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ConocoPhillips

Mr. Jim Griswold
New Mexico Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

January 30, 2017

Re: NMOCD Case No. 3R- 434, 2016 Annual Groundwater Assessment and Monitoring Report

Dear Mr. Griswold:

Enclosed is the 2016 Annual Groundwater Monitoring Report for the Faye Burdette 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 Faye Burdette No. 1
San Juan County, New Mexico
API# 30-045-25810
NMOCD# 3R-069

ConocoPhillips Company

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

074929| 6MN00| Report No 8 | December 22 2016

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1. Introduction

This report presents the results of annual groundwater monitoring conducted during 2016 by GHD Services, Inc. (GHD) at the ConocoPhillips Company (ConocoPhillips) Faye Burdette No. 1 site (hereafter referred to as the "Site"). The Site is located on private land in Unit Letter G, Section 9, Township 30N, Range 11W of San Juan County, New Mexico (Figure 1). Geographical coordinates for the Site are 36° 49' 47.71" North, 107° 59' 31.50" West.

The Site consists of a gas wellhead and associated equipment. A Site Detail Map is included as Figure 2. A generalized geologic cross section of the Site is included as Figure 3.

1.1 Background

The Faye Burdette No. 1 wellhead was spudded by Southwest Production Company in April 1962. Ownership was transferred to Beta Development Company in September 1963 and again to Mesa Operating Limited Partnership in August 1988. Conoco Inc., predecessor to ConocoPhillips Company, acquired the well in July 1991. A release occurred at the Site in May 2007 from a rusted portion of the produced water tank. Evidence of preexisting hydrocarbon impacted soil was encountered during excavation, possibly related to a former earthen pit. Temporary monitoring well MW-1 was drilled by Envirotech in September 2007. Groundwater samples from MW-1 indicated that benzene, toluene, ethylbenzene, and xylenes (BTEX) were below the New Mexico Water Quality Control Commission (NMWQCC) standards.

Monitoring wells MW-2, MW-3, and MW-4 were installed under the supervision of Tetra Tech, Inc. (Tetra Tech) during January 2009 to complete additional investigation of the Site, as requested by the New Mexico Oil Conservation Division (NMOCD). Monitoring wells MW-1, MW-2, MW-3, and MW-4 were incorporated into a quarterly monitoring program that was initiated on January 29, 2009. On June 15, 2011, Site consulting responsibilities were transferred from Tetra Tech to CRA of Albuquerque, NM (now GHD). Site history is outlined in Table 1.

BTEX analysis was discontinued following the March 2011 sampling even after 10 consecutive quarters of sampling with BTEX concentrations below New Mexico Water Quality Control Commission (NMWQCC) standards. From September 2011 to September 2013, annual monitoring for dissolved manganese only was conducted. Sampling was discontinued for monitoring wells MW-2, MW-3, and MW-4 since contaminant concentrations had been below NMWQCC standards since September 2009 and as authorized by the NMOCD in a meeting October 30, 2014.

2. Groundwater Monitoring Summary, Methodology, and Analytical Results

2.1 Groundwater Monitoring Summary

Groundwater quality monitoring events were conducted at the Site March 28 and September 13th, 2016. Prior to sampling MW-1, the only Site well from which a sample was

collected, groundwater elevation measurements were obtained for all site monitoring wells using an oil/water interface probe. Groundwater elevations are detailed in Table 2. Groundwater potentiometric surface maps for the March and September 2016 sampling events are presented as Figure 4. The 2016 monitoring event data are consistent with historical groundwater flow indicating a northwest flow direction.

2.2 Groundwater Sampling Methodology

Approximately 3 well volumes was purged from monitoring well MW-1 with a dedicated, polyethylene 1.5 inch bailer prior to sampling. During purging of MW-1, groundwater parameter data, including temperature, pH, conductivity, dissolved oxygen, and oxidation reduction potential were collected using a multi parameter meter. Field parameters are summarized on Table 3. Purge water was placed in the on Site produced water tank.

The groundwater sample was placed in laboratory prepared bottles, packed on ice, and shipped under chain of custody documentation to Pace Analytical Services, Inc. in Lenexa, Kansas. The sample was analyzed for the presence of dissolved manganese according to EPA Method 6010.

2.3 Groundwater Monitoring Analytical Results

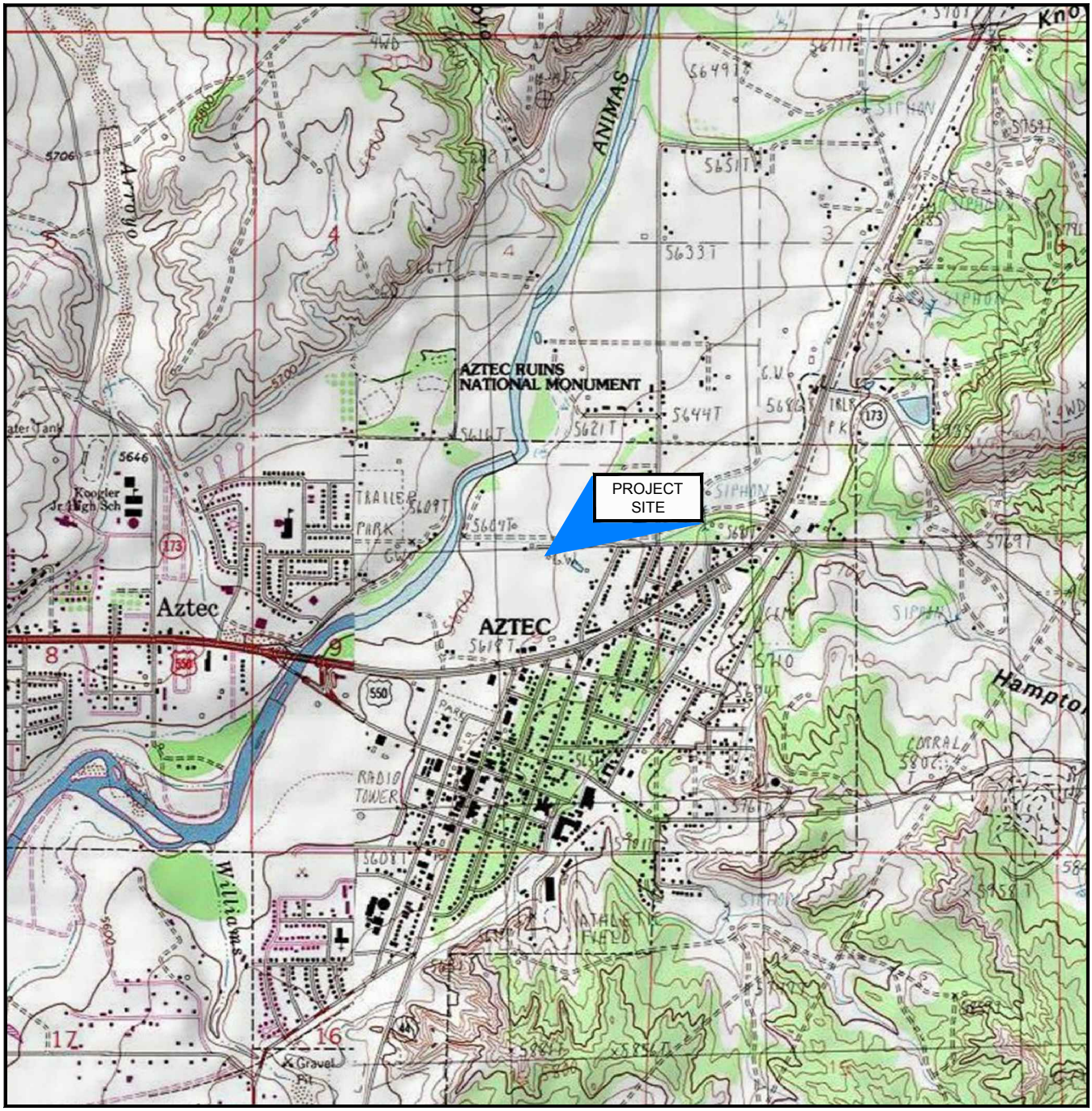
The NMWQCC standard for dissolved manganese is 0.2 milligrams per liter (mg/L). Laboratory analysis of groundwater samples collected during the March and September 2016 monitoring events indicated that dissolved manganese in monitoring well MW-1 was at concentrations above the NMWQCC standard during both events. Table 4 summarizes the laboratory analytical results for the 2016 groundwater sampling events. The corresponding laboratory analytical reports are included in Appendix A.

