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TETRA TECH, INC.

6121 Indian School Rd. NE Suite 200
Albuquerque, NM 87110
(505) 237-8440

June 22, 2009

Mr. Glen von Gonten
State of New Mexico Oil Conservation Division
1220 South Saint Francis Drive
Santa Fe, New Mexico 87505

RE: ✔(1) ConocoPhillips Company Federal 15 Site, Farmington, New Mexico. 2008 Quarterly Groundwater Monitoring Report - Fourth Quarter 2008
(2) ConocoPhillips Company Federal 15 Site, Farmington, New Mexico. 2009 Quarterly Groundwater Monitoring Report - First Quarter 2009

Dear Mr. von Gonten:

Enclosed please find one (1) copy of each of the above-referenced documents as compiled by Tetra Tech, Inc., formerly Maxim Technologies, for these Farmington area sites.

Please do not hesitate to contact me at (505) 237-8440 if you have any questions or require additional information.

Sincerely,

Kelly E. Blanchard

Kelly E. Blanchard
Project Manager/Geologist

Enclosures (2)

QUARTERLY GROUNDWATER MONITORING REPORT FOURTH QUARTER 2008

CONOCOPHILLIPS FEDERAL #15 FARMINGTON, NEW MEXICO

OCD # 3R087

Prepared for:

ConocoPhillips

420 South Keeler Avenue
Bartlesville, OK 74004

Prepared by:

TETRA TECH, INC.

6121 Indian School Rd. NE Suite 200
Albuquerque, NM 87110
Tetra Tech Project No. 8690097.100

June 2009

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QUARTERLY GROUNDWATER MONITORING REPORT CONOCOPHILLIPS FEDERAL #15, FARMINGTON, NEW MEXICO

1.0 INTRODUCTION

This report presents the results of quarterly groundwater monitoring completed by Tetra Tech, Inc. (Tetra Tech) on January 22, 2009, at the ConocoPhillips Federal #15 site in Farmington, New Mexico (Site). This event represents the fourth consecutive quarter of groundwater monitoring at the Site, and represents the second consecutive quarter of groundwater monitoring with laboratory results below New Mexico Water Quality Control Commission (NMWQCC) groundwater quality standards. Quarterly monitoring was initiated in March 2008, following a more variable monitoring frequency in place since 2005.

The Site is located between Washington Avenue and English Road on the north side of Gila Street; New Mexico 516 (Main Street) is located approximately 0.5 miles to the west. The Site consists of a gas production well and associated equipment and installations. The location and general features of the Site are shown on **Figures 1** and **2**, respectively.

1.1 Site History

The history of the Site is outlined on **Table 1** and discussed in more detail in the following paragraphs.

On October 23, 2004, a release was discovered at the Site. It was estimated that up to 15 barrels of condensate were unaccounted for. Approximately 1,500 cubic yards of affected soil were excavated and replaced with clean fill during the week of October 25, 2004.

Following soil remediation activities, four, 2-inch polyvinyl chloride (PVC) groundwater monitoring wells (MW-1 through MW-4) were installed on November 16 and November 17, 2004 by Biosphere Environmental Sciences and Technologies, LLC to depths of approximately 20 feet below ground surface (bgs). An additional, downgradient monitoring well (MW-5) was installed to a depth of approximately 17.5 feet bgs on the property south of the Site on October 19, 2005 by Spectrum Drilling under the supervision of Tetra Tech.

Monitor wells MW-1 through MW-4 were initially sampled on January 18, 2005 and again on October 18 and 19, 2005. Monitor well MW-5 was initially sampled on October 19, 2005.

Beginning in July 2005, Tetra Tech conducted quarterly groundwater removal events at monitor well MW-2 using a vacuum truck. A total of 4,343 gallons were pumped from this well between July 2005 and January 2008, at which time pumping activities were discontinued. The pumped water was disposed of in the on-site waste water tank (**Figure 2**). Each quarterly groundwater removal event is listed on Table 1.

Tetra Tech conducted annual groundwater sampling of monitor wells MW-1 through MW-5 in November of 2006 and 2007. The details of each sampling event are summarized in the 2006 and 2007 Annual Groundwater Monitoring and Site Activities Reports, dated January 2, 2007 and January 30, 2008, respectively.

Quarterly groundwater monitoring events were conducted in March, July, and October of 2008. The most current sampling event, conducted on January 22, 2009, marks the second consecutive quarterly groundwater monitoring event at the Site with groundwater quality results below NMWQCC groundwater quality standards.

2.0 METHODOLOGY AND RESULTS

The following subsections describe the groundwater monitoring methodology and sampling analytical results.

2.1 Groundwater Monitoring Methodology

Groundwater Elevation Measurements

On January 22, 2009, groundwater elevation measurements were recorded in monitor wells MW-1, MW-2, MW-3, MW-4, and MW-5. **Table 2** presents the monitor well specifications and groundwater level data. A groundwater elevation contour map is presented on **Figure 3,** which illustrates that groundwater at the Site flows to the south, south-west at an approximate gradient of 0.02 feet/feet (ft/ft) toward the Animas River, located approximately 3,200 feet south of the Site.

Groundwater sampling

Monitor wells MW-1, MW-2, MW-3, MW-4, and MW-5 were each sampled during the January 22, 2009 groundwater sampling event. Approximately 6 gallons of water, or three well volumes, were purged from each monitoring well before sampling was performed. A 1.5-inch GeoSquirt© submersible pump was used in each well to purge and collect groundwater samples. The pump and tubing was decontaminated with deionized water and an Alconox® solution prior to sampling each well. The purged water was disposed of in the on-site waste water tank (**Figure 2**). The samples were placed in laboratory prepared bottles, packed on ice, and shipped with chain of custody documentation to Southern Petroleum Laboratory located in Houston, Texas. The samples were analyzed for presence of benzene, toluene, ethyl-benzene, and xylenes (BTEX) by Environmental Protection Agency (EPA) Method 8260B. Samples were also analyzed for semivolatile organic compounds by EPA Method 8270C and chloride by EPA Method 300.0.

2.2 Groundwater Sampling Analytical Results

The January 2009 analysis of the collected groundwater samples indicates that all analyzed constituents are present in concentrations either below New Mexico Water Quality Control Commission (NMWQCC) groundwater quality standards or were not detected above their respective laboratory reporting limits. Chloride values ranged from 22 milligrams per liter (mg/l) in MW-3 to 74.8 mg/l in MW-1; the NMWQCC groundwater quality standard for chloride is 250 mg/l. Groundwater samples collected from MW-1, MW-3, MW-4 and MW-5 did not reveal BTEX in concentrations above the laboratory reporting limit of 5 micrograms per liter (ug/l). Ethylbenzene and total xylenes were detected

in MW-2 at concentrations of 7 and 17 ug/l, respectively. The NMWQCC groundwater standards for ethylbenzene and total xylenes are 750 ug/l and 620 ug/l. Historical laboratory analytical data, including the January 2009 data, are summarized on **Table 3**. The field groundwater sampling forms are presented in **Appendix A** and the laboratory analytical report is presented in **Appendix B**. A generalized geologic cross section has also been prepared for the Site, and is included as **Figure 4.**

3.0 CONCLUSIONS

Tetra Tech conducted quarterly pumping events in monitor well MW-2 from July 2005 to January of 2008. The concentrations of BTEX measured in this well have decreased steadily from October 2005 to January 2009 and are summarized below.

- MW-2 benzene concentrations decreased from 1,300 µg/L to below the laboratory detection limit of 5µg/L.
- MW-2 toluene concentrations decreased from 3,300 µg/L (above the NMWQCC standard of 750 µg/L) to less than the laboratory reporting limit of 5 µg/L.
- MW-2 ethylbenzene concentrations decreased from 380 µg/L (below the NMWQCC standard of 750 µg/L) to 7 µg/L.
- MW-2 total xylenes concentrations decreased from 3,500 µg/L (above the NMWQCC standard of 620 µg/L) to 17 µg/L.

The decrease in BTEX concentrations indicates that the pumping events were effective. Tetra Tech has discontinued the pumping of monitor well MW-2 and will continue monitoring all wells quarterly in order to move toward closure of the Site.

Benzene in MW-3 has decreased from 190 µg/L in January 2005 to less than the laboratory reporting limit of 5 µg/L in January 2009, while benzene in MW-4 has decreased from 36 µg/L in November 2007 to less than the laboratory reporting limit of 5 µg/L in January 2009. Additionally, chlorides have never been detected above NMWQCC groundwater quality standards in any Site monitoring well. Therefore, analysis of this constituent will not be continued past the January 2009 sampling event.

If you have any questions regarding the content of this report, please contact Kelly Blanchard at (505) 237-8440 or at kelly.blanchard@tetratech.com.

