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Risk Management & Remediation
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ConocoPhillips

Mr. Randolph Bayliss, P. E.
District III & IV Hydrologist
New Mexico Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

March 21, 2017

Re: NMOCD Case No. 3R-090, 2016 Annual Groundwater Monitoring Report

Dear Mr. Bayliss:

Enclosed is the 2016 Annual Groundwater Monitoring Report for the Nell Hall No. 1 site. This report, prepared by GHD Services, Inc., contains the results of groundwater monitoring activities in 2016.

Please let me know if you have any questions.

Sincerely,

Joseph B. Crouch

J. Brady Crouch

Enc

2016 Annual Groundwater Monitoring Report

ConocoPhillips Nell Hall No. 1
San Juan County, New Mexico
API# 30-045-09619
NMOCD# 3R-090

ConocoPhillips Company

GHD | 6121 Indian School Rd NE Suite 200 Albuquerque NM 87110 USA

074941| Report No 8 | March 21, 2017

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1. Introduction

This report presents the results of monitoring well installation and quarterly groundwater monitoring events conducted on behalf of ConocoPhillips Company (ConocoPhillips) by GHD Services, Inc. (GHD) in March, June, September, and November 2016 at the Nell Hall No. 1 natural gas well site (hereafter referred to as the "Site"). The Site is located on private land in Section 7, Township 30N, Range 11W of San Juan County, New Mexico, approximately 2 miles west of the city of Aztec, New Mexico. Geographical coordinates for the Site are 36.821659N, 108.037319W. The Site consists of a natural gas well and associated equipment. The Site Vicinity Map and Site Plan are presented as Figure 1 and 2, respectively.

1.1 Background

A Site history 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 monitoring wells MW-1, MW-2, and MW-3 were subsequently installed to determine if hydrocarbons had impacted groundwater beneath the Site. Ongoing drought conditions resulted in a water table decline to an elevation below the screened intervals of monitoring wells MW-1, MW-2, and MW-3. Monitoring wells MW-4, MW-5, and MW-6 were subsequently installed in 2004 by Souder Miller and Associates (SMA) at sufficient depths to intersect the water table and to allow for seasonal or drought-induced water table fluctuations. Boring log data from MW-4, MW-5 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 monitoring wells MW-4, MW-5, and MW-6 in 2004, adjusting to a semi-annual sampling schedule in 2005, followed by annual sampling beginning in 2006. Semi-annual sampling was resumed in 2007 due to seasonal groundwater fluctuations.

On June 15, 2011, Site consulting responsibilities were transferred from Tetra Tech to GHD of Albuquerque, New Mexico.

During September 2015, GHD installed monitoring wells MW-7 and MW-8 to further assess subsurface soils and groundwater quality conditions down-gradient of MW-6.

2. Groundwater Monitoring Methodology and Analytical Results

2.1 Groundwater Monitoring Methodology

Groundwater Elevation Measurements

Depth to groundwater was gauged at monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, and MW-8 using an oil/water interface probe prior to sampling. A summary of this data is

presented in Table 2. Groundwater potentiometric surface maps detailing groundwater elevations and groundwater flow direction using data collected during the 2016 quarterly sampling events are presented as Figure 4, 5, 6, and 7.

Table 2 data show that groundwater elevations are often significantly lower 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 (or pumping of irrigation wells) and/or base flow 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 as much as 18 feet over the course of a year. Groundwater flow direction at the site also varies in direction from south to southeast.

Groundwater Sampling

During the 2016 quarterly groundwater monitoring events, Site monitoring wells were purged of at least three casing volumes using 1.5 inch diameter, polyethylene dedicated bailers. Groundwater parameter data, including temperature, pH, conductivity, dissolved oxygen, and oxidation reduction potential were collected using a YSI 556 multi parameter Sonde while purging each well, and recorded on field forms. A summary of field parameters for the quarterly groundwater monitoring events is presented as Table 3.

Groundwater samples were collected from monitoring wells MW-5, MW-7, and MW-8during March 2016, wells MW-4, MW-5, MW-5, MW-7, and MW-8W-8 during June, September, and November 2016W-4W-5W-5W-7W-8W-8

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.

The samples were analyzed for the presence of BTEX by EPA Method 8260 and for dissolved iron by EPA Method 6010.

2.2 Groundwater Monitoring Results

The New Mexico Water Quality Control Commission (NMWQCC) regulates groundwater quality in New Mexico under Title 20, Chapter 6, Part 2, Section 3103 of the New Mexico Administrative Code (20.6.2.3103 NMAC). Groundwater concentrations above NMWQCC standards during the 2016 groundwater sampling events are discussed below:

March 2016

Analytical results this quarter indicated concentrations of BTEX and dissolved iron from MW-5, MW-7, and MW-8 were below laboratory detection limits. MW-6 had insufficient column of water for sample collection.

June 2016

- Benzene
  - The NMWQCC standard for benzene in groundwater is 0.01 milligrams per liter (mg/L). The groundwater sample collected from MW-5 exceeded this standard with a concentration of 0.419 mg/L.
- Dissolved Iron
  - The NMWQCC standard for dissolved iron is 1.0 mg/L. The groundwater samples collected MW-4 and MW-5 contained dissolved iron at concentrations of 2.07 mg/L and 16.2 mg/L, respectively.

September 2016

- Benzene
  - The groundwater sample collected from MW-5 exceeded the NMWQCC standard with a concentration of 0.209 mg/L.
- Dissolved Iron
  - The groundwater sample collected from MW-5 exceeded the NMWQCC standard with a concentration of 6.07 mg/L.

November 2016

- Benzene
  - The groundwater sample collected from MW-5 exceeded the NMWQCC standard with a concentration of 0.257 mg/L.
- Dissolved Iron
  - The groundwater sample collected from MW-5 exceeded the NMWQCC standard with a concentration of 6.32 mg/L.

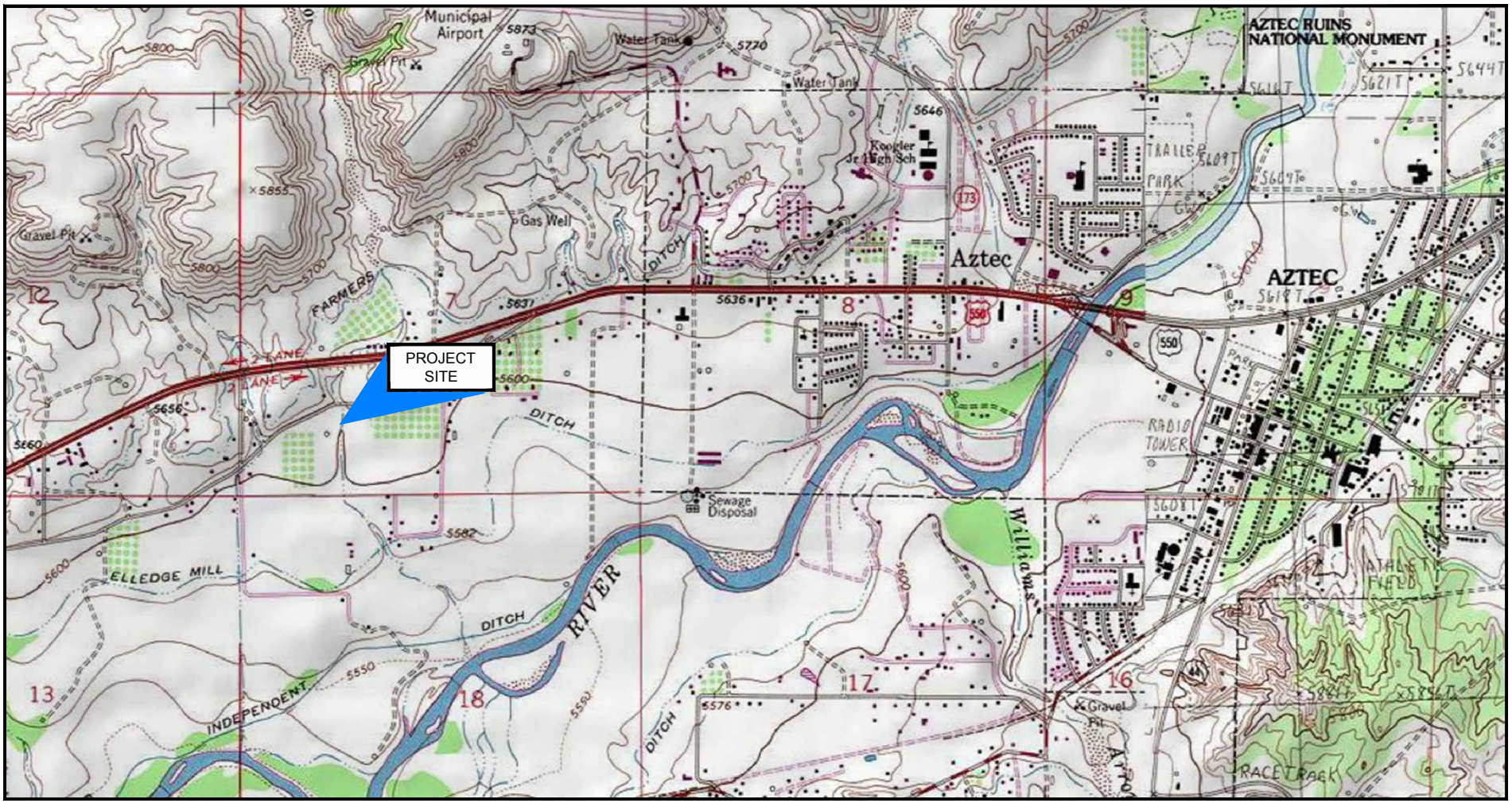
A summary of the 2016 laboratory analytical results is presented on Figure 8 – 2016 Contaminant Concentration Map. A summary of historical laboratory analytical results is presented as Table 4. Groundwater laboratory analytical reports are included as Appendix A.

3. Conclusions and Recommendations

Benzene continues to be present in groundwater of MW-6 at concentrations above the NMWCC standard. Groundwater samples collected from MW-7 and MW-8, down-gradient from MW-6, continue to exhibit concentrations of benzene and dissolved iron below NMWQCC standards, indicating a localized and stable contaminant plume in the area of MW-6.

GHD recommends continued sampling of Site monitoring wells on a semi-annual basis.

Figures



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

N

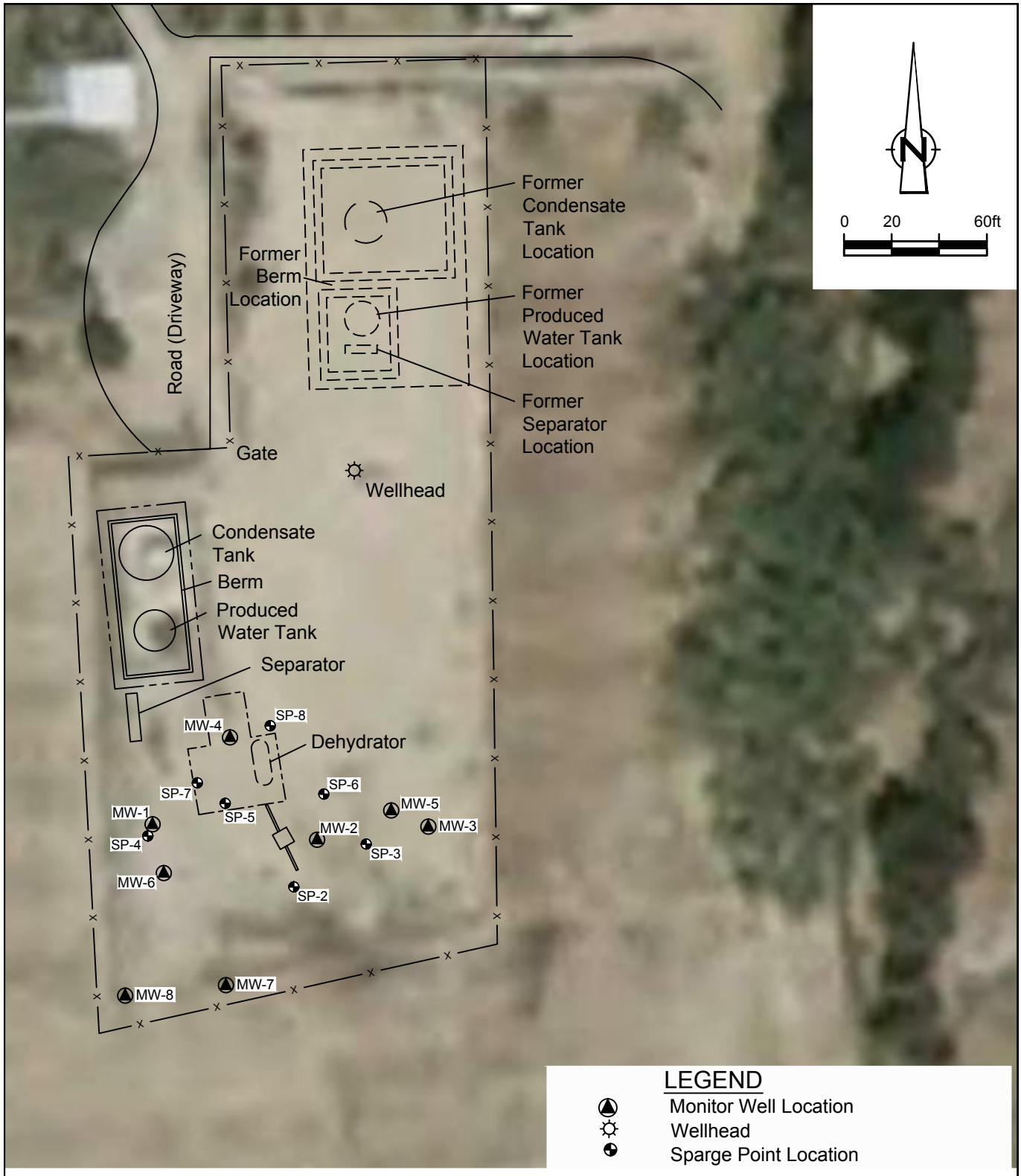
0 1000 2000ft

GHD

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(008)GN-DL003_TOPO FEB 16, 2017



