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**QUARTERLY GROUNDWATER
MONITORING REPORT
FIRST QUARTER 2009**

**CONOCOPHILLIPS
FEDERAL #15
FARMINGTON, NEW MEXICO**
OCD # 3R087

Prepared for:



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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 March 30, 2009, at the ConocoPhillips Federal #15 site in Farmington, New Mexico (Site). This event represents the fifth consecutive quarter of groundwater monitoring at the Site, and represents the third 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.

The 2008 quarterly groundwater monitoring events were conducted in March, July, and October of 2008 and in January 2009. The sampling event conducted on March 30, 2009 is the first quarter of sampling for 2009. March 2009 also marks the third consecutive quarterly groundwater monitoring event at the Site in which groundwater quality results for benzene, toluene, ethylbenzene and total xylenes (BTEX) were all 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 March 30, 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, southwest at an approximate gradient of 0.02 feet/foot (ft/ft) toward the Animas River, located approximately 3,200 feet south of the Site.

Groundwater sampling

Groundwater quality samples were collected from monitor wells MW-1, MW-2, MW-3, MW-4, and MW-5 during the March 30, 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 poly-vinyl disposable bailer was used in each well to purge and collect groundwater samples. 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 BTEX by Environmental Protection Agency (EPA) Method 8260B.

2.2 Groundwater Sampling Analytical Results

The March 2009 analysis of the collected groundwater samples indicates that all analyzed constituents are present in concentrations either below NMWQCC groundwater quality standards or were not detected above their respective laboratory reporting limits. 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). Benzene, ethylbenzene and total xylenes were detected in MW-2 at concentrations of 5.7 ug/l, 11 ug/l, and 22 ug/l, respectively. The NMWQCC groundwater standards for benzene, ethylbenzene and total xylenes are 10 ug/l, 750 ug/l and 620 ug/l. Historical laboratory analytical data, including the March 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 of the Site was included in the January 2009 (fourth quarter 2008) report.

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 March 2009 and are summarized below.

- MW-2 benzene concentrations decreased from 1,300 ug/L to 5.7 ug/l, just above the laboratory detection limit of 5ug/L.
- MW-2 toluene concentrations decreased from 3,300 ug/L (above the NMWQCC standard of 750 ug/L) to less than the laboratory reporting limit of 5 ug/L.
- MW-2 ethylbenzene concentrations decreased from 380 ug/L (below the NMWQCC standard of 750 ug/L) to 11 ug/L.
- MW-2 total xylenes concentrations decreased from 3,500 ug/L (above the NMWQCC standard of 620 ug/L) to 22 ug/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 March 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 March 2009. Additionally, chlorides have never been detected above NMWQCC groundwater quality standards in any Site monitoring well. Therefore, analysis of this constituent has been discontinued as of 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@tetrattech.com.

