3R – 0428

2015 AGWMR

01 / 04 / 2016

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ConocoPhillips

Mr. Glenn von Gonten
New Mexico Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

January 4, 2016

Re: NMOCD Case No. 3R-428, 2015 Annual Groundwater Monitoring Report

Dear Mr. von Gonten:

Enclosed is the 2015 Annual Groundwater Monitoring Report for the Sategna No. 2E site. This report, prepared by GHD Services Inc., contains the results of groundwater monitoring and monitoring well installation conducted during September 2015 at the referenced site.

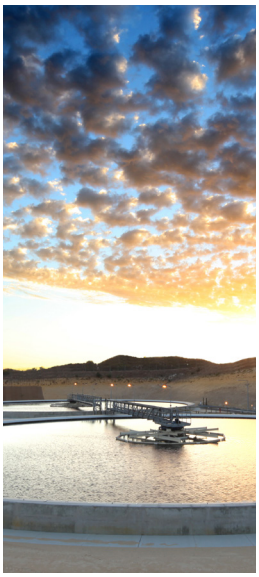
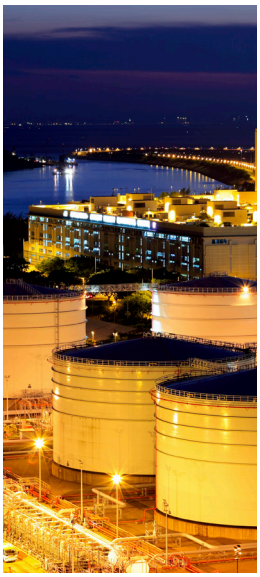
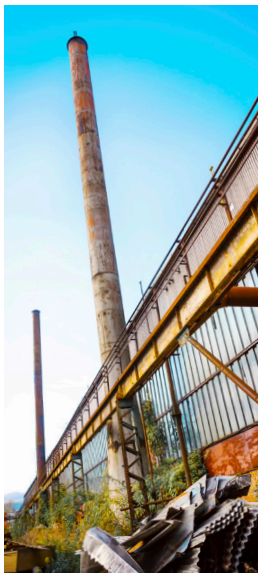
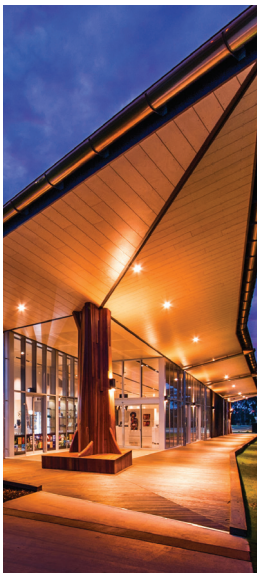
Please let me know if you have any questions.

Sincerely,

B. K. Coffman

B. Keith Coffman

Enc


2015 Annual Groundwater Monitoring Report

ConocoPhillips Sategna No. 2E
San Juan County, New Mexico
API# 30-045-24060
NMOCD# 3R-428

ConocoPhillips Risk Management & Remediation

6121 Indian School Road, NE Suite 200 Albuquerque New Mexico 87110
074932 | Report No 007 | January 04 2016

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1. Introduction

1.1 Introduction

This *2015 Annual Groundwater Monitoring Report* presents the results of groundwater monitoring conducted by GHD Services, Inc. (GHD) at the ConocoPhillips Company (ConocoPhillips) Sategna Number 2E natural gas production well site (Site). The Site is situated on privately owned land within Unit Letter J, Section 21, Township 29N, Range 11W of San Juan County, New Mexico (Figure 1). The Site consists of a natural gas production well and associated equipment. General features of the Site are depicted on Figure 2.

1.2 Background

On November 24, 2008, approximately 8 barrels of condensate were released from the on-Site, aboveground storage tank. Notification of the release was given to the New Mexico Oil Conservation Division (NMOCD) by ConocoPhillips personnel using NMOCD Form C-141. On November 25, 2008, Envirotech Inc. of Farmington, New Mexico (Envirotech) obtained grab soil samples from just outside the affected area for analysis of petroleum hydrocarbons. Results of this analysis were below NMOCD recommended action levels. Envirotech also used a hand auger to complete 2 soil borings to approximately 8 feet below ground surface (bgs), where groundwater was encountered. Two groundwater samples were submitted by Envirotech to an analytical laboratory for analysis of benzene, toluene, ethylbenzene and xylenes (BTEX). Analytical results revealed BTEX in concentrations below NMOCD action levels.

On December 4, 2008, Envirotech returned to the Site and obtained grab and composite soil samples from an excavation measuring approximately 30 feet by 18 feet by 5 feet deep (Figure 2). Soil samples were collected from the excavation and analyzed for BTEX, total petroleum hydrocarbons (TPH) and chloride. Analytical results were below NMOCD action levels for BTEX. Two grab soil samples collected from below the above-grade and below-grade tanks exceeded the NMOCD action level for total TPH.

Groundwater samples were collected from seepage into the excavation on December 5, 2008. The groundwater sample exceeded the New Mexico Water Quality Control Commission (NMWQCC) for benzene, toluene, and xylenes. Groundwater was recovered from the bottom of the excavated area using a vacuum truck during the week of December 8, 2008. Once removed, further excavation took place and groundwater slowly seeped into the excavation. This process was repeated a total of 4 times.

The first time water was recovered from the surface of the excavation, a hydrocarbon odor and free-phase, light non-aqueous phase liquid (LNAPL) were present. By the fourth and last event, neither the hydrocarbon odor nor free-phase LNAPL was present in the groundwater seepage. Each pumping event recovered approximately 30-60 barrels of liquid from the Site.

Groundwater monitoring wells MW-1, MW-2 and MW-3 were installed by TetraTech at the Site in March 2009. A geologic cross-section is presented in Figure 3. Quarterly groundwater monitoring was initiated in April 2009.

Additional hydrocarbon soil impacts were discovered during relocation and reinstallation of gas well equipment in April 2009. Envirotech uncovered an abandoned sewer line in the same location as

hydrocarbon impacted soils while digging an exploratory trench between the wellhead and the proposed separator tank location (Figure 2). Trench work was halted and the excavated soils were stockpiled on site. Tetra Tech returned to the site on April 23 and 24, 2009 to oversee excavation of the hydrocarbon impacted soils from the vicinity of the trench (Figure 2). Photoionization detector readings in the field indicated levels below the NMOCD action level; however, lab results were above the NMOCD action level for TPH in samples collected from all four walls of the excavation. The bottom sample results were below NMOCD action levels. The excavation was backfilled and equipment was reinstalled before analytical results were available. A Tetra Tech report detailing this activity, titled *Soil Excavation and Sampling Report*, was submitted to the NMOCD in July 2009.

Tetra Tech continued quarterly groundwater monitoring from April 2, 2009 to March 2011. The March 2011 Tetra Tech quarterly groundwater monitoring report recommended the discontinuation of sampling and analysis of BTEX for all Site monitoring wells.

On June 15, 2011, Site consulting responsibilities were transferred from Tetra Tech to GHD (Formerly CRA) of Albuquerque, NM. Quarterly groundwater monitoring was conducted by GHD in June and October 2011. Quarterly groundwater monitoring was discontinued and annual monitoring for dissolved manganese, sulfate, and total dissolved solids (TDS) was initiated. In addition, an up-gradient monitoring well was installed at the Site on the existing pad in October 2014, and incorporated into the annual groundwater sampling activities.

Site history is summarized in Table 1.

2. Groundwater Monitoring Summary, Methodology and Analytical Results

2.1 Groundwater Monitoring Summary

Groundwater elevation measurements were recorded from Site monitor wells using an oil/water interface probe on September 21, 2015. Groundwater elevations for the Site are presented in Table 2.