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(008)GN-DL004 FEB 16, 2017

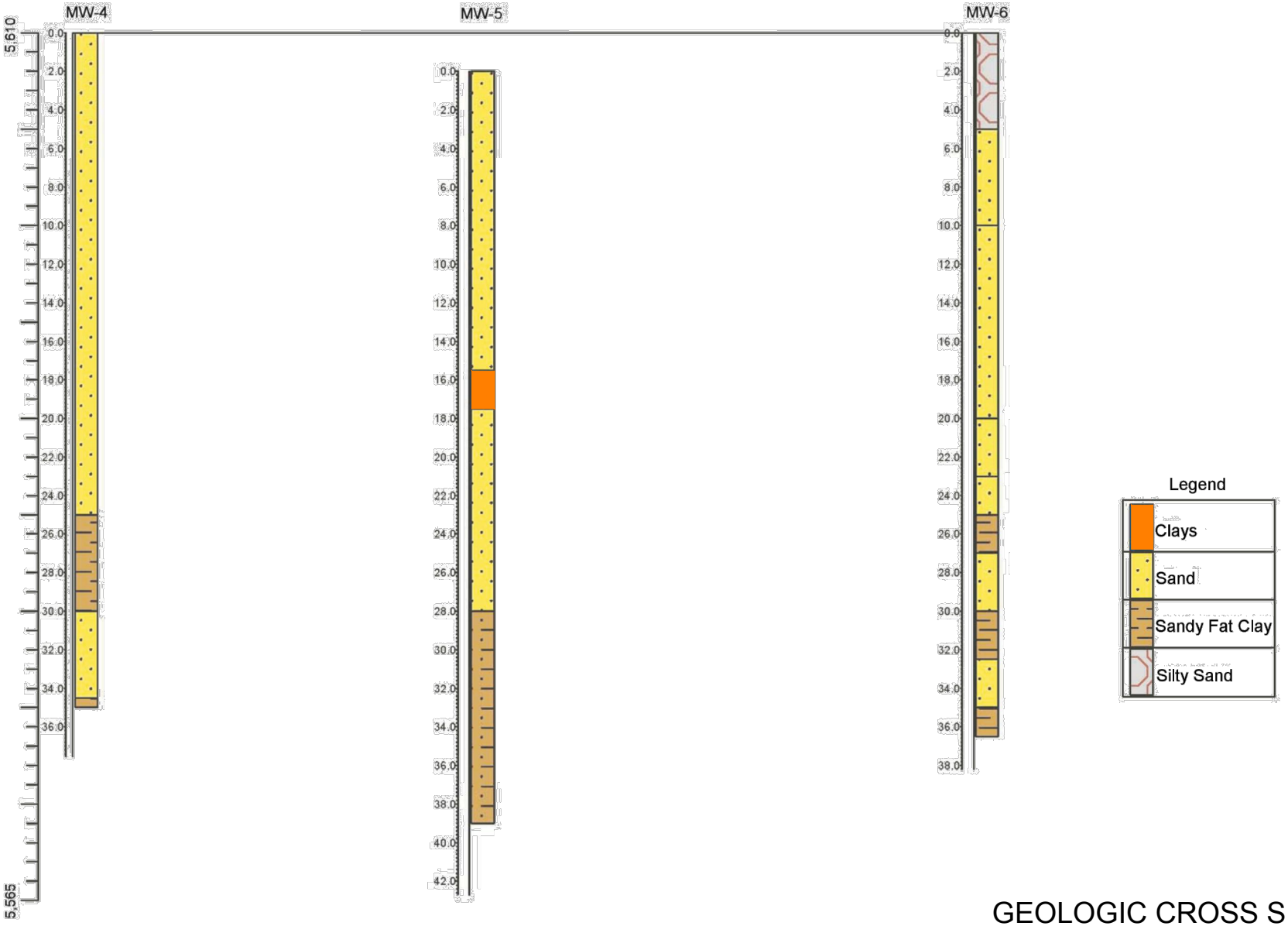
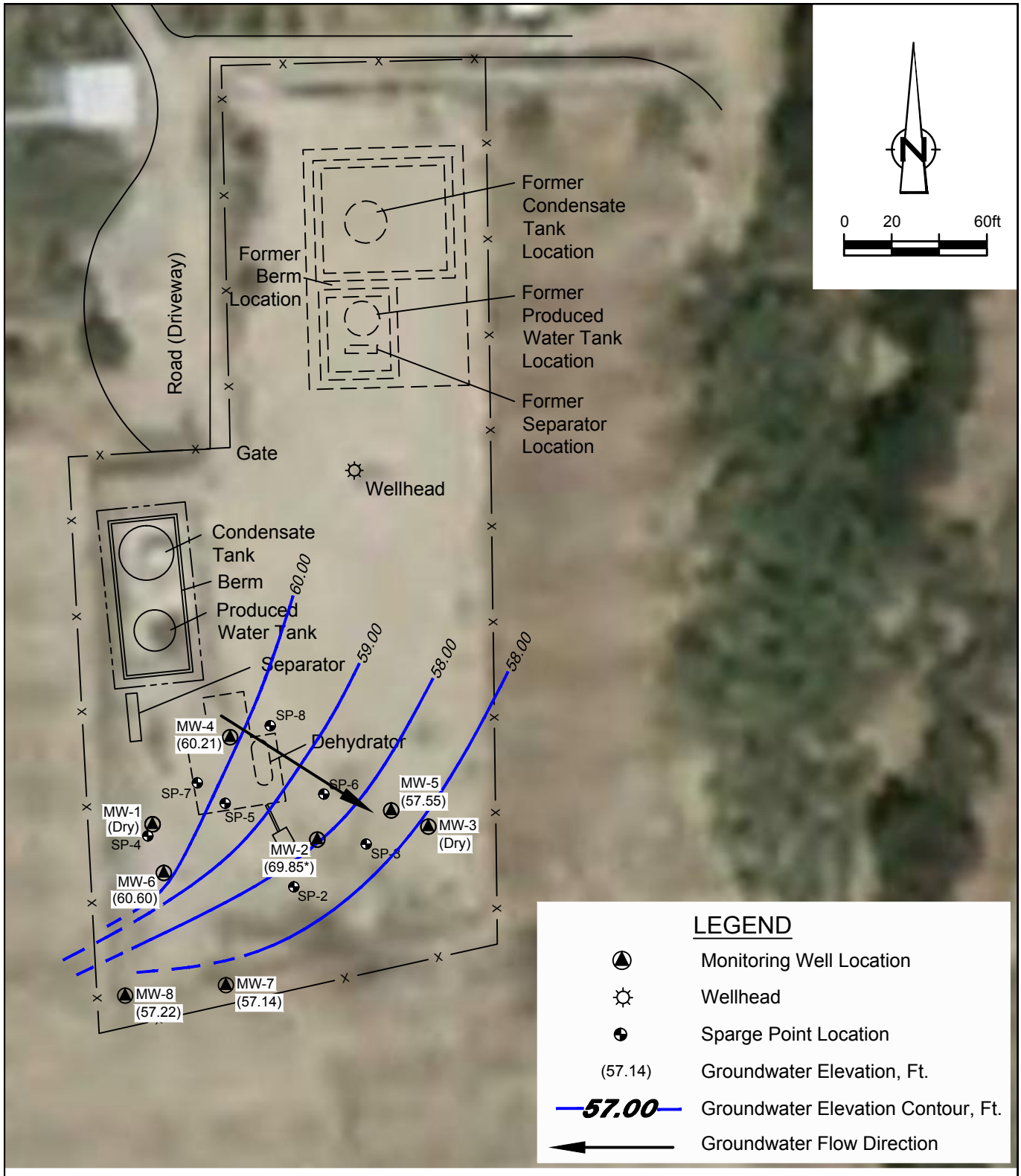


Figure 3

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

GHD



NOTE:

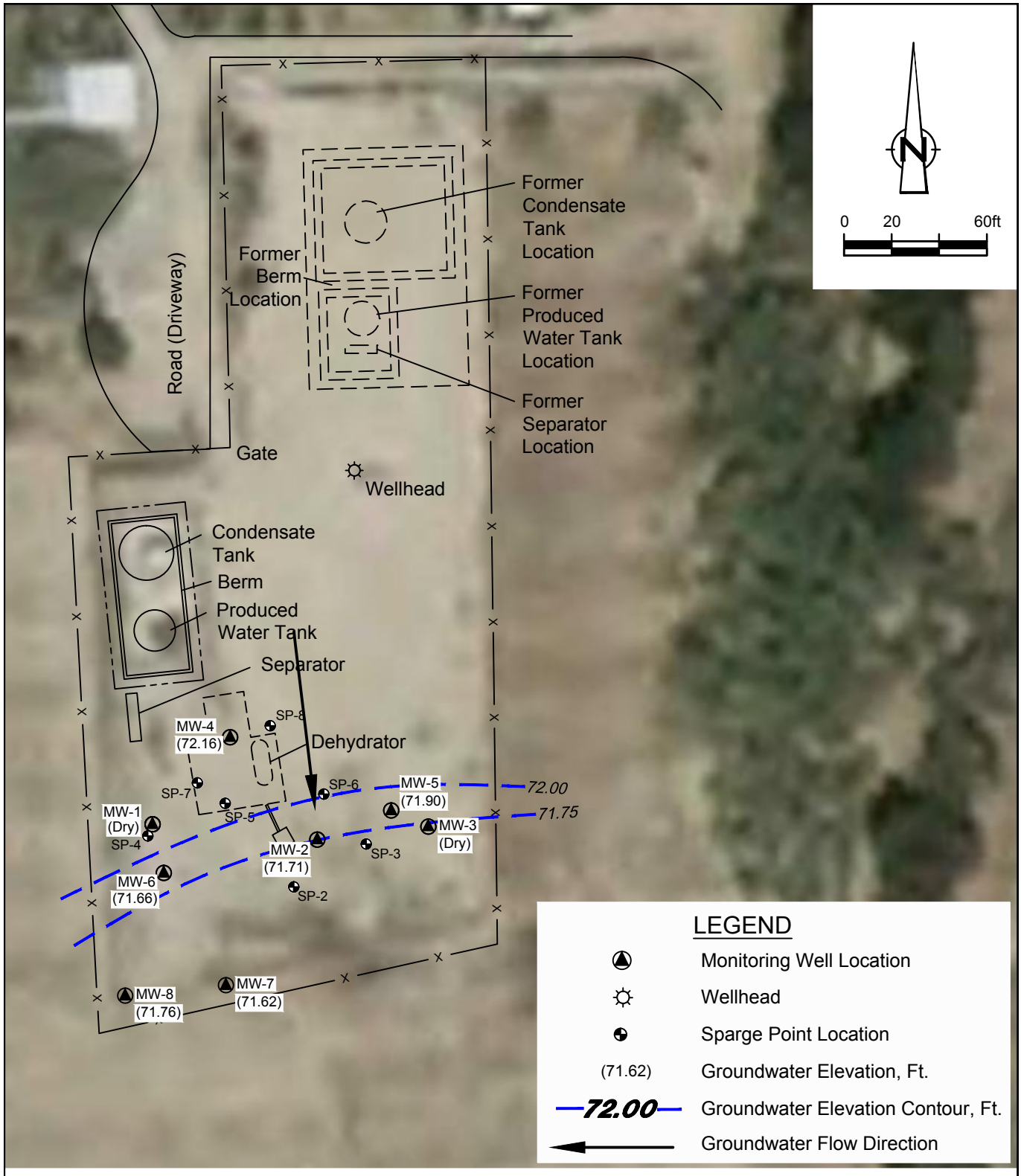
* - Value not consistent with historical data and is not included in plotting of isopleths.

Figure 4

MARCH 2016 GROUNDWATER POTENTIOMETRIC SURFACE MAP
NELL HALL No. 1 NATURAL GAS WELL SITE
SECTION 07, T30N-R11W, SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

GHD

074941-95(008)GN-DL001 MAR 1, 2017



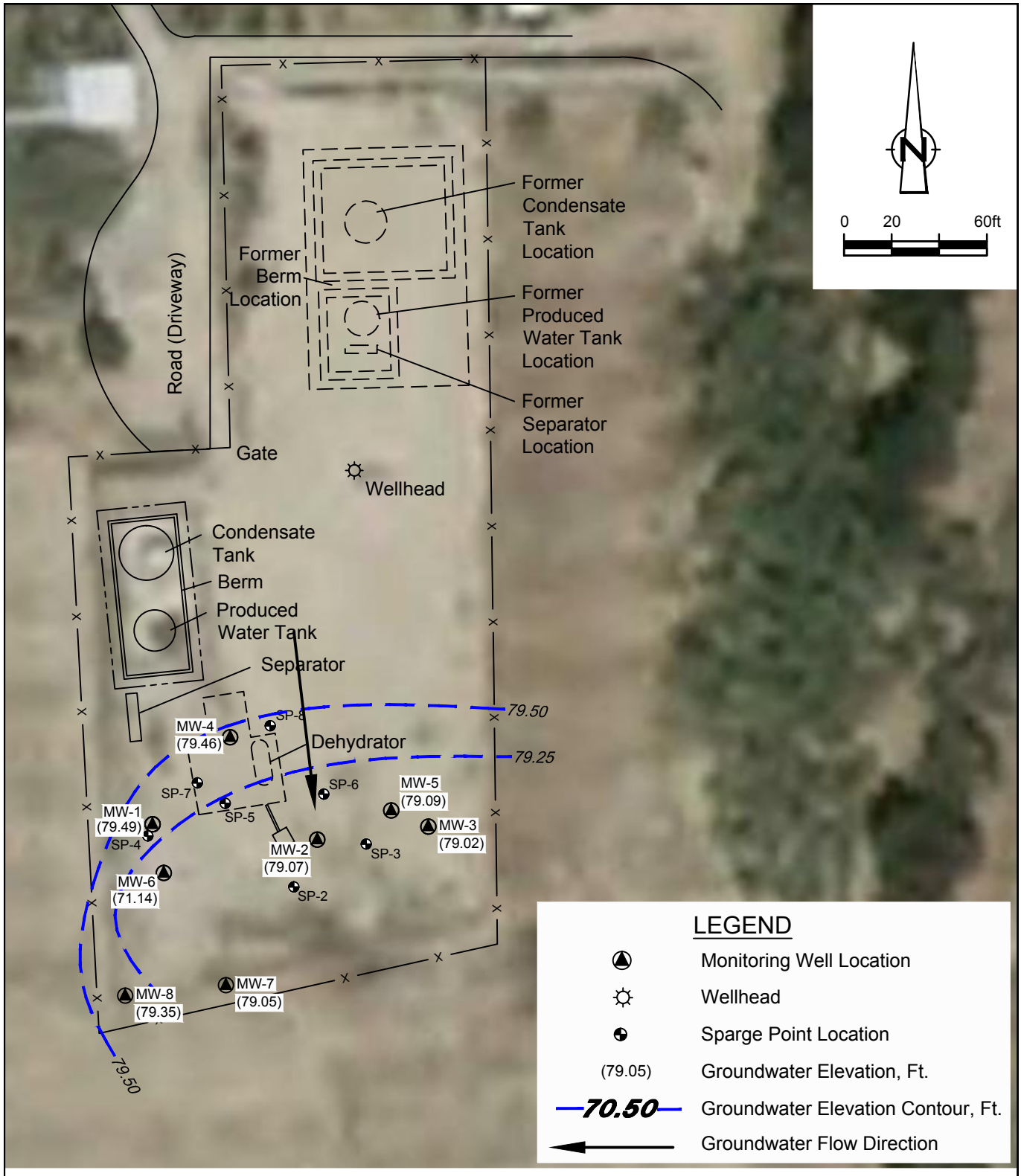
NOTE:

* - Value not consistent with historical data and is not included in plotting of isopleths.