3. Conclusions and Recommendations

Groundwater samples collected from MW-1 at or just above the NMWQCC groundwater quality standard for dissolved manganese during the 2016 sampling events.

Hydrocarbons have never been detected in Site groundwater monitoring wells. Dissolved phase manganese has been attenuating in Site monitoring wells and has been detected in concentrations just above or below the NMWQCC standard for several years. Groundwater impacts related to the 2007 equipment release have attenuated and are at levels protective of human health and the environment. GHD, on behalf of ConocoPhillips, therefore requests site closure and a no further action status be granted for this Site.

Figures

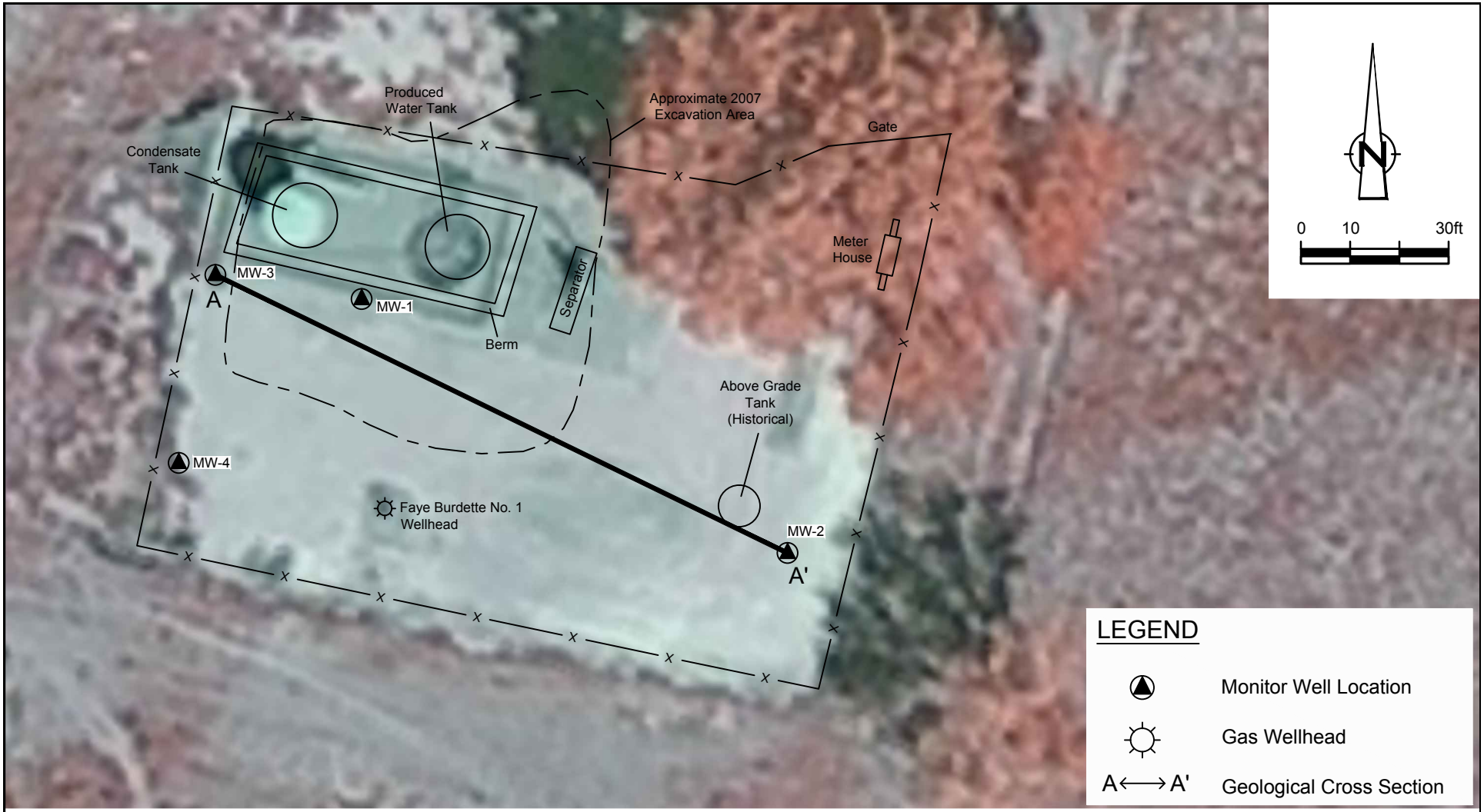


SOURCE: USGS 7.5 MINUTE QUADS
"AZTEC AND FLORA VISTA, NEW MEXICO"

Figure 1

SITE VICINITY MAP
FAYE BURDETTE No. 1 GAS WELL SITE
SECTION 22, T30N-R12W, SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

074929-95(008)GN-DL005_TOPO NOV 21, 2016



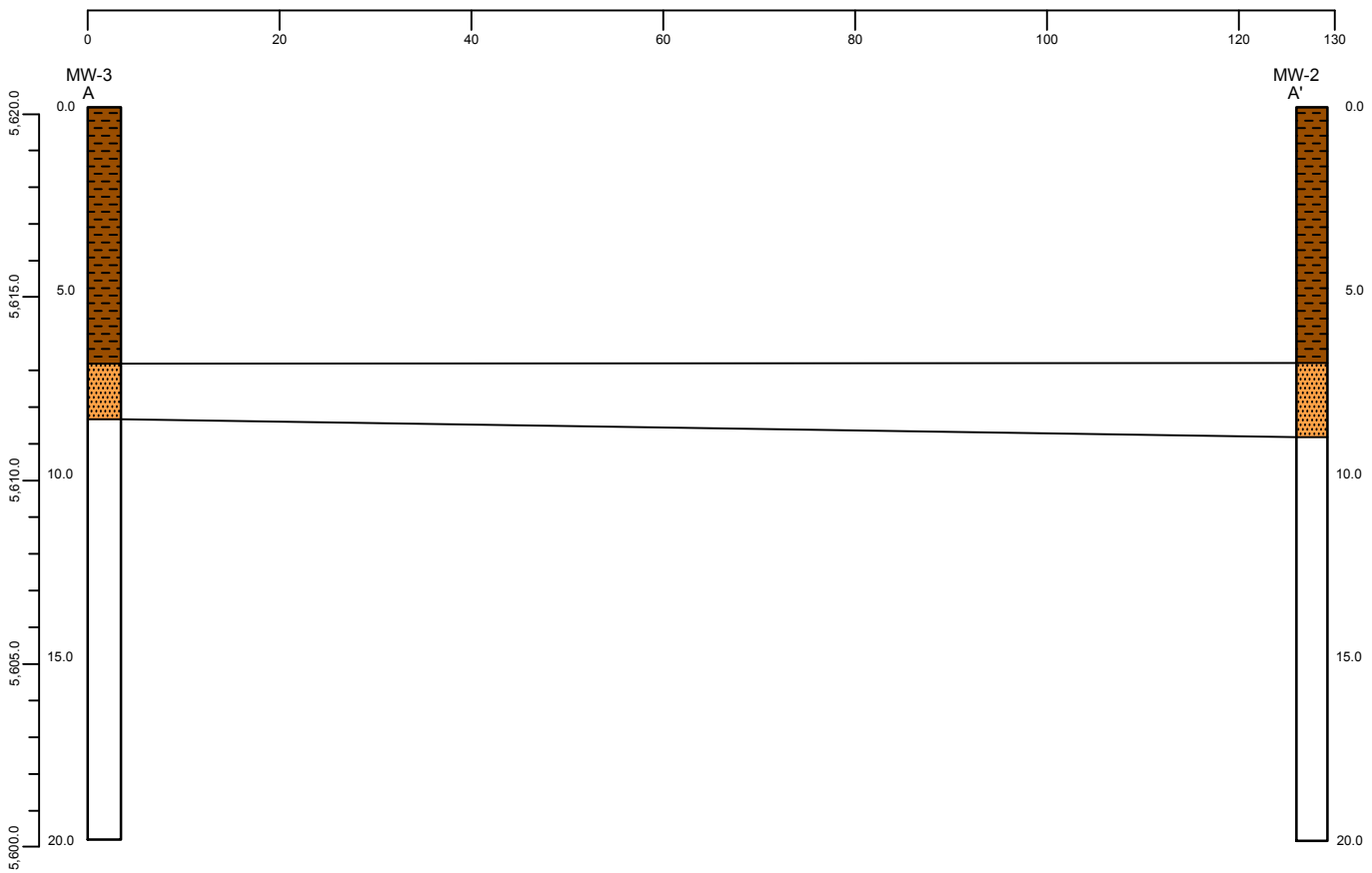
ConocoPhillips high resolution aerial imagery 2008.