September 2015 groundwater data indicates groundwater flow is towards the southwest, consistent with historical records. The groundwater gradient was estimated to be 0.0015 foot per foot (ft/ft). A groundwater potentiometric surface map is presented as Figure 4.

2.2 Groundwater Monitoring Methodology

Monitoring wells MW-1, MW-2, MW-3 and MW-4 were purged of at least three casing volumes of water using a dedicated polyethylene disposable bailer prior to sampling. Groundwater quality parameters including pH, temperature, oxidation reduction potential, total dissolved solids, and conductivity were collected using a calibrated YSI-556 Multi-Parameter Sonde and were recorded on GHD groundwater sampling field forms. Field parameters collected during sampling are included in Table 3.

Groundwater samples were placed in laboratory prepared bottles, packed on ice and shipped under chain-of-custody documentation to Pace Analytical Laboratories (Pace) located in Lenexa, Kansas. Groundwater samples were analyzed for dissolved manganese by EPA Method 6010B, sulfate by EPA method 300.0, and total dissolved solids (TDS) by Standard Method 2540C.

2.3 Groundwater Monitoring Analytical Results

The NMWQCC groundwater quality standard for dissolved manganese is 0.2 milligrams per liter (mg/L) with concentrations for Site wells ranging from 0.099 mg/L, in down-gradient well MW-2 to 0.55 mg/L in up-gradient well MW-4. All Site wells were above the NMWQCC standard for sulfate and TDS of 600 mg/L. Concentrations of sulfate were above the NMWQCC standard for TDS of 1000 mg/L and concentrations ranged from 1210 mg/L (MW-4) to 1680 mg/L (MW-3). The concentrations of TDS in Site wells ranged from 2040 mg/L (MW-4) to 2670 mg/L (MW-3).

A summary of groundwater laboratory analytical results is presented in Table 4. A groundwater concentration map is included as Figure 5. The September 2015 laboratory analytical report is included as Appendix A.

3. Conclusions and Recommendations

3.1 Conclusions

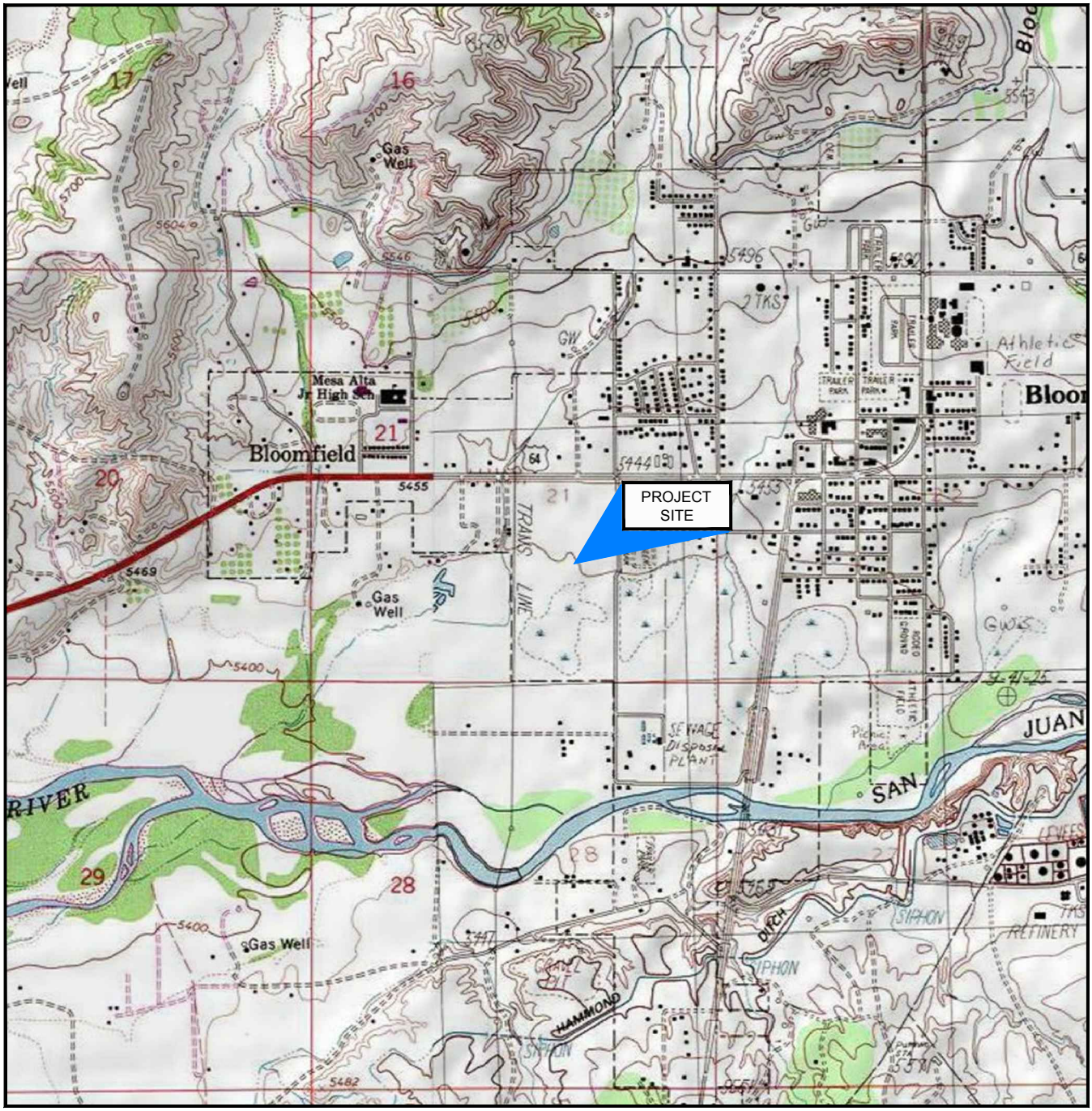
Based on the above referenced information, the following conclusions are presented below:

- Groundwater flow is towards the southwest and is consistent with historical records.
- Concentrations of dissolved manganese, sulfate and TDS have remained consistent since sampling began.
- Dissolved manganese, sulfate and TDS concentrations were also detected above the NMWQCC standard in the up-gradient monitoring well MW-4. Data review of historical documents suggests that the groundwater gradient has been primarily in the south southwest direction since monitoring began in 2009 and that MW-4 is located hydraulically up-gradient of the known impact areas. This suggests that elevated contaminant concentrations in Site wells are consistent with background groundwater quality conditions for the area.

3.2 Recommendations

There is no evidence to indicate that the dissolved manganese, sulfate or TDS concentrations have resulted from the historical release. Therefore, on behalf of ConocoPhillips, GHD recommends Site closure and that No Further Action status be granted for the Site.