FIGURES

1. Site Location Map
2. Site Layout Map
3. Groundwater Elevation Contour Map

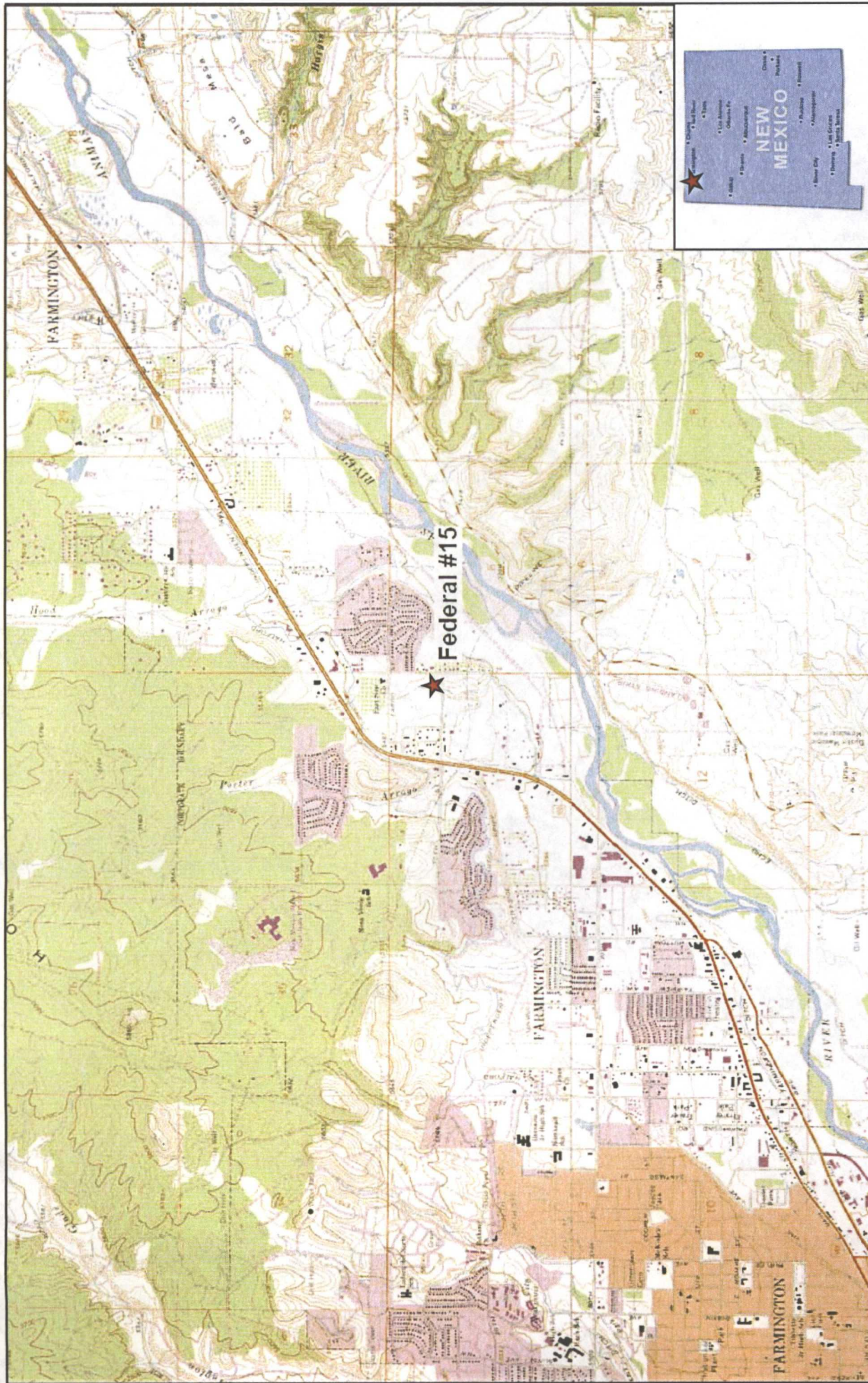


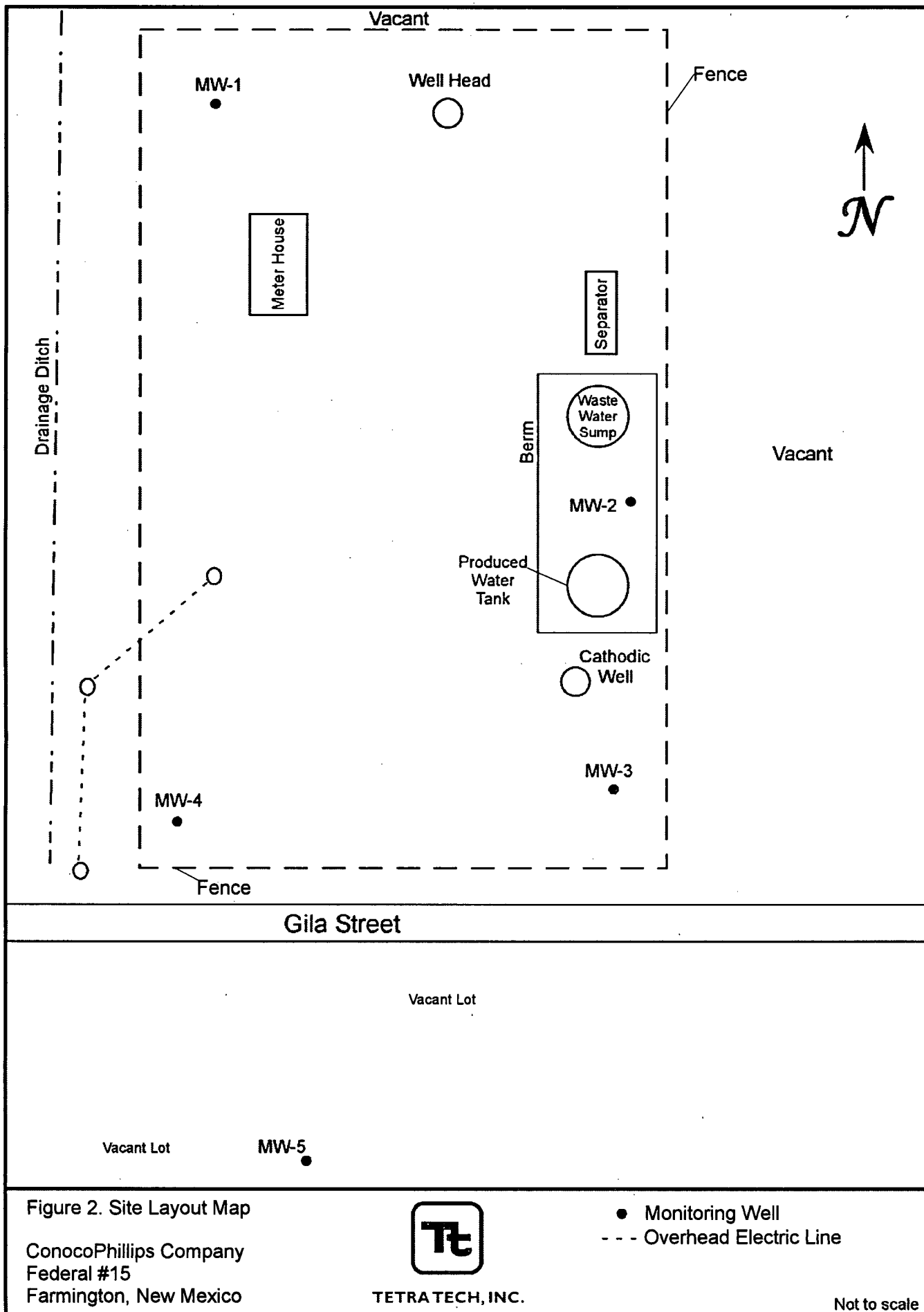
Figure 1. Site Location Map

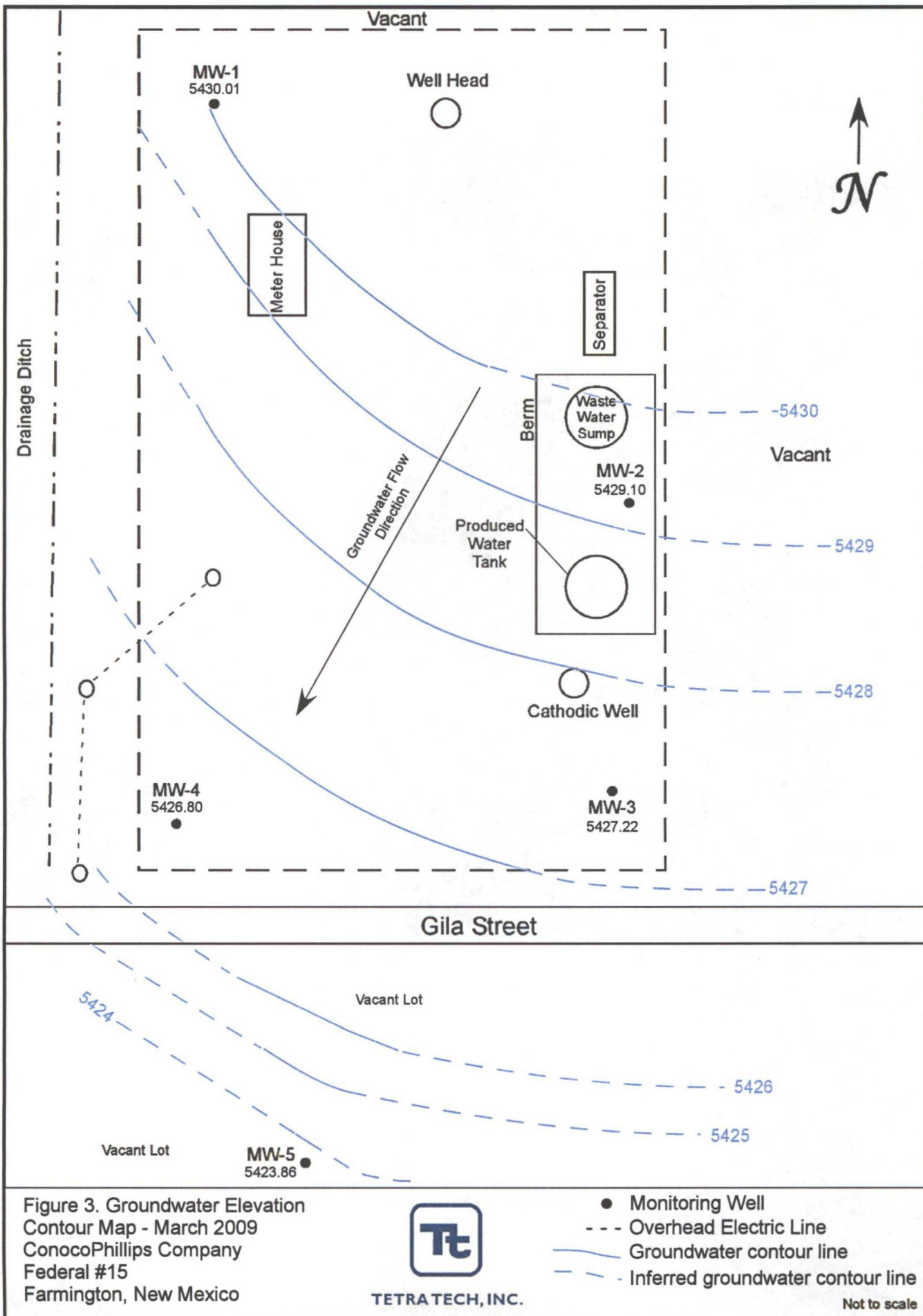
ConocoPhillips Company
Federal #15
Farmington, New Mexico 87401



TETRA TECH, INC.

★ Approximate ConocoPhillips
Federal #15 Site Location





TABLES

- I. Site History Timeline
2. Groundwater Elevation Summary (January 2005 – March 2009)
3. Laboratory Analytical Data Summary (January 2005 – March 2009)

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		236 gallons removed
May 15, 2006	Groundwater Removal from Monitor Well MW-2	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		346 gallons removed
May 15, 2007	Groundwater Removal from Monitor Well MW-2	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
March 30, 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 - March 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