Figure 2

SITE DETAIL MAP
FAYE BURDETTE No. 1 GAS WELL SITE
SECTION 09, T30N-R11W, SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

GHD

074929-95(008)GN-DL001_SD NOV 21, 2016



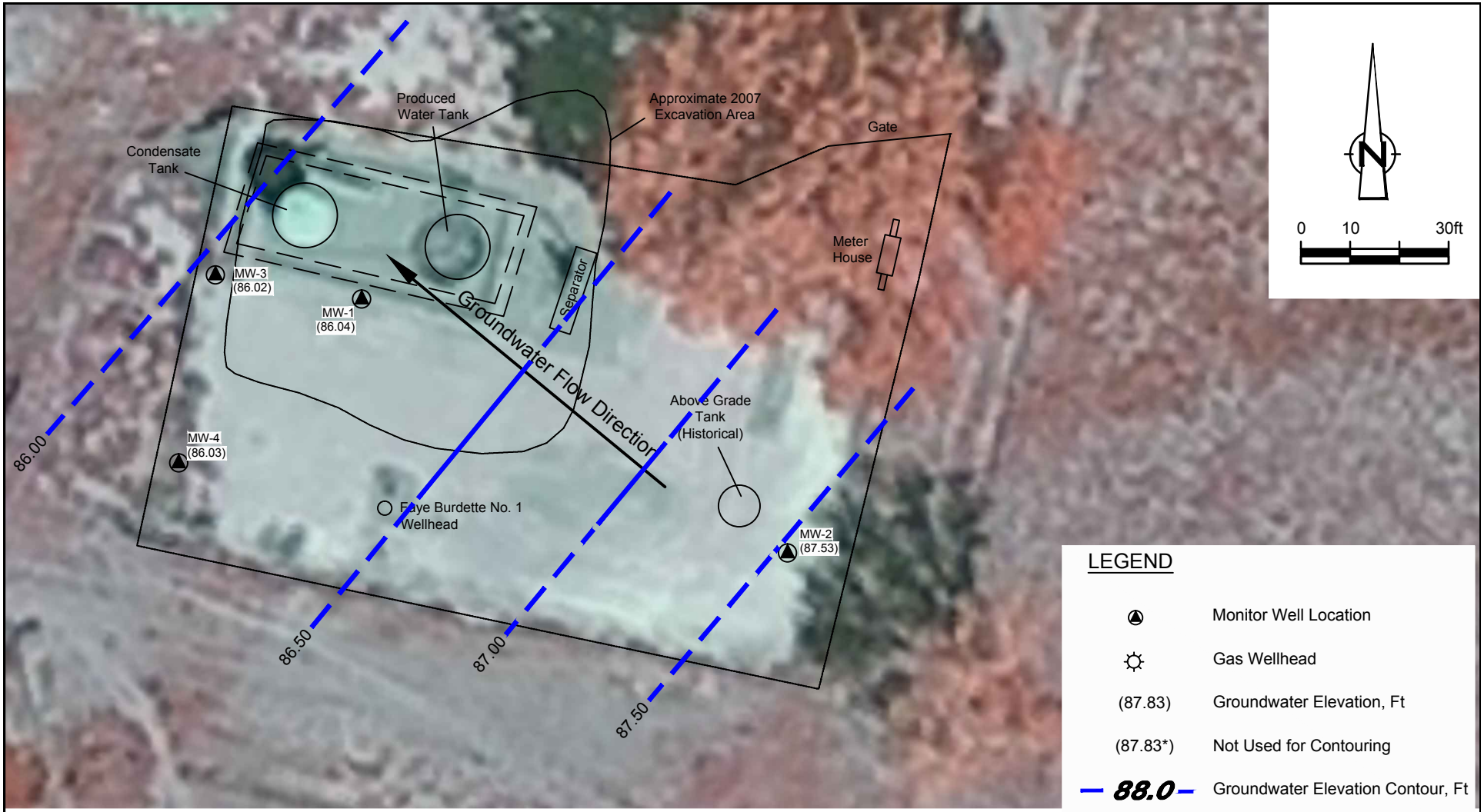
H: 1"= 20'
V: 1"= 10'

Silty Sand

Medium Grained Sand

Figure 3

GEOLOGICAL CROSS SECTION
FAYE BURDETTE No. 1 GAS WELL SITE
SECTION 09, T30N-R11W, SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