FIGURES

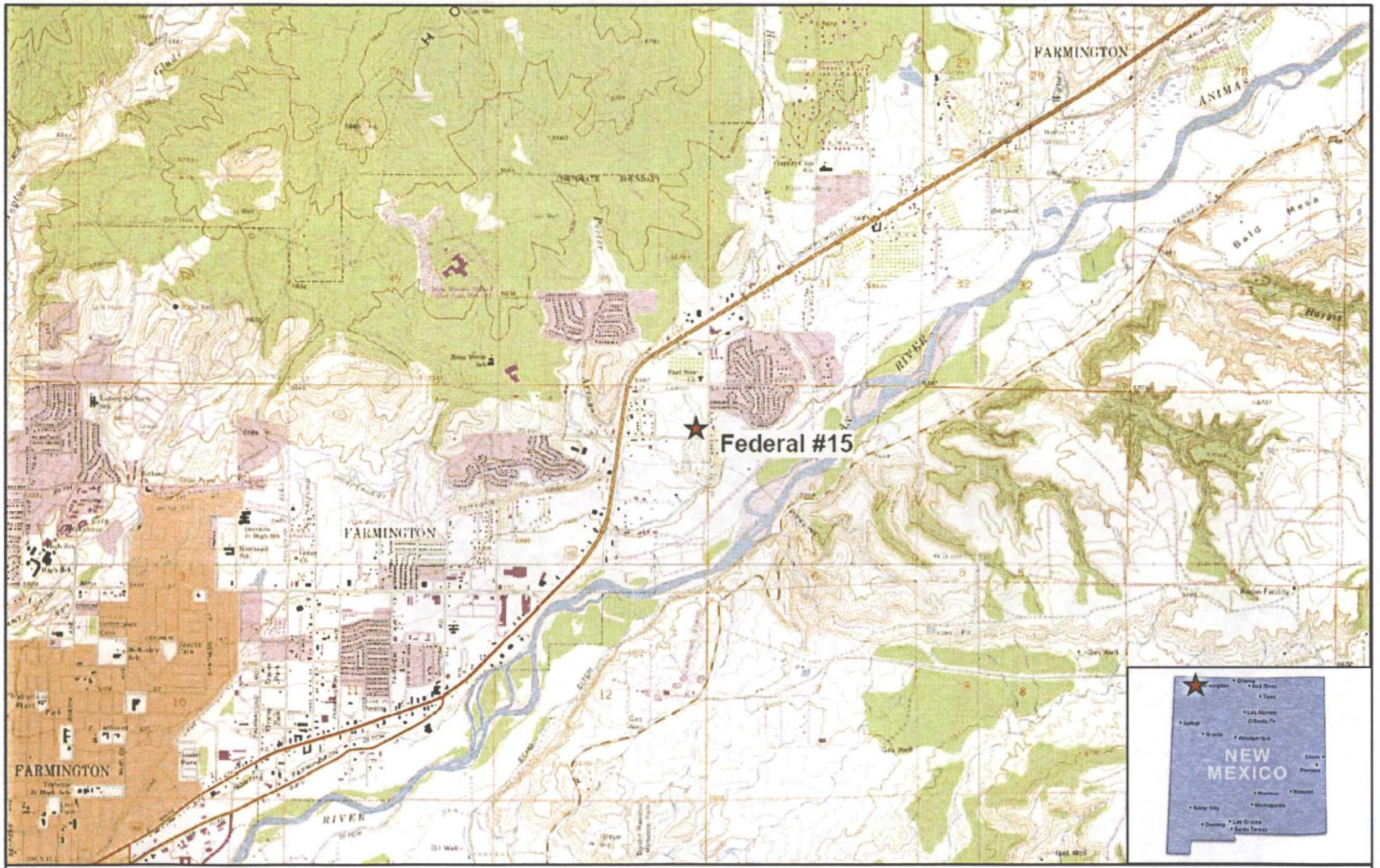

Figure 1. Site Location Map

ConocoPhillips Company
Federal #15
Farmington, New Mexico 87401

TETRA TECH, INC.

Approximate ConocoPhillips Federal #15 Site Location

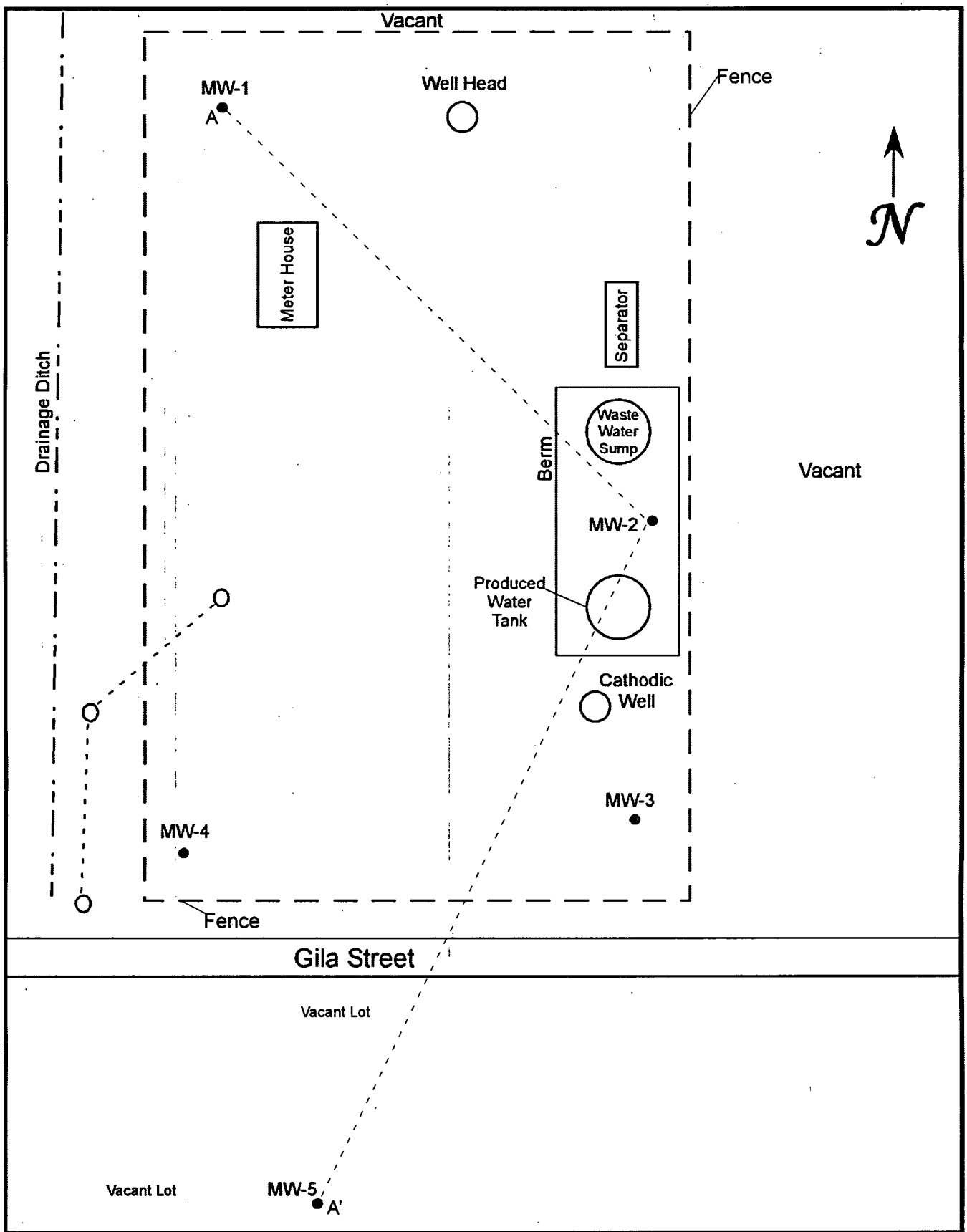

Figure 2. Site Layout Map

ConocoPhillips Company
Federal #15
Farmington, New Mexico

TETRA TECH, INC.

- Monitoring Well
- - - Overhead Electric Line
- - - Cross Section A to A' (Figure 4)

Not to scale

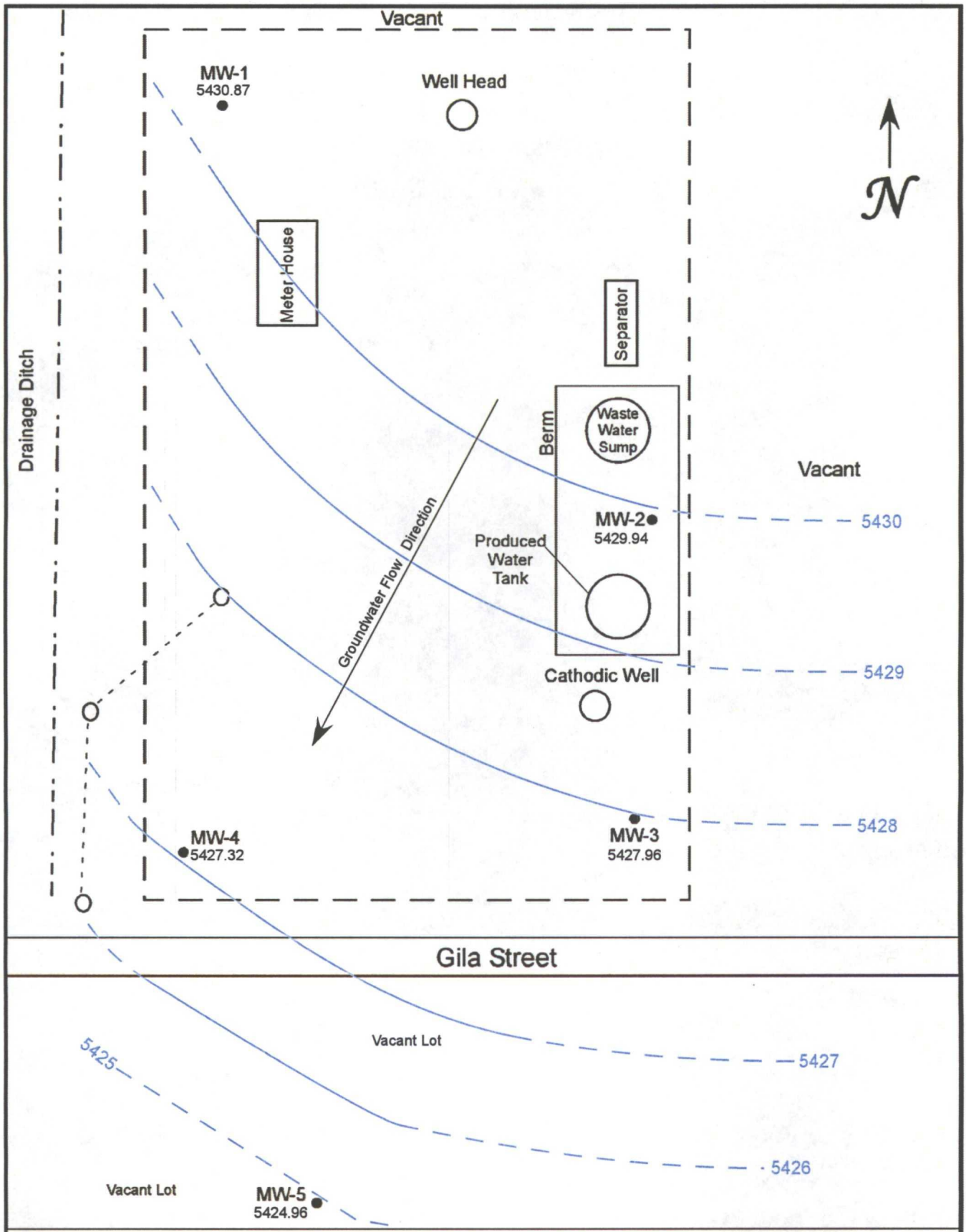

Figure 3. Groundwater Elevation Contour Map - January 2009

ConocoPhillips Company
Federal #15
Farmington, New Mexico

TETRA TECH, INC.