				3/30/2009	7.98		5430.01
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
				3/30/2009	8.23		5429.10
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
				3/30/2009	7.91		5427.22

Table 2. Groundwater Elevation Summary (January 2005 - March 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
				3/30/2009	7.88		5426.80
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
				3/30/2009	10.30		5423.86

Explanation

(1) = Water level near bottom of monitor well

AM = Anomalous 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 - March 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
	3/30/2009	<5.0	<5.0	<5.0	<5.0	NA	NA	NA	NA	NA
	1/18/2005	1200	3300	380	3500	72	34	51	157	41
MW-2	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	<5.0	42.7
	Duplicate	<5.0	<5.0	13	27	NA	NA	NA	NA	NA
MW-3	10/21/2008	<5.0	<5.0	<5.0	5	<5.0	<5.0	<5.0	<5.0	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
	3/30/2009	5.7	<5.0	11	22	NA	NA	NA	NA	NA
	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
MW-4	7/21/2008	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	22
	10/21/2008	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	20.6
	1/22/2009	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	22
	3/30/2009	<5.0	<5.0	<5.0	<5.0	NA	NA	NA	NA	NA
	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	<5.0	22
MW-4	10/21/2008	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	25.1
	1/22/2009	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	42.1
	3/30/2009	<5.0	<5.0	<5.0	<5.0	NA	NA	NA	NA	NA
	Duplicate	<5.0	<5.0	<5.0	<5.0	NA	NA	NA	NA	NA

Table 3. Groundwater Laboratory Analytical Results Summary (January 2005 - March 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	3/30/2009	<5.0	<5.0	<5.0	<5.0	NA	NA	NA	NA	NA
		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



TETRA TECH, INC.