Figure 5

JUNE 2016 GROUNDWATER POTENTIOMETRIC SURFACE MAP
NELL HALL No. 1 NATURAL GAS WELL SITE
SECTION 07, T30N-R11W, SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

GHD



NOTE:

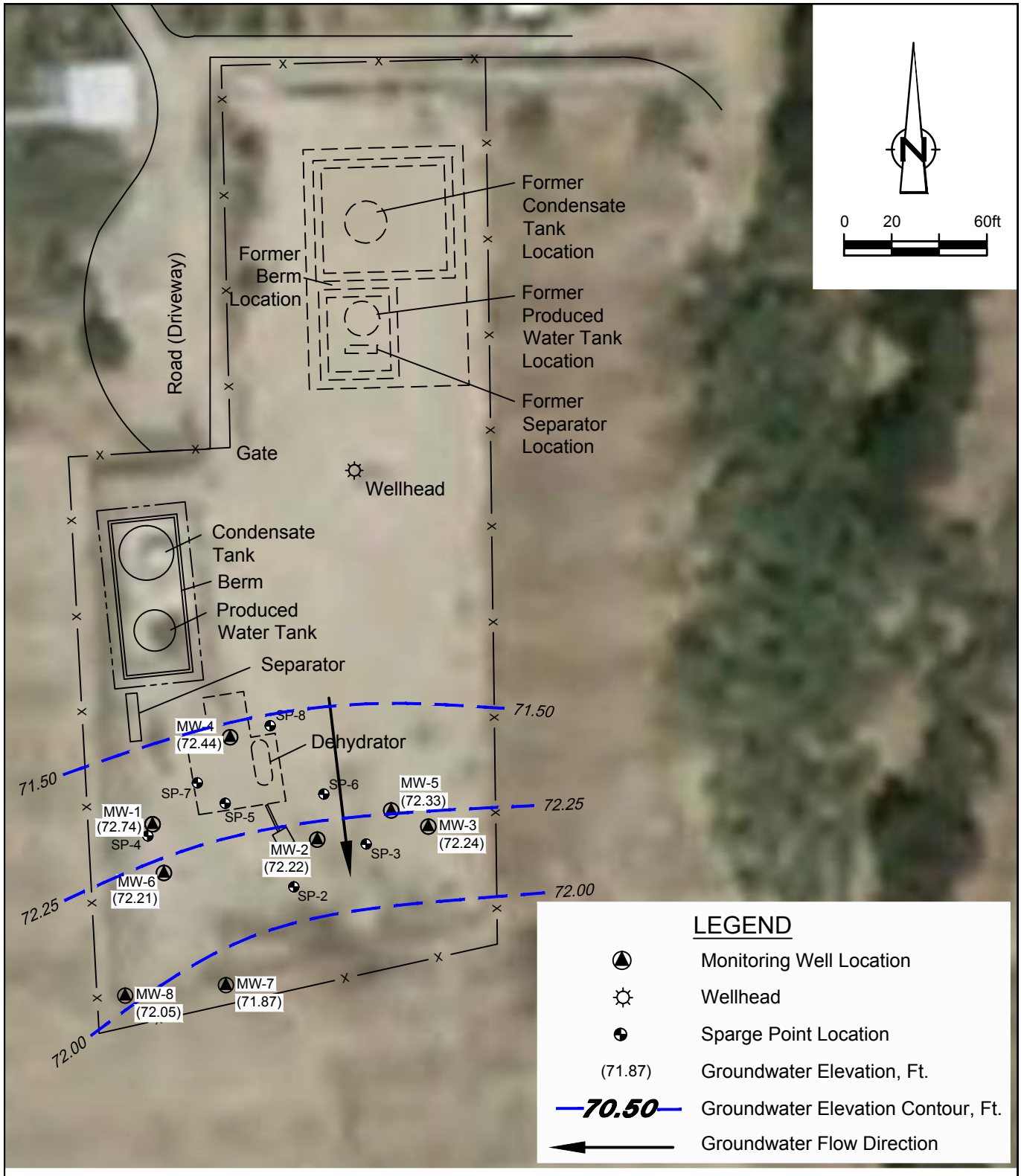
* - Value not consistent with historical data and is not included in plotting of isopleths.

Figure 6

SEPTEMBER 2016 GROUNDWATER POTENTIOMETRIC SURFACE MAP
NELL HALL No. 1 NATURAL GAS WELL SITE
SECTION 07, T30N-R11W, SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

GHD

074941-95(008)GN-DL001 FEB 16, 2017



NOTE:

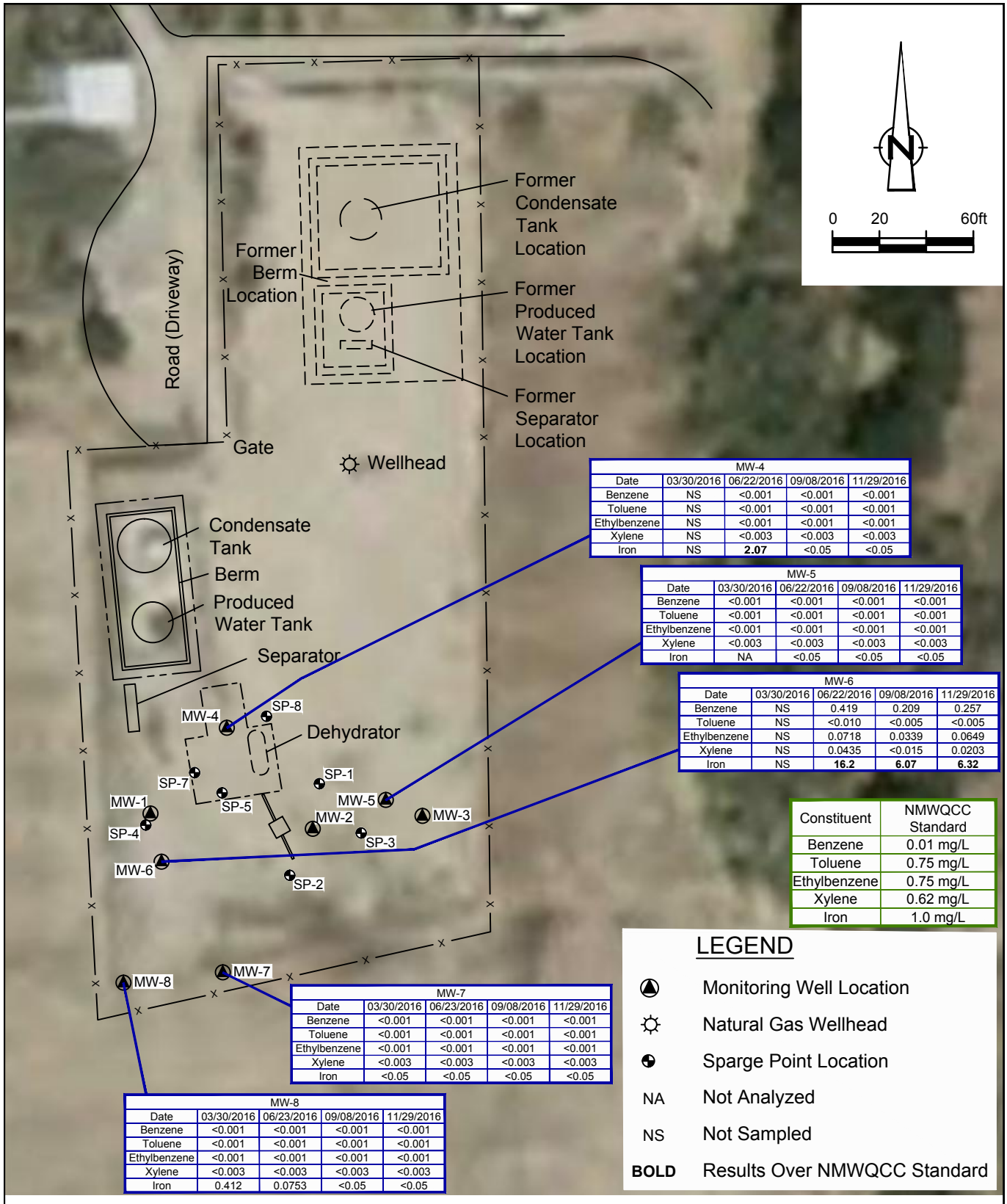
* - Value not consistent with historical data and is not included in plotting of isopleths.

Figure 7

NOVEMBER 2016 GROUNDWATER POTENTIOMETRIC SURFACE MAP
NELL HALL No. 1 NATURAL GAS WELL SITE
SECTION 07, T30N-R11W, SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

GHD

074941-95(008)GN-DL001 FEB 16, 2017



MW-4				
Date	03/30/2016	06/22/2016	09/08/2016	11/29/2016
Benzene	NS	<0.001	<0.001	<0.001
Toluene	NS	<0.001	<0.001	<0.001
Ethylbenzene	NS	<0.001	<0.001	<0.001
Xylene	NS	<0.003	<0.003	<0.003
Iron	NS	**2.07**	<0.05	<0.05

MW-5				
Date	03/30/2016	06/22/2016	09/08/2016	11/29/2016
Benzene	<0.001	<0.001	<0.001	<0.001
Toluene	<0.001	<0.001	<0.001	<0.001
Ethylbenzene	<0.001	<0.001	<0.001	<0.001
Xylene	<0.003	<0.003	<0.003	<0.003
Iron	NA	<0.05	<0.05	<0.05

MW-6				
Date	03/30/2016	06/22/2016	09/08/2016	11/29/2016
Benzene	NS	0.419	0.209	0.257
Toluene	NS	<0.010	<0.005	<0.005
Ethylbenzene	NS	0.0718	0.0339	0.0649
Xylene	NS	0.0435	<0.015	0.0203
Iron	NS	**16.2**	**6.07**	**6.32**

MW-7				
Date	03/30/2016	06/23/2016	09/08/2016	11/29/2016
Benzene	<0.001	<0.001	<0.001	<0.001
Toluene	<0.001	<0.001	<0.001	<0.001
Ethylbenzene	<0.001	<0.001	<0.001	<0.001
Xylene	<0.003	<0.003	<0.003	<0.003
Iron	<0.05	<0.05	<0.05	<0.05

MW-8				
Date	03/30/2016	06/23/2016	09/08/2016	11/29/2016
Benzene	<0.001	<0.001	<0.001	<0.001
Toluene	<0.001	<0.001	<0.001	<0.001
Ethylbenzene	<0.001	<0.001	<0.001	<0.001
Xylene	<0.003	<0.003	<0.003	<0.003
Iron	0.412	0.0753	<0.05	<0.05

Constituent	NMWQCC Standard
Benzene	0.01 mg/L
Toluene	0.75 mg/L
Ethylbenzene	0.75 mg/L
Xylene	0.62 mg/L
Iron	1.0 mg/L

LEGEND

▲	Monitoring Well Location
☼	Natural Gas Wellhead
◓	Sparge Point Location
NA	Not Analyzed
NS	Not Sampled
BOLD	Results Over NMWQCC Standard

NOTE:

1. All results are in milligrams per liter (mg/L).

Figure 8

2016 CONTAMINANT CONCENTRATION MAP
NELL HALL No. 1 NATURAL GAS WELL SITE
SECTION 07, T30N-R11W, SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

GHD

Tables

Table 1

Site History Timeline
ConocoPhillips Company
Nell Hall No. 1
San Juan County, New Mexico

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 monitoring 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	Monitoring Well Sampling	On Site Technologies, LTD found insufficient water in the 3 monitoring 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	Monitoring Well Installation	Monitoring 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 Monitoringing 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	Monitoring Well Sampling	Quarterly groundwater sampling of Monitoring 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	Monitoring Well Sampling	Semi-annual sampling of Monitoring Wells MW-4, MW-5, and MW-6.
November 15, 2006	Monitoring Well Sampling	Annual sampling of Monitoring Wells MW-4, MW-5, and MW-6.
February 21, 2007 through October 22, 2008	Monitoring Well Sampling	Resumption of semi-annual sampling of Monitoring 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	Monitoring Well Sampling	Groundwater samples collected from MW-5 and MW-6; no sample was collected from MW-4 (dry). Benzene result of 0.042 milligrams per liter (mg/L) for MW-6.
March 30, 2009	Monitoring Well Sampling	Monitoring 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	Monitoring 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	Monitoring 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.
June 9, 2010	Monitoring 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	MonitoringWell 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	Monitoring 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.

Table 1

Site History Timeline
ConocoPhillips Company
Nell Hall No. 1
San Juan County, New Mexico

Date/Time Period	*Event/Action*	*Description/Comments*
June 21, 2011	Monitoring 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	Monitoring 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	Monitoring 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	Monitoring 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	Monitoring 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	Monitoring 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	Monitoring 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.
March 28, 2013	Groundwater Monitoring	All site wells gauged were dry; no samples collected.
June 12, 2013	Monitoring Well Sampling	Groundwater samples collected from MW-4, MW-5 and MW-6. Groundwater sampled from MW-6 indicated a benzene concentration of 0.442 mg/L, and a dissolved iron concentration of 16.6 mg/L. Groundwater sampled from MW-4 indicated a dissolved iron concentration of 1.46 mg/L.
September 11, 2013	Monitoring Well Sampling	Groundwater samples collected from MW-4, MW-5 and MW-6. Groundwater sampled from MW-6 indicated a benzene concentration of 0.442 mg/L, and a dissolved iron concentration of 16.6 mg/L. Groundwater sampled from MW-4 indicated a dissolved iron concentration of 1.46 mg/L.
December 13, 2013	Monitoring Well Sampling	Groundwater samples collected from MW-4, MW-5 and MW-6. Groundwater sampled from MW-6 indicated a benzene concentration of 0.442 mg/L, and a dissolved iron concentration of 16.6 mg/L. Groundwater sampled from MW-4 indicated a dissolved iron concentration of 1.46 mg/L.
March 20 - 21, 2014	Monitoring Well Sampling	Groundwater samples collected from MW-5. Analytical results for BTEX and dissolved iron were below laboratory detection limits. MW-4 and MW-6 were dry during this sampling event.
June 18, 2014	Monitoring Well Sampling	Groundwater samples collected from MW-4, MW-5 and MW-6. Groundwater sampled from MW-6 indicated a benzene concentration of 0.384 mg/L, and a dissolved iron concentration of 15.5 mg/L. Groundwater sampled from MW-4 indicated a dissolved iron concentration of 1.83 mg/L.
September 15, 2014	Monitoring Well Sampling	Groundwater samples collected from MW-4, MW-5 and MW-6. Groundwater sampled from MW-6 indicated a benzene concentration of 0.502 mg/L, and a dissolved iron concentration of 7.75 mg/L.
December 15, 2014	Monitoring Well Sampling	Groundwater samples collected from MW-4, MW-5 and MW-6. Groundwater sampled from MW-6 indicated a benzene concentration of 0.333 mg/L, and a dissolved iron concentration of 5.45 mg/L.
March 17, 2015	Monitoring Well Sampling	Groundwater samples collected from MW-5. Analytical results for BTEX and dissolved iron were below laboratory detection limits. MW-4 and MW-6 were dry during this sampling event.
June 15, 2015	Monitoring Well Sampling	Groundwater samples collected from MW-4, MW-5 and MW-6. Groundwater sampled from MW-6 indicated a benzene concentration of 0.354 mg/L, and a dissolved iron concentration of 13.1 mg/L. Groundwater sampled from MW-4 indicated a dissolved iron concentration of 1.78 mg/L.
September 1, 2015	Monitoring Well Installation	GHD (formerly CRA) installed MW-7 and MW-8 along south fence of site, downgradient from impacted MW-6 to acertain horizontal extent of soil and groundwater hydrocarbon impacts.
September 16, 2015	Monitoring Well Sampling	Groundwater samples collected from MW-4, MW-5, MW-6, MW-7, and MW-8. Groundwater sampled from MW-6 indicated a benzene concentration of 0.294 mg/L and a dissolved iron concentration of 11.0 mg/L.
December 7, 2015	Monitoring Well Sampling	Groundwater samples collected from MW-4, MW-5, MW-6, MW-7, and MW-8. Groundwater sampled from MW-6 indicated a benzene concentration of 0.413 mg/L and a dissolved iron concentration of 7.35 mg/L.
March 30, 2016	Monitoring Well Sampling	Groudnwater samples collected from MW-5, MW-7, and MW-8. analytical results for BTEX and dissolved iron were below regulatory limits.
June 22, 2016	Monitoring Well Sampling	Groudnwater samples collected from MW-4, MW-5, MW-6, MW-7, and MW-8. Groundwater sampled from MW 6 indicated a benzene concentration of 0.419 mg/L. Groundwater samples collected from MW 4 and MW 6 indicated dissolved iren concentrations of 2.07 and 16.2 ug/L, respectively.
September 8, 2016	Monitoring Well Sampling	Groudnwater samples collected from MW-4, MW-5, MW-6, MW-7, and MW-8. Groundwater sampled from MW-6 indicated a benzene concentration of 0.209 mg/L and a dissolved iron concentration of 6.07 mg/L.
November 29, 2016	Monitoring Well Sampling	Groudnwater samples collected from MW-4, MW-5, MW-6, MW-7, and MW-8. Groundwater sampled from MW-6 indicated a benzene concentration of 0.257 mg/L and a dissolved iron concentration of 6.32 mg/L.