- Monitoring Well
- Overhead Electric Line
- Groundwater contour line
- Inferred groundwater contour line

Not to scale

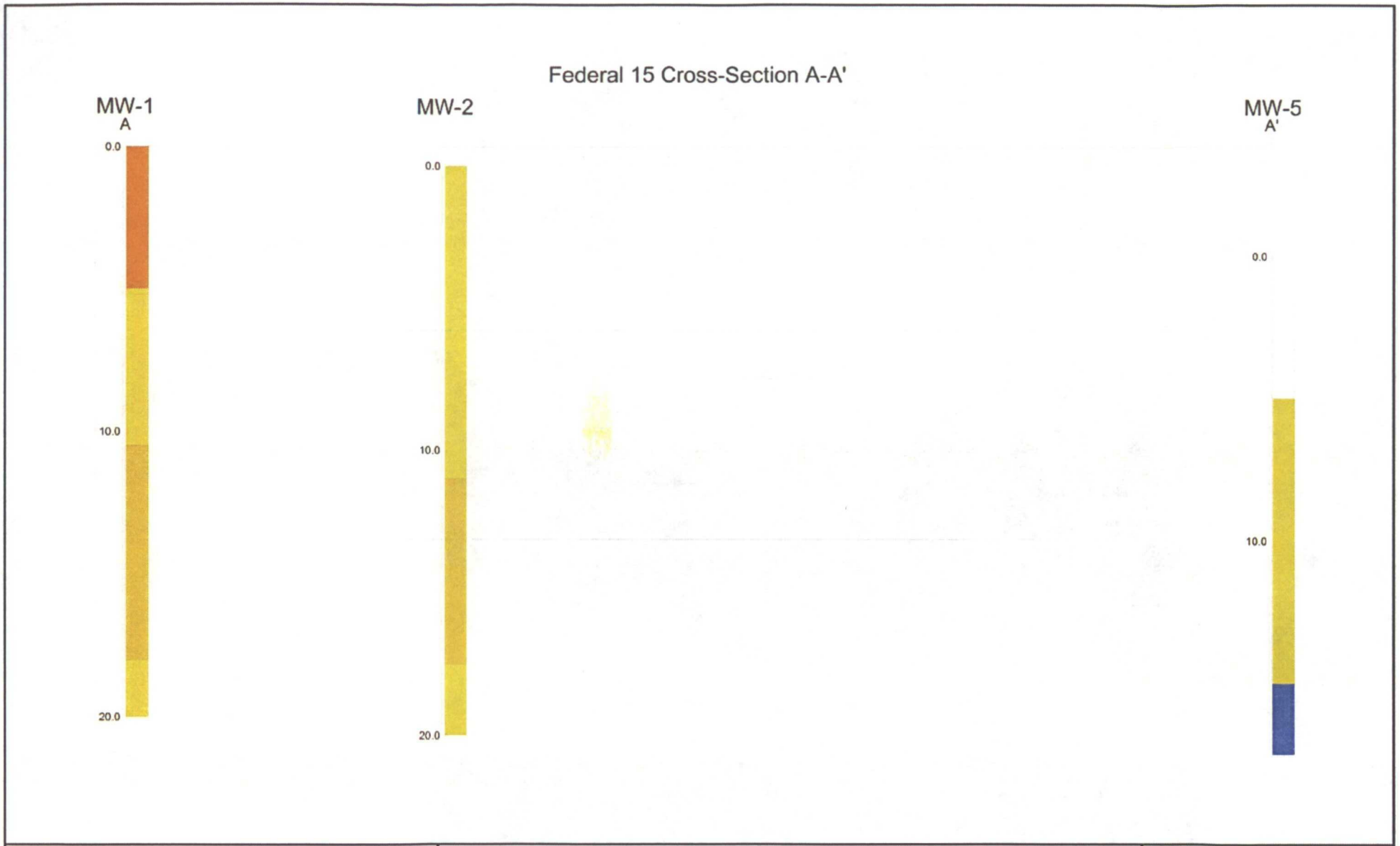

FIGURE 4:
GENERALIZED GEOLOGIC CROSS SECTION
CONOCOPHILLIPS COMPANY
FEDERAL 15
Sec 1, T29N, R13W
Farmington, New Mexico
OCD #3R-087

LEGEND

- Clay
- Clayey sand
- Cobbles
- Sand
- Sand & gravel fill

TETRA TECH, INC.

TABLES

Table 1. Site History Timeline - ConocoPhillips Federal #15

Date/Time Period	Event/Action	Description
October 23, 2004	Release Discovered	Estimated that 15 barrels of condensate was released to the subsurface soil and groundwater
October 25-29, 2004	Soil Excavation	Approximately 1500 cubic yards of affected soil excavated and replaced with clean fill
November 16-17, 2004	Monitor Well Installation	Monitor wells MW-1, MW-2, MW-3, and MW-4 installed to depths of approximately 20 ft BGS
January 18, 2005	Monitor Well Sampling	Initial sampling of monitor wells MW-1, MW-2, MW-3, and MW-4
July 7, 2005	Groundwater Removal from Monitor Well MW-2	First removal of groundwater - 145 gallons removed
October 18-19, 2005	Monitor Well Sampling	Second sampling of monitor wells MW-1, MW-2, MW-3, and MW-4
October 19, 2005	Monitor Well Installation	Monitor well MW-5 installed to a depth of 17.5 ft BGS
October 19, 2005	Groundwater Removal from Monitor Well MW-2	558 gallons removed
October 20, 2005	Monitor Well Sampling	Initial sampling of monitor well MW-5
February 16, 2006	Groundwater Removal from Monitor Well MW-2	236 gallons removed
May 15, 2006		296 gallons removed
August 2, 2006		380 gallons removed
November 14, 2006		440 gallons removed
November 14-15, 2006	Monitor Well Sampling	Third sampling of monitor wells MW-1, MW-2, MW-3, and MW-4; second sampling of monitor well MW-5
February 20, 2007	Groundwater Removal from Monitor Well MW-2	346 gallons removed
May 15, 2007		474 gallons removed
August 21, 2007		528 gallons removed
November 7, 2007		575 gallons removed
November 7, 2007	Monitor Well Sampling	Fourth sampling of monitor wells MW-1, MW-2, MW-3, and MW-4; third sampling of monitor well MW-5
January 16, 2008	Groundwater Removal from Monitor Well MW-2	365 gallons removed
March 18, 2008	Groundwater Removal from Monitor Well MW-2	278 gallons removed
March 18, 2008	Groundwater Removal from Monitor Well MW-4	288 gallons removed
March 18, 2008	Monitor Well Sampling	Initiation of quarterly sampling for monitor wells MW-1, MW-2, MW-3, MW-4, and MW-5
July 21, 2008	Monitor Well Sampling	Continuation of quarterly sampling for monitor wells MW-1, MW-2, MW-3, MW-4, and MW-5
October 21, 2008	Monitor Well Sampling	Continuation of quarterly sampling for monitor wells MW-1, MW-2, MW-3, MW-4, and MW-5
January 22, 2009	Monitor Well Sampling	Continuation of quarterly sampling for monitor wells MW-1, MW-2, MW-3, MW-4, and MW-5

Table 2. Groundwater Elevation Summary (January 2005 - January 2009) - ConocoPhillips Federal #15

Well ID	Date Installed	Total Depth (ft bgs)	Screen Interval (ft)	Date Measured	Groundwater Level (ft TOC)	Elevation (ft msl) (TOC)	Groundwater Elevation (ft msl)
MW-1	11/17/2004	20	5 - 20	1/18/2005	8.92	5437.99	5429.07
				7/7/2005	9.33		5428.66
				10/19/2005	8.03		5429.96
				2/16/2006	8.84		5429.15
				5/15/2006	8.96		5429.03
				8/2/2006	8.35		5429.64
				11/14/2006	8.10		5429.89
				2/20/2007	8.76		5429.23
				5/15/2007	9.67[1]		5428.32
				8/21/2007	NM		NM
				11/7/2007	AM		AM
				1/16/2008	7.10		5430.89
				3/18/2008	7.61		5430.38
				7/21/2008	4.82		5433.17
				10/21/2008	4.72		5433.27
				1/22/2009	7.12		5430.87
MW-2	11/17/2004	20	5 - 20	1/18/2005	9.49	5437.33	5427.84
				7/7/2005	9.55		5427.78
				10/19/2005	8.66		5428.67
				2/16/2006	9.01		5428.32
				5/15/2006	9.00		5428.33
				8/2/2006	8.52		5428.81
				11/14/2006	8.28		5429.05
				2/20/2007	8.87		5428.46
				5/15/2007	8.59		5428.74
				8/21/2007	6.67		5430.66
				11/7/2007	AM		AM
				1/16/2008	7.41		5429.92
				3/18/2008	8.00		5429.33
				7/21/2008	4.63		5432.70
				10/21/2008	4.37		5432.96
				1/22/2009	7.39		5429.94
MW-3	11/22/2004	20	5 - 20	1/18/2005	8.54	5435.13	5426.59
				7/7/2005	8.51		5426.62
				10/19/2005	7.75		5427.38
				2/16/2006	NM		NM
				5/15/2006	8.42		5426.71
				8/2/2006	7.99		5427.14
				11/14/2006	7.72		5427.41
				2/20/2007	8.23		5426.90
				5/15/2007	7.90		5427.23
				8/21/2007	NM		NM
				11/7/2007	AM		AM
				1/16/2008	7.20		5427.93
				3/18/2008	7.73		5427.40
				7/21/2008	5.00		5430.13
				10/21/2008	4.12		5431.01
				1/22/2009	7.17		5427.96

Table 2. Groundwater Elevation Summary (January 2005 - January 2009) - ConocoPhillips Federal #15

Well ID	Date Installed	Total Depth (ft bgs)	Screen Interval (ft)	Date Measured	Groundwater Level (ft TOC)	Elevation (ft msl) (TOC)	Groundwater Elevation (ft msl)
MW-4	11/22/2004	20	5 - 20	1/18/2005	8.65	5434.68	5426.03
				7/7/2005	8.50		5426.18
				10/19/2005	7.72		5426.96
				2/16/2006	8.35		5426.33
				5/15/2006	8.40		5426.28
				8/2/2006	7.96		5426.72
				11/14/2006	7.74		5426.94
				2/20/2007	8.18		5426.50
				5/15/2007	7.91		5426.77
				8/21/2007	NM		NM
				11/7/2007	AM		AM
				1/16/2008	7.37		5427.31
				3/18/2008	7.73		5426.95
				7/21/2008	5.90		5428.78
				10/21/2008	5.53		5429.15
				1/22/2009	7.36		5427.32
MW-5	10/19/2005	17.5	3.5-17.5	10/20/2005	9.11	5434.16	5425.05
				2/16/2006	10.62		5423.54
				5/15/2006	10.47		5423.69
				8/2/2006	9.42		5424.74
				11/14/2006	9.05		5425.11
				2/20/2007	9.84		5424.32
				5/15/2007	8.93		5425.23
				8/21/2007	NM		NM
				11/7/2007	AM		AM
				1/16/2008	NM		NM
				3/18/2008	10.21		5423.95
				7/21/2008	7.55		5426.61
				10/21/2008	6.18		5427.98
				1/22/2009	9.20		5424.96

Explanation

(1) = Water level near bottom of monitor well
AM = Anomolous measurement due to meter malfunction - reading not recorded
bgs = Below ground surface
ft = Feet
msl = Mean sea level
NM = Not measured
TOC = Top of casing

Table 3. Groundwater Laboratory Analytical Results Summary (January 2005 - January 2009) - ConocoPhillips Federal #15

Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	2-Methylnaphthalene (µg/L)	1-Methylnaphthalene (µg/L)	Naphthalene (µg/L)	Total Naphthalene (µg/L)	Chloride (mg/L)
MW-1	1/18/2005	<1.0	<1.0	<1.0	<2.0	<10	<10	<10	<10	85
	10/18/2005	<1.0	<1.0	<1.0	<2.0	<10	<10	<10	<10	39
	11/15/2006	<1.0	<1.0	<1.0	<2.0	<10	<10	<10	<10	36
	11/7/2007	<1.0	<1.0	<1.0	<2.0	<10	<10	<10	<10	44
	3/18/2008	<5.0	<5.0	<5.0	<5.0	NA	NA	NA	NA	NA
	7/21/2008	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	54
	10/21/2008	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	57.8
	1/22/2009	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	74.8
MW-2	1/18/2005	**1200**	**3300**	380	**3500**	72	34	51	**157**	41
	Duplicate	**1300**	**3700**	410	**3800**	NA	NA	NA	NA	NA
	10/19/2005	**1100**	410	160	470	18	11	15	**44**	60
	Duplicate	**1100**	500	150	610	NA	NA	NA	NA	NA
	11/14/2006	**23**	29	6.6	120	<10	<10	<10	<10	50
	Duplicate	**45**	57	12	220	NA	NA	NA	NA	NA
	11/7/2007	4.2	8.8	24	74	<10	<10	<10	<10	35
	Duplicate	3.9	7.9	22	69	NA	NA	NA	NA	NA
	3/18/2008	5	<5.0	<5.0	9	NA	NA	NA	NA	NA
	7/21/2008	<5.0	<5.0	13	27	<5.0	<5.0	<5.0	NA	42.7
	Duplicate	<5.0	<5.0	13	27	NA	NA	NA	NA	NA
	10/21/2008	<5.0	<5.0	<5.0	5	<5.0	<5.0	<5.0	NA	71.3
	Duplicate	<5.0	<5.0	<5.0	<5.0	NA	NA	NA	NA	NA
	1/22/2009	<5.0	<5.0	7	17	<5.0	<5.0	<5.0	<5.0	36.1
	Duplicate	<5.0	<5.0	5	12	NA	NA	NA	NA	NA
MW-3	1/18/2005	**190**	<5.0	<5.0	<10	<10	<10	<10	<10	34
	10/19/2005	<1.0	<1.0	<1.0	<2.0	<10	<10	<10	<10	42
	11/14/2006	<1.0	<1.0	<1.0	<2.0	<10	<10	<10	<10	39
	11/7/2007	<1.0	<1.0	<1.0	<2.0	<10	<10	<10	<10	34
	3/18/2008	<5.0	<5.0	<5.0	<5.0	NA	NA	NA	NA	NA
	7/21/2008	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	NA	22
	10/21/2008	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	NA	20.6
	1/22/2009	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	22
MW-4	1/18/2005	2.8	<1.0	<1.0	<2.0	<10	<10	<10	<10	37
	10/19/2005	**23**	2.2	<1.0	4.3	<10	<10	<10	<10	51
	11/14/2006	1.1	<1.0	<1.0	<2.0	<10	<10	<10	<10	44
	11/7/2007	**36**	<1.0	22	<2.0	<10	<10	<10	<10	24
	3/18/2008	<5.0	<5.0	<5.0	<5.0	NA	NA	NA	NA	NA
	7/21/2008	**35**	<5.0	18	<5.0	<5.0	<5.0	<5.0	NA	22
	10/21/2008	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	NA	25.1
	1/22/2009	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	42.1

Table 3. Groundwater Laboratory Analytical Results Summary (January 2005 - January 2009) - ConocoPhillips Federal #15

Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	2-Methylnaphthalene (µg/L)	1-Methylnaphthalene (µg/L)	Naphthalene (µg/L)	Total Naphthalene (µg/L)	Chloride (mg/L)
MW-5	10/20/2005	<1.0	<1.0	<1.0	<2.0	<10	<10	<10	<10	73
	11/14/2006	<1.0	<1.0	<1.0	<2.0	<10	<10	<10	<10	79
	11/7/2007	<1.0	<1.0	<1.0	<2.0	<10	<10	<10	<10	58
	3/18/2008	<5.0	<5.0	<5.0	<5.0	NA	NA	NA	NA	NA
	7/21/2008	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	NA	27.6
	10/21/2008	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	NA	34.5
	1/22/2009	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	35.8
NMWQCC Groundwater Quality Standards		**10 (µg/L)**	**750 (µg/L)**	**750 (µg/L)**	**620 (µg/L)**	**NE**	**NE**	**NE**	**30 (µg/L)**	**250 mg/L**

Explanation

mg/L = milligrams per liter (parts per million)
µg/L = micrograms per liter (parts per billion)
NE=Not established
NMWQCC = New Mexico Water Quality Control Commission
NA = Not analyzed
<1.0 = Not detected at the reporting limit
Constituents in excess of NMWQCC groundwater quality standards are in **BOLD**

APPENDIX A
GROUNDWATER SAMPLING FIELD FORMS

WATER SAMPLING FIELD FORM

Project No. Federal #15 — 1 of 5

Site Location Farmington, NM Gila St.

Site/Well No. MW-1 — Coded/Replicate No. — — Date 1-22-09

Weather Cloudy, 48° — Time Sampling Began 1410 — Time Sampling Completed 1430

EVACUATION DATA

Description of Measuring Pt (MP) TOC

Height of MP Above/Below Land Surface 1.09 — MP Elevation

Total Sounded Depth of Well Below MP 20.00 — Water-Level Elevation

Held ____ — Depth to Water Below MP 7.12 — Diameter of Casing (2 inch / 4 inch)

Wet ____ — Water Column in Well 12.88 — Gallons Pumped/Bailed Prior to Sampling 7 gallons

Gallons per Foot .16

Gallons in Well 2.06 — Sampling Pump Intake (feet below land surface) ~~7~~

Purging Equipment — X3 = 6.18

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (12.35)	pH	Conductivity	TDS	DO	DO%	ORP	Other
1428	~~12.47~~	6.71	1.91	1.603	4.87	45.1	5.3	
1438	12.36	6.70	1.878	1.620	4.28	40.9	4.6	

Sampling Equipment — Low Flow Pump / Disposable Bailer

Constituents Sampled	Container Description	Preservative
BTEX	3 VOAs	HCL
Chloride	32oz Plastics	None
PAHs	32oz Ambers	None

Remarks

Sampling Personnel

Well Casing Volumes

Gal./ft.				
	1 ¼" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1 ½" = 0.10	2 ½" = 0.24	3" ½ = 0.50	6" = 1.46

WATER SAMPLING FIELD FORM

Project No. Federal #15 — 2 of 5

Site Location

Site/Well No. MW-2 — Coded/ Replicate No. 1510 — Date 1.22.09

Weather cloudy, 48° — Time Sampling Began 1440 — Time Sampling Completed 1510

EVACUATION DATA

Description of Measuring Pt (MP)

Height of MP Above/Below Land Surface — MP Elevation

Total Sounded Depth of Well Below MP 20.00 — Water-Level Elevation

Held ____ — Depth to Water Below MP 7.39 — Diameter of Casing (2 inch / 4 inch)

Wet ____ — Water Column in Well 12.61 — Gallons Pumped/Bailed Prior to Sampling 6 gallons

Gallons per Foot .16

Gallons in Well 2.02 — Sampling Pump Intake (feet below land surface)

Purging Equipment X3 = 6.05

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature	pH	Conductivity	TDS	DO	DO%	ORP	Other
1448	12.88	6.83	2.526	1.128	4.81	46.1	-118.8	
1452 (Final 5gal)	12.90	6.78	2.273	1.920	4.57	41.2	-129.7	
1453	13.14	6.77	2.161	1.809	4.28	39.9	-145.6	
1454	13.14	6.78	2.162	1.808	3.51	33.9	-159.9	

Sampling Equipment Low Flow Pump / Disposable Bailer

Constituents Sampled	Container Description	Preservative
BTEX	3 VOAs	HCL
Chloride	32oz Plastics	None
PAHs	32oz Ambers	None

Remarks large white suspended material in purge water. very light sparse discontinuous sheen. Sewage smell

Sampling Personnel

Well Casing Volumes

Gal./ft.				
	1 ¼" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1 ½" = 0.10	2 ½" = 0.24	3" ½ = 0.50	6" = 1.46

WATER SAMPLING FIELD FORM

Project No. Federal #15 — 3 of 5

Site Location Farmington, NM

Site/Well No. MW-4 — Coded/ Replicate No. — Date 1.22.09

Weather Cloudy, 48° — Time Sampling Began — Time Sampling Completed 1530

EVACUATION DATA

Description of Measuring Pt (MP)

Height of MP Above/Below Land Surface — MP Elevation

Total Sounded Depth of Well Below MP 20.00 — Water-Level Elevation

Held ____ — Depth to Water Below MP 7.36 — Diameter of Casing (2 inch / 4 inch)

Wet ____ — Water Column in Well 12.64 — Gallons Pumped/Bailed Prior to Sampling 6 gallons

Gallons per Foot .16

Gallons in Well 2.02 — Sampling Pump Intake (feet below land surface)

Purging Equipment X3 = 6.07

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature	pH	Conductivity	TDS	DO	DO%	ORP	Other
1514	13.80	6.90	2.012	1.663	3.54	34.0	-57.0	
1515	13.90	6.89	2.001	1.646	3.41	34.2	-49.9	
1515	13.82	6.88	2.021	1.671	3.29	32.3	-54.4	

Sampling Equipment: Low Flow Pump / Disposable Bailer

Constituents Sampled	Container Description	Preservative
BTEX	3 VOAs	HCl
Chloride	1 32oz Plastics	None
PAHs	32oz Ambers	None

Remarks: Water is orange w/ orange floating particles

Sampling Personnel

Well Casing Volumes

Gal./ft.								
	1 ¼" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1 ½" = 0.10	2 ½" = 0.24	3" ½ = 0.50	6" = 1.46

WATER SAMPLING FIELD FORM

Project No. Fed 15 — 4 of 5

Site Location Farmington, NM

Site/Well No. MW- 3 — Coded/ Replicate No. ____ — Date 1545 1.22.09

Weather Cloudy, 48° — Time Sampling Began 1530 — Time Sampling Completed 1545

EVACUATION DATA

Description of Measuring Pt (MP) ____

Height of MP Above/Below Land Surface ____ — MP Elevation ____

Total Sounded Depth of Well Below MP 20.00 — Water-Level Elevation ____

Held ____ — Depth to Water Below MP 7.17 — Diameter of Casing (2 inch / 4 inch)

Wet ____ — Water Column in Well 12.83 — Gallons Pumped/Bailed Prior to Sampling ____

Gallons per Foot .16

Gallons in Well 2.05 — Sampling Pump Intake (feet below land surface) ____

Purging Equipment ____ X3 = 6.16

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature	pH	Conductivity	TDS	DO	DO%	ORP	Other
1541	13.16	6.91	1.799	1.511	4.96	47.5	13.9	
1542	13.29	6.91	1.803	1.512	4.85	46.7	11.9	
1543	13.37	6.92	1.813	1.514	5.24	50.4	11.4	
1544	13.41	6.92	1.815	1.516	6.20	59.8	11.1	
1545	13.44	6.93	1.820	1.519	5.13	49.3	11.0	