WATER SAMPLING FIELD FORM

Project Name Federal # 15Page 1 of 5Project No. 1158690097Site Location Gila Street, Farmington, NMSite/Well No. MW-1Coded/
Replicate No. _____Date 3/30/09Weather Sunny, windy, coldTime Sampling
Began _____Time Sampling
Completed 12:25

EVACUATION DATA

Description of Measuring Point (MP) Top of CasingHeight of MP Above/Below Land Surface _____ MP Elevation 5437.99 feet AMSLTotal Sounded Depth of Well Below MP 20 Water-Level Elevation _____Held _____ Depth to Water Below MP 7.90 Diameter of Casing 2"Wet _____ Water Column in Well 12.02 Gallons Pumped/Bailed Prior to Sampling 5Gallons per Foot .16Gallons in Well 1.92 x 3
= 5.76 Sampling Pump Intake Setting
(feet below land surface) N/APurging Equipment Geosquirt purge pump disposable bailer

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (C°)	pH	Conductivity	TDS in g/L	ORP (mV)	DO (mg/L)
<u>12:17</u>	<u>11.05</u>	<u>6.62</u>	<u>2151</u>	<u>1.396</u>	<u>86.4</u>	<u>9.5</u>
<u>12:19</u>	<u>10.82</u>	<u>6.63</u>	<u>2110</u>	<u>1.344</u>	<u>85.5</u>	<u>8.9</u>
<u>12:20</u>	<u>10.83</u>	<u>6.65</u>	<u>2041</u>	<u>1.3710</u>	<u>87.8</u>	<u>7.7</u>
<u>12:33</u>	<u>11.81</u>	<u>7.04</u>	<u>2008</u>	<u>1.344</u>	<u>80.0</u>	<u>7.5</u>

Sampling Equipment Geosquirt purge pump disposable bailer

Constituents Sampled

Container Description

Preservative

BTEX 3 - 40 mL glass VOAs HCLPAHs 2 - 1 L ambers noneChloride 4 - 1 L plastic noneRemarks Water is Murky with orange suspended particlesSampling Personnel CB, KB, CM

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

at a 3.5 gallons purged, water begins to clear



TETRA TECH, INC.

WATER SAMPLING FIELD FORM

Project Name Federal # 15Page 2 of 5Project No. 1158690097Site Location Gila Street, Farmington, NMSite/Well No. MW-2 Coded/
Replicate No. _____Date 3/30/09Weather Sunny, Windy, Cold Time Sampling
Began _____Time Sampling
Completed 12:35

EVACUATION DATA

Description of Measuring Point (MP) Top of CasingHeight of MP Above/Below Land Surface _____ MP Elevation 5437.33 feet AMSLTotal Sounded Depth of Well Below MP 20 Water-Level Elevation _____Held _____ Depth to Water Below MP 8.23 Diameter of Casing 2"Wet _____ Water Column in Well 11.77 Gallons Pumped/Bailed
Prior to Sampling 7 gallonsGallons per Foot 0.16Gallons in Well 1.883 x 3 = 5.65 Sampling Pump Intake Setting
(feet below land surface) N/APurging Equipment disposable bailer

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (C°)	pH	Conductivity	TDS in g/L	ORP (mV)	DO (mg/L)
<u>12:28</u>	<u>11.34</u>	<u>7.88</u>	<u>2177</u>	<u>1.417</u>	<u>-183.5</u>	<u>1.18</u>
<u>12:30</u>	<u>11.60</u>	<u>7.02</u>	<u>2153</u>	<u>1.406</u>	<u>-203.6</u>	<u>0.7</u>
<u>12:31</u>	<u>11.81</u>	<u>7.03</u>	<u>2118</u>	<u>1.371</u>	<u>-205.3</u>	<u>0.4</u>

Sampling Equipment Geosquirt purge pump disposable bailer

Constituents Sampled

Container Description

Preservative

BTEX 3 - 40 mL glass VOAs HCLPAHs 2 4L ambers noneChloride 1L plastic noneRemarks duplicate sample collected Strong weathered smell, no green, white &Sampling Personnel CB, KB, CM

Well Casing Volumes

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

black fibrous particles



TETRA TECH, INC.

