

Project: NELL HALL NO 1
Pace Project No.: 60129629

Sample: GW-074941-092012-JP-MW-5 **Lab ID: 60129629002** Collected: 09/20/12 17:35 Received: 09/22/12 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron, Dissolved	ND	ug/L	50.0	17.2	1	09/24/12 13:45	09/26/12 15:41	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260								
Benzene	ND	ug/L	1.0	0.12	1		09/24/12 21:47	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.060	1		09/24/12 21:47	100-41-4	
Toluene	ND	ug/L	1.0	0.054	1		09/24/12 21:47	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.67	1		09/24/12 21:47	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	98	%	80-120		1		09/24/12 21:47	460-00-4	
Dibromofluoromethane (S)	97	%	80-120		1		09/24/12 21:47	1868-53-7	
1,2-Dichloroethane-d4 (S)	93	%	80-120		1		09/24/12 21:47	17060-07-0	
Toluene-d8 (S)	110	%	80-120		1		09/24/12 21:47	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		09/24/12 21:47		

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ANALYTICAL RESULTS

Project: NELL HALL NO 1
Pace Project No.: 60129629

Sample: GW-074941-092012-JP-MW-6 **Lab ID: 60129629003** Collected: 09/20/12 17:30 Received: 09/22/12 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron, Dissolved	**9530**	ug/L	50.0	17.2	1	09/24/12 13:45	09/26/12 15:44	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260								
Benzene	**266**	ug/L	5.0	0.60	5		09/24/12 22:03	71-43-2	
Ethylbenzene	**65.0**	ug/L	5.0	0.30	5		09/24/12 22:03	100-41-4	
Toluene	ND	ug/L	5.0	0.27	5		09/24/12 22:03	108-88-3	
Xylene (Total)	**35.5**	ug/L	15.0	3.4	5		09/24/12 22:03	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	80-120		5		09/24/12 22:03	460-00-4	
Dibromofluoromethane (S)	100	%	80-120		5		09/24/12 22:03	1868-53-7	
1,2-Dichloroethane-d4 (S)	96	%	80-120		5		09/24/12 22:03	17060-07-0	
Toluene-d8 (S)	99	%	80-120		5		09/24/12 22:03	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	5		09/24/12 22:03		

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ANALYTICAL RESULTS

Project: NELL HALL NO 1
Pace Project No.: 60129629

Sample: GW-074941-092012-JP-DUP **Lab ID: 60129629004** Collected: 09/20/12 17:40 Received: 09/22/12 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Benzene	**282**	ug/L	5.0	0.60	5		09/24/12 22:18	71-43-2	
Ethylbenzene	**63.4**	ug/L	5.0	0.30	5		09/24/12 22:18	100-41-4	
Toluene	ND	ug/L	5.0	0.27	5		09/24/12 22:18	108-88-3	
Xylene (Total)	**34.8**	ug/L	15.0	3.4	5		09/24/12 22:18	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		5		09/24/12 22:18	460-00-4	
Dibromofluoromethane (S)	103	%	80-120		5		09/24/12 22:18	1868-53-7	
1,2-Dichloroethane-d4 (S)	97	%	80-120		5		09/24/12 22:18	17060-07-0	
Toluene-d8 (S)	98	%	80-120		5		09/24/12 22:18	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	5		09/24/12 22:18		

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ANALYTICAL RESULTS

Project: NELL HALL NO 1
Pace Project No.: 60129629

Sample: TB-074941-092012 **Lab ID: 60129629005** Collected: 09/20/12 00:00 Received: 09/22/12 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Benzene	ND	ug/L	1.0	0.12	1		09/24/12 22:34	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.060	1		09/24/12 22:34	100-41-4	
Toluene	ND	ug/L	1.0	0.054	1		09/24/12 22:34	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.67	1		09/24/12 22:34	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		1		09/24/12 22:34	460-00-4	
Dibromofluoromethane (S)	97	%	80-120		1		09/24/12 22:34	1868-53-7	
1,2-Dichloroethane-d4 (S)	94	%	80-120		1		09/24/12 22:34	17060-07-0	
Toluene-d8 (S)	109	%	80-120		1		09/24/12 22:34	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		09/24/12 22:34		

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QUALITY CONTROL DATA

Project: NELL HALL NO 1
Pace Project No.: 60129629

QC Batch: MPRP/19623 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved
Associated Lab Samples: 60129629001, 60129629002, 60129629003