Table 2

Monitoring Well Specifications and Groundwater Elevations
ConocoPhillips Company
Nell Hall No. 1
San Juan County, New Mexico

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
				3/28/2013	DRY	NA
				6/12/2013	24.33	73.62
				9/11/2013	17.59	80.36
				12/13/2013	27.45	70.50
				3/20/2014	DRY	NA
				6/18/2014	25.18	72.77
				9/15/2014	18.68	79.27
				12/15/2014	DRY	NA
				3/16/2015	DRY	NA
				6/15/2015	27.85	70.10
				9/16/2015	21.71	76.24
				11/30/2015	26.14	71.81
				3/30/2016	DRY	NA
				9/8/2016	18.46	79.49
				11/29/2016	25.21	72.74
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
				3/28/2013	DRY	NA
				6/12/2013	23.78	73.38
				9/11/2013	17.22	79.94
				12/13/2013	27.00	70.16
				3/20/2014	DRY	NA
				6/18/2014	24.78	72.38
				9/15/2014	18.18	78.98
				12/15/2014	DRY	NA
				3/16/2015	DRY	NA
				6/15/2015	26.65	70.51
				9/16/2015	21.37	75.79
				11/30/2015	26.04	71.12
				3/30/2016	27.31	69.85
				6/22/2016	25.45	71.71
				9/8/2016	18.09	79.07
				11/29/2016	24.94	72.22

Table 2

Monitoring Well Specifications and Groundwater Elevations
ConocoPhillips Company
Nell Hall No. 1
San Juan County, New Mexico

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-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
				3/28/2013	DRY	NA
				6/12/2013	24.36	73.41
				9/11/2013	17.84	79.93
				12/13/2013	DRY	NA
				3/20/2014	DRY	DRY
				6/18/2014	25.36	72.41
				9/15/2014	18.79	78.98
				12/15/2014	DRY	NA
				3/16/2015	DRY	NA
				6/15/2015	27.20	70.57
				9/16/2015	22.05	75.72
				11/30/2015	26.68	71.09
				3/30/2016	DRY	NA
				9/8/2016	18.75	79.02
				11/29/2016	25.53	72.24
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
				3/28/2013	DRY	NA
				6/12/2013	24.06	73.69
				9/11/2013	17.40	80.35
				12/13/2013	27.90	69.85
				3/20/2014	DRY	NA
				6/18/2014	25.10	72.65
				9/15/2014	18.43	79.32
				12/15/2014	28.01	69.74
				3/16/2015	DRY	NA
				6/15/2015	26.91	70.84
				9/16/2015	21.62	76.13
				11/30/2015	26.28	71.47
				3/30/2016	37.54	60.21
				6/22/2016	25.59	72.16
				9/8/2016	18.29	79.46
				11/29/2016	25.31	72.44

Table 2

Monitoring Well Specifications and Groundwater Elevations
ConocoPhillips Company
Nell Hall No. 1
San Juan County, New Mexico

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-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
				3/28/2013	DRY	NA
				6/12/2013	25.39	73.42
				9/11/2013	18.84	79.97
				12/13/2013	29.20	69.61
				3/20/2014	39.83	58.98
				6/18/2014	26.35	72.46
				9/15/2014	19.76	79.05
				12/15/2014	29.37	69.44
				3/16/2015	39.55	59.26
				6/15/2015	28.22	70.59
				9/16/2015	23.02	75.79
				11/30/2015	27.61	71.20
				3/30/2016	41.26	57.55
				6/22/2016	26.91	71.90
				9/8/2016	19.72	79.09
				11/29/2016	26.48	72.33
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
				3/28/2013	DRY	NA
				6/12/2013	24.78	73.63
				9/11/2013	18.26	80.15
				12/13/2013	28.84	69.57
				3/20/2014	37.47	60.94
				6/18/2014	25.93	72.48
				9/15/2014	19.35	79.06
				12/15/2014	29.02	69.39
				3/16/2015	37.37	61.04
				6/15/2015	27.92	70.49
				9/16/2015	22.40	76.01
				11/30/2015	27.22	71.19
				3/30/2016	37.81	60.60
				6/22/2016	26.75	71.66
				9/8/2016	19.27	79.14
				11/29/2016	26.20	72.21

Table 2

Monitoring Well Specifications and Groundwater Elevations
ConocoPhillips Company
Nell Hall No. 1
San Juan County, New Mexico

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-7	43.02	97.60	10-40	9/16/2015	21.70	75.90
				11/30/2015	26.78	70.82
				3/30/2016	40.46	57.14
				6/22/2016	25.98	71.62
				9/8/2016	18.55	79.05
				11/29/2016	25.73	71.87
MW-8	42.47	98.87	9-39	9/16/2015	22.74	76.13
				11/30/2015	27.97	70.90
				3/30/2016	41.65	57.22
				6/22/2016	27.11	71.76
				9/8/2016	19.52	79.35
				11/29/2016	26.82	72.05

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
Field Parameters Summary
ConocoPhillips Company
Nell Hall No. 1
San Juan County, New Mexico

Well ID	Sample Date	Temperature (°C)	pH	TDS (g/L)	Conductivity (µS/cm)	DO (mg/L)	ORP (mV)	Volume (gallons)
MW-4	3/17/2015	Not sampled.						
	6/15/2015	16.01	6.78	0.635	977	2.74	-113.90	5.25
	9/16/2015	16.48	7.00	0.619	953	4.24	-83.1	7.75
	11/30/2015	15.59	7.01	0.680	1046	2.60	-54.0	5.50
	3/30/2016	Not sampled.						
	6/22/2016	16.00	6.65	--	1090	1.10	-109.0	6.00
	9/8/2016	16.55	7.35	0.627	965	5.03	66.3	9.50
	11/29/2016	14.79	7.34	--	935	3.87	46.0	6.00
MW-5	3/17/2015	No parameters collected due to low well volume.						
	6/15/2015	15.28	7.08	0.576	886	6.83	10.2	7.00
	9/16/2015	15.99	6.72	0.598	920	7.33	34.9	9.75
	11/30/2015	16.24	6.84	1.118	1721	5.52	-50.5	7.75
	3/30/2016	No parameters collected due to low well volume.						
	6/22/2016	15.70	7.02	--	1120	5.87	2.0	7.75
	9/8/2016	15.78	7.82	0.550	846	7.91	54.3	11.25
	11/29/2016	15.47	7.17	--	1198	8.96	74.8	8.00
MW-6	3/17/2015	Not sampled.						
	6/15/2015	15.34	6.50	0.730	1124	4.15	-95.9	5.25
	9/16/2015	15.69	6.13	0.846	1302	2.92	-121.5	7.75
	11/30/2015	15.36	6.57	0.793	1221	4.82	-72.4	5.50
	3/30/2016	Not sampled.						
	6/22/2016	15.30	6.50	--	1220	1.42	-91.4	5.75
	9/8/2016	15.51	7.43	0.849	1307	1.86	-138.7	9.25
	11/29/2016	15.29	6.86	--	1132	2.57	-86.1	6.00
MW-7	9/16/2015	15.07	6.52	0.581	893	7.15	72.8	10.25
	11/30/2015	15.01	6.69	1.067	1641	4.99	21.0	7.75
	3/30/2016	16.77	6.91	0.800	1250	6.03	40.0	1.25
	6/22/2016	15.30	6.93	--	1090	1.22	53.5	8.25
	9/8/2016	16.29	7.62	0.441	679	7.49	5.6	11.50
	11/29/2016	14.11	7.07	--	1006	6.35	85.7	8.00
MW-8	9/16/2015	14.18	6.65	0.534	821	6.37	73.2	9.75
	11/30/2015	13.85	7.20	0.565	869	4.59	-13.8	7.00
	3/30/2016	No parameters collected due to low well volume.						
	6/22/2016	14.70	7.04	--	970	0.66	-22.6	7.50
	9/8/2016	13.99	7.82	0.550	847	7.95	15.0	11.25
	11/29/2016	13.71	7.24	--	883	8.81	89.1	7.50

Notes:
TDS = total dissolved solids
DO = dissolved oxygen
ORP = oxidation-reduction potential

Table 4

Groundwater Analytical Results Summary
ConocoPhillips Company
Nell Hall No. 1
San Juan County, New Mexico

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)
	NMWQCC Groundwater Quality Standards			***0.01***	***0.75***	***0.75***	***0.62***	***600***	***1***	***10***
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)	< 0.001	< 0.001	< 0.001	< 0.003	--	**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	--	--	--
	074941-061213-JK-MW4	6/12/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	**1.46**	--
	074941-061213-JK-DUP	6/12/2013	(Duplicate)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	--
	GW-074941-091113-CM-MW-4	9/11/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	<0.050	--
	GW-074941-122323-CM-MW4	12/13/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	0.758	--
	GW-074941-061814-CK-MW-4	6/18/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	**1.83**	--
	GW-074941-091514-CB-MW-4	9/15/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	0.0544	--
	GW-074941-121514-CM-MW-4	12/15/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	0.456	--
	GW-074941-061515-CB-MW-4	6/15/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	**1.78**	--
	GW-074941-091615-CK-MW-4	9/16/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	0.225	--
	GW-074941-113015-CB-MW-4	11/30/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	0.58	--
		3/30/16	Insufficient water column for sample							
	GW-074941-062216-SP-MW-4	06/22/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	2.07	--
	GW-074941-090816-SP-MW-4	09/08/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	< 0.05	--
	GW-074941-112916-CN-MW-4	11/29/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	< 0.05	--
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)	< 0.001	< 0.001	< 0.001	< 0.003	--	< 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	--
	074941-061213-JK-MW5	6/12/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	< 0.05	--
	GW-074941-091113-CM-MW-5	9/11/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	0.0723	--
	GW-074941-122323-CM-MW5	12/13/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	0.0760	--
	GW-074941-032114-CK-MW-5	3/21/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	< 0.05	--
	GW-074941-032114-CK-DUP	3/21/2014	(Duplicate)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	--
	GW-074941-061814-CK-MW-5	6/18/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	< 0.05	--
	GW-074941-091514-CB-MW-5	9/15/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	< 0.05	--
	GW-074941-121514-CM-MW-5	12/15/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	< 0.05	--
	GW-074941-031715-CM-MW-5	3/17/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	--
	GW-074941-061515-CB-MW-5	6/15/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	< 0.05	--
	GW-074941-091615-CK-MW-5	9/16/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	< 0.05	--
	GW-074941-113015-CB-MW-5	11/30/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	0.0684	--
	GW-074941-033016-CM-MW-5	3/30/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	--	--
	GW-074941-062216-SP-MW-5	6/22/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	< 0.05	--
	GW-074941-090816-SP-MW-5	09/08/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	< 0.05	--
	GW-074941-112916-CN-MW-5	11/29/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	< 0.05	--

Table 4

Groundwater Analytical Results Summary
ConocoPhillips Company
Nell Hall No. 1
San Juan County, New Mexico

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**	--
	074941-061213-JK-MW6	6/12/2013	(orig)	**0.442**	< 0.005	0.159	0.209	--	**16.6**	--
	GW-074941-091113-CM-MW-6	9/11/2013	(orig)	**0.109**	< 0.001	0.0208	0.0123	--	**2.260**	--
	GW-074941-091113-CM-DUP	9/11/2013	(Duplicate)	**0.0937**	< 0.001	0.0191	0.0114	--	--	--
	GW-074941-122323-CM-MW6	12/13/2013	(orig)	**0.467**	< 0.001	0.101	0.0537	--	**5.900**	--
	GW-074941-122323-CM-DUP	12/13/2013	(Duplicate)	**0.456**	< 0.001	0.0777	0.0491	--	--	--
	GW-074941-061814-CK-MW-6	6/18/2014	(orig)	**0.384**	< 0.005	0.152	0.177	--	**15.5**	--
	GW-074941-061814-CK-DUP	6/18/2014	(Duplicate)	**0.402**	< 0.005	0.153	0.173	--	--	--
	GW-074941-091514-CB-MW-6	9/15/2014	(orig)	**0.502**	< 0.001	0.101	0.064	--	**7.75**	--
	GW-074941-091514-CB-DUP	9/15/2014	(Duplicate)	**0.182**	< 0.001	0.0638	0.0354	--	--	--
	GW-074941-121514-CM-MW-6	12/15/2014	(orig)	**0.333**	< 0.001	0.0758	0.0249	--	**5.45**	--
	GW-074941-121514-CM-DUP	12/15/2014	(Duplicate)	**0.314**	< 0.001	0.0502	0.0169	--	--	--
	GW-074941-061515-CB-MW-6	6/15/2015	(orig)	**0.354**	< 0.005	0.167	0.222	--	**13.1**	--
	GW-074941-061515-CB-DUP	6/15/2015	(Duplicate)	**0.358**	< 0.005	0.144	0.195	--	--	--
	GW-074941-091615-CK-MW-6	9/16/2015	(orig)	**0.294**	< 0.005	0.134	0.0615	--	**11.0**	--
	GW-074941-091615-CK-DUP	9/16/2015	(Duplicate)	**0.284**	< 0.005	0.134	0.0624	--	--	--
	GW-074941-113015-CB-MW-6	11/30/2015	(orig)	**0.413**	< 0.01	0.0642	< 0.03	--	**7.35**	--
	GW-074941-113015-CB-DUP	11/30/2015	(Duplicate)	**0.367**	< 0.001	0.0714	0.0167	--	--	--
		3/30/2016	Insufficient water column for sample							
	GW-074941-062216-SP-MW-6	6/22/2016	(orig)	**0.419**	< 0.010	0.0718	0.0435	--	**16.2**	--
	GW-074941-090816-SP-MW-6	09/08/2016	(orig)	**0.209**	< 0.005	0.0339	< 0.015	--	**6.07**	--
	GW-074941-090816-SP-MW-DUP	09/08/2016	(Duplicate)	**0.217**	< 0.001	0.0474	0.0093	--	**--**	--
	GW-074941-112916-CN-MW-6	11/29/2016	(orig)	**0.257**	< 0.005	0.0649	0.0203	--	**6.32**	--
MW-7	GW-074941-091615-CK-MW-7	9/16/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	< 0.05	--
	GW-074941-113015-CB-MW-7	11/30/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	0.0637	--
	GW-074941-033016-CM-MW-7	3/30/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003		< 0.50	
	GW-074941-062216-SP-MW-7	6/22/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	< 0.50	--
	GW-074941-090816-SP-MW-7	09/08/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	< 0.05	--
	GW-074941-112916-CN-MW-7	11/29/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	<0.05	--
MW-8	GW-074941-091615-CK-MW-8	9/16/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	< 0.05	--
	GW-074941-113015-CB-MW-8	11/30/2015	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	< 0.05	--
	GW-074941-033016-CM-MW-8	3/30/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003		0.412	
	GW-074941-062216-SP-MW-8	6/22/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	0.0753	--
	GW-074941-090816-SP-MW-8	09/08/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	< 0.05	--
	GW-074941-112916-CN-MW-8	11/29/2016	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	--	< 0.05	--

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

Appendix A
Groundwater Laboratory Analytical Reports

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

April 08, 2016

Jeffrey Walker
GHD Services, Inc
6121 Indian School Rd NE
Ste 200
Albuquerque, NM 87110

RE: Project: 074941 Nell Hall No 1 Waters
Pace Project No.: 60216014

Dear Jeffrey Walker:
Enclosed are the analytical results for sample(s) received by the laboratory on March 31, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Alice Flanagan
alice.flanagan@pacelabs.com
Project Manager

Enclosures

cc: Angela Bown, GHD Services, Inc,
Cassie Brown, GHD Services, Inc,
Cale Kanack, GHD

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

CERTIFICATIONS

Project: 074941 Nell Hall No 1 Waters
Pace Project No.: 60216014

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 15-016-0
Illinois Certification #: 003097
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212008A
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407
Utah Certification #: KS00021
Kansas Field Laboratory Accreditation: # E-92587

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: 074941 Nell Hall No 1 Waters
Pace Project No.: 60216014