WATER SAMPLING FIELD FORM

Project Name Federal # 15Page 3 of 5Project No. 1158690097Site Location Gila Street, Farmington, NMSite/Well No. MW-3Coded/
Replicate No. _____Date 3/30/09Weather Sunny, Windy & ColdTime Sampling
Began _____Time Sampling
Completed 12:50

EVACUATION DATA

Description of Measuring Point (MP) Top of Casing

Height of MP Above/Below Land Surface _____

MP Elevation 5435.13 feet AMSLTotal Sounded Depth of Well Below MP 20

Water-Level Elevation _____

Held _____ Depth to Water Below MP 7.91Diameter of Casing 2"Wet _____ Water Column in Well 12.09Gallons Pumped/Bailed
Prior to Sampling ~25Gallons per Foot 0.16Gallons in Well 1.934 x 3Sampling Pump Intake Setting
(feet below land surface) N/APurging Equipment disposable bailer

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (C°)	pH	Conductivity	TDS in g/L	ORP (mV)	DO (mg/L)
<u>12:44</u>	<u>12.30</u>	<u>7.09</u>	<u>2081</u>	<u>1.349</u>	<u>-87.9</u>	<u>20.8</u>
<u>12:40</u>	<u>12.45</u>	<u>7.07</u>	<u>2088</u>	<u>1.325</u>	<u>-89.1</u>	<u>19.0</u>
<u>12:47</u>	<u>12.40</u>	<u>7.00</u>	<u>2015</u>	<u>1.307</u>	<u>-85.7</u>	<u>22.4</u>

Sampling Equipment Disposable polyethylene bailerConstituents SampledContainer DescriptionPreservativeBTEX 3 - 40 mL glass VOAs HCL

Remarks _____

Sampling Personnel CB, KB, CM

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



TETRA TECH, INC.

WATER SAMPLING FIELD FORM

Project Name Federal # 15Page 4 of 5Project No. 1158690097Site Location Gila Street, Farmington, NMSite/Well No. MW-4 Coded/
Replicate No. 1305Date 3/30/09Weather Sunny, Windy & Cold Time Sampling
Began 13Time Sampling
Completed 1300

EVACUATION DATA

Description of Measuring Point (MP) Top of CasingHeight of MP Above/Below Land Surface _____ MP Elevation 5434.68 feet AMSLTotal Sounded Depth of Well Below MP 20 Water-Level Elevation _____Held _____ Depth to Water Below MP 7.88 Diameter of Casing _____ 2"Wet _____ Water Column in Well 12.12 Gallons Pumped/Bailed
Prior to Sampling 25Gallons per Foot 0.16Sampling Pump Intake Setting
(feet below land surface) N/APurging Equipment Boiler
Gallons in Well 1939 x 3
5.817

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (C°)	pH	Conductivity	TDS in g/L	ORP (mV)	DO (mg/L)
<u>12:56</u>	<u>12.11</u>	<u>6.94</u>	<u>1837</u>	<u>1.195</u>	<u>-49.2</u>	<u>31.2</u>
<u>12:57</u>	<u>12.32</u>	<u>6.95</u>	<u>1836</u>	<u>1.197</u>	<u>-52.5</u>	<u>17.9</u>
<u>12:58</u>	<u>12.26</u>	<u>6.98</u>	<u>1844</u>	<u>1.199</u>	<u>-34.8</u>	<u>13.1</u>
<u>12:59</u>	<u>12.23</u>	<u>6.99</u>	<u>1843</u>	<u>1.198</u>	<u>-37.9</u>	<u>11.3</u>

31.2

Sampling Equipment disposable boiler

Constituents Sampled

Container Description

Preservative

BTEX _____ 3 - 40 mL glass VOAs _____ HCL _____

PAHs _____ 2 - 1L ambers _____ none _____

Chloride _____ 1 - 1L plastic _____ none _____

Remarks Rusty brown in color, until ~ 3 gallons then H₂O cleared. No Sheen or odorSampling Personnel CB, KB, CM

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

duplicate



TETRATECH, INC.