Sampling Equipment: Low Flow Pump / Disposable Bailer

Constituents Sampled	Container Description	Preservative
BTEX	3 VOAs	HCl
Chloride	32oz Plastics	None
PAHs	32oz Ambers	None

Remarks: Roots in well @ about 9 feet. Water is light brown rusty colored

Sampling Personnel ____

Well Casing Volumes

Gal./ft.							
	1 ¼" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1 ½" = 0.10	2 ½" = 0.24	3" ½ = 0.50	6" = 1.46

WATER SAMPLING FIELD FORM

Project No. Federal #15 — 5 of 5

Site Location Farmington, NM

Site/Well No. MW- 5 — Coded/Replicate No. — Date ~~1630~~ 1-22-09

Weather Cloudy, 48° — Time Sampling Began — Time Sampling Completed 1630

EVACUATION DATA

Description of Measuring Pt (MP)

Height of MP Above/Below Land Surface — MP Elevation

Total Sounded Depth of Well Below MP ~~20.0~~ 17.0 — Water-Level Elevation

Hold ____ — Depth to Water Below MP 9.2 — Diameter of Casing 2 inch / 4 inch

Wet ____ — Water Column in Well 11.8 — Gallons Pumped/Bailed Prior to Sampling

Gallons per Foot .16

Gallons in Well 1.88 — Sampling Pump Intake (feet below land surface)

Purging Equipment X3 = 5.64

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature	pH	Conductivity	TDS	DO	DO%	ORP	Other
1617	12.80	6.82	2.027	1.710	3.73	35.6	48.6	
1619	13.14	6.83	2.040	1.715	3.22	30.6	43.9	
1621	13.22	6.82	2.044	1.714	2.73	26.3	41.8	
1622	13.10	6.82	2.042	1.718	2.78	27.1	40.3	

Sampling Equipment: Low Flow Pump / Disposable Bailer

Constituents Sampled	Container Description	Preservative
BTEX	3 VOAs	HCL
Chloride	32oz Plastics	None
PAHs	32oz Ambers	None

Remarks

Sampling Personnel

Well Casing Volumes

Gal./ft.				
	1 ¼" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1 ½" = 0.10	2 ½" = 0.24	3" ½ = 0.50	6" = 1.46

APPENDIX B

LABORATORY ANALYTICAL REPORT

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conoco Phillips

Certificate of Analysis Number:

09010947

Report To:		Project Name:	COP Federal Com #15
Tetra Tech, Inc.		Site:	Farmington, NM
Kelly Blanchard		Site Address:	
6121 Indian School Road, N.E.			
Suite 200		PO Number:	4509596743
Albuquerque		State:	New Mexico
NM		State Cert. No.:	
87110-		Date Reported:	2/5/2009
ph: (505) 237-8440	fax:		

This Report Contains A Total Of 19 Pages

Excluding This Page, Chain Of Custody

And

Any Attachments

2/5/2009

Date

Test results meet all requirements of NELAC, unless specified in the narrative.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Case Narrative for:

Conoco Phillips

Certificate of Analysis Number:

09010947

Report To:		Project Name:	COP Federal Com #15
Tetra Tech, Inc.		Site:	Farmington, NM
Kelly Blanchard		Site Address:	
6121 Indian School Road, N.E.			
Suite 200		PO Number:	4509596743
Albuquerque		State:	New Mexico
NM		State Cert. No.:	
87110-			
ph: (505) 237-8440	fax:	Date Reported:	2/5/2009

Per the Conoco Phillips TSM Revision 0, a copy of the internal chain of custody is to be included in final data package. However, due to LIMS limitations, this cannot be provided at this time.

Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

Due to limited sample volume, a Matrix Spike (MS) or Matrix Spike Duplicate (MSD) was not extracted with Batch ID:87445 and 87488 for the Semivolatile Organics analysis by SW846 Method 8270C. A Laboratory Control Sample (LCS) and a Laboratory Control Sample Duplicate (LCSD) were extracted with the analytical batch and serve as the batch quality control (QC). The LCS and LCSD recovered acceptably and precision criteria were met.

Some of the percent recoveries and RPD's on the QC report for the MS/MSD may be different than the calculated recoveries and RPD's using the sample result and the MS/MSD results that appear on the report because, the actual raw result is used to perform the calculations for percent recovery and RPD.

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

Erica Cardenas
Project Manager

Date

Test results meet all requirements of NELAC, unless specified in the narrative.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Conoco Phillips

Certificate of Analysis Number:

09010947

Report To: Tetra Tech, Inc.
Kelly Blanchard
6121 Indian School Road, N.E.
Suite 200
Albuquerque
NM
87110-
ph: (505) 237-8440 fax: (505) 881-3283

Fax To:

Project Name: COP Federal Com #15
Site: Farmington, NM
Site Address:

PO Number: 4509596743
State: New Mexico
State Cert. No.:
Date Reported: 2/5/2009

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
MW-3	09010947-01	Water	1/22/2009 3:45:00 PM	1/24/2009 10:30:00 AM		☐
MW-4	09010947-02	Water	1/22/2009 3:30:00 PM	1/24/2009 10:30:00 AM		☐
MW-5	09010947-03	Water	1/22/2009 4:30:00 PM	1/24/2009 10:30:00 AM		☐
MW-1	09010947-04	Water	1/22/2009 2:30:00 PM	1/24/2009 10:30:00 AM		☐
MW-1	09010947-04	Water	1/22/2009 2:30:00 PM	1/24/2009 10:30:00 AM	316974	☐
MW-2	09010947-05	Water	1/22/2009 3:10:00 PM	1/24/2009 10:30:00 AM	316974	☐
Duplicate	09010947-06	Water	1/22/2009 2:30:00 PM	1/24/2009 10:30:00 AM	316974	☐
Trip Blank	09010947-07	Water	1/22/2009	1/24/2009 10:30:00 AM	316974	☐

Erica Cardenas
Project Manager

2/5/2009
Date

Richard R. Reed
Laboratory Director

Ted Yen
Quality Assurance Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-3 **Collected:** 01/22/2009 15:45 **SPL Sample ID:** 09010947-01

Site: Farmington, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
ION CHROMATOGRAPHY			**MCL**	**E300.0**	**Units: mg/L**		
Chloride	22		1	2	02/04/09 18:49	BDG	4894349
SEMIVOLATILES ORGANICS BY METHOD 8270C			**MCL**	**SW8270C**	**Units: ug/L**		
1-Methylnaphthalene	ND		5	1	01/28/09 18:56	GY	4882857
2-Methylnaphthalene	ND		5	1	01/28/09 18:56	GY	4882857
Acenaphthene	ND		5	1	01/28/09 18:56	GY	4882857
Acenaphthylene	ND		5	1	01/28/09 18:56	GY	4882857
Anthracene	ND		5	1	01/28/09 18:56	GY	4882857
Benz(a)anthracene	ND		5	1	01/28/09 18:56	GY	4882857
Benzo(a)pyrene	ND		5	1	01/28/09 18:56	GY	4882857
Benzo(b)fluoranthene	ND		5	1	01/28/09 18:56	GY	4882857
Benzo(g,h,i)perylene	ND		5	1	01/28/09 18:56	GY	4882857
Benzo(k)fluoranthene	ND		5	1	01/28/09 18:56	GY	4882857
Chrysene	ND		5	1	01/28/09 18:56	GY	4882857
Dibenz(a,h)anthracene	ND		5	1	01/28/09 18:56	GY	4882857
Dibenzofuran	ND		5	1	01/28/09 18:56	GY	4882857
Fluoranthene	ND		5	1	01/28/09 18:56	GY	4882857
Fluorene	ND		5	1	01/28/09 18:56	GY	4882857
Indeno(1,2,3-cd)pyrene	ND		5	1	01/28/09 18:56	GY	4882857
Naphthalene	ND		5	1	01/28/09 18:56	GY	4882857
Phenanthrene	ND		5	1	01/28/09 18:56	GY	4882857
Pyrene	ND		5	1	01/28/09 18:56	GY	4882857
Surr: 2-Fluorobiphenyl	30.8		% 23-116	1	01/28/09 18:56	GY	4882857
Surr: Nitrobenzene-d5	24.8		% 21-114	1	01/28/09 18:56	GY	4882857
Surr: Terphenyl-d14	18.56MI	*	% 22-141	1	01/28/09 18:56	GY	4882857

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	01/28/2009 13:09	LLL	1.00

VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
Benzene	ND		5	1	01/30/09 16:28	E_G	4886254
Ethylbenzene	ND		5	1	01/30/09 16:28	E_G	4886254
Toluene	ND		5	1	01/30/09 16:28	E_G	4886254
m,p-Xylene	ND		5	1	01/30/09 16:28	E_G	4886254
o-Xylene	ND		5	1	01/30/09 16:28	E_G	4886254
Xylenes,Total	ND		5	1	01/30/09 16:28	E_G	4886254
Surr: 1,2-Dichloroethane-d4	96.0		% 62-130	1	01/30/09 16:28	E_G	4886254
Surr: 4-Bromofluorobenzene	104		% 70-130	1	01/30/09 16:28	E_G	4886254
Surr: Toluene-d8	106		% 74-122	1	01/30/09 16:28	E_G	4886254

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-4 **Collected:** 01/22/2009 15:30 **SPL Sample ID:** 09010947-02

Site: Farmington, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
ION CHROMATOGRAPHY			**MCL**	**E300.0**	**Units: mg/L**		
Chloride	42.1		2.5	5	02/04/09 19:07	BDG	4894350
SEMIVOLATILES ORGANICS BY METHOD 8270C			**MCL**	**SW8270C**	**Units: ug/L**		
1-Methylnaphthalene	ND		5	1	01/30/09 14:53	GY	4888392
2-Methylnaphthalene	ND		5	1	01/30/09 14:53	GY	4888392
Acenaphthene	ND		5	1	01/30/09 14:53	GY	4888392
Acenaphthylene	ND		5	1	01/30/09 14:53	GY	4888392
Anthracene	ND		5	1	01/30/09 14:53	GY	4888392
Benz(a)anthracene	ND		5	1	01/30/09 14:53	GY	4888392
Benzo(a)pyrene	ND		5	1	01/30/09 14:53	GY	4888392
Benzo(b)fluoranthene	ND		5	1	01/30/09 14:53	GY	4888392
Benzo(g,h,i)perylene	ND		5	1	01/30/09 14:53	GY	4888392
Benzo(k)fluoranthene	ND		5	1	01/30/09 14:53	GY	4888392
Chrysene	ND		5	1	01/30/09 14:53	GY	4888392
Dibenz(a,h)anthracene	ND		5	1	01/30/09 14:53	GY	4888392
Dibenzofuran	ND		5	1	01/30/09 14:53	GY	4888392
Fluoranthene	ND		5	1	01/30/09 14:53	GY	4888392
Fluorene	ND		5	1	01/30/09 14:53	GY	4888392
Indeno(1,2,3-cd)pyrene	ND		5	1	01/30/09 14:53	GY	4888392
Naphthalene	ND		5	1	01/30/09 14:53	GY	4888392
Phenanthrene	ND		5	1	01/30/09 14:53	GY	4888392
Pyrene	ND		5	1	01/30/09 14:53	GY	4888392
Surr: 2-Fluorobiphenyl	84.2		% 23-116	1	01/30/09 14:53	GY	4888392
Surr: Nitrobenzene-d5	79.0		% 21-114	1	01/30/09 14:53	GY	4888392
Surr: Terphenyl-d14	75.6		% 22-141	1	01/30/09 14:53	GY	4888392