Figures



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

N

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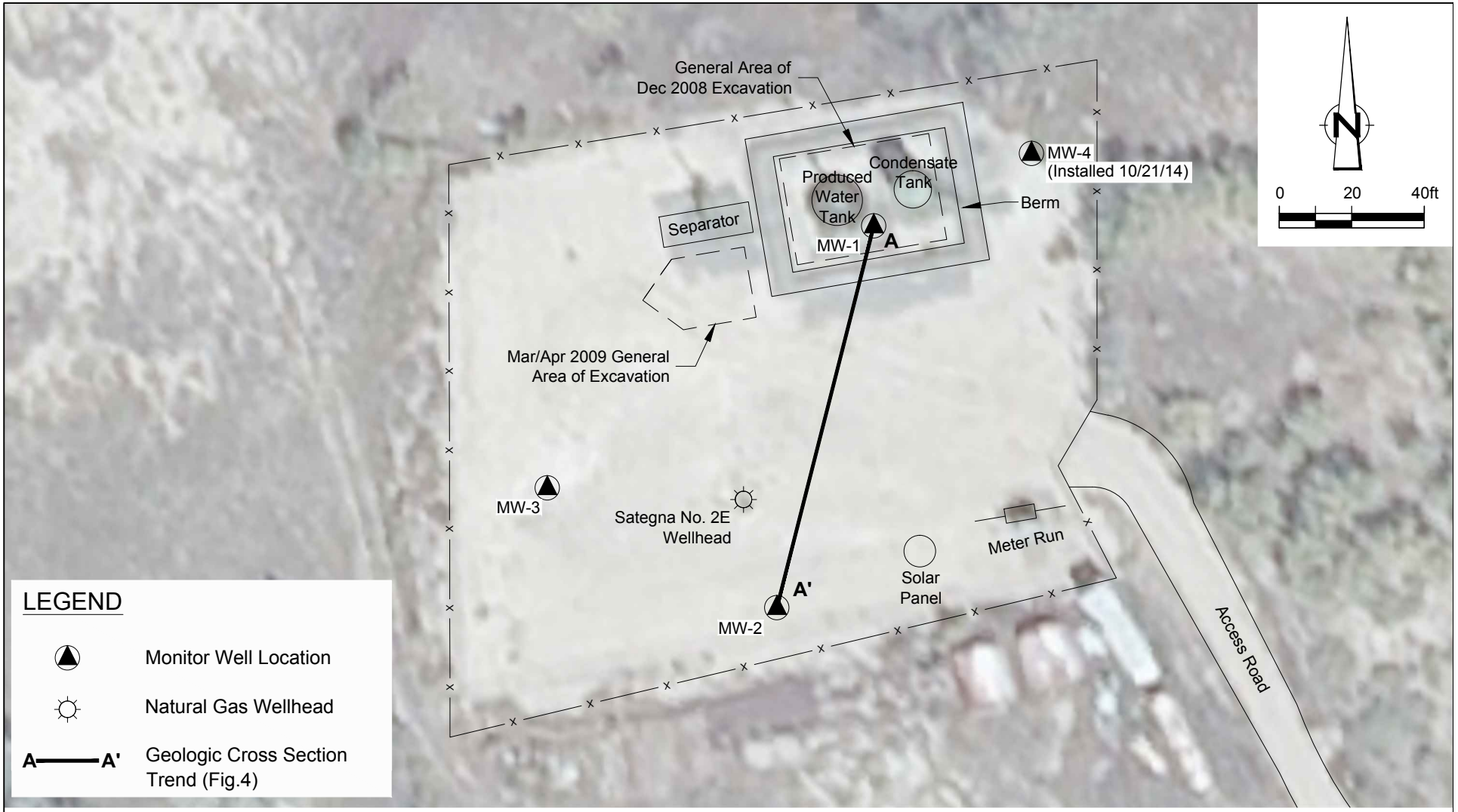
Figure 1

SITE VICINITY MAP
SATEGNA No. 2E NATURAL GAS WELL SITE
SECTION 21, T29N-R11W, BLOOMFIELD, NEW MEXICO
ConocoPhillips Company

GHD

074932-95(007)GN-DL005 OCT 30/2015



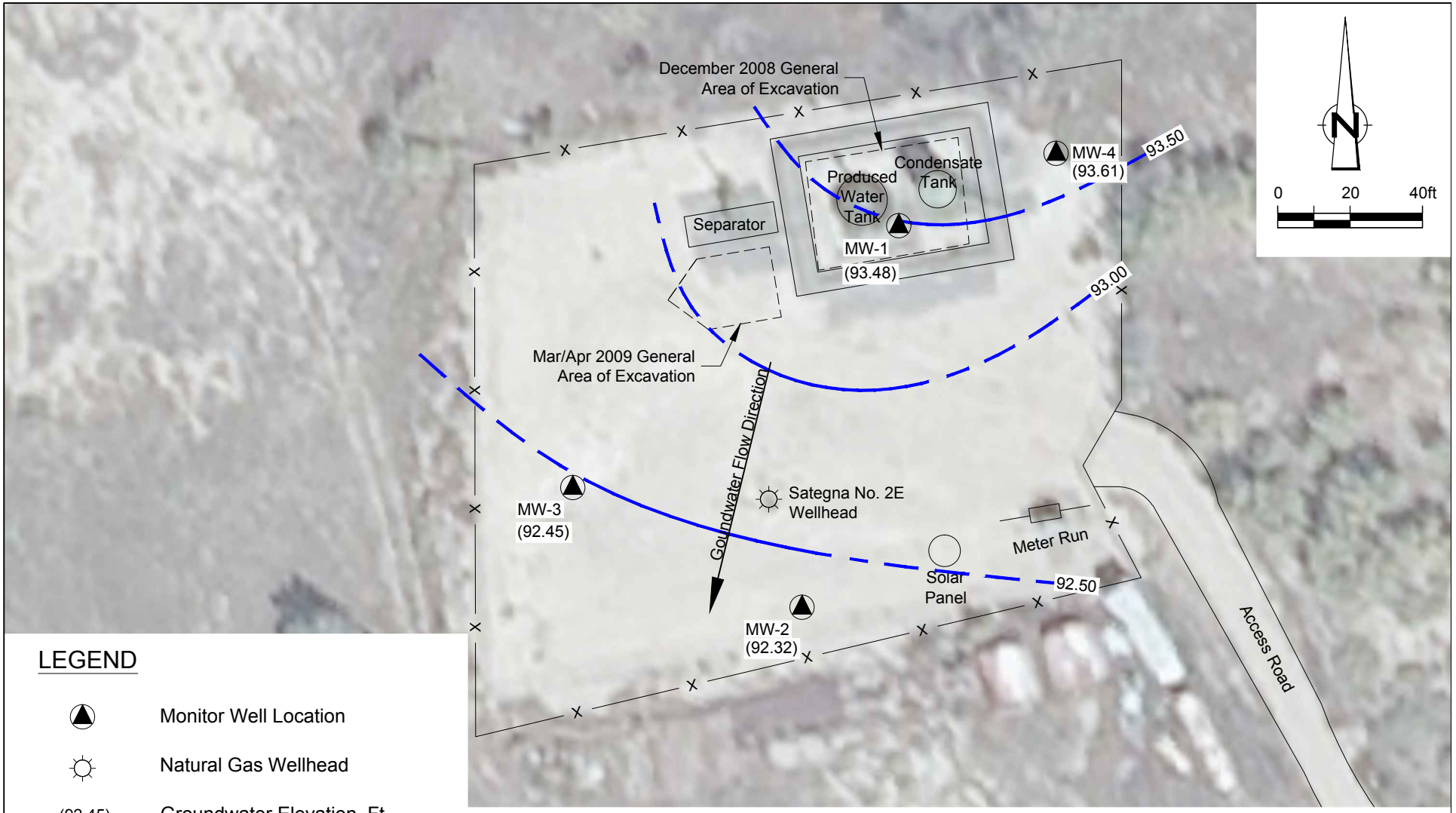
ConocoPhillips high resolution aerial imagery 2008.