METHOD BLANK: 1066229 Matrix: Water
Associated Lab Samples: 60129629001, 60129629002, 60129629003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron, Dissolved	ug/L	ND	50.0	09/26/12 14:46	

LABORATORY CONTROL SAMPLE: 1066230

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Dissolved	ug/L	10000	9850	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1066231 1066232

Parameter	Units	60129627003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron, Dissolved	ug/L	ND	10000	10000	9560	9630	96	96	75-125	1	20	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: NELL HALL NO 1
Pace Project No.: 60129629

QC Batch: MSV/48681 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 7 day
Associated Lab Samples: 60129629001, 60129629002, 60129629003, 60129629004, 60129629005

METHOD BLANK: 1066323 Matrix: Water
Associated Lab Samples: 60129629001, 60129629002, 60129629003, 60129629004, 60129629005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	09/24/12 18:10	
Ethylbenzene	ug/L	ND	1.0	09/24/12 18:10	
Toluene	ug/L	ND	1.0	09/24/12 18:10	
Xylene (Total)	ug/L	ND	3.0	09/24/12 18:10	
1,2-Dichloroethane-d4 (S)	%	90	80-120	09/24/12 18:10	
4-Bromofluorobenzene (S)	%	99	80-120	09/24/12 18:10	
Dibromofluoromethane (S)	%	99	80-120	09/24/12 18:10	
Toluene-d8 (S)	%	95	80-120	09/24/12 18:10	

LABORATORY CONTROL SAMPLE: 1066324

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	18.9	94	74-123	
Ethylbenzene	ug/L	20	19.1	95	76-123	
Toluene	ug/L	20	18.8	94	75-123	
Xylene (Total)	ug/L	60	57.1	95	76-123	
1,2-Dichloroethane-d4 (S)	%			99	80-120	
4-Bromofluorobenzene (S)	%			105	80-120	
Dibromofluoromethane (S)	%			95	80-120	
Toluene-d8 (S)	%			102	80-120	

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QUALIFIERS

Project: NELL HALL NO 1
Pace Project No.: 60129629

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: MSV/48681

[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
Pace Project No.: 60129629

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60129629001	**GW-074941-092012-JP-MW-4**	EPA 3010	MPRP/19623	EPA 6010	ICP/16167
60129629002	**GW-074941-092012-JP-MW-5**	EPA 3010	MPRP/19623	EPA 6010	ICP/16167
60129629003	**GW-074941-092012-JP-MW-6**	EPA 3010	MPRP/19623	EPA 6010	ICP/16167
60129629001	**GW-074941-092012-JP-MW-4**	EPA 5030B/8260	MSV/48681		
60129629002	**GW-074941-092012-JP-MW-5**	EPA 5030B/8260	MSV/48681		
60129629003	**GW-074941-092012-JP-MW-6**	EPA 5030B/8260	MSV/48681		
60129629004	**GW-074941-092012-JP-DUP**	EPA 5030B/8260	MSV/48681		
60129629005	**TB-074941-092012**	EPA 5030B/8260	MSV/48681		

CHAIN-OF-CUSTODY / Analytical Request Document

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

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Page: 1 of 1

Section A — **Required** Client information:

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

Section B — **Required** Project Information:

Report To:	Christine Mathews
Copy To:	Kelly Blanchard, Angela Bown
Purchase Order No.:	4515860215
Project Name:	Nell Hall No.1
Project Number:	074941

Section C — Invoice Information:

Attention:	ENFOS
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Alice Flanagan
Pace Profile #:	5514, 4

REGULATORY AGENCY

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

Site Location STATE: NM

Section D — **Required** Client Information

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

Valid Matrix Codes

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

Requested Analysis Filtered (Y/N)

ITEM #	Sample ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	8260 BTEX	6010 Dissolved Fe	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	GW-074941-092012-JP-MW-4	WT	G			9.20.12	1800		4				X	X					X	X		3DG9H 1BP3F 1.5 AA
2	GW-074941-092012-JP-MW-5	WT	G			9.20.12	1735		4				X	X					X	X		2DG9H AC
3	GW-074941-092012-JP-MW-6	WT	G			9.20.12	1730		4				X	X					X	X		AC
4	GW-074941-092012-JP-DUP	WT	G			9.20.12	1740		4					X					X			AC
5	TB-074941-092112	WT	G			9.21.12	1100		2					X					X			AC
6																						
7																						
8																						
9																						
10																						
11																						
12																						