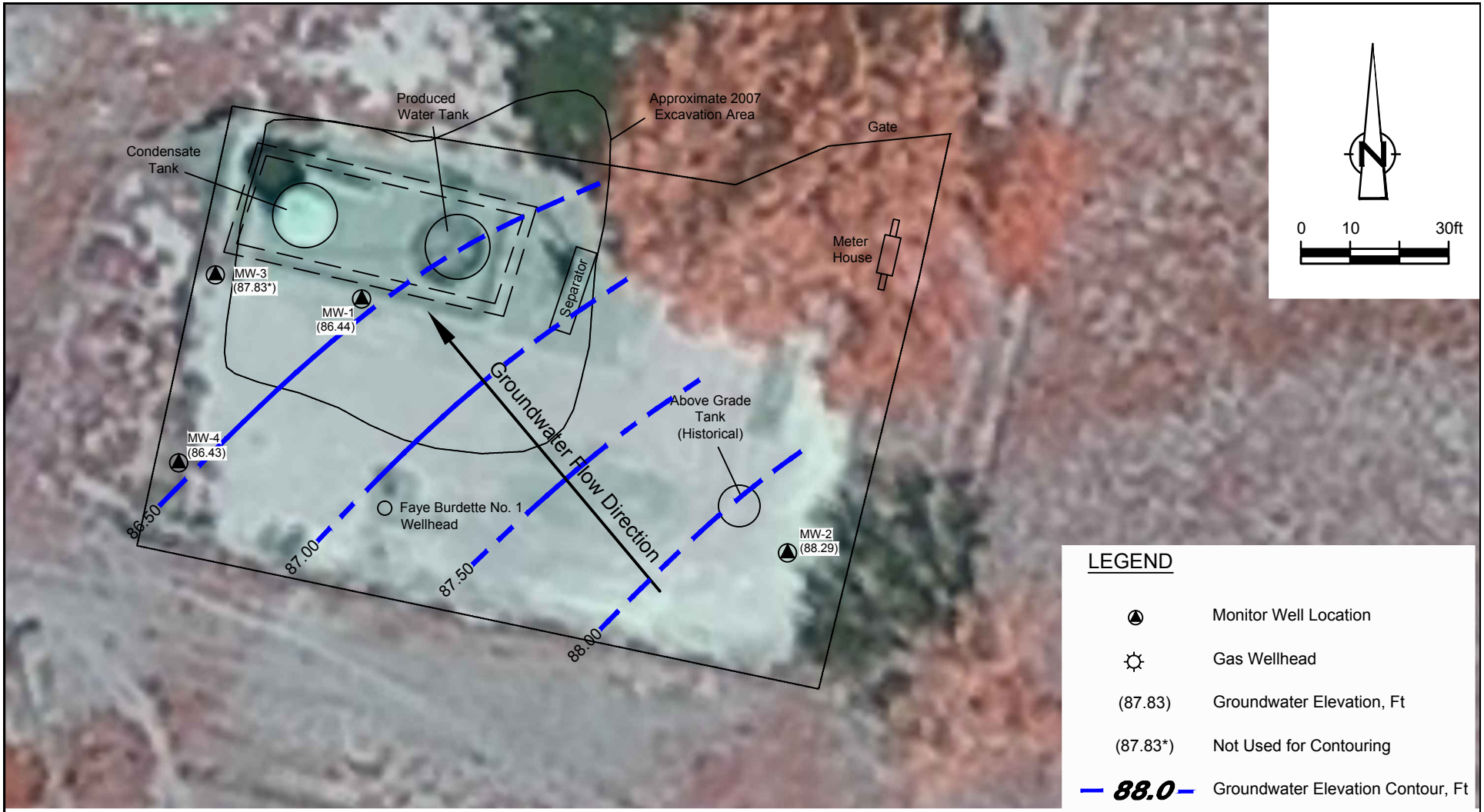


ConocoPhillips high resolution aerial imagery 2008.

Figure 4

MARCH 2016 GROUNDWATER POTENTIOMETRIC SURFACE MAP
FAYE BURDETTE No. 1 GAS WELL SITE
SECTION 09, T30N-R11W, SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

074929-95(008)GN-DL003_GG JAN 3, 2017



ConocoPhillips high resolution aerial imagery 2008.

Figure 5

SEPTEMBER 2016 GROUNDWATER POTENTIOMETRIC SURFACE MAP
FAYE BURDETTE No. 1 GAS WELL SITE
SECTION 09, T30N-R11W, SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

GHD

074929-95(008)GN-DL003_GG JAN 3, 2017

Tables

Table 1
Site History Timeline
ConocoPhillips Company
Faye Burdette No. 1
San Juan County, New Mexico

Date	*Event/Action*	*Activity*
April 29, 1962	Well spudded	Well was spudded by Southwest Production Company.
September 1, 1963	Ownership transfer	Ownership of well transferred to Beta Development Company.
February 21, 1983	NMOCD inspection	NMOCD inspection noted a leaking 2-inch valve on a storage tank.
August 15, 1988	Ownership transfer	Ownership of well transferred to Mesa Operating Limited Partnership.
July 1, 1991	Ownership transfer	Ownership of well transferred to Conoco Inc.
May 24, 2007	Release from produced water tank	A small (<25 gallons) release occurred from the produced water tank after a rusty spot was scraped off. Follow-up excavation encountered evidence of pre-existing hydrocarbon-impacted soil, apparently related to a former earthen pit beneath the tank.
July 1, 2007	Initial site assessment	Contaminated soil was excavated from the Site. Two ground water samples were obtained at the time of this excavation, and one (1) of these samples was found to contain total xylenes above the State of New Mexico drinking water standard.
September 26, 2007	Monitor well installation/Site assessment	Ground water monitor well installed to a depth of 15 feet below ground surface (bgs) by Envirotech Inc. of Farmington, NM (Envirotech). A soil sample obtained from the well boring was analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) and total petroleum hydrocarbons (TPH). Results were below NMOCD regulations of 10 parts per million (ppm), 50 ppm, and 100 ppm, respectively.
	Site assessment	A ground water sample was collected from the temporary Monitor Well (MW-1) and analyzed for BTEX; results were below the State of New Mexico drinking water standard for this constituent. Depth to ground water recorded at 9.5 feet bgs.
November 1, 2007	Envirotech recommendation	Envirotech report recommends plugging and abandonment of the temporary ground water monitor well and a no further action determination for the Site (Envirotech, 2007).
April 8, 2008	Additional monitoring requested by OCD	Oil Conservation Division of NM Energy, Minerals, and Resources Dept. indicates additional investigation and sampling is necessary for closure consideration during a meeting between Tetra Tech and Glenn Von Gonten.
October 22, 2008	Groundwater monitoring	1st quarter sampling of MW-1 conducted by Tetra Tech.
January 9, 2009	Installation of additional monitor wells	WDC Exploration and Wells of Peralta, NM installed additional Monitor Wells MW-2, MW-3 and MW-4 under the supervision of Tetra Tech.
January 29, 2009	Groundwater monitoring	Second quarter sampling of MW-1 conducted by Tetra Tech. Initial sampling of Monitor Wells MW-2, MW-3, and MW-4.
March 31, 2009	Groundwater monitoring	Third consecutive quarter of sampling MW-1 conducted by Tetra Tech. Second quarter sampling of Monitor Wells MW-2, MW-3, and MW-4.
June 17, 2009	Groundwater monitoring	Fourth consecutive quarter of sampling MW-1 conducted by Tetra Tech. Third quarter of sampling Monitor Wells MW-2, MW-3, and MW-4.
September 22, 2009	Groundwater monitoring	Fifth consecutive quarter of sampling MW-1 by Tetra Tech. Fourth consecutive quarter of sampling Monitor Wells MW-2, MW-3, and MW-4. Sampling for total metals discontinued as approved by NMOCD. Sampling for select dissolved metals based on total metals analyses begins.
December 16, 2009	Groundwater monitoring	Sixth consecutive quarter sampling of MW-1 conducted by Tetra Tech. Fifth consecutive quarter sampling of Monitor Wells MW-2, MW-3, and MW-4 for BTEX and dissolved manganese only.
April 1, 2010	Groundwater monitoring	Seventh consecutive quarter sampling of MW-1 conducted by Tetra Tech. Sixth consecutive quarter sampling of Monitor Wells MW-2, MW-3, and MW-4 for BTEX and dissolved manganese only.
June 9, 2010	Groundwater monitoring	Eighth consecutive quarter sampling of MW-1 conducted by Tetra Tech. Seventh consecutive quarter sampling of Monitor Wells MW-2, MW-3, and MW-4 for BTEX and dissolved manganese only.
September 20, 2010	Groundwater monitoring	Ninth consecutive quarter sampling of MW-1 conducted by Tetra Tech. Eighth consecutive quarter sampling of Monitor Wells MW-2, MW-3, and MW-4 for BTEX and dissolved manganese only.
December 17, 2010	Groundwater monitoring	Tenth consecutive quarter sampling of MW-1 conducted by Tetra Tech. Ninth consecutive quarter sampling of Monitor Wells MW-2, MW-3, and MW-4 for BTEX and dissolved manganese only.
March 16, 2011	Groundwater monitoring	11th consecutive quarter sampling of MW-1 conducted by Tetra Tech. Tenth consecutive quarter sampling of Monitor Wells MW-2, MW-3, and MW-4 for BTEX and dissolved manganese only. Tetra Tech recommended that sampling for BTEX be discontinued.
June 15, 2011	Transfer of site consulting responsibilities	On June 15, 2011, Site consulting responsibilities were transferred from Tetra Tech of Albuquerque, NM to Conestoga-Rovers & Associates (CRA) of Albuquerque, NM.
June 22, 2011	Groundwater monitoring	12th consecutive quarter sampling of MW-1. 11th consecutive quarter sampling of Monitor Wells MW-2, MW-3, and MW-4. Samples analyzed for dissolved manganese only.
September 27, 2011	Groundwater monitoring	13th consecutive quarter sampling of MW-1. 12th consecutive quarter sampling of Monitor Wells MW-2, MW-3, and MW-4. Samples analyzed for dissolved manganese only.
September 17, 2012	Groundwater monitoring	Annual groundwater sampling event. Samples analyzed for dissolved manganese only.
September 16, 2013	Groundwater monitoring	Annual groundwater sampling event. Samples analyzed for dissolved manganese only.