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60216014001	**GW-074941-033016-CM-MW-5**	Water	03/30/16 14:25	03/31/16 13:25
60216014002	**GW-074941-033016-CM-MW-7**	Water	03/30/16 14:05	03/31/16 13:25
60216014003	**GW-074941-033016-CM-MW-8**	Water	03/30/16 14:10	03/31/16 13:25
60216014004	**GW-074941-033016-CM-DUP**	Water	03/30/16 00:00	03/31/16 13:25
60216014005	**TB-074941-033016-CM-001**	Water	03/30/16 15:15	03/31/16 13:25

REPORT OF LABORATORY ANALYSIS

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

SAMPLE ANALYTE COUNT

Project: 074941 Nell Hall No 1 Waters
Pace Project No.: 60216014

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60216014001	**GW-074941-033016-CM-MW-5**	EPA 8260	JDH	8
60216014002	**GW-074941-033016-CM-MW-7**	EPA 6010	JGP	1
		EPA 8260	JDH	8
60216014003	**GW-074941-033016-CM-MW-8**	EPA 6010	JGP	1
		EPA 8260	JTK	8
60216014004	**GW-074941-033016-CM-DUP**	EPA 8260	JDH	8
60216014005	**TB-074941-033016-CM-001**	EPA 8260	JTK	8

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

PROJECT NARRATIVE

Project: 074941 Nell Hall No 1 Waters
Pace Project No.: 60216014

Method: **EPA 6010**
Description: 6010 MET ICP, Dissolved
Client: GHD Services_COP NM
Date: April 08, 2016

General Information:
2 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

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

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

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

Additional Comments:

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

PROJECT NARRATIVE

Project: 074941 Nell Hall No 1 Waters
Pace Project No.: 60216014

Method: **EPA 8260**
Description: 8260 MSV UST, Water
Client: GHD Services_COP NM
Date: April 08, 2016

General Information:
5 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

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

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

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

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

QC Batch: MSV/75060

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

Additional Comments:

Batch Comments:

- QC Batch: MSV / 75025

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

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

ANALYTICAL RESULTS

Project: 074941 Nell Hall No 1 Waters
Pace Project No.: 60216014

Sample: GW-074941-033016-CM-MW-5 **Lab ID: 60216014001** Collected: 03/30/16 14:25 Received: 03/31/16 13:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		04/05/16 08:14	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		04/05/16 08:14	100-41-4	
Toluene	ND	ug/L	1.0	1		04/05/16 08:14	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		04/05/16 08:14	1330-20-7	
Surrogates								
Toluene-d8 (S)	100	%	80-120	1		04/05/16 08:14	2037-26-5	
4-Bromofluorobenzene (S)	100	%	77-130	1		04/05/16 08:14	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	81-127	1		04/05/16 08:14	17060-07-0	
Preservation pH	**1.0**		1.0	1		04/05/16 08:14		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 074941 Nell Hall No 1 Waters
Pace Project No.: 60216014

Sample: GW-074941-033016-CM-MW-7 **Lab ID: 60216014002** Collected: 03/30/16 14:05 Received: 03/31/16 13:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Iron, Dissolved	ND	ug/L	50.0	1	04/01/16 15:30	04/05/16 13:17	7439-89-6	
8260 MSV UST, Water	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		04/05/16 08:28	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		04/05/16 08:28	100-41-4	
Toluene	ND	ug/L	1.0	1		04/05/16 08:28	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		04/05/16 08:28	1330-20-7	
Surrogates								
Toluene-d8 (S)	99	%	80-120	1		04/05/16 08:28	2037-26-5	
4-Bromofluorobenzene (S)	101	%	77-130	1		04/05/16 08:28	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	81-127	1		04/05/16 08:28	17060-07-0	
Preservation pH	**1.0**		1.0	1		04/05/16 08:28		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 074941 Nell Hall No 1 Waters
Pace Project No.: 60216014

Sample: GW-074941-033016-CM-MW-8 **Lab ID: 60216014003** Collected: 03/30/16 14:10 Received: 03/31/16 13:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Iron, Dissolved	**412**	ug/L	50.0	1	04/01/16 15:30	04/05/16 13:31	7439-89-6	
8260 MSV UST, Water	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		04/02/16 06:02	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		04/02/16 06:02	100-41-4	
Toluene	ND	ug/L	1.0	1		04/02/16 06:02	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		04/02/16 06:02	1330-20-7	
Surrogates								
Toluene-d8 (S)	107	%	80-120	1		04/02/16 06:02	2037-26-5	
4-Bromofluorobenzene (S)	101	%	77-130	1		04/02/16 06:02	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	81-127	1		04/02/16 06:02	17060-07-0	
Preservation pH	**1.0**		1.0	1		04/02/16 06:02		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 074941 Nell Hall No 1 Waters
Pace Project No.: 60216014

Sample: GW-074941-033016-CM-DUP **Lab ID: 60216014004** Collected: 03/30/16 00:00 Received: 03/31/16 13:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		04/06/16 08:31	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		04/06/16 08:31	100-41-4	
Toluene	ND	ug/L	1.0	1		04/06/16 08:31	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		04/06/16 08:31	1330-20-7	
Surrogates								
Toluene-d8 (S)	103	%	80-120	1		04/06/16 08:31	2037-26-5	
4-Bromofluorobenzene (S)	101	%	77-130	1		04/06/16 08:31	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	81-127	1		04/06/16 08:31	17060-07-0	
Preservation pH	**1.0**		1.0	1		04/06/16 08:31		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 074941 Nell Hall No 1 Waters
Pace Project No.: 60216014

Sample: TB-074941-033016-CM-001 **Lab ID: 60216014005** Collected: 03/30/16 15:15 Received: 03/31/16 13:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		04/02/16 06:32	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		04/02/16 06:32	100-41-4	
Toluene	ND	ug/L	1.0	1		04/02/16 06:32	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		04/02/16 06:32	1330-20-7	
Surrogates								
Toluene-d8 (S)	107	%	80-120	1		04/02/16 06:32	2037-26-5	
4-Bromofluorobenzene (S)	101	%	77-130	1		04/02/16 06:32	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	81-127	1		04/02/16 06:32	17060-07-0	
Preservation pH	**1.0**		1.0	1		04/02/16 06:32		

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 074941 Nell Hall No 1 Waters
Pace Project No.: 60216014

QC Batch: MPRP/35416 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved
Associated Lab Samples: 60216014002, 60216014003

METHOD BLANK: 1734700 Matrix: Water
Associated Lab Samples: 60216014002, 60216014003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron, Dissolved	ug/L	ND	50.0	04/05/16 12:06	

LABORATORY CONTROL SAMPLE: 1734701

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Dissolved	ug/L	10000	10400	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1734702 1734703

Parameter	Units	60216014002 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	10600	10300	106	103	75-125	3	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

QUALITY CONTROL DATA

Project: 074941 Nell Hall No 1 Waters
Pace Project No.: 60216014

QC Batch: MSV/75025
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 60216014001, 60216014002

METHOD BLANK: 1734867 Matrix: Water
Associated Lab Samples: 60216014001, 60216014002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	04/05/16 05:00	
Ethylbenzene	ug/L	ND	1.0	04/05/16 05:00	
Toluene	ug/L	ND	1.0	04/05/16 05:00	
Xylene (Total)	ug/L	ND	3.0	04/05/16 05:00	
1,2-Dichloroethane-d4 (S)	%	102	81-127	04/05/16 05:00	
4-Bromofluorobenzene (S)	%	102	77-130	04/05/16 05:00	
Toluene-d8 (S)	%	101	80-120	04/05/16 05:00	

LABORATORY CONTROL SAMPLE: 1734868

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	20.5	103	79-116	
Ethylbenzene	ug/L	20	19.9	100	81-110	
Toluene	ug/L	20	19.5	97	82-111	
Xylene (Total)	ug/L	60	63.1	105	80-111	
1,2-Dichloroethane-d4 (S)	%			104	81-127	
4-Bromofluorobenzene (S)	%			102	77-130	
Toluene-d8 (S)	%			99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1734870 1734871

Parameter	Units	60216014002 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	20	20	21.4	21.6	107	108	37-151	1	40	
Ethylbenzene	ug/L	ND	20	20	20.5	20.0	102	100	29-151	3	45	
Toluene	ug/L	ND	20	20	20.8	20.3	104	102	37-147	2	43	
Xylene (Total)	ug/L	ND	60	60	63.7	61.1	106	102	27-156	4	46	
1,2-Dichloroethane-d4 (S)	%						101	104	81-127			
4-Bromofluorobenzene (S)	%						98	98	77-130			
Toluene-d8 (S)	%						101	100	80-120			
Preservation pH		1.0			1.0	1.0				0		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 074941 Nell Hall No 1 Waters
Pace Project No.: 60216014

QC Batch: MSV/75033 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 60216014003, 60216014005

METHOD BLANK: 1734975 Matrix: Water
Associated Lab Samples: 60216014003, 60216014005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	04/02/16 05:48	
Ethylbenzene	ug/L	ND	1.0	04/02/16 05:48	
Toluene	ug/L	ND	1.0	04/02/16 05:48	
Xylene (Total)	ug/L	ND	3.0	04/02/16 05:48	
1,2-Dichloroethane-d4 (S)	%	99	81-127	04/02/16 05:48	
4-Bromofluorobenzene (S)	%	102	77-130	04/02/16 05:48	
Toluene-d8 (S)	%	108	80-120	04/02/16 05:48	

LABORATORY CONTROL SAMPLE: 1734976

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	19.3	96	79-116	
Ethylbenzene	ug/L	20	20.1	100	81-110	
Toluene	ug/L	20	20.3	101	82-111	
Xylene (Total)	ug/L	60	61.6	103	80-111	
1,2-Dichloroethane-d4 (S)	%			97	81-127	
4-Bromofluorobenzene (S)	%			101	77-130	
Toluene-d8 (S)	%			108	80-120	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: 074941 Nell Hall No 1 Waters
Pace Project No.: 60216014

QC Batch: MSV/75060
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 60216014004

METHOD BLANK: 1736233 Matrix: Water
Associated Lab Samples: 60216014004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	04/06/16 05:01	
Ethylbenzene	ug/L	ND	1.0	04/06/16 05:01	
Toluene	ug/L	ND	1.0	04/06/16 05:01	
Xylene (Total)	ug/L	ND	3.0	04/06/16 05:01	
1,2-Dichloroethane-d4 (S)	%	102	81-127	04/06/16 05:01	
4-Bromofluorobenzene (S)	%	101	77-130	04/06/16 05:01	
Toluene-d8 (S)	%	102	80-120	04/06/16 05:01	

LABORATORY CONTROL SAMPLE: 1736234

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	20.3	102	79-116	
Ethylbenzene	ug/L	20	19.9	100	81-110	
Toluene	ug/L	20	19.6	98	82-111	
Xylene (Total)	ug/L	60	61.6	103	80-111	
1,2-Dichloroethane-d4 (S)	%			104	81-127	
4-Bromofluorobenzene (S)	%			101	77-130	
Toluene-d8 (S)	%			101	80-120	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219
(913)599-5665

QUALIFIERS

Project: 074941 Nell Hall No 1 Waters
Pace Project No.: 60216014

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

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.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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/75025

[1]

Batch: MSV/75060

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

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 074941 Nell Hall No 1 Waters
Pace Project No.: 60216014

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60216014002	**GW-074941-033016-CM-MW-7**	EPA 3010	MPRP/35416	EPA 6010	ICP/25911
60216014003	**GW-074941-033016-CM-MW-8**	EPA 3010	MPRP/35416	EPA 6010	ICP/25911
60216014001	**GW-074941-033016-CM-MW-5**	EPA 8260	MSV/75025		
60216014002	**GW-074941-033016-CM-MW-7**	EPA 8260	MSV/75025		
60216014003	**GW-074941-033016-CM-MW-8**	EPA 8260	MSV/75033		
60216014004	**GW-074941-033016-CM-DUP**	EPA 8260	MSV/75060		
60216014005	**TB-074941-033016-CM-001**	EPA 8260	MSV/75033		

Pace Analytical
www.pacelabs.com

Sample Condition Upon Receipt

WO# : 60216014

60216014

Client Name: GHD

Optional
Proj Due Date:
Proj Name:

Courier: FedEx ☒ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Other ☐ Client ☐

Tracking #: 6509 8165 1975 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: CF +1.0 T-239 / CF 0.0 T-262 **Type of Ice:** Wet Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 3.5

Date and initials of person examining contents: JB 3/31

Temperature should be above freezing to 6°C

Chain of Custody present:	☒Yes	☐No	☐N/A
Chain of Custody filled out:	☒Yes	☐No	☐N/A
Chain of Custody relinquished:	☒Yes	☐No	☐N/A
Sampler name & signature on COC:	☒Yes	☐No	☐N/A
Samples arrived within holding time:	☒Yes	☐No	☐N/A
Short Hold Time analyses (<72hr):	☐Yes	☒No	☐N/A
Rush Turn Around Time requested:	☐Yes	☒No	☐N/A
Sufficient volume:	☒Yes	☐No	☐N/A
Correct containers used:	☒Yes	☐No	☐N/A
Pace containers used:	☒Yes	☐No	☐N/A
Containers intact:	☒Yes	☐No	☐N/A
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes	☐No	☒N/A
Filtered volume received for dissolved tests?	☐Yes	☐No	☒N/A
Sample labels match COC:	☒Yes	☐No	☐N/A
Includes date/time/ID/analyses Matrix: WT			
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
Exceptions: VOA, Coliform, O&G, WI-DRO (water)	☒Yes	☐No	
Trip Blank present:	☒Yes	☐No	☐N/A
Pace Trip Blank lot # (if purchased): 2/25/16			
Headspace in VOA vials (>6mm):	☐Yes	☒No	☐N/A
Project sampled in USDA Regulated Area:	☐Yes	☐No	☒N/A
Additional labels attached to 5035A vials in the field?	☐Yes	☐No	☒N/A

	Initial when completed	Lot # of added preservative
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		
17. List State:		
18.		