6012 9629

DBGH BA 9/22/12

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
VOAs leaked HCl and may not be preserved. 7 day hold.	Jason Ploss / CRA	9/21/12	1200	Benell Ofs	9-22-12	850	2.2	Y	Y	Y

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

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jason Ploss

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 09/21/12

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

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

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Sample Condition Upon Receipt – ESI Tech Specs

Client Name: COP CRA NM

Project #: 60129629

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

Optional
Proj Due Date: 10/04
Proj Name:

Tracking #: 8993 9001 6573 Pace Shipping Label Used? Yes ☐ No ☑

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

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

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

Cooler Temperature: 2.2

Date and initials of person examining contents: 9-22-12 BA

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	1.
Chain of Custody filled out:	☑Yes ☐No ☐N/A	2.
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	3.
Sampler name & signature on COC:	☑Yes ☐No ☐N/A	4.
Samples arrived within holding time:	☑Yes ☐No ☐N/A	5.
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	7.
Sufficient volume:	☑Yes ☐No ☐N/A	8.
Correct containers used:	☑Yes ☐No ☐N/A	
-Pace containers used:	☑Yes ☐No ☐N/A	9.
Containers intact:	☑Yes ☐No ☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☑N/A	11.
Filtered volume received for dissolved tests?	☑Yes ☐No ☐N/A	12. BA 9/22/12
Sample labels match COC:	☑Yes ☐No ☐N/A	
-Includes date/time/ID/analyses Matrix: WT		13.
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes ☐No	Initial when completed / Lot # of added preservative
Trip Blank present:	☑Yes ☐No ☐N/A	
Pace Trip Blank lot # (if purchased): 080612-3		15.
Headspace in VOA vials (>6mm):	☐Yes ☑No ☐N/A	
		16.
Project sampled in USDA Regulated Area:	☐Yes ☐No ☑N/A	17. List State:

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

BA 9/22/12 1410

Project Manager Review: AMF Date: 9/24/12

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

Start: 1410	Start:
End: 1420	End:
Temp:	Temp:

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

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January 07, 2013

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

RE: Project: 074941 Nell Hall No. 1
Pace Project No.: 60136178

Dear Christine Matthews:
Enclosed are the analytical results for sample(s) received by the laboratory on December 29, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Alice Flanagan

alice.flanagan@pacelabs.com
Project Manager

Enclosures

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

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CERTIFICATIONS

Project: 074941 Nell Hall No. 1
Pace Project No.: 60136178

Kansas Certification IDs
9608 Loiret Boulevard, Lenexa, KS 66219
A2LA Certification #: 2456.01
Arkansas Certification #: 12-019-0
Illinois Certification #: 002885
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212008A
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407-12-3
Utah Certification #: KS000212012-2

Pace Analytical Services, Inc.
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SAMPLE SUMMARY

Project: 074941 Nell Hall No. 1
Pace Project No.: 60136178

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60136178001	**GW-074941-122812-JMK-MW4**	Water	12/28/12 11:30	12/29/12 08:45
60136178002	**GW-074941-122812-JMK-MW5**	Water	12/28/12 12:15	12/29/12 08:45
60136178003	**GW-074941-122812-JMK-MW6**	Water	12/28/12 13:00	12/29/12 08:45
60136178004	**GW-074941-122812-JMK-DUP**	Water	12/28/12 12:15	12/29/12 08:45
60136178005	**TRIP BLANK**	Water	12/28/12 08:00	12/29/12 08:45

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SAMPLE ANALYTE COUNT

Project: 074941 Nell Hall No. 1
Pace Project No.: 60136178

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60136178001	**GW-074941-122812-JMK-MW4**	EPA 6010	SMW	1
		EPA 8260	PRG	9
60136178002	**GW-074941-122812-JMK-MW5**	EPA 6010	SMW	1
		EPA 8260	PRG	9
60136178003	**GW-074941-122812-JMK-MW6**	EPA 6010	SMW	1
		EPA 8260	PRG	9
60136178004	**GW-074941-122812-JMK-DUP**	EPA 8260	PRG	9
60136178005	**TRIP BLANK**	EPA 8260	PRG	9

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PROJECT NARRATIVE

Project: 074941 Nell Hall No. 1
Pace Project No.: 60136178

Method: **EPA 6010**
Description: 6010 MET ICP, Dissolved
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: January 07, 2013

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.