Figure 2

SITE PLAN
SATEGNA No. 2E NATURAL GAS WELL SITE
SECTION 21, T29N-R11W, BLOOMFIELD, NEW MEXICO
ConocoPhillips Company

GHD

074932-95(007)GN-DL001 DEC 15/2015



LEGEND

- Monitor Well Location
- Natural Gas Wellhead
- (92.45) Groundwater Elevation, Ft
- 92.50 Groundwater Elevation Contour, Ft
- Groundwater Flow Direction

Figure 3

SEPTEMBER 2015 GROUNDWATER POTENTIOMETRIC SURFACE MAP
SATEGNA No. 2E NATURAL GAS WELL SITE
SECTION 21, T29N-R11W, BLOOMFIELD, NEW MEXICO
ConocoPhillips Company

GHD

074932-95(007)GN-DL002 OCT 30/2015

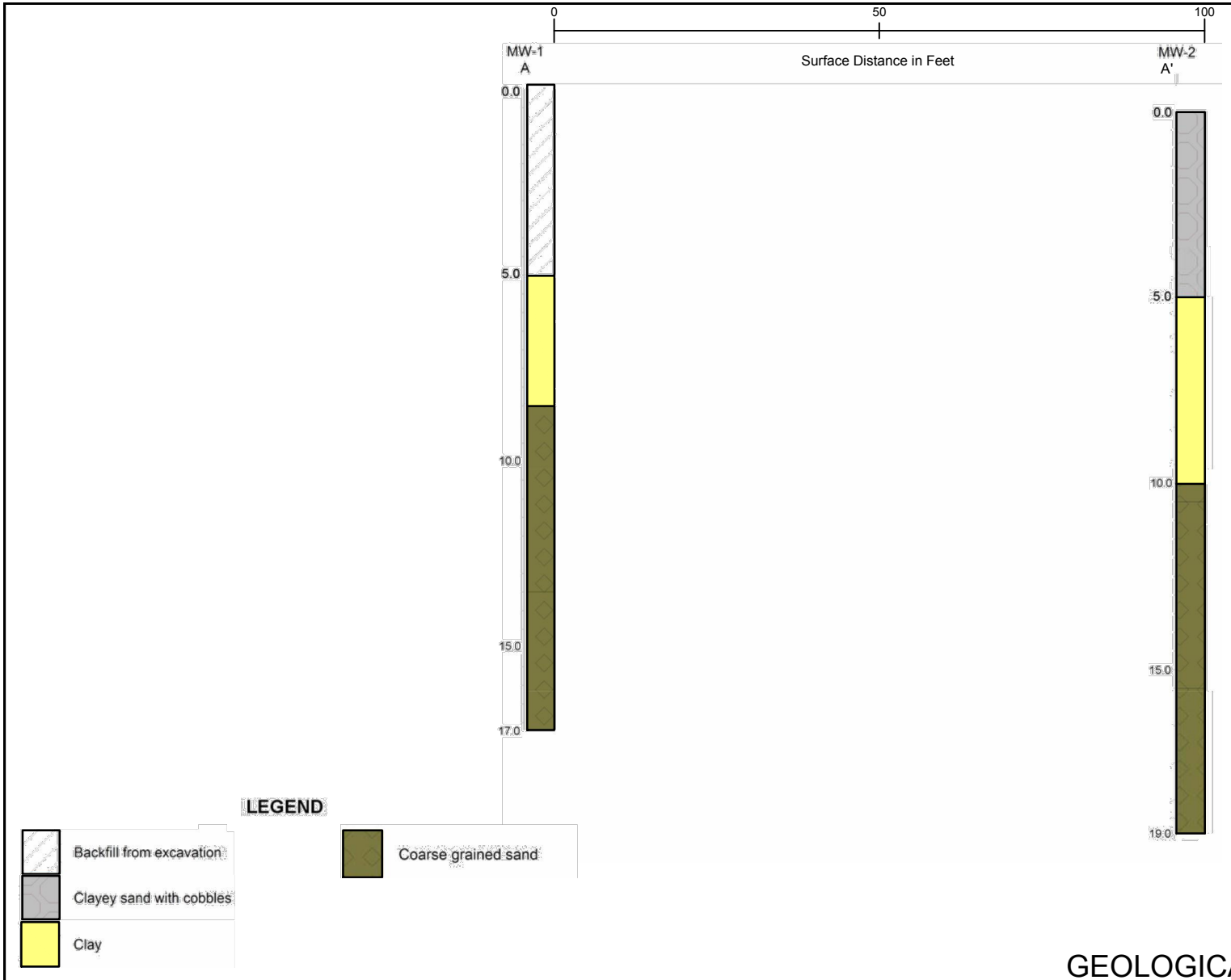
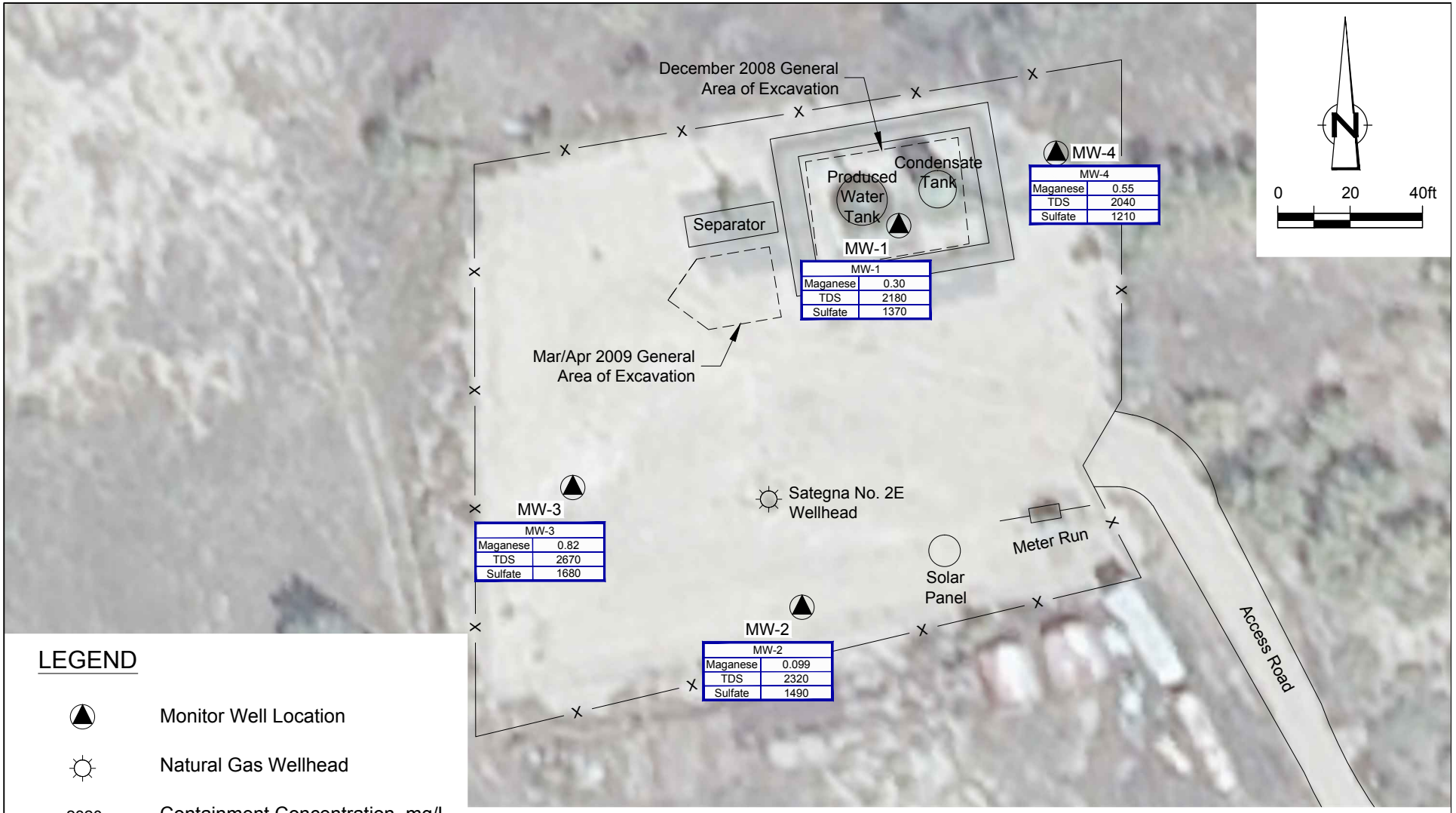