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: AMF Date: 3/31/16

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:	GHD Services_COP NM	Report To:	Christine Mathews	Attention:	
Address:	6212 Indian School Rd. NE St2	Copy To:	Jeff Walker	Company Name:	
	Albuquerque, NM 87110		Angela Bown	Address:	
Email:	christine.mathews@ghd.com	Purchase Order #:		Pace Quote:	
Phone:	505-884-0672 Fax:	Project Name:	074941 Nell Hall No1 COP	Pace Project Manager:	alice.flanagan@pacelabs.com,
Requested Due Date:		Project #:		Pace Profile #:	

Regulatory Agency

State / Location: NM

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	8260 BTEX	Dissolved Fe-field filtered	Residual Chlorine (Y/N)	60216014
1	GW-074941-033016-CM-MW-5	WT	G			3:30.16	1425		3				3						X			(3) DG9H
2	GW-074941-033016-CM-MW-7	WT	G			3:30.16	1405		7			1	6						X	X		(6) DG9H BP3F
3	GW-074941-033016-CM-MW-8	WT	G			3:30.16	1410		4			1	3						X	X		(5) DG9H
4	GW-074941-033016-CM-DUP	WT	G			3:30.16	—		3				3						X			
5	TB-074941-033016-CM-001	WT				3:30.16	1515		3				3						X			
6																						
7																						
8																						
9																						
10																						
11																						
12																						

001 002 003 004 005

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)
	[signature] GHD	3.30.16	1530	[signature] Pace	3/31	1325	3.5	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Christine Mathews

SIGNATURE of SAMPLER: [signature] DATE Signed: 3/30/16

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

June 29, 2016

Christine Mathews
GHD Services, Inc.
6212 Indian School Rd. NE St2
Albuquerque, NM 87110

RE: Project: 074941 Nell Hall No1 COP
Pace Project No.: 60222236

Dear Christine Mathews:
Enclosed are the analytical results for sample(s) received by the laboratory on June 27, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Alice Flanagan
alice.flanagan@pacelabs.com
Project Manager

Enclosures

cc: Angela Bown, GHD Services, Inc,
Jeffrey Walker, GHD Services, Inc

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

CERTIFICATIONS

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60222236

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 15-016-0
Illinois Certification #: 003097
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212008A
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407
Utah Certification #: KS00021
Kansas Field Laboratory Accreditation: # E-92587

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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SAMPLE SUMMARY

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60222236

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60222236001	**GW-074941-062216-SP-MW-4**	Water	06/22/16 09:15	06/27/16 08:30
60222236002	**GW-074941-062216-SP-MW-6**	Water	06/22/16 09:40	06/27/16 08:30
60222236003	**GW-074941-062216-SP-MW-5**	Water	06/22/16 10:10	06/27/16 08:30
60222236004	**GW-074941-062216-SP-MW-7**	Water	06/22/16 10:40	06/27/16 08:30
60222236005	**GW-074941-062216-SP-MW-8**	Water	06/22/16 11:10	06/27/16 08:30
60222236006	**GW-074941-062216-SP-DUP**	Water	06/22/16 00:00	06/27/16 08:30
60222236007	**TRIP BLANK**	Water	06/22/16 09:15	06/27/16 08:30

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SAMPLE ANALYTE COUNT

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60222236

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60222236001	**GW-074941-062216-SP-MW-4**	EPA 6010	JGP	1
		EPA 5030B/8260	PGH	8
60222236002	**GW-074941-062216-SP-MW-6**	EPA 6010	JGP	1
		EPA 5030B/8260	PGH	8
60222236003	**GW-074941-062216-SP-MW-5**	EPA 6010	JGP	1
		EPA 5030B/8260	PGH	8
60222236004	**GW-074941-062216-SP-MW-7**	EPA 6010	JGP	1
		EPA 5030B/8260	PGH	8
60222236005	**GW-074941-062216-SP-MW-8**	EPA 6010	JGP	1
		EPA 5030B/8260	PGH	8
60222236006	**GW-074941-062216-SP-DUP**	EPA 5030B/8260	PGH	8
60222236007	**TRIP BLANK**	EPA 5030B/8260	PGH	8

REPORT OF LABORATORY ANALYSIS

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

PROJECT NARRATIVE

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60222236

Method: **EPA 6010**
Description: 6010 MET ICP, Dissolved
Client: GHD Services_COP NM
Date: June 29, 2016

General Information:
5 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

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

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

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

Additional Comments:

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

PROJECT NARRATIVE

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60222236

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: GHD Services_COP NM
Date: June 29, 2016

General Information:
7 samples were analyzed for EPA 5030B/8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

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

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

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

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

QC Batch: MSV/76687

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 No1 COP
Pace Project No.: 60222236

Sample: GW-074941-062216-SP-MW-4 **Lab ID: 60222236001** Collected: 06/22/16 09:15 Received: 06/27/16 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Iron, Dissolved	**2070**	ug/L	50.0	1	06/28/16 10:45	06/29/16 10:06	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		06/29/16 00:27	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		06/29/16 00:27	100-41-4	
Toluene	ND	ug/L	1.0	1		06/29/16 00:27	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		06/29/16 00:27	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	99	%	77-130	1		06/29/16 00:27	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	81-127	1		06/29/16 00:27	17060-07-0	
Toluene-d8 (S)	109	%	80-120	1		06/29/16 00:27	2037-26-5	
Preservation pH	**1.0**		0.10	1		06/29/16 00:27		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60222236

Sample: GW-074941-062216-SP-MW-6 **Lab ID: 60222236002** Collected: 06/22/16 09:40 Received: 06/27/16 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Iron, Dissolved	**16200**	ug/L	50.0	1	06/28/16 10:45	06/29/16 10:10	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	**419**	ug/L	10.0	10		06/29/16 01:40	71-43-2	
Ethylbenzene	**71.8**	ug/L	10.0	10		06/29/16 01:40	100-41-4	
Toluene	ND	ug/L	10.0	10		06/29/16 01:40	108-88-3	
Xylene (Total)	**43.5**	ug/L	30.0	10		06/29/16 01:40	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	103	%	77-130	10		06/29/16 01:40	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	81-127	10		06/29/16 01:40	17060-07-0	
Toluene-d8 (S)	112	%	80-120	10		06/29/16 01:40	2037-26-5	
Preservation pH	**1.0**		0.10	10		06/29/16 01:40		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60222236

Sample: GW-074941-062216-SP-MW-5 **Lab ID: 60222236003** Collected: 06/22/16 10:10 Received: 06/27/16 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Iron, Dissolved	ND	ug/L	50.0	1	06/28/16 10:45	06/29/16 10:13	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		06/29/16 00:42	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		06/29/16 00:42	100-41-4	
Toluene	ND	ug/L	1.0	1		06/29/16 00:42	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		06/29/16 00:42	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	102	%	77-130	1		06/29/16 00:42	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	81-127	1		06/29/16 00:42	17060-07-0	
Toluene-d8 (S)	107	%	80-120	1		06/29/16 00:42	2037-26-5	
Preservation pH	**1.0**		0.10	1		06/29/16 00:42		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60222236

Sample: GW-074941-062216-SP-MW-7 **Lab ID: 60222236004** Collected: 06/22/16 10:40 Received: 06/27/16 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Iron, Dissolved	ND	ug/L	50.0	1	06/28/16 10:45	06/29/16 10:17	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		06/29/16 00:56	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		06/29/16 00:56	100-41-4	
Toluene	ND	ug/L	1.0	1		06/29/16 00:56	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		06/29/16 00:56	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	103	%	77-130	1		06/29/16 00:56	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	81-127	1		06/29/16 00:56	17060-07-0	
Toluene-d8 (S)	107	%	80-120	1		06/29/16 00:56	2037-26-5	
Preservation pH	**1.0**		0.10	1		06/29/16 00:56		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60222236

Sample: GW-074941-062216-SP-MW-8 **Lab ID: 60222236005** Collected: 06/22/16 11:10 Received: 06/27/16 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Iron, Dissolved	**75.3**	ug/L	50.0	1	06/28/16 10:45	06/29/16 10:21	7439-89-6	
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		06/29/16 01:11	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		06/29/16 01:11	100-41-4	
Toluene	ND	ug/L	1.0	1		06/29/16 01:11	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		06/29/16 01:11	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	103	%	77-130	1		06/29/16 01:11	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	81-127	1		06/29/16 01:11	17060-07-0	
Toluene-d8 (S)	111	%	80-120	1		06/29/16 01:11	2037-26-5	
Preservation pH	**1.0**		0.10	1		06/29/16 01:11		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60222236

Sample: GW-074941-062216-SP-DUP **Lab ID: 60222236006** Collected: 06/22/16 00:00 Received: 06/27/16 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		06/29/16 01:25	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		06/29/16 01:25	100-41-4	
Toluene	ND	ug/L	1.0	1		06/29/16 01:25	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		06/29/16 01:25	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	99	%	77-130	1		06/29/16 01:25	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	81-127	1		06/29/16 01:25	17060-07-0	
Toluene-d8 (S)	109	%	80-120	1		06/29/16 01:25	2037-26-5	
Preservation pH	**1.0**		0.10	1		06/29/16 01:25		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60222236

Sample: TRIP BLANK **Lab ID: 60222236007** Collected: 06/22/16 09:15 Received: 06/27/16 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	1.0	1		06/28/16 22:17	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		06/28/16 22:17	100-41-4	
Toluene	ND	ug/L	1.0	1		06/28/16 22:17	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		06/28/16 22:17	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	104	%	77-130	1		06/28/16 22:17	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	81-127	1		06/28/16 22:17	17060-07-0	
Toluene-d8 (S)	105	%	80-120	1		06/28/16 22:17	2037-26-5	
Preservation pH	**1.0**		0.10	1		06/28/16 22:17		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60222236

QC Batch: MPRP/36479 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved
Associated Lab Samples: 60222236001, 60222236002, 60222236003, 60222236004, 60222236005

METHOD BLANK: 1784029 Matrix: Water
Associated Lab Samples: 60222236001, 60222236002, 60222236003, 60222236004, 60222236005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron, Dissolved	ug/L	ND	50.0	06/29/16 09:13	

LABORATORY CONTROL SAMPLE: 1784030

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Dissolved	ug/L	10000	9740	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1784031 1784032

Parameter	Units	60222267002 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	1830	10000	10000	11200	11400	94	95	75-125	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60222236

QC Batch: MSV/76687 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60222236001, 60222236002, 60222236003, 60222236004, 60222236005, 60222236006, 60222236007

METHOD BLANK: 1784320 Matrix: Water
Associated Lab Samples: 60222236001, 60222236002, 60222236003, 60222236004, 60222236005, 60222236006, 60222236007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	06/28/16 21:33	
Ethylbenzene	ug/L	ND	1.0	06/28/16 21:33	
Toluene	ug/L	ND	1.0	06/28/16 21:33	
Xylene (Total)	ug/L	ND	3.0	06/28/16 21:33	
1,2-Dichloroethane-d4 (S)	%	102	81-127	06/28/16 21:33	
4-Bromofluorobenzene (S)	%	101	77-130	06/28/16 21:33	
Toluene-d8 (S)	%	103	80-120	06/28/16 21:33	

LABORATORY CONTROL SAMPLE: 1784321

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	19.1	96	79-116	
Ethylbenzene	ug/L	20	19.0	95	80-120	
Toluene	ug/L	20	18.3	91	80-120	
Xylene (Total)	ug/L	60	58.6	98	80-120	
1,2-Dichloroethane-d4 (S)	%			100	81-127	
4-Bromofluorobenzene (S)	%			95	77-130	
Toluene-d8 (S)	%			97	80-120	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60222236

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

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.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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/76687

[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 No1 COP
Pace Project No.: 60222236

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60222236001	**GW-074941-062216-SP-MW-4**	EPA 3010	MPRP/36479	EPA 6010	ICP/26591
60222236002	**GW-074941-062216-SP-MW-6**	EPA 3010	MPRP/36479	EPA 6010	ICP/26591
60222236003	**GW-074941-062216-SP-MW-5**	EPA 3010	MPRP/36479	EPA 6010	ICP/26591
60222236004	**GW-074941-062216-SP-MW-7**	EPA 3010	MPRP/36479	EPA 6010	ICP/26591
60222236005	**GW-074941-062216-SP-MW-8**	EPA 3010	MPRP/36479	EPA 6010	ICP/26591
60222236001	**GW-074941-062216-SP-MW-4**	EPA 5030B/8260	MSV/76687		
60222236002	**GW-074941-062216-SP-MW-6**	EPA 5030B/8260	MSV/76687		
60222236003	**GW-074941-062216-SP-MW-5**	EPA 5030B/8260	MSV/76687		
60222236004	**GW-074941-062216-SP-MW-7**	EPA 5030B/8260	MSV/76687		
60222236005	**GW-074941-062216-SP-MW-8**	EPA 5030B/8260	MSV/76687		
60222236006	**GW-074941-062216-SP-DUP**	EPA 5030B/8260	MSV/76687		
60222236007	**TRIP BLANK**	EPA 5030B/8260	MSV/76687		

Pace Analytical
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Sample Condition Upon Receipt
ESI Tech Spec Client

WO# : 60222236

60222236

Client Name: GHD COP

Optional
Proj Due Date:
Proj Name:

Courier: FedEx ☒ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Other ☐ Client ☐

Tracking #: 6703 1644 5740 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: CF -0.1 T-239 / CF 0.0 T-262 **Type of Ice:** (Wet) Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 2.9

Date and initials of person examining contents: JB 6/27

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, O&G, WI-DRO (water)	☒Yes	☐No	Initial when completed	Lot # of added preservative
Trip Blank present: Pace Trip Blank lot # (if purchased): 6/14/16	☒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:
Additional labels attached to 5035A vials in the field?	☐Yes	☐No	☒N/A	18.

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: 0950	Start:
End: 0959	End:
Temp:	Temp:

Project Manager Review: AAF Date: 06/27/16

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:	GHD Services_COP NM	Report To:	Christine Mathews	Attention:	
Address:	6212 Indian School Rd. NE St2	Copy To:	Jeff Walker	Company Name:	
Albuquerque, NM 87110		Angela Bown		Address:	
Email:	christine.mathews@ghd.com	Purchase Order #:		Pace Quote:	
Phone:	505-884-0672 Fax	Project Name:	074941 Nell Hall No1 COP	Pace Project Manager:	alice.flanagan@pacelabs.com
Requested Due Date:		Project #:		Pace Profile #:	

Regulatory Agency	
State / Location	NM

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	8260 BTEX	Dissolved Fe-field filtered	Residual Chlorine (Y/N)	6022236
1	GW-074941-062216-SP-MW-4	WT	G	6/22/16	9:15	—	—		4			X	X						X	X		001
2	GW-074941-062216-SP-MW-6				9:40	—	—		4			X	X						X	X		002 needs re-filtering for Fe
3	GW-074941-062216-SP-MW-5				10:10	—	—		4			X	X						X	X		003
4	GW-074941-062216-SP-MW-7				10:40	—	—		4			X	X						X	X		004
5	GW-074941-062216-SP-MW-8				11:10	—	—		4			X	X						X	X		005
6	GW-074941-062216-SP-DUP					—	—		3				X						X			006
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: TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Steve Perez	6/23/16	1525		6/27	0830	2.9	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Steve Perez

SIGNATURE of SAMPLER: Steve Perez DATE Signed: 6-23-16

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

September 16, 2016

Christine Mathews
GHD Services, Inc.
6212 Indian School Rd. NE St2
Albuquerque, NM 87110

RE: Project: 074941 Nell Hall No1 COP
Pace Project No.: 60227340

Dear Christine Mathews:
Enclosed are the analytical results for sample(s) received by the laboratory on September 09, 2016. 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 Spiller

Alice Spiller
alice.spiller@pacelabs.com
Project Manager

Enclosures

cc: Angela Bown, GHD Services, Inc,
Jeffrey Walker, GHD Services, Inc

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CERTIFICATIONS

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60227340

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 15-016-0
Illinois Certification #: 003097
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212008A
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407
Utah Certification #: KS00021
Kansas Field Laboratory Accreditation: # E-92587

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60227340

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60227340001	**GW-074941-090816-SP-MW-4**	Water	09/08/16 09:05	09/09/16 08:50
60227340002	**GW-074941-090816-SP-MW-5**	Water	09/08/16 09:43	09/09/16 08:50
60227340003	**GW-074941-090816-SP-MW-6**	Water	09/08/16 10:10	09/09/16 08:50
60227340004	**GW-074941-090816-SP-MW-7**	Water	09/08/16 10:28	09/09/16 08:50
60227340005	**GW-074941-090816-SP-MW-8**	Water	09/08/16 10:48	09/09/16 08:50
60227340006	**GW-074941-090816-SP-MW-DUP**	Water	09/08/16 00:00	09/09/16 08:50
60227340007	**TRIP BLANK**	Water	09/08/16 09:05	09/09/16 08:50

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SAMPLE ANALYTE COUNT

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60227340

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60227340001	**GW-074941-090816-SP-MW-4**	EPA 6010	JGP	1
		EPA 8260	JTK	8
60227340002	**GW-074941-090816-SP-MW-5**	EPA 6010	JGP	1
		EPA 8260	JTK	8
60227340003	**GW-074941-090816-SP-MW-6**	EPA 6010	JGP	1
		EPA 8260	JTK	8
60227340004	**GW-074941-090816-SP-MW-7**	EPA 6010	JGP	1
		EPA 8260	JTK	8
60227340005	**GW-074941-090816-SP-MW-8**	EPA 6010	JGP	1
		EPA 8260	JTK	8
60227340006	**GW-074941-090816-SP-MW-DUP**	EPA 8260	JTK	8
60227340007	**TRIP BLANK**	EPA 8260	JTK	8