Table 1
Site History Timeline
ConocoPhillips Company
Faye Burdette No. 1
San Juan County, New Mexico

Date	*Event/Action*	*Activity*
March 24, 2014	Groundwater monitoring	Quarterly groundwater sampling event. Samples analyzed for dissolved manganese only.
June 18, 2014	Groundwater monitoring	Quarterly groundwater sampling event. Samples analyzed for dissolved manganese only.
September 19, 2014	Groundwater monitoring	Quarterly groundwater sampling event. Samples analyzed for dissolved manganese only.
December 18, 2014	Groundwater monitoring	Quarterly groundwater sampling event. MW-1 analyzed for dissolved manganese only.
March 18, 2015	Groundwater monitoring	Quarterly groundwater sampling event. MW-1 and MW-3 analyzed for dissolved manganese only.
June 17, 2015	Groundwater monitoring	Quarterly groundwater sampling event. MW-1 analyzed for dissolved manganese only.
September 16, 2015	Groundwater monitoring	Quarterly groundwater sampling event. MW-1 analyzed for dissolved manganese only.
December 2, 2015	Groundwater monitoring	Quarterly groundwater sampling event. MW-1 analyzed for dissolved manganese only.
March 28, 2016	Groundwater monitoring	Quarterly groundwater sampling event. MW-1 analyzed for dissolved manganese only.
September 13, 2016	Groundwater monitoring	Quarterly groundwater sampling event. MW-1 analyzed for dissolved manganese only.

Table 2

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

Well ID	*Total Depth (ft below TOC)*	*Elevation**	*Screen Interval (ft bgs)*	*Date Measured*	*Depth to Groundwater (ft below TOC)*	*Relative Water Level*
MW-1	17.52	97.66	4.8 - 14.8	10/22/2008	10.91	86.75
				1/29/2009	11.72	85.94
				3/31/2009	11.88	85.78
				6/17/2009	11.24	86.42
				9/22/2009	10.87	86.79
				12/16/2009	11.56	86.10
				4/1/2010	11.91	85.75
				6/9/2010	11.31	86.35
				9/20/2010	11.39	86.27
				12/17/2010	11.06	86.60
				3/16/2011	11.39	86.27
				6/22/2011	10.73	86.93
				9/27/2011	10.68	86.98
				9/17/2012	10.81	86.85
				9/16/2013	10.64	87.02
				3/24/2014	11.19	86.47
				6/18/2014	10.61	87.05
				9/17/2014	10.36	87.30
				12/18/2014	10.31	87.35
				3/18/2015	10.73	86.93
				6/17/2015	10.80	86.86
				9/16/2015	10.97	86.69
				12/2/2015	11.00	86.66
				3/28/2016	11.62	86.04
				9/13/2016	11.22	86.44
MW-2	19.45	98.54	5 - 20	1/29/2009	10.91	87.63
				3/31/2009	11.12	87.42
				6/17/2009	10.48	88.06
				9/22/2009	10.76	87.78
				12/16/2009	10.61	87.93
				4/1/2010	11.20	87.34
				6/9/2010	10.35	88.19
				9/20/2010	10.35	88.19
				12/17/2010	10.10	88.44
				3/16/2011	10.70	87.84
				6/22/2011	9.69	88.85
				9/27/2011	9.63	88.91
				9/17/2012	10.02	88.52
				9/16/2013	9.73	88.81
				3/24/2014	10.61	87.93
				6/18/2014	9.72	88.82
				9/17/2014	9.34	89.20
				12/18/2014	9.51	89.03
				3/18/2015	10.13	88.41
				6/17/2015	10.08	88.46
				9/16/2015	10.08	88.46
				12/2/2015	10.23	88.31
				3/28/2016	11.01	87.53
				9/13/2016	10.25	88.29

Table 2

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

Well ID	*Total Depth (ft below TOC)*	*Elevation**	*Screen Interval (ft bgs)*	*Date Measured*	*Depth to Groundwater (ft below TOC)*	*Relative Water Level*
MW-3	22.96	97.16	5 - 20	1/29/2009	11.44	85.72
				3/31/2009	11.62	85.54
				6/17/2009	10.97	86.19
				9/22/2009	10.57	86.59
				12/16/2009	11.32	85.84
				4/1/2010	11.66	85.50
				6/9/2010	11.10	86.06
				9/20/2010	11.17	85.99
				12/17/2010	10.84	86.32
				3/16/2011	11.16	86.00
				6/22/2011	10.54	86.62
				9/27/2011	10.50	86.66
				9/17/2012	10.61	86.55
				9/16/2013	10.45	86.71
				3/24/2014	10.88	86.28
				6/18/2014	10.44	86.72
				9/17/2014	10.20	86.96
				12/18/2014	10.19	86.97
				3/18/2015	10.53	86.63
				6/17/2015	10.63	86.53
				9/16/2015	10.59	86.57
				12/2/2015	10.62	86.54
				3/28/2016	11.14	86.02
				9/13/2016	9.33	87.83
MW-4	22.28	97.06	5 - 20	1/29/2009	11.02	86.04
				3/31/2009	11.18	85.88
				6/17/2009	10.59	86.47
				9/22/2009	10.16	86.90
				12/16/2009	10.87	86.19
				4/1/2010	11.04	86.02
				6/9/2010	10.65	86.41
				9/20/2010	10.72	86.34
				12/17/2010	10.46	86.60
				3/16/2011	10.84	86.22
				6/22/2011	10.15	86.91
				9/27/2011	10.10	86.96
				9/17/2012	10.31	86.75
				9/16/2013	10.08	86.98
				3/24/2014	10.64	86.42
				6/18/2014	10.12	86.94
				9/17/2014	9.85	87.21
				12/18/2014	9.82	87.24
				3/18/2015	10.24	86.82
				6/17/2015	10.32	86.74
				9/16/2015	10.40	86.66
				12/2/2015	10.42	86.64
				3/28/2016	11.03	86.03
				9/13/2016	10.63	86.43

Notes:
1. ft = Feet
2. TOC = Top of casing
3. bgs = below ground surface
4. * Elevation relative to an arbitrary point set at 100 feet

Table 3

Field Parameters Summary
ConocoPhillips Company
Faye Burdette 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-1	3/18/2015	12.80	7.43	0.800	1190	--	-49.0	3.25
	6/17/2015	14.52	6.05	0.609	939	2.67	21.6	3.25
	9/16/2015	17.85	7.13	0.617	949	1.93	-1.7	1.75
	12/2/2015	15.80	7.92	0.679	1013	2.07	-34.2	1.50
	3/28/2016	13.90	6.17	0.700	1020	6.83	46.0	1.50
	9/13/2016	17.79	8.09	0.566	871	1.46	-347.3	1.50
MW-2	3/18/2015	Well not sampled						
	6/17/2015	Well not sampled						
	9/16/2015	Well not sampled						
	12/2/2015	Well not sampled						
MW-3	3/18/2015	13.50	7.22	0.800	1240		53.0	6.00
	6/17/2015	Well not sampled						
	9/16/2015	Well not sampled						
	12/2/2015	Well not sampled						
	3/282016	Well not sampled						
MW-4	3/18/2015	Well not sampled						
	6/17/2015	Well not sampled						
	9/16/2015	Well not sampled						
	12/2/2015	Well not sampled						
	3/282016	Well not sampled						