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	01/29/2009 13:19	LLL	1.00

VOLATILE ORGANICS BY METHOD 8260B			**MCL**	**SW8260B**	**Units: ug/L**		
Benzene	ND		5	1	01/30/09 16:55	E_G	4886257
Ethylbenzene	ND		5	1	01/30/09 16:55	E_G	4886257
Toluene	ND		5	1	01/30/09 16:55	E_G	4886257
m,p-Xylene	ND		5	1	01/30/09 16:55	E_G	4886257
o-Xylene	ND		5	1	01/30/09 16:55	E_G	4886257
Xylenes,Total	ND		5	1	01/30/09 16:55	E_G	4886257
Surr: 1,2-Dichloroethane-d4	104		% 62-130	1	01/30/09 16:55	E_G	4886257
Surr: 4-Bromofluorobenzene	102		% 70-130	1	01/30/09 16:55	E_G	4886257
Surr: Toluene-d8	100		% 74-122	1	01/30/09 16:55	E_G	4886257

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-5 **Collected:** 01/22/2009 16:30 **SPL Sample ID:** 09010947-03

Site: Farmington, NM

Analyses/Method	Result	QUAL		Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
ION CHROMATOGRAPHY				**MCL**	**E300.0**	**Units: mg/L**		
Chloride	35.8			2.5	5	02/04/09 19:24	BDG	4894351
SEMIVOLATILES ORGANICS BY METHOD 8270C				**MCL**	**SW8270C**	**Units: ug/L**		
1-Methylnaphthalene	ND			5	1	01/28/09 19:58	GY	4882859
2-Methylnaphthalene	ND			5	1	01/28/09 19:58	GY	4882859
Acenaphthene	ND			5	1	01/28/09 19:58	GY	4882859
Acenaphthylene	ND			5	1	01/28/09 19:58	GY	4882859
Anthracene	ND			5	1	01/28/09 19:58	GY	4882859
Benz(a)anthracene	ND			5	1	01/28/09 19:58	GY	4882859
Benzo(a)pyrene	ND			5	1	01/28/09 19:58	GY	4882859
Benzo(b)fluoranthene	ND			5	1	01/28/09 19:58	GY	4882859
Benzo(g,h,i)perylene	ND			5	1	01/28/09 19:58	GY	4882859
Benzo(k)fluoranthene	ND			5	1	01/28/09 19:58	GY	4882859
Chrysene	ND			5	1	01/28/09 19:58	GY	4882859
Dibenz(a,h)anthracene	ND			5	1	01/28/09 19:58	GY	4882859
Dibenzofuran	ND			5	1	01/28/09 19:58	GY	4882859
Fluoranthene	ND			5	1	01/28/09 19:58	GY	4882859
Fluorene	ND			5	1	01/28/09 19:58	GY	4882859
Indeno(1,2,3-cd)pyrene	ND			5	1	01/28/09 19:58	GY	4882859
Naphthalene	ND			5	1	01/28/09 19:58	GY	4882859
Phenanthrene	ND			5	1	01/28/09 19:58	GY	4882859
Pyrene	ND			5	1	01/28/09 19:58	GY	4882859
Surr: 2-Fluorobiphenyl	65.8		%	23-116	1	01/28/09 19:58	GY	4882859
Surr: Nitrobenzene-d5	57.2		%	21-114	1	01/28/09 19:58	GY	4882859
Surr: Terphenyl-d14	15.24MI	*	%	22-141	1	01/28/09 19:58	GY	4882859

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	01/28/2009 13:09	LLL	1.00

VOLATILE ORGANICS BY METHOD 8260B				**MCL**	**SW8260B**	**Units: ug/L**		
Benzene	ND			5	1	01/30/09 17:21	E_G	4886260
Ethylbenzene	ND			5	1	01/30/09 17:21	E_G	4886260
Toluene	ND			5	1	01/30/09 17:21	E_G	4886260
m,p-Xylene	ND			5	1	01/30/09 17:21	E_G	4886260
o-Xylene	ND			5	1	01/30/09 17:21	E_G	4886260
Xylenes,Total	ND			5	1	01/30/09 17:21	E_G	4886260
Surr: 1,2-Dichloroethane-d4	98.0		%	62-130	1	01/30/09 17:21	E_G	4886260
Surr: 4-Bromofluorobenzene	102		%	70-130	1	01/30/09 17:21	E_G	4886260
Surr: Toluene-d8	100		%	74-122	1	01/30/09 17:21	E_G	4886260

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-1 **Collected:** 01/22/2009 14:30 **SPL Sample ID:** 09010947-04

Site: Farmington, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
ION CHROMATOGRAPHY			**MCL**	**E300.0**	**Units: mg/L**		
Chloride	74.8		5	10	02/04/09 19:41	BDG	4894352
SEMIVOLATILES ORGANICS BY METHOD 8270C			**MCL**	**SW8270C**	**Units: ug/L**		
1-Methylnaphthalene	ND		5	1	01/28/09 20:29	GY	4882860
2-Methylnaphthalene	ND		5	1	01/28/09 20:29	GY	4882860
Acenaphthene	ND		5	1	01/28/09 20:29	GY	4882860
Acenaphthylene	ND		5	1	01/28/09 20:29	GY	4882860
Anthracene	ND		5	1	01/28/09 20:29	GY	4882860
Benz(a)anthracene	ND		5	1	01/28/09 20:29	GY	4882860
Benzo(a)pyrene	ND		5	1	01/28/09 20:29	GY	4882860
Benzo(b)fluoranthene	ND		5	1	01/28/09 20:29	GY	4882860
Benzo(g,h,i)perylene	ND		5	1	01/28/09 20:29	GY	4882860
Benzo(k)fluoranthene	ND		5	1	01/28/09 20:29	GY	4882860
Chrysene	ND		5	1	01/28/09 20:29	GY	4882860
Dibenz(a,h)anthracene	ND		5	1	01/28/09 20:29	GY	4882860
Dibenzofuran	ND		5	1	01/28/09 20:29	GY	4882860
Fluoranthene	ND		5	1	01/28/09 20:29	GY	4882860
Fluorene	ND		5	1	01/28/09 20:29	GY	4882860
Indeno(1,2,3-cd)pyrene	ND		5	1	01/28/09 20:29	GY	4882860
Naphthalene	ND		5	1	01/28/09 20:29	GY	4882860
Phenanthrene	ND		5	1	01/28/09 20:29	GY	4882860
Pyrene	ND		5	1	01/28/09 20:29	GY	4882860
Surr: 2-Fluorobiphenyl	72.6		% 23-116	1	01/28/09 20:29	GY	4882860
Surr: Nitrobenzene-d5	64.2		% 21-114	1	01/28/09 20:29	GY	4882860
Surr: Terphenyl-d14	16MI	*	% 22-141	1	01/28/09 20:29	GY	4882860

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	01/28/2009 13:09	LLL	1.00

VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
Benzene	ND		5	1	01/30/09 17:48	E_G	4886263
Ethylbenzene	ND		5	1	01/30/09 17:48	E_G	4886263
Toluene	ND		5	1	01/30/09 17:48	E_G	4886263
m,p-Xylene	ND		5	1	01/30/09 17:48	E_G	4886263
o-Xylene	ND		5	1	01/30/09 17:48	E_G	4886263
Xylenes,Total	ND		5	1	01/30/09 17:48	E_G	4886263
Surr: 1,2-Dichloroethane-d4	96.0		% 62-130	1	01/30/09 17:48	E_G	4886263
Surr: 4-Bromofluorobenzene	102		% 70-130	1	01/30/09 17:48	E_G	4886263
Surr: Toluene-d8	100		% 74-122	1	01/30/09 17:48	E_G	4886263

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-2 **Collected:** 01/22/2009 15:10 **SPL Sample ID:** 09010947-05

Site: Farmington, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
ION CHROMATOGRAPHY			**MCL**	**E300.0**	**Units: mg/L**		
Chloride	36.1		5	10	02/04/09 19:58	BDG	4894353
SEMIVOLATILES ORGANICS BY METHOD 8270C			**MCL**	**SW8270C**	**Units: ug/L**		
1-Methylnaphthalene	ND		5	1	01/28/09 20:59	GY	4882861
2-Methylnaphthalene	ND		5	1	01/28/09 20:59	GY	4882861
Acenaphthene	ND		5	1	01/28/09 20:59	GY	4882861
Acenaphthylene	ND		5	1	01/28/09 20:59	GY	4882861
Anthracene	ND		5	1	01/28/09 20:59	GY	4882861
Benz(a)anthracene	ND		5	1	01/28/09 20:59	GY	4882861
Benzo(a)pyrene	ND		5	1	01/28/09 20:59	GY	4882861
Benzo(b)fluoranthene	ND		5	1	01/28/09 20:59	GY	4882861
Benzo(g,h,i)perylene	ND		5	1	01/28/09 20:59	GY	4882861
Benzo(k)fluoranthene	ND		5	1	01/28/09 20:59	GY	4882861
Chrysene	ND		5	1	01/28/09 20:59	GY	4882861
Dibenz(a,h)anthracene	ND		5	1	01/28/09 20:59	GY	4882861
Dibenzofuran	ND		5	1	01/28/09 20:59	GY	4882861
Fluoranthene	ND		5	1	01/28/09 20:59	GY	4882861
Fluorene	ND		5	1	01/28/09 20:59	GY	4882861
Indeno(1,2,3-cd)pyrene	ND		5	1	01/28/09 20:59	GY	4882861
Naphthalene	ND		5	1	01/28/09 20:59	GY	4882861
Phenanthrene	ND		5	1	01/28/09 20:59	GY	4882861
Pyrene	ND		5	1	01/28/09 20:59	GY	4882861
Surr: 2-Fluorobiphenyl	72.2		% 23-116	1	01/28/09 20:59	GY	4882861
Surr: Nitrobenzene-d5	64.8		% 21-114	1	01/28/09 20:59	GY	4882861
Surr: Terphenyl-d14	19MI	*	% 22-141	1	01/28/09 20:59	GY	4882861