Figure 4

GEOLOGICAL CROSS SECTION
SATEGNA No. 2E NATURAL GAS WELL SITE
SECTION 21, T29N-R11W, BLOOMFIELD, NEW MEXICO
ConocoPhillips Company



LEGEND

- Monitor Well Location
- Natural Gas Wellhead
- 2320 Containment Concentration, mg/L

Figure 5

SEPTEMBER 2015 GROUNDWATER CONCENTRATION MAP
SATEGNA No. 2E NATURAL GAS WELL SITE
SECTION 21, T29N-R11W, BLOOMFIELD, NEW MEXICO
ConocoPhillips Company

GHD

Tables

Table 1

Site History Timeline
ConocoPhillips Company
Sategna No. 2E
San Juan County, New Mexico

Date/Time Period	*Event/Action*	*Description/Comments*
November 24, 2008	Release Discovered	Approximately eight barrels of condensate were found to have spilled from an on-Site, aboveground storage tank (AST); corrosion was thought to be the cause of the release. A C-141 form was filled out by ConocoPhillips staff and notice was given to Brandon Powell of the New Mexico Oil Conservation Division (NMOCD) via electronic mail. The C-141 form stated that the well was shut down and the production tank was emptied.
November 25, 2008	Initial Site Assessment	Envirotech Inc. of Farmington, NM (Envirotech) collected soil samples and analyzed them using the heated headspace soil method; results were 0.2 and 1.1 parts per million (ppm) from outside the excavated area. Depth of soil samples was not noted. Envirotech hand augered two soil borings to groundwater at a depth of approximately 8 feet below ground surface (bgs) and submitted groundwater samples for analysis. Results were below OCD action levels for benzene, toluene, ethylbenzene, and total xylenes (BTEX) in groundwater. Envirotech noted that groundwater levels in the soil borings increased to approximately 5 feet bgs, and groundwater beneath the Site was thought to be under confined aquifer conditions.
December 4, 2008	Site Assessment	Envirotech returned to the Site and obtained grab and composite soil samples from an excavation measuring approximately 30 feet by 18 feet by 5 feet deep (Figure 2). Heated headspace results show values ranging from 6.5 ppm in a grab soil sample obtained from the bottom of the excavation to 1,400 ppm from a composite soil sample taken from the former location of the AST. Total petroleum hydrocarbons (TPH), BTEX, and chloride samples were obtained for soils analysis. Results were below OCD action levels for BTEX. One soil sample obtained for chlorides showed results of 370 milligrams per kilogram (mg/kg). Results for TPH analysis obtained through Environmental Protection Agency (EPA) method 8015B for the composite soil sample taken at the site of the AST revealed results of 205 mg/kg; the OCD action level is 100 mg/kg. Results for TPH analysis obtained through EPA method 418.1 for the composite soil sample obtained at the location of the below ground tank revealed results of 521 mg/kg. The below ground tank was located within the berm and adjacent to the AST (Figure 2).
		Results of all other soil analyses at all other sampling locations were below OCD action levels.
December 5, 2008	Site Assessment	Envirotech noted seepage of groundwater into the excavation on December 4, 2008, and returned to the Site on December 5, 2008 to collect groundwater samples from the excavation for BTEX analysis. The OCD groundwater action levels for benzene, toluene, and total xylenes are 10 ug/l, 750 ug/l, and 620 ug/l, respectively. Benzene was found at a concentration of 327 ug/l, toluene was detected at 4,300 ug/l, and total xylenes were found at a concentration of 8,480 ug/L.
Week of December 8, 2008	Removal of Groundwater Seepage	A vacuum truck was utilized to pump groundwater seepage from the surface of the excavated area. Once removed, further excavation took place and groundwater slowly seeped into the excavation; this process was repeated a total of four (4) times. The first time water was pumped from the surface of the excavation, a hydrocarbon odor and free-phase, light non-aqueous phase liquid (LNAPL) were present. By the fourth and last event, neither the hydrocarbon odor nor free-phase LNAPL were present in the groundwater seepage. Each pumping event removed approximately 30-60 barrels of liquid from the Site.
January 20, 2009 & January 30, 2009	Site Assessment	Tetra Tech conducted a Site visit to determine proposed groundwater monitoring well locations.
March 4-5, 2009	Monitoring Well Installation	Tetra Tech installed three groundwater monitoring wells at the Site: MW-1, MW-2, and MW-3.
March 2009	Additional Contamination Discovered	Construction and trenching for relocation of well operational equipment and tanks uncovered additional hydrocarbon impacted soils between the well head and separator tank. Work was stopped.
April 2, 2009	Quarterly Groundwater Monitoring Initiated	Tetra Tech conducted the first quarterly groundwater monitoring event at the Site.
April 2, 2009	Site Assessment	Envirotech created an exploratory trench between the proposed location of the separator tank and the well head and found an abandoned sewer line associated with hydrocarbon-impacted soils. The trenching was stopped and the excavated soils were stockpiled on site.
April 23 - 24, 2009	Removal of Contaminated Soil	Tetra Tech provided oversight for removal of approximately 96 cubic yards of hydrocarbon-impacted soils located west of the tank berm and in the vicinity of the abandoned sewer line. Excavation was backfilled.
June 17, 2009	Quarterly Groundwater Monitoring	Tetra Tech conducted the second quarterly groundwater monitoring event at the Site.
September 28, 2009	Quarterly Groundwater Monitoring	Tetra Tech conducted the third quarterly groundwater monitoring event at the Site.
December 14, 2009	Quarterly Groundwater Monitoring	Tetra Tech conducted the fourth quarterly groundwater monitoring event at the Site.
March 31, 2010	Quarterly Groundwater Monitoring	Tetra Tech conducted the fifth quarterly groundwater monitoring event at the Site.

Table 1

Site History Timeline
ConocoPhillips Company
Sategna No. 2E
San Juan County, New Mexico

Date/Time Period	*Event/Action*	*Description/Comments*
June 7, 2010	Quarterly Groundwater Monitoring	Tetra Tech conducted the sixth quarterly groundwater monitoring event at the Site.
September 23, 2010	Quarterly Groundwater Monitoring	Tetra Tech conducted the seventh quarterly groundwater monitoring event at the Site.
December 14, 2010	Quarterly Groundwater Monitoring	Tetra Tech conducted the eighth quarterly groundwater monitoring event at the Site.
March 14, 2011	Quarterly Groundwater Monitoring	Tetra Tech conducted the ninth quarterly groundwater monitoring event at the Site.
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 24, 2011	Quarterly Groundwater Monitoring	CRA conducted the tenth quarterly groundwater monitoring event at the Site.
October 3, 2011	Quarterly Groundwater Monitoring	CRA conducted the 11th quarterly groundwater monitoring event at the Site.
September 17, 2012	Groundwater Monitoring	CRA conducted an annual groundwater monitoring event at the Site. Samples analyzed for dissolved Mn, sulfate, and total dissolved solids.
September 16, 2013	Groundwater Monitoring	CRA conducted an annual groundwater monitoring event at the Site. Samples analyzed for dissolved Mn, sulfate, and total dissolved solids.
September 22, 2014	Groundwater Monitoring	CRA conducted an annual groundwater monitoring event at the Site. Samples analyzed for dissolved Mn, sulfate, and total dissolved solids.
October 21, 2014	Monitoring Well Installation	CRA installed an up-gradient monitoring well MW-4.
December 17, 2014	Groundwater Monitoring	CRA conducted initial groundwater monitoring of the up-gradient monitoring well MW-4. The sample was analyzed for dissolved Mn, sulfate, and total dissolved solids.
September 21, 2015	Groundwater Monitoring	GHD (formerly CRA) conducted an annual groundwater monitoring event at the Site. Samples analyzed for dissolved Mn, sulfate, and total dissolved solids.