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

Table 4

Groundwater Analytical Results Summary
ConocoPhillips Company
Faye Burdette 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)	Iron (dissolved) (mg/L)	Manganese (dissolved) (mg/L)	Manganese (mg/L)	Sulfate (mg/L)
NMWQCC Groundwater Quality Standards				*0.01*	*0.75*	*0.75*	*0.62*	*1*	*0.2*	*0.2*	600
MW-1	MW-1	10/22/2008	(orig)	< 0.005	< 0.005	< 0.005	< 0.005	--	--	**2.09**	--
	MW-1	1/29/2009	(orig)	< 0.005	< 0.005	< 0.005	< 0.005	--	--	**1.41**	--
	MW-1 Duplicate	1/29/2009	Duplicate	< 0.005	< 0.005	< 0.005	< 0.005	--	--	--	--
	MW-1	3/31/2009	(orig)	< 0.005	< 0.005	< 0.005	< 0.005	--	--	**1.24**	--
	MW-1 Duplicate	3/31/2009	Duplicate	< 0.005	< 0.005	< 0.005	< 0.005	--	--	--	--
	MW-1	6/17/2009	(orig)	< 0.005	< 0.005	< 0.005	< 0.005	--	--	**2.47**	--
	MW-1 Duplicate	6/17/2009	Duplicate	< 0.005	< 0.005	< 0.005	< 0.005	--	--	**2.52**	--
	MW-1	9/22/2009	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	0.445	**1.44**	--	--
	MW-1 Duplicate	9/22/2009	Duplicate	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--
	MW-1	12/16/2009	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	**0.732**	--	--
	MW-1 Duplicate	12/16/2009	Duplicate	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--
	MW-1	4/1/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	**1.71**	--	--
	MW-1 Duplicate	4/1/2010	Duplicate	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--
	MW-1	6/9/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	**1.61**	--	--
	MW-1 Duplicate	6/9/2010	Duplicate	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--
	MW-1	9/20/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	**0.895**	--	--
	MW-1 Duplicate	9/20/2010	Duplicate	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--
	MW-1	12/17/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	**0.773**	--	--
	MW-1 Duplicate	12/17/2010	Duplicate	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--
	MW-1	3/16/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	**2.23**	--	--
	MW-1 Duplicate	3/16/2011	Duplicate	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--
	GW-74929-062211-PG-04	6/22/2011	(orig)	--	--	--	--	--	**0.368**	--	--
	GW-074929-092711-CM-009	9/27/2011	(orig)	--	--	--	--	--	**0.624**	--	--
	GW-074929-091712-CM-MW-1	9/17/2012	(orig)	--	--	--	--	--	**0.73**	--	--
	GW-074929-091712-CM-DUP	9/17/2012	Duplicate	--	--	--	--	--	**0.38**	--	--
	GW-074929-091613-CM-MW-1	9/16/2013	(orig)	--	--	--	--	--	**0.22**	--	--
	GW-074929-032414-CM-MW-1	3/24/2014	(orig)	--	--	--	--	--	**0.40**	--	--
	GW-074929-061814-CK-MW-1	6/18/2014	(orig)	--	--	--	--	--	**0.58**	--	--
	GW-074929-061814-CK-DUP	6/18/2014	Duplicate	--	--	--	--	--	**0.46**	--	--
	GW-074929-091914-CK-MW-1	9/17/2014	(orig)	--	--	--	--	--	**0.21**	--	--
	GW-074929-121814-CM-MW-1	12/18/2014	(orig)	--	--	--	--	--	**0.21**	--	--
	GW-074929-121814-CM-DUP	12/18/2014	Duplicate	--	--	--	--	--	**0.34**	--	--
	GW-074929-031815-CM-MW-1	3/18/2015	(orig)	--	--	--	--	--	0.15	--	--
	GW-074929-031815-CM-DUP	3/18/2015	Duplicate	--	--	--	--	--	**0.26**	--	--
	GW-074929-061715-CB-MW-1	6/17/2015	(orig)	--	--	--	--	--	**0.27**	--	--
	GW-074929-061715-CB-DUP	6/17/2015	Duplicate	--	--	--	--	--	0.14	--	--
	GW-074929-091615-CK-MW-1	9/16/2015	(orig)	--	--	--	--	--	**0.20**	--	--
	GW-074929-12215-CB-MW-1	12/2/2015	(orig)	--	--	--	--	--	**0.26**	--	--
	GW-074929-12215-CB-DUP	12/2/2015	Duplicate	--	--	--	--	--	0.09	--	--
	GW-074929-032816-CM-MW-1	3/28/2016	(orig)	--	--	--	--	--	**0.44**	--	285
	GW-074929-032816-CM-DUP	3/28/2016	Duplicate	--	--	--	--	--	**0.33**	--	--
	GW-074929-091316-CM-MW-1	9/13/2016	(orig)						**0.23**	--	180
	GW-074929-091316-CM-DUP	9/13/2016	Duplicate						**0.20**	--	--

Table 4

Groundwater Analytical Results Summary
ConocoPhillips Company
Faye Burdette 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)	Iron (dissolved) (mg/L)	Manganese (dissolved) (mg/L)	Manganese (mg/L)	Sulfate (mg/L)
NMWQCC Groundwater Quality Standards				*0.01*	*0.75*	*0.75*	*0.62*	*1*	*0.2*	*0.2*	600
MW-2	MW-2	1/29/2009	(orig)	< 0.005	< 0.005	< 0.005	< 0.005	--	--	**1.79**	--
	MW-2	3/31/2009	(orig)	< 0.005	< 0.005	< 0.005	< 0.005	--	--	**0.326**	--
	MW-2	6/17/2009	(orig)	< 0.005	< 0.005	< 0.005	< 0.005	--	--	**1.37**	--
	MW-2	9/22/2009	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	< 0.02	0.0264	--	--
	MW-2	12/16/2009	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	0.0654	--	--
	MW-2	4/1/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	0.16	--	--
	MW-2	6/9/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	0.0323	--	--
	MW-2	9/20/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	0.0455	--	--
	MW-2	12/17/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	0.0332	--	--
	MW-2	3/16/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	0.0265	--	--
	GW-74929-062211-PG-01	6/22/2011	(orig)	--	--	--	--	--	0.0232	--	--
	GW-074929-092711-CM-006	9/27/2011	(orig)	--	--	--	--	--	0.0142	--	--
	GW-074929-091712-CM-MW-2	9/17/2012	(orig)	--	--	--	--	--	< 0.005	--	--
	GW-074929-091613-CM-MW-2	9/16/2013	(orig)	--	--	--	--	--	0.0082	--	--
	GW-074929-032414-CM-MW-2	3/24/2014	(orig)	--	--	--	--	--	0.0078	--	--
	GW-074929-032414-CM-DUP	3/24/2014	Duplicate	--	--	--	--	--	0.0071	--	--
	GW-074929-061814-CK-MW-2	6/18/2014	(orig)	--	--	--	--	--	<0.0050	--	--
	GW-074929-091914-CK-MW-2	9/17/2014	(orig)	--	--	--	--	--	<0.0050	--	--
MW-3	MW-3	1/29/2009	(orig)	< 0.005	< 0.005	< 0.005	< 0.005	--	--	**0.374**	--
	MW-3	3/31/2009	(orig)	< 0.005	< 0.005	< 0.005	< 0.005	--	--	**0.271**	--
	MW-3	6/17/2009	(orig)	< 0.005	< 0.005	< 0.005	< 0.005	--	--	**0.628**	--
	MW-3	9/22/2009	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	0.0291	0.0201	--	--
	MW-3	12/16/2009	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	0.0607	--	--
	MW-3	4/1/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	0.0232	--	--
	MW-3	6/9/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--
	MW-3	9/20/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--
	MW-3	12/17/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	0.178	--	--
	MW-3	3/16/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	0.0424	--	--
	GW-74929-062211-PG-03	6/22/2011	(orig)	--	--	--	--	--	0.0311	--	--
	GW-074929-092711-CM-008	9/27/2011	(orig)	--	--	--	--	--	0.0244	--	--
	GW-074929-091712-CM-MW-3	9/17/2012	(orig)	--	--	--	--	--	0.015	--	--
	GW-074929-091613-CM-MW-3	9/16/2013	(orig)	--	--	--	--	--	0.012	--	--
	GW-074929-091613-CM-DUP	9/16/2013	Duplicate	--	--	--	--	--	0.015	--	--
	GW-074929-032414-CM-MW-3	3/24/2014	(orig)	--	--	--	--	--	0.021	--	--
	GW-074929-061814-CK-MW-3	6/18/2014	(orig)	--	--	--	--	--	0.033	--	--
	GW-074929-091914-CK-MW-3	9/17/2014	(orig)	--	--	--	--	--	0.029	--	--
	GW-074929-031815-CM-MW-3	3/18/2015	(orig)	--	--	--	--	--	0.040	--	--