Additional Comments:

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PROJECT NARRATIVE

Project: 074941 Nell Hall No. 1
Pace Project No.: 60136178

Method: **EPA 8260**
Description: 8260 MSV UST, Water
Client: COP Conestoga-Rovers & Associates, Inc. NM
Date: January 07, 2013

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/51101

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

QC Batch: MSV/51129

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

Additional Comments:

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

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ANALYTICAL RESULTS

Project: 074941 Nell Hall No. 1
Pace Project No.: 60136178

Sample: GW-074941-122812-JMK-MW4 **Lab ID: 60136178001** Collected: 12/28/12 11:30 Received: 12/29/12 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron, Dissolved	**748**	ug/L	50.0	17.2	1	12/31/12 15:00	01/03/13 15:06	7439-89-6	
8260 MSV UST, Water	Analytical Method: EPA 8260								
Benzene	ND	ug/L	1.0	0.098	1		01/01/13 05:03	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.23	1		01/01/13 05:03	100-41-4	
Toluene	ND	ug/L	1.0	0.15	1		01/01/13 05:03	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.41	1		01/01/13 05:03	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	106	%	80-120		1		01/01/13 05:03	1868-53-7	
Toluene-d8 (S)	96	%	80-120		1		01/01/13 05:03	2037-26-5	
4-Bromofluorobenzene (S)	105	%	80-120		1		01/01/13 05:03	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		01/01/13 05:03	17060-07-0	
Preservation pH	**1.0**		1.0	0.10	1		01/01/13 05:03		

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ANALYTICAL RESULTS

Project: 074941 Nell Hall No. 1
Pace Project No.: 60136178

Sample: GW-074941-122812-JMK-MW5 **Lab ID: 60136178002** Collected: 12/28/12 12:15 Received: 12/29/12 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron, Dissolved	ND	ug/L	50.0	17.2	1	12/31/12 15:00	01/03/13 15:19	7439-89-6	
8260 MSV UST, Water	Analytical Method: EPA 8260								
Benzene	ND	ug/L	1.0	0.098	1		01/01/13 05:18	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.23	1		01/01/13 05:18	100-41-4	
Toluene	ND	ug/L	1.0	0.15	1		01/01/13 05:18	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.41	1		01/01/13 05:18	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	109	%	80-120		1		01/01/13 05:18	1868-53-7	
Toluene-d8 (S)	97	%	80-120		1		01/01/13 05:18	2037-26-5	
4-Bromofluorobenzene (S)	104	%	80-120		1		01/01/13 05:18	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		01/01/13 05:18	17060-07-0	
Preservation pH	**1.0**		1.0	0.10	1		01/01/13 05:18		

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ANALYTICAL RESULTS

Project: 074941 Nell Hall No. 1
Pace Project No.: 60136178

Sample: GW-074941-122812-JMK-MW6 **Lab ID: 60136178003** Collected: 12/28/12 13:00 Received: 12/29/12 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Iron, Dissolved	**8060**	ug/L	50.0	17.2	1	12/31/12 15:00	01/03/13 15:23	7439-89-6	
8260 MSV UST, Water	Analytical Method: EPA 8260								
Benzene	**319**	ug/L	5.0	0.49	5		01/01/13 05:32	71-43-2	
Ethylbenzene	**76.4**	ug/L	5.0	1.2	5		01/01/13 05:32	100-41-4	
Toluene	ND	ug/L	5.0	0.75	5		01/01/13 05:32	108-88-3	
Xylene (Total)	**45.2**	ug/L	15.0	2.0	5		01/01/13 05:32	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	106	%	80-120		5		01/01/13 05:32	1868-53-7	
Toluene-d8 (S)	95	%	80-120		5		01/01/13 05:32	2037-26-5	
4-Bromofluorobenzene (S)	106	%	80-120		5		01/01/13 05:32	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		5		01/01/13 05:32	17060-07-0	
Preservation pH	**1.0**		1.0	0.10	5		01/01/13 05:32		