Table 2

Monitoring Well Specifications and Groundwater Elevations
ConocoPhillips Company
Sategna No. 2E
San Juan County, New Mexico

Well ID	*Total Depth (ft below TOC)*	*Elevation**	*Screen Interval (bgs)*	*Date Measured*	*Depth to Groundwater (ft below TOC)*	*Relative Water Level*
MW-1	20.3	99.36	2.2 - 17.2	4/2/2009	5.15	94.21
				6/17/2009	5.43	93.93
				9/28/2009	5.45	93.91
				12/14/2009	5.06	94.30
				3/31/2010	5.03	94.33
				6/7/2010	5.41	93.95
				9/23/2010	5.25	94.11
				12/14/2010	5.07	94.29
				3/14/2011	5.09	94.27
				6/24/2011	5.56	93.80
				10/3/2011	5.90	93.46
				9/17/2012	6.83**	92.53**
				11/26/2012	5.51	93.85
				9/16/2013	5.73	93.63
				9/22/2014	6.03	93.33
				9/21/2015	5.88	93.48
MW-2	20.9	98.78	3.33 - 18.33	4/2/2009	5.96	92.82
				6/17/2009	6.21	92.57
				9/28/2009	6.23	92.55
				12/14/2009	5.92	92.86
				3/31/2010	5.90	92.88
				6/7/2010	6.21	92.57
				9/23/2010	6.06	92.72
				12/14/2010	5.91	92.87
				3/14/2011	5.94	92.84
				6/24/2011	6.32	92.46
				10/3/2011	6.60	92.18
				9/17/2012	7.42**	91.36**
				11/26/2012	6.14	92.64
				9/16/2013	6.31	92.47
				9/22/2014	6.62	92.16
				9/21/2015	6.46	92.32
MW-3	20.28	98.66	3 - 18	4/2/2009	5.70	92.96
				6/17/2009	5.97	92.69
				9/28/2009	5.96	92.70
				12/14/2009	5.63	93.03
				3/31/2010	5.61	93.05
				6/7/2010	5.95	92.71
				9/23/2010	5.77	92.89
				12/14/2010	5.61	93.05
				3/14/2011	5.63	93.03
				6/24/2011	6.06	92.60
				10/3/2011	6.27	92.39
				9/17/2012	6.11**	92.55**
				11/26/2012	6.00	92.66
				9/16/2013	6.05	92.61
				9/22/2014	6.38	92.28
				9/21/2015	6.21	92.45
MW-4	20.57	98.37	2.5-17.5	12/17/2014	4.37	94.00
				9/21/2015	4.76	93.61

Notes:
1. ft = feet
2. TOC = top of casing
3. bgs = below ground surface
4. * Elevation relative to wellhead, set at 100 feet.
5. ** Anomalous data

Table 3

Field Parameters Summary
ConocoPhillips Company
Sategne No. 2E
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	9/22/2014	15.20	7.09	2.00	3050	8.97	92.0	5.75
	9/22/2014	15.30	7.09	1.30	3040	8.33	92.0	6.25
	9/22/2014	15.40	7.09	1.90	3040	8.68	94.0	6.75
	9/21/2015	14.79	7.55	0.83	1368	14.64	59.7	6.25
	9/21/2015	14.60	7.28	1.77	2715	6.82	60.9	6.75
	9/21/2015	14.50	7.16	1.77	2715	4.26	60.8	7.25
MW-2	9/22/2014	17.40	7.13	2.10	3230	10.56	85.0	6.50
	9/22/2014	16.90	6.99	2.00	3160	8.31	80.0	7.00
	9/22/2014	16.70	6.97	2.00	3160	7.85	77.0	7.50
	9/21/2015	15.47	7.01	1.90	2921	4.05	83.7	6.00
	9/21/2015	15.30	6.93	1.89	2913	1.89	76.4	6.50
	9/21/2015	15.21	6.90	1.89	2907	1.53	73.1	7.00
MW-3	9/22/2014	17.80	7.34	0.01	7	9.79	-15.0	4.50
	9/22/2014	16.50	7.08	2.20	3440	9.91	-20.0	5.00
	9/22/2014	15.90	7.03	2.20	3470	9.68	-23.0	5.25
	9/22/2014	15.70	7.01	2.30	3540	9.31	-27.0	5.50
	9/21/2015	14.30	6.99	2.08	3202	3.33	28.7	5.25
	9/21/2015	14.49	6.94	2.07	3188	1.85	13.2	5.50
	9/21/2015	15.59	6.90	2.10	3229	1.44	3.4	5.75
MW-4	12/17/2014	12.40	5.43	1.40	2180	10.47	253.0	7.00
	12/17/2014	12.70	5.54	1.40	2190	10.51	252.0	7.50
	12/17/2014	13.10	5.64	1.40	2210	8.02	242.0	8.00
	9/21/2015	13.52	7.05	1.62	2493	1.80	32.4	6.50
	9/21/2015	13.52	7.01	1.62	2499	1.49	34.1	7.00
	9/21/2015	13.40	6.99	1.62	2499	1.26	33.8	7.50