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PROJECT NARRATIVE

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60227340

Method: **EPA 6010**
Description: 6010 MET ICP, Dissolved
Client: GHD Services_COP NM
Date: September 16, 2016

General Information:
5 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60227340

Method: **EPA 8260**
Description: 8260 MSV UST, Water
Client: GHD Services_COP NM
Date: September 16, 2016

General Information:
7 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

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

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

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

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

QC Batch: 446568

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60227293005,60227374008

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1825963)
  - Toluene

QC Batch: 446710

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 No1 COP
Pace Project No.: 60227340

Sample: GW-074941-090816-SP-MW-4 **Lab ID: 60227340001** Collected: 09/08/16 09:05 Received: 09/09/16 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Iron, Dissolved	ND	ug/L	50.0	1	09/12/16 16:00	09/14/16 12:35	7439-89-6	
8260 MSV UST, Water	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		09/14/16 22:12	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		09/14/16 22:12	100-41-4	
Toluene	ND	ug/L	1.0	1		09/14/16 22:12	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		09/14/16 22:12	1330-20-7	
Surrogates								
Toluene-d8 (S)	96	%	80-120	1		09/14/16 22:12	2037-26-5	
4-Bromofluorobenzene (S)	104	%	77-130	1		09/14/16 22:12	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	81-127	1		09/14/16 22:12	17060-07-0	
Preservation pH	**1.0**		1.0	1		09/14/16 22:12		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60227340

Sample: GW-074941-090816-SP-MW-5 **Lab ID: 60227340002** Collected: 09/08/16 09:43 Received: 09/09/16 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Iron, Dissolved	ND	ug/L	50.0	1	09/12/16 16:00	09/14/16 12:39	7439-89-6	
8260 MSV UST, Water	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		09/14/16 22:27	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		09/14/16 22:27	100-41-4	
Toluene	ND	ug/L	1.0	1		09/14/16 22:27	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		09/14/16 22:27	1330-20-7	
Surrogates								
Toluene-d8 (S)	98	%	80-120	1		09/14/16 22:27	2037-26-5	
4-Bromofluorobenzene (S)	105	%	77-130	1		09/14/16 22:27	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	81-127	1		09/14/16 22:27	17060-07-0	
Preservation pH	**1.0**		1.0	1		09/14/16 22:27		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60227340

Sample: GW-074941-090816-SP-MW-6 **Lab ID: 60227340003** Collected: 09/08/16 10:10 Received: 09/09/16 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Iron, Dissolved	**6070**	ug/L	50.0	1	09/12/16 16:00	09/14/16 12:43	7439-89-6	
8260 MSV UST, Water	Analytical Method: EPA 8260							
Benzene	**209**	ug/L	5.0	5		09/14/16 22:41	71-43-2	
Ethylbenzene	**33.9**	ug/L	5.0	5		09/14/16 22:41	100-41-4	
Toluene	ND	ug/L	5.0	5		09/14/16 22:41	108-88-3	
Xylene (Total)	ND	ug/L	15.0	5		09/14/16 22:41	1330-20-7	
Surrogates								
Toluene-d8 (S)	98	%	80-120	5		09/14/16 22:41	2037-26-5	
4-Bromofluorobenzene (S)	101	%	77-130	5		09/14/16 22:41	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	81-127	5		09/14/16 22:41	17060-07-0	
Preservation pH	**1.0**		1.0	5		09/14/16 22:41		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60227340

Sample: GW-074941-090816-SP-MW-7 **Lab ID: 60227340004** Collected: 09/08/16 10:28 Received: 09/09/16 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Iron, Dissolved	ND	ug/L	50.0	1	09/12/16 16:00	09/14/16 12:57	7439-89-6	
8260 MSV UST, Water	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		09/15/16 04:23	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		09/15/16 04:23	100-41-4	
Toluene	ND	ug/L	1.0	1		09/15/16 04:23	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		09/15/16 04:23	1330-20-7	
Surrogates								
Toluene-d8 (S)	97	%	80-120	1		09/15/16 04:23	2037-26-5	
4-Bromofluorobenzene (S)	103	%	77-130	1		09/15/16 04:23	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	81-127	1		09/15/16 04:23	17060-07-0	
Preservation pH	**1.0**		1.0	1		09/15/16 04:23		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60227340

Sample: GW-074941-090816-SP-MW-8 **Lab ID: 60227340005** Collected: 09/08/16 10:48 Received: 09/09/16 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Iron, Dissolved	ND	ug/L	50.0	1	09/12/16 16:00	09/14/16 13:03	7439-89-6	
8260 MSV UST, Water	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		09/15/16 04:38	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		09/15/16 04:38	100-41-4	
Toluene	ND	ug/L	1.0	1		09/15/16 04:38	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		09/15/16 04:38	1330-20-7	
Surrogates								
Toluene-d8 (S)	98	%	80-120	1		09/15/16 04:38	2037-26-5	
4-Bromofluorobenzene (S)	104	%	77-130	1		09/15/16 04:38	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	81-127	1		09/15/16 04:38	17060-07-0	
Preservation pH	**1.0**		1.0	1		09/15/16 04:38		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60227340

Sample: GW-074941-090816-SP-MW-DUP **Lab ID: 60227340006** Collected: 09/08/16 00:00 Received: 09/09/16 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water	Analytical Method: EPA 8260							
Benzene	**217**	ug/L	5.0	5		09/15/16 20:54	71-43-2	
Ethylbenzene	**47.4**	ug/L	1.0	1		09/15/16 04:53	100-41-4	
Toluene	ND	ug/L	1.0	1		09/15/16 04:53	108-88-3	
Xylene (Total)	**9.3**	ug/L	3.0	1		09/15/16 04:53	1330-20-7	
Surrogates								
Toluene-d8 (S)	101	%	80-120	1		09/15/16 04:53	2037-26-5	
4-Bromofluorobenzene (S)	104	%	77-130	1		09/15/16 04:53	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	81-127	1		09/15/16 04:53	17060-07-0	
Preservation pH	**1.0**		1.0	1		09/15/16 04:53		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60227340

Sample: TRIP BLANK **Lab ID: 60227340007** Collected: 09/08/16 09:05 Received: 09/09/16 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		09/15/16 05:08	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		09/15/16 05:08	100-41-4	
Toluene	ND	ug/L	1.0	1		09/15/16 05:08	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		09/15/16 05:08	1330-20-7	
Surrogates								
Toluene-d8 (S)	96	%	80-120	1		09/15/16 05:08	2037-26-5	
4-Bromofluorobenzene (S)	104	%	77-130	1		09/15/16 05:08	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	81-127	1		09/15/16 05:08	17060-07-0	
Preservation pH	**1.0**		1.0	1		09/15/16 05:08		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60227340

QC Batch: 446196 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved
Associated Lab Samples: 60227340001, 60227340002, 60227340003, 60227340004, 60227340005

METHOD BLANK: 1824209 Matrix: Water
Associated Lab Samples: 60227340001, 60227340002, 60227340003, 60227340004, 60227340005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron, Dissolved	ug/L	ND	50.0	09/14/16 11:55	

LABORATORY CONTROL SAMPLE: 1824210

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Dissolved	ug/L	10000	9580	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1824211 1824212

Parameter	Units	60227340003 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	6070	10000	10000	15100	15800	91	97	75-125	4	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60227340

QC Batch: 446561 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 60227340001, 60227340002, 60227340003

METHOD BLANK: 1825851 Matrix: Water
Associated Lab Samples: 60227340001, 60227340002, 60227340003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	09/14/16 18:59	
Ethylbenzene	ug/L	ND	1.0	09/14/16 18:59	
Toluene	ug/L	ND	1.0	09/14/16 18:59	
Xylene (Total)	ug/L	ND	3.0	09/14/16 18:59	
1,2-Dichloroethane-d4 (S)	%	98	81-127	09/14/16 18:59	
4-Bromofluorobenzene (S)	%	103	77-130	09/14/16 18:59	
Toluene-d8 (S)	%	98	80-120	09/14/16 18:59	

LABORATORY CONTROL SAMPLE: 1825852

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	21.2	106	79-116	
Ethylbenzene	ug/L	20	19.1	95	81-110	
Toluene	ug/L	20	19.6	98	82-111	
Xylene (Total)	ug/L	60	54.5	91	80-111	
1,2-Dichloroethane-d4 (S)	%			95	81-127	
4-Bromofluorobenzene (S)	%			99	77-130	
Toluene-d8 (S)	%			97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1825867 1825868

Parameter	Units	60227340003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	209	100	100	322	322	113	113	37-151	0	40	
Ethylbenzene	ug/L	33.9	100	100	135	132	101	98	29-151	2	45	
Toluene	ug/L	ND	100	100	104	102	103	102	37-147	1	43	
Xylene (Total)	ug/L	ND	300	300	292	291	97	97	27-156	0	46	
1,2-Dichloroethane-d4 (S)	%						95	97	81-127			
4-Bromofluorobenzene (S)	%						99	100	77-130			
Toluene-d8 (S)	%						98	96	80-120			
Preservation pH		1.0			1.0	1.0				0		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60227340

QC Batch: 446568 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 60227340004, 60227340005, 60227340006, 60227340007

METHOD BLANK: 1825959 Matrix: Water
Associated Lab Samples: 60227340004, 60227340005, 60227340006, 60227340007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	09/15/16 00:26	
Ethylbenzene	ug/L	ND	1.0	09/15/16 00:26	
Toluene	ug/L	ND	1.0	09/15/16 00:26	
Xylene (Total)	ug/L	ND	3.0	09/15/16 00:26	
1,2-Dichloroethane-d4 (S)	%	96	81-127	09/15/16 00:26	
4-Bromofluorobenzene (S)	%	104	77-130	09/15/16 00:26	
Toluene-d8 (S)	%	97	80-120	09/15/16 00:26	

LABORATORY CONTROL SAMPLE: 1825960

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	21.0	105	79-116	
Ethylbenzene	ug/L	20	18.6	93	81-110	
Toluene	ug/L	20	19.3	97	82-111	
Xylene (Total)	ug/L	60	54.1	90	80-111	
1,2-Dichloroethane-d4 (S)	%			93	81-127	
4-Bromofluorobenzene (S)	%			101	77-130	
Toluene-d8 (S)	%			99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1825961 1825962

Parameter	Units	60227293005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	22.9	200	200	228	223	103	100	37-151	2	40	
Ethylbenzene	ug/L	332	200	200	521	510	94	89	29-151	2	45	
Toluene	ug/L	ND	200	200	188	187	94	93	37-147	1	43	
Xylene (Total)	ug/L	3450	600	600	4020	3940	94	82	27-156	2	46	
1,2-Dichloroethane-d4 (S)	%						96	94	81-127			
4-Bromofluorobenzene (S)	%						100	100	77-130			
Toluene-d8 (S)	%						98	98	80-120			
Preservation pH		1.0			1.0	1.0				0		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1825963 1825964

Parameter	Units	60227374008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	270	100	100	383	361	113	91	37-151	6	40	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60227340

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1825963 1825964

Parameter	Units	60227374008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Ethylbenzene	ug/L	29.1	100	100	125	116	96	87	29-151	7	45	
Toluene	ug/L	901	100	100	1070	987	168	86	37-147	8	43	M1
Xylene (Total)	ug/L	670	300	300	1000	942	110	91	27-156	6	46	
1,2-Dichloroethane-d4 (S)	%						94	96	81-127			
4-Bromofluorobenzene (S)	%						101	101	77-130			
Toluene-d8 (S)	%						99	97	80-120			
Preservation pH		1.0			1.0	1.0				0		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60227340

QC Batch: 446710
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 60227340006

METHOD BLANK: 1826755 Matrix: Water
Associated Lab Samples: 60227340006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	09/15/16 18:10	
1,2-Dichloroethane-d4 (S)	%	97	81-127	09/15/16 18:10	
4-Bromofluorobenzene (S)	%	104	77-130	09/15/16 18:10	
Toluene-d8 (S)	%	99	80-120	09/15/16 18:10	

LABORATORY CONTROL SAMPLE: 1826756

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	21.9	109	79-116	
1,2-Dichloroethane-d4 (S)	%			95	81-127	
4-Bromofluorobenzene (S)	%			100	77-130	
Toluene-d8 (S)	%			99	80-120	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60227340

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

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.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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: 446710

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

ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60227340

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60227340001	**GW-074941-090816-SP-MW-4**	EPA 3010	446196	EPA 6010	446250
60227340002	**GW-074941-090816-SP-MW-5**	EPA 3010	446196	EPA 6010	446250
60227340003	**GW-074941-090816-SP-MW-6**	EPA 3010	446196	EPA 6010	446250
60227340004	**GW-074941-090816-SP-MW-7**	EPA 3010	446196	EPA 6010	446250
60227340005	**GW-074941-090816-SP-MW-8**	EPA 3010	446196	EPA 6010	446250
60227340001	**GW-074941-090816-SP-MW-4**	EPA 8260	446561		
60227340002	**GW-074941-090816-SP-MW-5**	EPA 8260	446561		
60227340003	**GW-074941-090816-SP-MW-6**	EPA 8260	446561		
60227340004	**GW-074941-090816-SP-MW-7**	EPA 8260	446568		
60227340005	**GW-074941-090816-SP-MW-8**	EPA 8260	446568		
60227340006	**GW-074941-090816-SP-MW-DUP**	EPA 8260	446568		
60227340006	**GW-074941-090816-SP-MW-DUP**	EPA 8260	446710		
60227340007	**TRIP BLANK**	EPA 8260	446568		

Pace Analytical
www.pacelabs.com

Sample Condition Upon Receipt
ESI Tech Spec Client

WO# : 60227340

60227340

Client Name: GHD COP

Courier: FedEx ☒ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☐ Client ☐ Other ☐

Tracking #: 7844 6652 7937 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: (CF +1.1) T-266 / (CF -0.1) T-239 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 2.9 **Corr. Factor** (CF +1.1) CF -0.1 **Corrected** 4.0

Date and initials of person examining contents: JB 9/9

Temperature should be above freezing to 6°C

Chain of Custody present:	☒Yes ☐No ☐N/A	
Chain of Custody relinquished:	☒Yes ☐No ☐N/A	
Samples arrived within holding time:	☒Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☒No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☒No ☐N/A	
Sufficient volume:	☒Yes ☐No ☐N/A	
Correct containers used:	☒Yes ☐No ☐N/A	
Pace containers used:	☒Yes ☐No ☐N/A	
Containers intact:	☒Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☒N/A	
Filtered volume received for dissolved tests?	☒Yes ☐No ☐N/A	
Sample labels match COC: Date / time / ID / analyses	☒Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☒No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO)	☒Yes ☐No ☐N/A	
Cyanide water sample checks: ☒ N/A Lead acetate strip turns dark? (Record only) Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No ☐Yes ☐No	
Trip Blank present:	☒Yes ☐No ☐N/A	
Headspace in VOA vials (>6mm):	☐Yes ☒No ☐N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☒N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☒N/A	

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: alice Date: 09/09/16

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

Start: 1320	Start:
End: 1330	End:
Temp:	Temp:

CHAIN-OF-CUSTODY / Analytical Request Document

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

Pace Analytical

Page : 1 **Of** 1

Section A — Required Client Information:

Company:	GHD Services_COP NM
Address:	6212 Indian School Rd. NE St2
	Albuquerque, NM 87110
Email:	christine.mathews@ghd.com
Phone:	505-884-0672
Fax:	
Requested Due Date:	

Section B — Required Project Information:

Report To:	Christine Mathews
Copy To:	Jeff Walker, Angela Bown
Purchase Order #:	34005864
Project Name:	074941 Neil Hall No1 COP
Project #:	