WATER SAMPLING FIELD FORM

Project Name Federal # 15Page 5 of 5Project No. 1158690097Site Location Gila Street, Farmington, NMSite/Well No. MW-5Coded/
Replicate No. _____Date 3-30-09Weather partly cloudy, coldTime Sampling
Began 1255Time Sampling
Completed 1315

EVACUATION DATA

Description of Measuring Point (MP) Top of CasingHeight of MP Above/Below Land Surface _____ MP Elevation 5434.16 feet AMSLTotal Sounded Depth of Well Below MP 20.18 Water-Level Elevation _____Held _____ Depth to Water Below MP 10.30 Diameter of Casing 2"Wet _____ Water Column in Well 7.7 Gallons Pumped/Bailed 5 gallonsGallons per Foot 0.16Gallons in Well 1.23 Sampling Pump Intake Setting
(feet below land surface) N/APurging Equipment X3 = 3.696

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (C°)	pH	Conductivity	TDS in g/L	ORP (mV)	DO (mg/L)
<u>1312</u>	<u>11.24</u>	<u>6.99</u>	<u>1.608</u>	<u>1.416</u>	<u>-36.0</u>	<u>1.30</u>
<u>1313</u>	<u>11.43</u>	<u>6.88</u>	<u>1.613</u>	<u>1.415</u>	<u>-36.5</u>	<u>0.74</u>

Sampling Equipment Geosquirt purge pump Bailer

Constituents Sampled

Container Description

Preservative

BTEX 3 - 40 mL glass VOAs HCLPAHs 2 - 1L ambers noneChloride 4 - 1L plastic 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



SPL Inc.
8880 Interchange Drive
Houston, TX 77054
Phone: (713) 660-0901
Fax: (713) 660-8975

Certificate of Analysis

April 13, 2009

Workorder: H09040024

Kelly Blanchard
Tetra Tech
6121 Indian School Road NE
Suite 200
Albuquerque, NM 87110

Project: Federal Com#15

Project Number: NA

Site: Gila Street, Farmington, NM

PO Number:

NELAC Cert. No.: T104704205-08C-TX

This Report Contains A Total Of 18 Pages

Excluding Any Attachments



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Case Narrative

April 13, 2009

Workorder: H09040024

Kelly Blanchard
Tetra Tech
6121 Indian School Road NE
Suite 200
Albuquerque, NM 87110

Project: Federal Com#15
Project Number: NA
Site: Gila Street, Farmington, NM
PO Number:
NELAC Cert. No.: T104704205-08C-TX

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report (" mg/kg-dry " or " ug/kg-dry ").

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.

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.

This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

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, Senior Project Manager

Enclosures



SPL Inc.
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SAMPLE SUMMARY

Workorder: H09040024 : Federal Com#15

Project Number: NA

Lab ID	Sample ID	Matrix	COC ID	Date/Time Collected	Date/Time Received
H09040024001	MW-1	Water		3/30/2009 12:25	4/1/2009 10:00
H09040024002	MW-2	Water		3/30/2009 12:35	4/1/2009 10:00
H09040024003	MW-3	Water		3/30/2009 12:50	4/1/2009 10:00
H09040024004	MW-4	Water		3/30/2009 13:00	4/1/2009 10:00
H09040024005	MW-5	Water		3/30/2009 13:15	4/1/2009 10:00
H09040024006	Duplicate	Water		3/30/2009 13:05	4/1/2009 10:00
H09040024007	Trip Blank	Water		3/30/2009 13:30	4/1/2009 10:00



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ANALYTICAL RESULTS

Workorder: H09040024 : Federal Com#15

Project Number: NA

Lab ID: H09040024001

Date/Time Received: 4/1/2009 10:00

Matrix: Water

Sample ID: MW-1

Date/Time Collected: 3/30/2009 12:25

VOLATILES

Analysis Desc: SW-846 8260B (GCVMS Analysis)