Table 4

Groundwater Analytical Results Summary
ConocoPhillips Company
Faye Burdette 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)*	*Iron (dissolved) (mg/L)*	*Manganese (dissolved) (mg/L)*	*Manganese (mg/L)*	*Sulfate (mg/L)*
NMWQCC Groundwater Quality Standards				***0.01***	***0.75***	***0.75***	***0.62***	***1***	***0.2***	***0.2***	600
MW-4	MW-4	1/29/2009	(orig)	< 0.005	< 0.005	< 0.005	< 0.005	--	--	**4.15**	--
	MW-4	3/31/2009	(orig)	< 0.005	< 0.005	< 0.005	< 0.005	--	--	**1.45**	--
	MW-4	6/17/2009	(orig)	< 0.005	< 0.005	< 0.005	< 0.005	--	--	**0.854**	--
	MW-4	9/22/2009	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	0.108	**0.476**	--	--
	MW-4	12/16/2009	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	0.0149	--	--
	MW-4	4/1/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--
	MW-4	6/9/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--
	MW-4	9/20/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	0.0152	--	--
	MW-4	12/17/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	0.0502	--	--
	MW-4	3/16/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--
	GW-74929-062211-PG-02	6/22/2011	(orig)	--	--	--	--	--	< 0.015	--	--
	GW-074929-092711-CM-007	9/27/2011	(orig)	--	--	--	--	--	0.182	--	--
	GW-074929-091712-CM-MW-4	9/17/2012	(orig)	--	--	--	--	--	0.090	--	--
	GW-074929-091613-CM-MW-4	9/16/2013	(orig)	--	--	--	--	--	0.011	--	--
	GW-074929-032414-CM-MW-4	3/24/2014	(orig)	--	--	--	--	--	0.020	--	--
	GW-074929-061814-CK-MW-4	6/18/2014	(orig)	--	--	--	--	--	<0.0050	--	--
	GW-074929-091914-CK-MW-2	9/17/2014	(orig)	--	--	--	--	--	0.057	--	--

Notes:
1. MW = monitoring well
2. NMWQCC = New Mexico Water Quality Control Commission
3. Constituents in **BOLD** are in excess of NMWQCC groundwater quality standards
4. mg/L = milligrams per liter (parts per million)
5. < 1.0 = Below laboratory detection limit of 1.0 mg/L

Appendix A
2016 Annual Groundwater Laboratory Analytical Report

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

April 07, 2016

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

RE: Project: 074929 Faye Burdette No 1
Pace Project No.: 60215807

Dear Jeffrey Walker:
Enclosed are the analytical results for sample(s) received by the laboratory on March 29, 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.
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(913)599-5665

CERTIFICATIONS

Project: 074929 Faye Burdette No 1
Pace Project No.: 60215807

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

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SAMPLE SUMMARY

Project: 074929 Faye Burdette No 1
Pace Project No.: 60215807

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60215807001	**GW-074929-032816-CM-MW-1**	Water	03/28/16 13:50	03/29/16 08:50
60215807002	**GW-074929-032816-CM-DUP**	Water	03/28/16 08:00	03/29/16 08:50

REPORT OF LABORATORY ANALYSIS

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

SAMPLE ANALYTE COUNT

Project: 074929 Faye Burdette No 1
Pace Project No.: 60215807

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60215807001	**GW-074929-032816-CM-MW-1**	EPA 6010	JGP	1
		EPA 300.0	OL	1
60215807002	**GW-074929-032816-CM-DUP**	EPA 6010	JGP	1

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PROJECT NARRATIVE

Project: 074929 Faye Burdette No 1
Pace Project No.: 60215807

Method: **EPA 6010**
Description: 6010 MET ICP, Dissolved
Client: GHD Services_COP NM
Date: April 07, 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.
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Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project: 074929 Faye Burdette No 1
Pace Project No.: 60215807

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: GHD Services_COP NM
Date: April 07, 2016

General Information:
1 sample was analyzed for EPA 300.0. 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.

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:

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

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ANALYTICAL RESULTS

Project: 074929 Faye Burdette No 1
Pace Project No.: 60215807

Sample: GW-074929-032816-CM-MW-1 **Lab ID: 60215807001** Collected: 03/28/16 13:50 Received: 03/29/16 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							
Manganese, Dissolved	**0.44**	mg/L	0.0050	1	04/01/16 15:30	04/05/16 12:13	7439-96-5	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**285**	mg/L	50.0	50		04/06/16 10:16	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 074929 Faye Burdette No 1
Pace Project No.: 60215807

Sample: GW-074929-032816-CM-DUP **Lab ID: 60215807002** Collected: 03/28/16 08:00 Received: 03/29/16 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							
Manganese, Dissolved	**0.33**	mg/L	0.0050	1	04/01/16 15:30	04/05/16 12:17	7439-96-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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Lenexa, KS 66219
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QUALITY CONTROL DATA

Project: 074929 Faye Burdette No 1
Pace Project No.: 60215807

QC Batch: MPRP/35416
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Associated Lab Samples: 60215807001, 60215807002

METHOD BLANK: 1734700 Matrix: Water
Associated Lab Samples: 60215807001, 60215807002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Manganese, Dissolved	mg/L	ND	0.0050	04/05/16 12:06	

LABORATORY CONTROL SAMPLE: 1734701

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Manganese, Dissolved	mg/L	1	1.0	100	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
Manganese, Dissolved	mg/L	0.13	1	1	1.1	1.1	101	99	75-125	2	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

Pace Analytical Services, Inc.
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QUALITY CONTROL DATA

Project: 074929 Faye Burdette No 1
Pace Project No.: 60215807

QC Batch: WETA/38839 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60215807001

METHOD BLANK: 1736387 Matrix: Water
Associated Lab Samples: 60215807001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	04/06/16 09:00	

LABORATORY CONTROL SAMPLE: 1736388

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1735886 1735887

Parameter	Units	60215915002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	20.6	10	10	31.0	30.9	104	103	80-120	0	15	

MATRIX SPIKE SAMPLE: 1735888

Parameter	Units	60215915003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	19.0	5	23.8	96	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

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

QUALIFIERS

Project: 074929 Faye Burdette No 1
Pace Project No.: 60215807

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.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 074929 Faye Burdette No 1
Pace Project No.: 60215807

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60215807001	**GW-074929-032816-CM-MW-1**	EPA 3010	MPRP/35416	EPA 6010	ICP/25911
60215807002	**GW-074929-032816-CM-DUP**	EPA 3010	MPRP/35416	EPA 6010	ICP/25911
60215807001	**GW-074929-032816-CM-MW-1**	EPA 300.0	WETA/38839		

Pace Analytical
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Sample Condition Upon Receipt
ESI Tech Spec Client