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	01/28/2009 13:09	LLL	1.00

VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
Benzene	ND		5	1	01/30/09 18:15	E_G	4886267
Ethylbenzene	7		5	1	01/30/09 18:15	E_G	4886267
Toluene	ND		5	1	01/30/09 18:15	E_G	4886267
m,p-Xylene	17		5	1	01/30/09 18:15	E_G	4886267
o-Xylene	ND		5	1	01/30/09 18:15	E_G	4886267
Xylenes,Total	17		5	1	01/30/09 18:15	E_G	4886267
Surr: 1,2-Dichloroethane-d4	100		% 62-130	1	01/30/09 18:15	E_G	4886267
Surr: 4-Bromofluorobenzene	104		% 70-130	1	01/30/09 18:15	E_G	4886267
Surr: Toluene-d8	100		% 74-122	1	01/30/09 18:15	E_G	4886267

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
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Client Sample ID: Duplicate **Collected:** 01/22/2009 14:30 **SPL Sample ID:** 09010947-06

Site: Farmington, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			**MCL**	**SW8260B**	**Units: ug/L**		
Benzene	ND		5	1	01/30/09 18:43	E_G	4886270
Ethylbenzene	5		5	1	01/30/09 18:43	E_G	4886270
Toluene	ND		5	1	01/30/09 18:43	E_G	4886270
m,p-Xylene	12		5	1	01/30/09 18:43	E_G	4886270
o-Xylene	ND		5	1	01/30/09 18:43	E_G	4886270
Xylenes,Total	12		5	1	01/30/09 18:43	E_G	4886270
Surr: 1,2-Dichloroethane-d4	100		% 62-130	1	01/30/09 18:43	E_G	4886270
Surr: 4-Bromofluorobenzene	104		% 70-130	1	01/30/09 18:43	E_G	4886270
Surr: Toluene-d8	102		% 74-122	1	01/30/09 18:43	E_G	4886270

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: Trip Blank **Collected:** 01/22/2009 0:00 **SPL Sample ID:** 09010947-07

Site: Farmington, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			**MCL**	**SW8260B**	**Units: ug/L**		
Benzene	ND		5	1	01/30/09 12:50	E_G	4886234
Ethylbenzene	ND		5	1	01/30/09 12:50	E_G	4886234
Toluene	ND		5	1	01/30/09 12:50	E_G	4886234
m,p-Xylene	ND		5	1	01/30/09 12:50	E_G	4886234
o-Xylene	ND		5	1	01/30/09 12:50	E_G	4886234
Xylenes,Total	ND		5	1	01/30/09 12:50	E_G	4886234
Surr: 1,2-Dichloroethane-d4	98.0		% 62-130	1	01/30/09 12:50	E_G	4886234
Surr: 4-Bromofluorobenzene	100		% 70-130	1	01/30/09 12:50	E_G	4886234
Surr: Toluene-d8	100		% 74-122	1	01/30/09 12:50	E_G	4886234

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

Quality Control Documentation

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Conoco Phillips

COP Federal Com #15

Analysis: Semivolatiles Organics by Method 8270C
Method: SW8270C
WorkOrder: 09010947
Lab Batch ID: 87445

Method Blank

RunID: H_090128B-4882854 Units: ug/L
Analysis Date: 01/28/2009 17:23 Analyst: GY
Preparation Date: 01/28/2009 13:09 Prep By: LLL Method: SW3510C

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09010947-01C	MW-3
09010947-03C	MW-5
09010947-04C	MW-1
09010947-05C	MW-2

Analyte	Result	Rep Limit
1-Methylnaphthalene	ND	5.0
2-Methylnaphthalene	ND	5.0
Acenaphthene	ND	5.0
Acenaphthylene	ND	5.0
Anthracene	ND	5.0
Benz(a)anthracene	ND	5.0
Benzo(a)pyrene	ND	5.0
Benzo(b)fluoranthene	ND	5.0
Benzo(g,h,i)perylene	ND	5.0
Benzo(k)fluoranthene	ND	5.0
Chrysene	ND	5.0
Dibenz(a,h)anthracene	ND	5.0
Dibenzofuran	ND	5.0
Fluoranthene	ND	5.0
Fluorene	ND	5.0
Indeno(1,2,3-cd)pyrene	ND	5.0
Naphthalene	ND	5.0
Phenanthrene	ND	5.0
Pyrene	ND	5.0
Surr: 2-Fluorobiphenyl	69.8	23-116
Surr: Nitrobenzene-d5	66.0	21-114
Surr: Terphenyl-d14	68.8	22-141

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

RunID: H_090128B-4882855 Units: ug/L
Analysis Date: 01/28/2009 17:55 Analyst: GY
Preparation Date: 01/28/2009 13:09 Prep By: LLL Method: SW3510C

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
1-Methylnaphthalene	50.0	38.7	77.4	50.0	40.6	81.2	4.8	50	30	120
2-Methylnaphthalene	50.0	38.5	77.0	50.0	39.4	78.8	2.3	50	20	170
Acenaphthene	50.0	40.2	80.4	50.0	41.1	82.2	2.2	31	30	150
Acenaphthylene	50.0	39.4	78.8	50.0	39.8	79.6	1.0	50	33	250
Anthracene	50.0	40.1	80.2	50.0	41.1	82.2	2.5	50	27	133
Benz(a)anthracene	50.0	37.8	75.6	50.0	38.4	76.8	1.6	50	33	143
Benzo(a)pyrene	50.0	40.1	80.2	50.0	41.0	82.0	2.2	50	17	163
Benzo(b)fluoranthene	50.0	39.6	79.2	50.0	39.8	79.6	0.5	50	24	159

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Conoco Phillips

COP Federal Com #15

Analysis: Semivolatiles Organics by Method 8270C **WorkOrder:** 09010947
Method: SW8270C **Lab Batch ID:** 87445

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

RunID: H_090128B-4882855 Units: ug/L
Analysis Date: 01/28/2009 17:55 Analyst: GY
Preparation Date: 01/28/2009 13:09 Prep By: LLL Method: SW3510C

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Benzo(g,h,i)perylene	50.0	42.1	84.2	50.0	43.1	86.2	2.3	50	30	160
Benzo(k)fluoranthene	50.0	39.8	79.6	50.0	41.0	82.0	3.0	50	11	162
Chrysene	50.0	38.7	77.4	50.0	39.6	79.2	2.3	50	17	168
Dibenz(a,h)anthracene	50.0	42.4	84.8	50.0	43.3	86.6	2.1	50	30	160
Dibenzofuran	50.0	40.5	81.0	50.0	41.9	83.8	3.4	50	30	150
Fluoranthene	50.0	40.6	81.2	50.0	42.0	84.0	3.4	50	26	137
Fluorene	50.0	38.3	76.6	50.0	39.9	79.8	4.1	50	30	150
Indeno(1,2,3-cd)pyrene	50.0	42.4	84.8	50.0	42.7	85.4	0.7	50	30	160
Naphthalene	50.0	39.9	79.8	50.0	41.5	83.0	3.9	50	21	133
Phenanthrene	50.0	41.2	82.4	50.0	42.7	85.4	3.6	50	10	140
Pyrene	50.0	36.3	72.6	50.0	37.6	75.2	3.5	38	30	150
Surr: 2-Fluorobiphenyl	50.0	46.7	93.4	50.0	47.4	94.8	1.5	30	23	116
Surr: Nitrobenzene-d5	50.0	44.6	89.2	50.0	45.4	90.8	1.8	30	21	114
Surr: Terphenyl-d14	50.0	42.5	85.0	50.0	43.0	86.0	1.2	30	22	141

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Conoco Phillips

COP Federal Com #15

Analysis: Semivolatiles Organics by Method 8270C
Method: SW8270C
WorkOrder: 09010947
Lab Batch ID: 87488

Method Blank

RunID: H_090130A-4888389 Units: ug/L
Analysis Date: 01/30/2009 11:15 Analyst: GY
Preparation Date: 01/29/2009 13:19 Prep By: LLL Method: SW3510C

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09010947-02C	MW-4

Analyte	Result	Rep Limit
1-Methylnaphthalene	ND	5.0
2-Methylnaphthalene	ND	5.0
Acenaphthene	ND	5.0
Acenaphthylene	ND	5.0
Anthracene	ND	5.0
Benz(a)anthracene	ND	5.0
Benzo(a)pyrene	ND	5.0
Benzo(b)fluoranthene	ND	5.0
Benzo(g,h,i)perylene	ND	5.0
Benzo(k)fluoranthene	ND	5.0
Chrysene	ND	5.0
Dibenz(a,h)anthracene	ND	5.0
Dibenzofuran	ND	5.0
Fluoranthene	ND	5.0
Fluorene	ND	5.0
Indeno(1,2,3-cd)pyrene	ND	5.0
Naphthalene	ND	5.0
Phenanthrene	ND	5.0
Pyrene	ND	5.0
Surr: 2-Fluorobiphenyl	92.4	23-116
Surr: Nitrobenzene-d5	88.0	21-114
Surr: Terphenyl-d14	96.2	22-141

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

RunID: H_090130A-4888390 Units: ug/L
Analysis Date: 01/30/2009 11:47 Analyst: GY
Preparation Date: 01/29/2009 13:19 Prep By: LLL Method: SW3510C

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
1-Methylnaphthalene	50.0	49.4	98.8	50.0	51.3	103	3.8	50	30	120
2-Methylnaphthalene	50.0	49.4	98.8	50.0	51.4	103	4.0	50	20	170
Acenaphthene	50.0	50.6	101	50.0	52.6	105	3.9	31	30	150
Acenaphthylene	50.0	50.0	100	50.0	52.1	104	4.1	50	33	250
Anthracene	50.0	50.1	100	50.0	52.7	105	5.1	50	27	133
Benz(a)anthracene	50.0	48.7	97.4	50.0	50.4	101	3.4	50	33	143
Benzo(a)pyrene	50.0	51.4	103	50.0	53.3	107	3.6	50	17	163
Benzo(b)fluoranthene	50.0	51.2	102	50.0	52.0	104	1.6	50	24	159

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Conoco Phillips

COP Federal Com #15

Analysis: Semivolatiles Organics by Method 8270C **WorkOrder:** 09010947
Method: SW8270C **Lab Batch ID:** 87488

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

RunID: H_090130A-4888390 Units: ug/L
Analysis Date: 01/30/2009 11:47 Analyst: GY
Preparation Date: 01/29/2009 13:19 Prep By: LLL Method: SW3510C