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

Table 4

Groundwater Analytical Results Summary
ConocoPhillips Company
Sategna No. 2E
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)	Sulfate (mg/L)	dissolved solids (TDS) (mg/L)
NMWQCC Groundwater Quality Standards				**0.01**	**0.75**	**0.75**	**0.62**	**1.0**	**0.2**	**600**	**1000**
MW-1	MW-1	4/2/2009	(orig)	< 0.005	< 0.005	< 0.005	< 0.005	--	--	**1790**	--
	MW-1	6/17/2009	(orig)	< 0.005	< 0.005	< 0.005	< 0.005	--	--	**1420**	--
	MW-1	9/28/2009	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	< 0.02	**0.243**	**1770**	**2590**
	MW-1	12/14/2009	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	0.152	--	**2470**
	MW-1	3/31/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	0.176	**1320**	**2470**
	MW-1	6/7/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	**0.206**	**1330**	**2580**
	MW-1	9/23/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	**0.238**	**1560**	**3210**
	MW-1	12/14/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	**0.232**	**1600**	**2520**
	MW-1	3/14/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	**0.323**	**1820**	**2770**
	GW-74932-062411-CB-02	6/24/2011	(orig)	--	--	--	--	--	**0.574**	**1790**	**2450**
	GW-074932-100311-CM-005	10/3/2011	(orig)	--	--	--	--	--	**0.335**	**2030**	**2560**
	GW-074932-091712-CM-MW-1	9/17/2012	(orig)	--	--	--	--	--	**0.32**	**1790**	**2660**
	GW-074932-091712-CM-DUP	9/17/2012	(duplicate)	--	--	--	--	--		**--**	**2620**
	GW-074932-091613-CM-MW-1	9/16/2013	(orig)	--	--	--	--	--	**0.36**	**1580**	**2560**
	GW-074932-091613-CM-DUP	9/16/2013	(duplicate)	--	--	--	--	--	**0.33**	--	--
	GW-074932-092214-CB-MW-1	9/22/2014	(orig)	--	--	--	--	--	**0.42**	**1440**	**2650**
	GW-074932-092115-CB-MW-1	9/21/2015	(orig)	--	--	--	--	--	**0.30**	**1370**	**2180**
	GW-074932-092115-CB-DUP	9/21/2015	(duplicate)	--	--	--	--	--	**0.31**	--	--
MW-2	MW-2	4/2/2009	(orig)	< 0.005	< 0.005	< 0.005	< 0.005	--	--	**1850**	--
	MW-2	6/17/2009	(orig)	< 0.005	< 0.005	< 0.005	< 0.005	--	--	**1610**	--
	MW-2	9/28/2009	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	0.0217	0.168	**1840**	**2260**
	MW-2	12/14/2009	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	0.158	--	**2470**
	MW-2	3/31/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	0.136	**1530**	**2620**
	MW-2	6/7/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	0.157	**1290**	**2590**
	MW-2	9/23/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	0.0981	**1510**	**2800**
	MW-2	12/14/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	0.128	**1610**	**3000**
	MW-2	3/14/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	0.158	**1850**	**2680**
	GW-74932-062411-1B-01	6/24/2011	(orig)	--	--	--	--	--	0.174	**1860**	**2550**
	GW-074932-100311-CM-006	10/3/2011	(orig)	--	--	--	--	--	0.187	**1830**	**2590**
	GW-074932-091712-CM-MW-2	9/17/2012	(orig)	--	--	--	--	--	**0.22**	**1830**	**2710**
	GW-074932-091613-CM-MW-2	9/16/2013	(orig)	--	--	--	--	--	**0.21**	**1690**	**2570**
	GW-074932-092214-CB-MW-2	9/22/2014	(orig)	--	--	--	--	--	0.18	**1550**	**2630**
	GW-074932-092115-CB-MW-2	9/21/2015	(orig)	--	--	--	--	--	0.099	**1490**	**2320**
MW-3	MW-3	4/2/2009	(orig)	< 0.005	< 0.005	< 0.005	< 0.005	--	--	**2110**	--
	MW-3	6/17/2009	(orig)	< 0.005	< 0.005	< 0.005	< 0.005	--	--	**1650**	--
	MW-3	9/28/2009	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	< 0.02	**2.68**	**2230**	**3340**
	MW-3	12/14/2009	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	**2.4**	--	**3060**
	MW-3	3/31/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	**1.71**	**1660**	**3090**
	MW-3	6/7/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	**0.968**	**1760**	**2650**
	MW-3	9/23/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	**1.68**	**1910**	**3570**
	MW-3	12/14/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	**1.13**	**1900**	**3000**
	MW-3	3/14/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	--	**2.08**	**2090**	**3200**
	GW-74932-062411-CB-03	6/24/2011	(orig)	--	--	--	--	--	**1.7**	**2080**	**2860**
	GW-074932-100311-CM-007	10/3/2011	(orig)	--	--	--	--	--	**1.45**	**1770**	**2810**
	GW-074932-091712-CM-MW-3	9/17/2012	(orig)	--	--	--	--	--	**1.1**	**1910**	**2830**
	GW-074932-091613-CM-MW-3	9/16/2013	(orig)	--	--	--	--	--	**0.83**	**1750**	**2600**
	GW-074932-092214-CB-MW-3	9/22/2014	(orig)	--	--	--	--	--	**0.87**	**1670**	**2830**
	GW-074932-092115-CB-MW-3	9/21/2015	(orig)	--	--	--	--	--	**0.83**	**1680**	**2670**
MW-4	GW-074932-121714-JW-MW-4	12/17/2014	(orig)	--	--	--	--	--	**1.5**	**1140**	**1520**
	GW-074932-092115-CB-MW-4	9/21/2015	(orig)	--	--	--	--	--	**0.55**	**1210**	**2040**

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. -- = not analyzed
6. < 1.0 = Below laboratory detection limit of 1.0 mg/L

Appendices

Appendix A
2015 Annual Groundwater Laboratory Analytical Report

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

October 06, 2015

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

RE: Project: 074932 SATEGNA NO 2E
Pace Project No.: 60203550

Dear Jeffrey Walker:
Enclosed are the analytical results for sample(s) received by the laboratory on September 24, 2015. 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,
Christine Mathews, GHD Services, Inc.

Pace Analytical Services, Inc.
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CERTIFICATIONS

Project: 074932 SATEGNA NO 2E
Pace Project No.: 60203550

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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SAMPLE SUMMARY

Project: 074932 SATEGNA NO 2E
Pace Project No.: 60203550

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60203550001	**GW 074932 092115 CB MW-1**	Water	09/21/15 16:45	09/24/15 08:40
60203550002	**GW 074932 092115 CB MW-2**	Water	09/21/15 17:05	09/24/15 08:40
60203550003	**GW 074932 092115 CB MW-3**	Water	09/21/15 17:10	09/24/15 08:40
60203550004	**GW 074932 092115 CB MW-4**	Water	09/21/15 17:20	09/24/15 08:40
60203550005	**GW 074932 092115 CB DUP**	Water	09/21/15 08:00	09/24/15 08:40

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SAMPLE ANALYTE COUNT

Project: 074932 SATEGNA NO 2E
Pace Project No.: 60203550

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60203550001	**GW 074932 092115 CB MW-1**	EPA 6010	JGP	1
		SM 2540C	CRS	1
		EPA 300.0	AJM	1
60203550002	**GW 074932 092115 CB MW-2**	EPA 6010	JGP	1
		SM 2540C	CRS	1
		EPA 300.0	AJM	1
60203550003	**GW 074932 092115 CB MW-3**	EPA 6010	JGP	1
		SM 2540C	CRS	1
		EPA 300.0	AJM	1
60203550004	**GW 074932 092115 CB MW-4**	EPA 6010	JGP	1
		SM 2540C	CRS	1
		EPA 300.0	AJM	1
60203550005	**GW 074932 092115 CB DUP**	EPA 6010	JGP	1

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PROJECT NARRATIVE

Project: 074932 SATEGNA NO 2E
Pace Project No.: 60203550

Method: **EPA 6010**
Description: 6010 MET ICP, Dissolved
Client: GHD Services_COP NM
Date: October 06, 2015

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: 074932 SATEGNA NO 2E
Pace Project No.: 60203550

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: GHD Services_COP NM
Date: October 06, 2015

General Information:
4 samples were analyzed for SM 2540C. 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.

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

Additional Comments:

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PROJECT NARRATIVE

Project: 074932 SATEGNA NO 2E
Pace Project No.: 60203550

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: GHD Services_COP NM
Date: October 06, 2015

General Information:
4 samples were 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.