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ANALYTICAL RESULTS

Project: 074941 Nell Hall No. 1
Pace Project No.: 60136178

Sample: GW-074941-122812-JMK-DUP **Lab ID: 60136178004** Collected: 12/28/12 12:15 Received: 12/29/12 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water	Analytical Method: EPA 8260								
Benzene	ND	ug/L	1.0	0.098	1		01/02/13 18:46	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.23	1		01/02/13 18:46	100-41-4	
Toluene	ND	ug/L	1.0	0.15	1		01/02/13 18:46	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.41	1		01/02/13 18:46	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	103	%	80-120		1		01/02/13 18:46	1868-53-7	
Toluene-d8 (S)	99	%	80-120		1		01/02/13 18:46	2037-26-5	
4-Bromofluorobenzene (S)	102	%	80-120		1		01/02/13 18:46	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		01/02/13 18:46	17060-07-0	
Preservation pH	**1.0**		1.0	0.10	1		01/02/13 18:46		

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ANALYTICAL RESULTS

Project: 074941 Nell Hall No. 1
Pace Project No.: 60136178

Sample: TRIP BLANK **Lab ID: 60136178005** Collected: 12/28/12 08:00 Received: 12/29/12 08:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water	Analytical Method: EPA 8260								
Benzene	ND	ug/L	1.0	0.098	1		01/01/13 06:01	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.23	1		01/01/13 06:01	100-41-4	
Toluene	ND	ug/L	1.0	0.15	1		01/01/13 06:01	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.41	1		01/01/13 06:01	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	111	%	80-120		1		01/01/13 06:01	1868-53-7	
Toluene-d8 (S)	98	%	80-120		1		01/01/13 06:01	2037-26-5	
4-Bromofluorobenzene (S)	102	%	80-120		1		01/01/13 06:01	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	80-120		1		01/01/13 06:01	17060-07-0	
Preservation pH	**1.0**		1.0	0.10	1		01/01/13 06:01		

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QUALITY CONTROL DATA

Project: 074941 Nell Hall No. 1
Pace Project No.: 60136178

QC Batch: MPRP/21025 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved
Associated Lab Samples: 60136178001, 60136178002, 60136178003

METHOD BLANK: 1121151 Matrix: Water
Associated Lab Samples: 60136178001, 60136178002, 60136178003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron, Dissolved	ug/L	ND	50.0	01/03/13 14:59	

LABORATORY CONTROL SAMPLE: 1121152

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Dissolved	ug/L	10000	9960	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1121153 1121154

Parameter	Units	60136178001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron, Dissolved	ug/L	748	10000	10000	10800	10700	100	100	75-125	0	20	

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QUALITY CONTROL DATA

Project: 074941 Nell Hall No. 1
Pace Project No.: 60136178

QC Batch: MSV/51101 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 60136178001, 60136178002, 60136178003, 60136178005

METHOD BLANK: 1121041 Matrix: Water
Associated Lab Samples: 60136178001, 60136178002, 60136178003, 60136178005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	01/01/13 03:08	
Ethylbenzene	ug/L	ND	1.0	01/01/13 03:08	
Toluene	ug/L	ND	1.0	01/01/13 03:08	
Xylene (Total)	ug/L	ND	3.0	01/01/13 03:08	
1,2-Dichloroethane-d4 (S)	%	101	80-120	01/01/13 03:08	
4-Bromofluorobenzene (S)	%	100	80-120	01/01/13 03:08	
Dibromofluoromethane (S)	%	110	80-120	01/01/13 03:08	
Toluene-d8 (S)	%	100	80-120	01/01/13 03:08	

LABORATORY CONTROL SAMPLE: 1121042

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	20.8	104	74-123	
Ethylbenzene	ug/L	20	20.9	104	76-123	
Toluene	ug/L	20	20.0	100	75-123	
Xylene (Total)	ug/L	60	62.8	105	76-123	
1,2-Dichloroethane-d4 (S)	%			99	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Dibromofluoromethane (S)	%			108	80-120	
Toluene-d8 (S)	%			99	80-120	

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QUALITY CONTROL DATA

Project: 074941 Nell Hall No. 1
Pace Project No.: 60136178

QC Batch: MSV/51129
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 60136178004

METHOD BLANK: 1121342
Matrix: Water
Associated Lab Samples: 60136178004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	01/02/13 15:40	
Ethylbenzene	ug/L	ND	1.0	01/02/13 15:40	
Toluene	ug/L	ND	1.0	01/02/13 15:40	
Xylene (Total)	ug/L	ND	3.0	01/02/13 15:40	
1,2-Dichloroethane-d4 (S)	%	101	80-120	01/02/13 15:40	
4-Bromofluorobenzene (S)	%	100	80-120	01/02/13 15:40	
Dibromofluoromethane (S)	%	103	80-120	01/02/13 15:40	
Toluene-d8 (S)	%	99	80-120	01/02/13 15:40	