Section C — Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	alice.spiller@pacelabs.com,
Pace Profile #:	8644 , 34

Regulatory Agency	
State / Location	NM

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

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 START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	8260 BTEX	Dissolved Fe-field filtered	(other analyses, handwritten)	Residual Chlorine (Y/N)	60227340
1	GW-074941-090816-SP-MW-4	WT	G	9-8-16	905				4										X	X	(3)BF 20; (3)DG4H		001
2	GW-074941-090816-SP-MW-5	↓	↓	↓	943				4										↓	↓	↓		002
3	GW-074941-090816-SP-MW-6	↓	↓	↓	1010				7										↓	↓	(6)DG4H		QA/QC sample included 003
4	GW-074941-090816-SP-MW-7	↓	↓	↓	1028				4										↓	↓	(3)DG4H		004
5	GW-074941-090816-SP-MW-8	↓	↓	↓	1048				4										↓	↓	↓		005
6	GW-074941-090816-SP-DUP	↓	↓	↓					3										↓		↓		006
7																					(1)DG4H TB		007
8																							
9																							
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Steven Perez	9-8-16	16:24	[signature] Pace	9/9	0850	4.0	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: Steve Perez

SIGNATURE of SAMPLER: Steve Perez

DATE Signed: 9-8-16

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

December 15, 2016

Jeffrey Walker
GHD Services, Inc
6121 Indian School Rd NE
Ste 200
Albuquerque, NM 87110

RE: Project: 074941 Nell Hall No1 COP
Pace Project No.: 60233343

Dear Jeffrey Walker:
Enclosed are the analytical results for sample(s) received by the laboratory on December 01, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC 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 Spiller

Alice Spiller
alice.spiller@pacelabs.com
Project Manager

Enclosures

cc: Angela Bown, GHD Services, Inc,

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
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CERTIFICATIONS

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60233343

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 15-016-0
Illinois Certification #: 003097
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212008A
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407
Utah Certification #: KS00021
Kansas Field Laboratory Accreditation: # E-92587
Missouri Certification: 10070

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SAMPLE SUMMARY

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60233343

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60233343001	**GW-074941-112916-CN-MW4**	Water	11/29/16 09:45	12/01/16 08:55
60233343002	**GW-074941-112916-CN-MW5**	Water	11/29/16 10:09	12/01/16 08:55
60233343003	**GW-074941-112916-CN-MW6**	Water	11/29/16 10:43	12/01/16 08:55
60233343004	**GW-074941-112916-CN-MW7**	Water	11/29/16 10:14	12/01/16 08:55
60233343005	**GW-074941-112916-CN-MW8**	Water	11/29/16 10:30	12/01/16 08:55
60233343006	**TRIP BLANK**	Water	11/29/16 09:45	12/01/16 08:55

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SAMPLE ANALYTE COUNT

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60233343

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60233343001	**GW-074941-112916-CN-MW4**	EPA 6010	JGP	1
		EPA 8260	EAG	8
60233343002	**GW-074941-112916-CN-MW5**	EPA 6010	JGP	1
		EPA 8260	EAG	8
60233343003	**GW-074941-112916-CN-MW6**	EPA 6010	JGP	1
		EPA 8260	EAG	8
60233343004	**GW-074941-112916-CN-MW7**	EPA 6010	JGP	1
		EPA 8260	EAG	8
60233343005	**GW-074941-112916-CN-MW8**	EPA 6010	JGP	1
		EPA 8260	EAG	8
60233343006	**TRIP BLANK**	EPA 8260	PGH	8

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PROJECT NARRATIVE

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60233343

Method: **EPA 6010**
Description: 6010 MET ICP, Dissolved
Client: GHD Services_COP NM
Date: December 15, 2016

General Information:
5 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60233343

Method: **EPA 8260**
Description: 8260 MSV UST, Water
Client: GHD Services_COP NM
Date: December 15, 2016

General Information:
6 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

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

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

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

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

QC Batch: 458375

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

QC Batch: 458541

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 No1 COP
Pace Project No.: 60233343

Sample: GW-074941-112916-CN-MW4 **Lab ID: 60233343001** Collected: 11/29/16 09:45 Received: 12/01/16 08:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Iron, Dissolved	ND	ug/L	50.0	1	12/02/16 11:10	12/05/16 17:32	7439-89-6	
8260 MSV UST, Water	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		12/10/16 06:36	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/10/16 06:36	100-41-4	
Toluene	ND	ug/L	1.0	1		12/10/16 06:36	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/10/16 06:36	1330-20-7	
Surrogates								
Toluene-d8 (S)	104	%	80-120	1		12/10/16 06:36	2037-26-5	
4-Bromofluorobenzene (S)	95	%	77-130	1		12/10/16 06:36	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	81-127	1		12/10/16 06:36	17060-07-0	
Preservation pH	**1.0**		1.0	1		12/10/16 06:36		

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

ANALYTICAL RESULTS

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60233343

Sample: GW-074941-112916-CN-MW5 **Lab ID: 60233343002** Collected: 11/29/16 10:09 Received: 12/01/16 08:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Iron, Dissolved	ND	ug/L	50.0	1	12/02/16 11:10	12/05/16 17:36	7439-89-6	
8260 MSV UST, Water	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		12/10/16 06:49	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/10/16 06:49	100-41-4	
Toluene	ND	ug/L	1.0	1		12/10/16 06:49	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/10/16 06:49	1330-20-7	
Surrogates								
Toluene-d8 (S)	102	%	80-120	1		12/10/16 06:49	2037-26-5	
4-Bromofluorobenzene (S)	96	%	77-130	1		12/10/16 06:49	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	81-127	1		12/10/16 06:49	17060-07-0	
Preservation pH	**1.0**		1.0	1		12/10/16 06:49		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60233343

Sample: GW-074941-112916-CN-MW6 **Lab ID: 60233343003** Collected: 11/29/16 10:43 Received: 12/01/16 08:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Iron, Dissolved	**6320**	ug/L	50.0	1	12/02/16 11:10	12/05/16 17:40	7439-89-6	
8260 MSV UST, Water	Analytical Method: EPA 8260							
Benzene	**257**	ug/L	5.0	5		12/10/16 07:03	71-43-2	
Ethylbenzene	**64.9**	ug/L	5.0	5		12/10/16 07:03	100-41-4	
Toluene	ND	ug/L	5.0	5		12/10/16 07:03	108-88-3	
Xylene (Total)	**20.3**	ug/L	15.0	5		12/10/16 07:03	1330-20-7	
Surrogates								
Toluene-d8 (S)	103	%	80-120	5		12/10/16 07:03	2037-26-5	
4-Bromofluorobenzene (S)	96	%	77-130	5		12/10/16 07:03	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	81-127	5		12/10/16 07:03	17060-07-0	
Preservation pH	**1.0**		1.0	5		12/10/16 07:03		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60233343

Sample: GW-074941-112916-CN-MW7 **Lab ID: 60233343004** Collected: 11/29/16 10:14 Received: 12/01/16 08:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Iron, Dissolved	ND	ug/L	50.0	1	12/02/16 11:10	12/05/16 17:43	7439-89-6	
8260 MSV UST, Water	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		12/10/16 07:17	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/10/16 07:17	100-41-4	
Toluene	ND	ug/L	1.0	1		12/10/16 07:17	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/10/16 07:17	1330-20-7	
Surrogates								
Toluene-d8 (S)	103	%	80-120	1		12/10/16 07:17	2037-26-5	
4-Bromofluorobenzene (S)	97	%	77-130	1		12/10/16 07:17	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	81-127	1		12/10/16 07:17	17060-07-0	
Preservation pH	**1.0**		1.0	1		12/10/16 07:17		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60233343

Sample: GW-074941-112916-CN-MW8 **Lab ID: 60233343005** Collected: 11/29/16 10:30 Received: 12/01/16 08:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Iron, Dissolved	ND	ug/L	50.0	1	12/02/16 11:10	12/05/16 17:47	7439-89-6	
8260 MSV UST, Water	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		12/10/16 07:31	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/10/16 07:31	100-41-4	
Toluene	ND	ug/L	1.0	1		12/10/16 07:31	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/10/16 07:31	1330-20-7	
Surrogates								
Toluene-d8 (S)	103	%	80-120	1		12/10/16 07:31	2037-26-5	
4-Bromofluorobenzene (S)	95	%	77-130	1		12/10/16 07:31	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	81-127	1		12/10/16 07:31	17060-07-0	
Preservation pH	**1.0**		1.0	1		12/10/16 07:31		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60233343

Sample: TRIP BLANK **Lab ID: 60233343006** Collected: 11/29/16 09:45 Received: 12/01/16 08:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		12/13/16 02:33	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/13/16 02:33	100-41-4	
Toluene	ND	ug/L	1.0	1		12/13/16 02:33	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/13/16 02:33	1330-20-7	
Surrogates								
Toluene-d8 (S)	98	%	80-120	1		12/13/16 02:33	2037-26-5	
4-Bromofluorobenzene (S)	101	%	77-130	1		12/13/16 02:33	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	81-127	1		12/13/16 02:33	17060-07-0	
Preservation pH	**1.0**		1.0	1		12/13/16 02:33		

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

QUALITY CONTROL DATA

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60233343

QC Batch: 457310 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved
Associated Lab Samples: 60233343001, 60233343002, 60233343003, 60233343004, 60233343005

METHOD BLANK: 1872141 Matrix: Water
Associated Lab Samples: 60233343001, 60233343002, 60233343003, 60233343004, 60233343005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron, Dissolved	ug/L	ND	50.0	12/05/16 16:34	

LABORATORY CONTROL SAMPLE: 1872142

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Dissolved	ug/L	10000	9900	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1872143 1872144

Parameter	Units	60232824001 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	9200	10000	10000	19600	19400	103	102	75-125	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60233343

QC Batch: 458375 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 60233343001, 60233343002, 60233343003, 60233343004, 60233343005

METHOD BLANK: 1876626 Matrix: Water
Associated Lab Samples: 60233343001, 60233343002, 60233343003, 60233343004, 60233343005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	12/10/16 02:53	
Ethylbenzene	ug/L	ND	1.0	12/10/16 02:53	
Toluene	ug/L	ND	1.0	12/10/16 02:53	
Xylene (Total)	ug/L	ND	3.0	12/10/16 02:53	
1,2-Dichloroethane-d4 (S)	%	98	81-127	12/10/16 02:53	
4-Bromofluorobenzene (S)	%	96	77-130	12/10/16 02:53	
Toluene-d8 (S)	%	102	80-120	12/10/16 02:53	

LABORATORY CONTROL SAMPLE: 1876627

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	18.4	92	79-116	
Ethylbenzene	ug/L	20	19.3	97	81-110	
Toluene	ug/L	20	18.6	93	82-111	
Xylene (Total)	ug/L	60	58.6	98	80-111	
1,2-Dichloroethane-d4 (S)	%			96	81-127	
4-Bromofluorobenzene (S)	%			94	77-130	
Toluene-d8 (S)	%			103	80-120	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60233343

QC Batch: 458541
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 60233343006

METHOD BLANK: 1877335 Matrix: Water
Associated Lab Samples: 60233343006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	12/13/16 02:18	
Ethylbenzene	ug/L	ND	1.0	12/13/16 02:18	
Toluene	ug/L	ND	1.0	12/13/16 02:18	
Xylene (Total)	ug/L	ND	3.0	12/13/16 02:18	
1,2-Dichloroethane-d4 (S)	%	99	81-127	12/13/16 02:18	
4-Bromofluorobenzene (S)	%	94	77-130	12/13/16 02:18	
Toluene-d8 (S)	%	99	80-120	12/13/16 02:18	

LABORATORY CONTROL SAMPLE: 1877336

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	20.8	104	79-116	
Ethylbenzene	ug/L	20	19.6	98	81-110	
Toluene	ug/L	20	19.3	96	82-111	
Xylene (Total)	ug/L	60	59.4	99	80-111	
1,2-Dichloroethane-d4 (S)	%			101	81-127	
4-Bromofluorobenzene (S)	%			100	77-130	
Toluene-d8 (S)	%			100	80-120	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60233343

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

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.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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: 458375

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

Batch: 458541

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

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(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 074941 Nell Hall No1 COP
Pace Project No.: 60233343

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60233343001	**GW-074941-112916-CN-MW4**	EPA 3010	457310	EPA 6010	457385
60233343002	**GW-074941-112916-CN-MW5**	EPA 3010	457310	EPA 6010	457385
60233343003	**GW-074941-112916-CN-MW6**	EPA 3010	457310	EPA 6010	457385
60233343004	**GW-074941-112916-CN-MW7**	EPA 3010	457310	EPA 6010	457385
60233343005	**GW-074941-112916-CN-MW8**	EPA 3010	457310	EPA 6010	457385
60233343001	**GW-074941-112916-CN-MW4**	EPA 8260	458375		
60233343002	**GW-074941-112916-CN-MW5**	EPA 8260	458375		
60233343003	**GW-074941-112916-CN-MW6**	EPA 8260	458375		
60233343004	**GW-074941-112916-CN-MW7**	EPA 8260	458375		
60233343005	**GW-074941-112916-CN-MW8**	EPA 8260	458375		
60233343006	**TRIP BLANK**	EPA 8260	458541		

Pace Analytical
www.pacelabs.com

Sample Condition Upon Receipt
ESI Tech Spec Client

WO# : 60233343

60233343

Client Name: GHD COP

Courier: FedEx ☒ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☐ Client ☐ Other ☐

Tracking #: 7044 6656 7529 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: CF +0.7 / CF -0.5 T-266 / T-239 **Type of Ice:** Wet Blue None

Cooler Temperature (°C): **As-read** 3.1 **Corr. Factor** CF +0.7 CF -0.5 **Corrected** 3.8

Date and initials of person examining contents: 12/1/16

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	10 ml
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO)	☑Yes ☐No ☐N/A	
Cyanide water sample checks: ☑ N/A Lead acetate strip turns dark? (Record only) Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No ☐Yes ☐No	
Trip Blank present:	☑Yes ☐No ☐N/A	
Headspace in VOA vials (>6mm):	☐Yes ☑No ☐N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: Alice Date: 12/01/16

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

Start: 1135	Start:
End: 1141	End:
Temp:	Temp:

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:	GHD Services_COP NM	Report To:	Christine Mathews	Attention:	
Address:	6212 Indian School Rd. NE St2	Copy To:	Jeff Walker, Angela Bown	Company Name:	
Albuquerque, NM 87110				Address:	
Email:	christine.mathews@ghd.com	Purchase Order #:	34005864	Pace Quote:	
Phone:	505-884-0672 Fax:	Project Name:	074941 Nell Hall No1 COP	Pace Project Manager:	alice.spiller@pacelabs.com,
Requested Due Date:		Project #:	074941	Pace Profile #:	8644 , 34

Regulatory Agency:

State / Location: NM

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	8260 BTEX	Dissolved Fe-field filtered	Residual Chlorine (Y/N)	6023343
1	GW-074941-112916-CN-MW4	GW	G	112916	0945	—	—	A	4			X	X						X	X		(3)DG4H 001
2	GW-074941-112916-CN-MW5	"	"	"	1009	"	"	"	"			"	"						"	"		002
3	GW-074941-112916-CN-MW6				1043																	003
4	GW-074941-112916-CN-MW7				1014																	004
5	GW-074941-112916-CN-MW8	↓	↓	↓	1030	↓	↓	↓	↓			↓	↓						↓	↓		005 (3)DG4HTB 006
6																						—
7																						
8																						
9																						
10																						
11																						
12																						

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

A ambient

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Jeff Walker / GHD	11/30/16	1218		12/1/16	0855	3.8	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jeff Walker for CN

SIGNATURE of SAMPLER: Jeff Walker DATE Signed: 11/30/16

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