QC Batch: WETA/36194

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60203550001,60203556001

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

- MS (Lab ID: 1644216)
  - Sulfate
- MSD (Lab ID: 1644217)
  - Sulfate

Additional Comments:

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

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ANALYTICAL RESULTS

Project: 074932 SATEGNA NO 2E
Pace Project No.: 60203550

Sample: GW 074932 092115 CB MW-1 **Lab ID: 60203550001** Collected: 09/21/15 16:45 Received: 09/24/15 08:40 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	**0.30**	mg/L	0.0050	1	09/28/15 16:45	09/29/15 17:40	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**2180**	mg/L	5.0	1		09/25/15 11:03		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**1370**	mg/L	100	100		10/05/15 10:37	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 074932 SATEGNA NO 2E
Pace Project No.: 60203550

Sample: GW 074932 092115 CB MW-2 **Lab ID: 60203550002** Collected: 09/21/15 17:05 Received: 09/24/15 08:40 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	**0.099**	mg/L	0.0050	1	09/28/15 16:45	09/29/15 17:51	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**2320**	mg/L	5.0	1		09/25/15 11:04		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**1490**	mg/L	100	100		10/05/15 11:05	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 074932 SATEGNA NO 2E
Pace Project No.: 60203550

Sample: GW 074932 092115 CB MW-3 **Lab ID: 60203550003** Collected: 09/21/15 17:10 Received: 09/24/15 08:40 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	**0.82**	mg/L	0.0050	1	09/28/15 16:45	09/29/15 17:55	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**2670**	mg/L	5.0	1		09/25/15 11:04		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**1680**	mg/L	100	100		10/05/15 11:18	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 074932 SATEGNA NO 2E
Pace Project No.: 60203550

Sample: GW 074932 092115 CB MW-4 **Lab ID: 60203550004** Collected: 09/21/15 17:20 Received: 09/24/15 08:40 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	**0.55**	mg/L	0.0050	1	09/28/15 16:45	09/29/15 17:59	7439-96-5	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	**2040**	mg/L	5.0	1		09/25/15 11:04		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	**1210**	mg/L	100	100		10/05/15 11:32	14808-79-8	

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ANALYTICAL RESULTS

Project: 074932 SATEGNA NO 2E
Pace Project No.: 60203550

Sample: GW 074932 092115 CB DUP **Lab ID: 60203550005** Collected: 09/21/15 08:00 Received: 09/24/15 08:40 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	**0.31**	mg/L	0.0050	1	09/28/15 16:45	09/29/15 18:09	7439-96-5	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 074932 SATEGNA NO 2E
Pace Project No.: 60203550

QC Batch: MPRP/33317 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved
Associated Lab Samples: 60203550001, 60203550002, 60203550003, 60203550004, 60203550005

METHOD BLANK: 1640723 Matrix: Water
Associated Lab Samples: 60203550001, 60203550002, 60203550003, 60203550004, 60203550005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Manganese, Dissolved	mg/L	ND	0.0050	09/29/15 17:36	

LABORATORY CONTROL SAMPLE: 1640724

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Manganese, Dissolved	mg/L	1	0.96	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1640725 1640726

Parameter	Units	60203550001 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	0.30	1	1	1.2	1.2	95	94	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: 074932 SATEGNA NO 2E
Pace Project No.: 60203550

QC Batch: WET/57426 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 60203550001, 60203550002, 60203550003, 60203550004

METHOD BLANK: 1639353 Matrix: Water
Associated Lab Samples: 60203550001, 60203550002, 60203550003, 60203550004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	09/25/15 11:03	

LABORATORY CONTROL SAMPLE: 1639354

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1040	104	80-120	

SAMPLE DUPLICATE: 1639355

Parameter	Units	60203550001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2180	2210	1	10	

SAMPLE DUPLICATE: 1639356

Parameter	Units	60203553004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	3330	3360	1	10	

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: 074932 SATEGNA NO 2E
Pace Project No.: 60203550

QC Batch: WETA/36194 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60203550001, 60203550002, 60203550003, 60203550004

METHOD BLANK: 1644213 Matrix: Water
Associated Lab Samples: 60203550001, 60203550002, 60203550003, 60203550004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	10/05/15 08:48	

LABORATORY CONTROL SAMPLE: 1644214

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	4.8	95	90-110	

MATRIX SPIKE SAMPLE: 1644215

Parameter	Units	60203550001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	1370	500	1790	85	80-120	

MATRIX SPIKE SAMPLE: 1644216

Parameter	Units	60203556001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	1370	500	1680	61	80-120	M1

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: 074932 SATEGNA NO 2E
Pace Project No.: 60203550

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.

ANALYTE QUALIFIERS

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

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 074932 SATEGNA NO 2E
Pace Project No.: 60203550

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60203550001	**GW 074932 092115 CB MW-1**	EPA 3010	MPRP/33317	EPA 6010	ICP/24560
60203550002	**GW 074932 092115 CB MW-2**	EPA 3010	MPRP/33317	EPA 6010	ICP/24560
60203550003	**GW 074932 092115 CB MW-3**	EPA 3010	MPRP/33317	EPA 6010	ICP/24560
60203550004	**GW 074932 092115 CB MW-4**	EPA 3010	MPRP/33317	EPA 6010	ICP/24560
60203550005	**GW 074932 092115 CB DUP**	EPA 3010	MPRP/33317	EPA 6010	ICP/24560
60203550001	**GW 074932 092115 CB MW-1**	SM 2540C	WET/57426		
60203550002	**GW 074932 092115 CB MW-2**	SM 2540C	WET/57426		
60203550003	**GW 074932 092115 CB MW-3**	SM 2540C	WET/57426		
60203550004	**GW 074932 092115 CB MW-4**	SM 2540C	WET/57426		
60203550001	**GW 074932 092115 CB MW-1**	EPA 300.0	WETA/36194		
60203550002	**GW 074932 092115 CB MW-2**	EPA 300.0	WETA/36194		
60203550003	**GW 074932 092115 CB MW-3**	EPA 300.0	WETA/36194		
60203550004	**GW 074932 092115 CB MW-4**	EPA 300.0	WETA/36194		

Pace Analytical
www.pacelabs.com

Sample Condition Upon Receipt
ESI Tech Spec Client

WO# : 60203550

60203550

Client Name: GHD Service Corp NM

Optional
Proj Due Date:
Proj Name:

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

Tracking #: 6500815843 12 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 +0.6 T-239 / CF +0.6 T-262 **Type of Ice:** (Wet) Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 3.1

Date and initials of person examining contents: pvg 9/24/15

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? pvg 9/24	☑Yes ☐No ☐N/A	12.
Sample labels match COC:	☑Yes ☐No ☐N/A	
Includes date/time/ID/analyses Matrix: WT		13.
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	14.
Exceptions: VOA, Coliform, 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: _____

Project Manager Review: AAF Date: 09/24/15

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

Start: 1033	Start:
End: 1036	End:
Temp:	Temp:

Pace Analytical

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:	Jeffrey Walker	Attention:	
Address:	6121 Indian School Rd NE	Copy To:		Company Name:	
	Albuquerque, NM 87110			Address:	
Email:	jeff.walker@ghd.com	Purchase Order #:		Pace Quote:	
Phone:	505-377-3920 Fax	Project Name:	074932 Sategna No 2E	Pace Project Manager:	alice.flanagan@pacelabs.com,
Requested Due Date:		Project #:		Pace Profile #:	

Regulatory Agency
State / Location
NM

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 (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	Dissolved Mn	TDS	Sulfate by 300.0	Residual Chlorine (Y/N)	60203550	
1	GW-074932-092115-CB-MW-1	WT				9.21.15	1045		2	X		X							X	X	X			001
2	GW-074932-092115-CB-MW-2	WT				9.21.15	1705		2	X		X							X	X	X			002
3	GW-074932-092115-CB-MW-3	WT				9.21.15	1710		2	X		X							X	X	X			003
4	GW-074932-092115-CB-MW-4	WT				9.21.15	1720		2	X		X							X	X	X			004
5	GW-074932-092115-CB-DUP	WT				9.21.15	—		1			X							X					005
6																									
7																									
8																									
9																									
10																									
11																									
12																									

1BP3U 1BP3F^{2-}

Requested Analysis Filtered (Y/N)

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Jessie Brown GHD	9.23.15	1400		9/24/15	0840	3.1	Y	X	X

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jessie Brown

SIGNATURE of SAMPLER: Jessie Brown DATE Signed: 9.23.15

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