WO# : 60215807

60215807

Client Name: GHD Services_COP NM

Optional
Proj Due Date:
Proj Name:

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

Tracking #: 6508 8165 2022 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: 2.0

Date and initials of person examining contents: SB 3/29

Temperature should be above freezing to 6°C

Chain of Custody present:	☒Yes ☐No ☐N/A	1.
Chain of Custody filled out:	☒Yes ☐No ☐N/A	2.
Chain of Custody relinquished:	☒Yes ☐No ☐N/A	3.
Sampler name & signature on COC:	☒Yes ☐No ☐N/A	4.
Samples arrived within holding time:	☒Yes ☐No ☐N/A	5.
Short Hold Time analyses (<72hr):	☐Yes ☒No ☐N/A	6.
Rush Turn Around Time requested:	☐Yes ☒No ☐N/A	7.
Sufficient volume:	☒Yes ☐No ☐N/A	8.
Correct containers used:	☒Yes ☐No ☐N/A	
Pace containers used:	☒Yes ☐No ☐N/A	9.
Containers intact:	☒Yes ☐No ☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☒N/A	11.
Filtered volume received for dissolved tests?	☐Yes ☐No ☒N/A	12.
Sample labels match COC:	☒Yes ☐No ☐N/A	
Includes date/time/ID/analyses Matrix: ✓		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:	☐Yes ☐No ☒N/A	
Pace Trip Blank lot # (if purchased):		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: 1009	End:
Temp:	Temp:

Project Manager Review: AAF Date: 03/29/16

F-KS-C-004-Rev.4, 30June 2015

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:	074929 COP Faye Burdette No 1	Pace Project Manager:	alice.flanagan@pacelabs.com,
Requested Due Date:		Project #:		Pace Profile #:	

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	Sulfate by 300.0	Dissolved Mn - field filtered	Residual Chlorine (Y/N)	3/24
1	GW-074929-032816-CM-MW-1	WT	G			3-28-16	1350		2	1		1							X	X		BP3U BP3N BP3F 1-0
2	GW-074929-032816-CM-DUP	WT	G			3-28-16	—		1			1								X		↓
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
METALS WERE FIELD FILTERED	GHD	3-28-16	1600		3/29	0850	2.0	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: CALE HANACK

SIGNATURE of SAMPLER: [signature] DATE Signed: 3-28-16

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

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

September 27, 2016

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

RE: Project: 074929 COP Faye Burdette No. 1
Pace Project No.: 60227639

Dear Christine Mathews:
Enclosed are the analytical results for sample(s) received by the laboratory on September 14, 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,
Jeffrey Walker, GHD Services, Inc

Pace Analytical Services, Inc.
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CERTIFICATIONS

Project: 074929 COP Faye Burdette No. 1
Pace Project No.: 60227639

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: 074929 COP Faye Burdette No. 1
Pace Project No.: 60227639

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60227639001	**GW-074929-091316-CM-MW-1**	Water	09/13/16 12:50	09/14/16 08:50
60227639002	**GW-074929-091316-CM-DUP**	Water	09/13/16 00:00	09/14/16 08:50

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 074929 COP Faye Burdette No. 1
Pace Project No.: 60227639

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60227639001	**GW-074929-091316-CM-MW-1**	EPA 6010	JGP	1
		EPA 300.0	OL	1
60227639002	**GW-074929-091316-CM-DUP**	EPA 6010	JGP	1

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PROJECT NARRATIVE

Project: 074929 COP Faye Burdette No. 1
Pace Project No.: 60227639

Method: **EPA 6010**
Description: 6010 MET ICP, Dissolved
Client: GHD Services_COP NM
Date: September 27, 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:

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PROJECT NARRATIVE

Project: 074929 COP Faye Burdette No. 1
Pace Project No.: 60227639

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: GHD Services_COP NM
Date: September 27, 2016

General Information:
1 sample was analyzed for EPA 300.0. 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.

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:

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

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: 074929 COP Faye Burdette No. 1
Pace Project No.: 60227639

Sample: GW-074929-091316-CM-MW-1 **Lab ID: 60227639001** Collected: 09/13/16 12:50 Received: 09/14/16 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							
Manganese, Dissolved	**0.23**	mg/L	0.0050	1	09/15/16 15:45	09/20/16 15:26	7439-96-5	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**180**	mg/L	10.0	10		09/26/16 12:29	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

ANALYTICAL RESULTS

Project: 074929 COP Faye Burdette No. 1
Pace Project No.: 60227639

Sample: GW-074929-091316-CM-DUP **Lab ID: 60227639002** Collected: 09/13/16 00:00 Received: 09/14/16 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							
Manganese, Dissolved	**0.20**	mg/L	0.0050	1	09/15/16 15:45	09/20/16 15:41	7439-96-5	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 074929 COP Faye Burdette No. 1
Pace Project No.: 60227639

QC Batch: 446683 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved
Associated Lab Samples: 60227639001, 60227639002

METHOD BLANK: 1826572 Matrix: Water
Associated Lab Samples: 60227639001, 60227639002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Manganese, Dissolved	mg/L	ND	0.0050	09/20/16 15:19	

LABORATORY CONTROL SAMPLE: 1826573

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Manganese, Dissolved	mg/L	1	1.0	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1826574 1826575

Parameter	Units	60227639001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Manganese, Dissolved	mg/L	0.23	1	1	1.2	1.2	100	99	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: 074929 COP Faye Burdette No. 1
Pace Project No.: 60227639

QC Batch: 447878
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60227639001

METHOD BLANK: 1832503 Matrix: Water
Associated Lab Samples: 60227639001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	09/26/16 18:09	

LABORATORY CONTROL SAMPLE: 1832504

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	5.4	107	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1832505 1832506

Parameter	Units	60227856001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	10.4	5	5	15.3	15.2	97	95	80-120	1	15	

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: 074929 COP Faye Burdette No. 1
Pace Project No.: 60227639

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.

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(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 074929 COP Faye Burdette No. 1
Pace Project No.: 60227639

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60227639001	**GW-074929-091316-CM-MW-1**	EPA 3010	446683	EPA 6010	446740
60227639002	**GW-074929-091316-CM-DUP**	EPA 3010	446683	EPA 6010	446740
60227639001	**GW-074929-091316-CM-MW-1**	EPA 300.0	447878		

Pace Analytical
www.pacelabs.com

Sample Condition Upon Receipt
ESI Tech Spec Client

WO# : 60227639

60227639

Client Name: GHD COP NM

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

Tracking #: 7044 6652 8039 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** 0.0 **Corr. Factor** CF +1.1 CF -0.1 **Corrected** 1.1

Date and initials of person examining contents: JB 9/14

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? (HNO3, H2SO4, 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: 09/15/16

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

Start: 1325	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.

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		Angela Bown		Address:	
Email:	christine.mathews@ghd.com	Purchase Order #:	34005855	Pace Quote:	
Phone:	505-884-0672 Fax:	Project Name:	074929 COP Faye Burdette No 1	Pace Project Manager:	alice.spiller@pacelabs.com
Requested Due Date:		Project #:		Pace Profile #:	8644 , 16

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

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	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Sulfate by 300.0	Dissolved Mn - field filtered	Residual Chlorine (Y/N)	0022-7639
1	GW-074929-091316-CM-MW-1	WT	G			9/13/16	1250		2	1		1						X	X	X		BP3u BP3F 001
2	GW-074929-091316-CM-DUP	WT	G			9/13/16	—		1			1						(NO)	X	X		002
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Metals for duplicate	Christine Mathews/GHD	9/13/16	1430		9/14	0830	1.1	Y	X	Y
Field Filtered										

SAMPLER NAME AND SIGNATURE				
PRINT Name of SAMPLER:	Christine Mathews			
SIGNATURE of SAMPLER:	Christine Mathews	DATE Signed:	9/13/16	

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