LABORATORY CONTROL SAMPLE: 1121343

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	21.0	105	74-123	
Ethylbenzene	ug/L	20	20.5	102	76-123	
Toluene	ug/L	20	19.7	99	75-123	
Xylene (Total)	ug/L	60	62.6	104	76-123	
1,2-Dichloroethane-d4 (S)	%			104	80-120	
4-Bromofluorobenzene (S)	%			102	80-120	
Dibromofluoromethane (S)	%			102	80-120	
Toluene-d8 (S)	%			98	80-120	

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QUALIFIERS

Project: 074941 Nell Hall No. 1
Pace Project No.: 60136178

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: MSV/51101

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

Batch: MSV/51129

[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: 074941 Nell Hall No. 1
Pace Project No.: 60136178

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60136178001	**GW-074941-122812-JMK-MW4**	EPA 3010	MPRP/21025	EPA 6010	ICP/17024
60136178002	**GW-074941-122812-JMK-MW5**	EPA 3010	MPRP/21025	EPA 6010	ICP/17024
60136178003	**GW-074941-122812-JMK-MW6**	EPA 3010	MPRP/21025	EPA 6010	ICP/17024
60136178001	**GW-074941-122812-JMK-MW4**	EPA 8260	MSV/51101		
60136178002	**GW-074941-122812-JMK-MW5**	EPA 8260	MSV/51101		
60136178003	**GW-074941-122812-JMK-MW6**	EPA 8260	MSV/51101		
60136178004	**GW-074941-122812-JMK-DUP**	EPA 8260	MSV/51129		
60136178005	**TRIP BLANK**	EPA 8260	MSV/51101		

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Sample Condition Upon Receipt
ESI Tech Spec Client

WO#: 60136178

60136178

Client Name: COP - CRA

Optional
Proj Due Date:
Proj Name:

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

Tracking #: 8015 3662 1442 Pace Shipping Label Used? Yes ☐ No ☑

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

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

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

Cooler Temperature: 1.4

Date and initials of person examining contents: 12/29/12 JD

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	1.
Chain of Custody filled out:	☑Yes ☐No ☐N/A	2.
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	3.
Sampler name & signature on COC:	☑Yes ☐No ☐N/A	4.
Samples arrived within holding time:	☑Yes ☐No ☐N/A	5.
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	7.
Sufficient volume:	☑Yes ☐No ☐N/A	8.
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	9.
Containers intact:	☑Yes ☐No ☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	12.
Sample labels match COC: Includes date/time/ID/analyses Matrix: WT	☑Yes ☐No ☐N/A	13.
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes ☐No	Initial when completed / Lot # of added preservative
Trip Blank present: Pace Trip Blank lot # (if purchased): 102912-3	☑Yes ☐No ☐N/A	15.
Headspace in VOA vials (>6mm):	☐Yes ☑No ☐N/A	16.
Project sampled in USDA Regulated Area:	☐Yes ☑No ☐N/A	17. List State:

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: [signature] Date: 12/31/12

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

Start: 0927	Start:
End: 0930	End:
Temp:	Temp:

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: of

Section A — **Required** Client Information:

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

Section B — **Required** Project Information:

Report To:	Christine Mathews
Copy To:	Kelly Blanchard, Angela Brown, Cassie Brown
Purchase Order No.:	
Project Name:	Nell Hall No.1
Project Number:	074941

Section C — Invoice Information:

Attention:	ENFOS
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Alice Flanagan
Pace Profile #:	5514, 4

REGULATORY AGENCY

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

Site Location STATE: NM

Section D — Required Client Information

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

Valid Matrix Codes

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

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: 8260 BTEX	6010 Dissolved Fe	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	GW-074941-122812-JMK-MW 4	WT		12-28	1130				4									✓	✓		001
2	GW-074941-122812-JMK-MW 5	WT		12-28	1215				4									✓	✓		002
3	GW-074941-122812-JMK-MW 6	WT		12-28	1300				4									✓	✓		003
4	GW-074941-122812-JMK-DUP	WT		12-28	1215				3									✓			004
5																					005
6																					
7																					
8																					
9																					
10																					
11																					
12																					

60/361 78

1BP3F 1.5, 3D69H
↓
↓ (LTB)

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
		12/28/12	1500	E Brockett	12/29	0845	1.4	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: J KIRCHNER

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 12/28/12

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

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