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Benzo(g,h,i)perylene	50.0	52.5	105	50.0	54.1	108	3.0	50	30	160
Benzo(k)fluoranthene	50.0	50.6	101	50.0	53.0	106	4.6	50	11	162
Chrysene	50.0	48.5	97.0	50.0	50.7	101	4.4	50	17	168
Dibenz(a,h)anthracene	50.0	52.8	106	50.0	52.8	106	0.0	50	30	160
Dibenzofuran	50.0	51.6	103	50.0	53.5	107	3.6	50	30	150
Fluoranthene	50.0	47.3	94.6	50.0	49.8	99.6	5.1	50	26	137
Fluorene	50.0	49.4	98.8	50.0	51.5	103	4.2	50	30	150
Indeno(1,2,3-cd)pyrene	50.0	48.0	96.0	50.0	48.1	96.2	0.2	50	30	160
Naphthalene	50.0	49.7	99.4	50.0	51.9	104	4.3	50	21	133
Phenanthrene	50.0	50.7	101	50.0	53.7	107	5.7	50	10	140
Pyrene	50.0	53.7	107	50.0	55.6	111	3.5	38	30	150
Surr: 2-Fluorobiphenyl	50.0	54.4	109	50.0	55.1	110	1.3	30	23	116
Surr: Nitrobenzene-d5	50.0	51.3	103	50.0	53.1	106	3.4	30	21	114
Surr: Terphenyl-d14	50.0	56.6	113	50.0	57.5	115	1.6	30	22	141

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Conoco Phillips

COP Federal Com #15

Analysis: Volatile Organics by Method 8260B
Method: SW8260B
WorkOrder: 09010947
Lab Batch ID: R263981

Method Blank

RunID: L_090130A-4886225 Units: ug/L
Analysis Date: 01/30/2009 11:28 Analyst: E_G
Preparation Date: 01/30/2009 11:28 Prep By: Method:

Analyte	Result	Rep Limit
Benzene	ND	5.0
Ethylbenzene	ND	5.0
Toluene	ND	5.0
m,p-Xylene	ND	5.0
o-Xylene	ND	5.0
Xylenes,Total	ND	5.0
Surr: 1,2-Dichloroethane-d4	98.0	62-130
Surr: 4-Bromofluorobenzene	102.0	70-130
Surr: Toluene-d8	102.0	74-122

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09010947-01A	MW-3
09010947-02A	MW-4
09010947-03A	MW-5
09010947-04A	MW-1
09010947-05A	MW-2
09010947-06A	Duplicate
09010947-07A	Trip Blank

Laboratory Control Sample (LCS)

RunID: L_090130A-4886317 Units: ug/L
Analysis Date: 01/30/2009 10:57 Analyst: E_G
Preparation Date: 01/30/2009 10:57 Prep By: Method:

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	20.0	20.0	100	76	126
Ethylbenzene	20.0	21.0	105	67	122
Toluene	20.0	21.0	105	70	131
m,p-Xylene	40.0	43.0	108	72	150
o-Xylene	20.0	21.0	105	78	141
Xylenes,Total	60	64	110	72	150
Surr: 1,2-Dichloroethane-d4	50.0	49	98.0	62	130
Surr: 4-Bromofluorobenzene	50.0	54	108	70	130
Surr: Toluene-d8	50.0	51	102	74	122

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 09011124-04
RunID: L_090130A-4886245 Units: ug/L
Analysis Date: 01/30/2009 15:06 Analyst: E_G

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

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8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Conoco Phillips

COP Federal Com #15

Analysis: Volatile Organics by Method 8260B
Method: SW8260B
WorkOrder: 09010947
Lab Batch ID: R263981

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Benzene	ND	20	20.0	100	20	18.0	90.0	10.5	22	76	127
Ethylbenzene	ND	20	21.0	105	20	19.0	95.0	10.0	20	35	175
Toluene	ND	20	20.0	100	20	20.0	100	0	24	70	131
m,p-Xylene	ND	40	43.0	108	40	40.0	100	7.23	20	35	175
o-Xylene	ND	20	21.0	105	20	20.0	100	4.88	20	35	175
Xylenes,Total	ND	60	64	110	60	60	100	6.5	20	35	175
Surr: 1,2-Dichloroethane-d4	ND	50	50	100	50	52.0	104	3.92	30	62	130
Surr: 4-Bromofluorobenzene	ND	50	54	108	50	54.0	108	0	30	70	130
Surr: Toluene-d8	ND	50	51	102	50	52.0	104	1.94	30	74	122

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

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HOUSTON, TX 77054
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Quality Control Report

Conoco Phillips

COP Federal Com #15

Analysis: Ion Chromatography
Method: E300.0

WorkOrder: 09010947
Lab Batch ID: R264452

Method Blank

RunID: IC2_090204A-4894341 Units: mg/L
Analysis Date: 02/04/2009 13:49 Analyst: BDG

Analyte	Result	Rep Limit
Chloride	ND	0.50

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09010947-01B	MW-3
09010947-02B	MW-4
09010947-03B	MW-5
09010947-04B	MW-1
09010947-05B	MW-2

Laboratory Control Sample (LCS)

RunID: IC2_090204A-4894342 Units: mg/L
Analysis Date: 02/04/2009 14:07 Analyst: BDG

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Chloride	10.00	11.18	111.8	85	115

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 09020122-01
RunID: IC2_090204A-4894346 Units: mg/L
Analysis Date: 02/04/2009 17:36 Analyst: BDG

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Chloride	ND	10	8.183	81.83	10	8.964	89.64	9.109	20	80	120

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

Sample Receipt Checklist

And

Chain of Custody

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Sample Receipt Checklist

Workorder:	09010947	Received By:	L_C
Date and Time Received:	1/24/2009 10:30:00 AM	Carrier name:	Fedex-Priority
Temperature:	3.5°C	Chilled by:	Water Ice

1.	Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2.	Custody seals intact on shippping container/cooler?	Yes ☑	No ☐	Not Present ☐
3.	Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4.	Chain of custody present?	Yes ☑	No ☐	
5.	Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
6.	Chain of custody agrees with sample labels?	Yes ☑	No ☐	
7.	Samples in proper container/bottle?	Yes ☑	No ☐	
8.	Sample containers intact?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test?	Yes ☑	No ☐	
10.	All samples received within holding time?	Yes ☑	No ☐	
11.	Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
12.	Water - VOA vials have zero headspace?	Yes ☑	No ☐	VOA Vials Not Present ☐
13.	Water - Preservation checked upon receipt (except VOA*)?	Yes ☐	No ☐	Not Applicable ☑

*VOA Preservation Checked After Sample Analysis

SPL Representative: Contact Date & Time:

Client Name Contacted:

Non Conformance Issues:

Client Instructions:

8880 Interchange Drive, Houston, TX 77054

Analysis Request and Chain of Custody Record

SPL Workorder No.: 90010947

Company Name: **Tetra Tech / Conoco Phillips**	
Contact: **Kelly Blanchard**	
Address: **6121 Indian School Rd. NE, Ste. 200**	
Phone/Fax: **(505) 237-8440 / (505) 237-8666**	
Email Address: **kelly.blanchard@tetratech.com**	
Invoice To:	
Purchase Order No:	
Project Name/No: **Federal Com #16**	
Site Address:	
Sampled By: K. Blanchard, Christine Mathews	

Sampling Event Description

- Quarterly [X]
- Semi-Annual [ ]
- WC-Waste Char. [ ]
- Other (describe below) [ ]

QA/QC Level

- TRRP [ ] LVL 3 [ ]
- STD [X] Other [ ]

SAMPLE ID	DATE	TIME	Water	Soil	Sludge	Other	Number Containers	Container Type	Preservative	BTEX - 8260	PAH - 8270	Chloride - 300
MW-3	1-22-09	1545	X				3	VOAs	HCL	X		
MW-3	1-22-09	1545	X				2	32oz Amber	None		X	
MW-3	1-22-09	1545	X				1	32oz Plastic	None			X
MW-4	1-22-09	1530	X				3	VOAs	HCL	X		
MW-4	1-22-09	1530	X				2	32/Amber	None		X	
MW-4	1-22-09	1530	X				1	32/Plastic	None			X
MW-5	1-22-09	1630	X				3	VOAs	HCL	X		
MW-5	1-22-09	1630	X				2	32/Amber	None		X	
MW-5	1-22-09	1630	X				1	32/Plastic	None			X
MW-1	1-22-09	1430	X				3	VOAs	HCL	X		

TAT

- 24hr [ ] 72hr [ ]
- 48hr [ ] 10 day [X]
- Other [ ] [ ]

Special Detection Limits (Specify): lowest possible

Special Reporting Requirements (Specify):

Consultant Remarks:

Laboratory Remarks:

PM review: DF 3-5-09

	Date	Time	
Relinquished by Sampler: Kelly Blanchard	1-23-09	14:00	Received by:
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date 1/24/09	Time 10:30	Received by SPL, Inc:

SPL, Inc.

Analysis Request & Chain of Custody Record

SPL Workorder No. 09016647 — 316974 — page ___ of ___

Client Name: Tetra Tech/Conoco Phillips
Address: 6121 Indian School Rd. Ste 200
Phone/Fax: 505-237-8440
Client Contact: Kelly Blanchard Email: kelly.blanchard@tetratech.com
Project Name/No.: Federal #15
Site Name:
Site Location: Farmington, NM
Invoice To: ConocoPhillips Ph:

SAMPLE ID	DATE	TIME	comp	grab	matrix (W=water S=soil O=oil SL=sludge X=other)	bottle (P=plastic A=amber glass G=glass V=vial X=other)	size (1=1 liter 4=4oz 40=vial 8=8oz 16=16oz X=other)	pres. (1=HCl 2=HNO3 3=H2SO4 X=other Ø None)	Number of Containers	BTEX-8260	PAH-8270	Chloride-300
MW-1 (cont)	1-22-09	1430			W	A	1	Ø	2		X	
MW-1	1-22-09	1430			W	P	1	Ø	1			X
MW-2	1-22-09	1510			W	V	40	1	3	X		
MW-2	1-22-09	1510			W	A	1	Ø	2		X	
MW-2	1-22-09	1510			W	P	1	Ø	1			X
Duplicate	1-22-09	1430			W	V	40	1	3	X		
Trip Blank	1-22-09	1555			W	V	40	1	2	X		

Client/Consultant Remarks:

Laboratory remarks:

Intact? ☑ Y ☐ N
Ice? ☑ Y ☐ N
Temp: 3.5

Requested TAT
Contract ☐ 72hr ☐
24hr ☐ Standard ☑
48hr ☐
Other ☐ ______

Special Reporting Requirements Results: Fax ☐ Email ☐ PDF ☐
Standard QC ☑ Level 3 QC ☐ Level 4 QC ☐ TX TRRP ☐ LA RECAP ☐

Special Detection Limits (specify): Low

PM review (initial): DF

1. Relinquished by Sampler: Kelly Blanchard	date 1-23-09	time	2. Received by:
3. Relinquished by:	date	time	4. Received by:
5. Relinquished by:	date 1/23/09	time 1/24/09 10:30	6. Received by Laboratory:

☐ 8880 Interchange Drive, Houston, TX 77054 (713) 660-0901
☐ 500 Ambassador Caffery Parkway, Scott, LA 70583 (337) 237-4775
☐ 459 Hughes Drive, Traverse City, MI 49686 (231) 947-5777