Preparation Batches:

Batch: 1038 SW-846 5030 on 04/02/2009 00:00 by MSV

Analytical Batches:

Batch: 1039 SW-846 8260B (GCVMS Analysis) on 04/03/2009 04:02 by DLY

Parameters	Results				Batch Information	
	ug/l	Qual	Report Limit	MDL	DF	RegLmt
Benzene	ND		5.0	0.35	1	1038 1039
Ethylbenzene	ND		5.0	0.34	1	1038 1039
Toluene	ND		5.0	0.25	1	1038 1039
m,p-Xylene	ND		5.0	0.30	1	1038 1039
o-Xylene	ND		5.0	0.31	1	1038 1039
Xylenes, Total	ND		5.0	0.30	1	1038 1039
4-Bromofluorobenzene (S)	102 %		70-130		1	1038 1039
1,2-Dichloroethane-d4 (S)	98.5 %		71-140		1	1038 1039
Toluene-d8 (S)	99.3 %		61-121		1	1038 1039
Preservation pH	<2				1	1038 1039



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ANALYTICAL RESULTS

Workorder: H09040024 : Federal Com#15

Project Number: NA

Lab ID: H09040024002

Date/Time Received: 4/1/2009 10:00

Matrix: Water

Sample ID: MW-2

Date/Time Collected: 3/30/2009 12:35

VOLATILES

Analysis Desc: SW-846 8260B (GCVMS Analysis)

Preparation Batches:

Batch: 1038 SW-846 5030 on 04/02/2009 00:00 by MSV

Analytical Batches:

Batch: 1039 SW-846 8260B (GCVMS Analysis) on 04/03/2009 04:23 by DLY

Parameters	Results		Report Limit	MDL	DF	RegLmt	Batch Information	
	ug/l	Qual					Prep	Analysis
Benzene	5.7		5.0	0.35	1		1038	1039
Ethylbenzene	11		5.0	0.34	1		1038	1039
Toluene	ND		5.0	0.25	1		1038	1039
m,p-Xylene	22		5.0	0.30	1		1038	1039
o-Xylene	ND		5.0	0.31	1		1038	1039
Xylenes, Total	22		5.0	0.30	1		1038	1039
4-Bromofluorobenzene (S)	103 %		70-130		1		1038	1039
1,2-Dichloroethane-d4 (S)	96.8 %		71-140		1		1038	1039
Toluene-d8 (S)	99.2 %		61-121		1		1038	1039
Preservation pH	<2				1		1038	1039



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ANALYTICAL RESULTS

Workorder: H09040024 : Federal Com#15

Project Number: NA

Lab ID: H09040024003

Date/Time Received: 4/1/2009 10:00

Matrix: Water

Sample ID: MW-3

Date/Time Collected: 3/30/2009 12:50

VOLATILES

Analysis Desc: SW-846 8260B (GCVMS Analysis)

Preparation Batches:

Batch: 1038 SW-846-5030 on 04/02/2009 00:00 by MSV

Analytical Batches:

Batch: 1039 SW-846 8260B (GCVMS Analysis) on 04/03/2009 04:45 by DLY

Parameters	Results				DF	RegLmt	Batch Information	
	ug/l	Qual	Report Limit	MDL			Prep	Analysis
Benzene	ND		5.0	0.35	1		1038	1039
Ethylbenzene	ND		5.0	0.34	1		1038	1039
Toluene	ND		5.0	0.25	1		1038	1039
m,p-Xylene	ND		5.0	0.30	1		1038	1039
o-Xylene	ND		5.0	0.31	1		1038	1039
Xylenes, Total	ND		5.0	0.30	1		1038	1039
4-Bromofluorobenzene (S)	101 %		70-130		1		1038	1039
1,2-Dichloroethane-d4 (S)	108 %		71-140		1		1038	1039
Toluene-d8 (S)	102 %		61-121		1		1038	1039
Preservation pH	<2				1		1038	1039



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ANALYTICAL RESULTS

Workorder: H09040024 : Federal Com#15

Project Number: NA

Lab ID: H09040024004

Date/Time Received: 4/1/2009 10:00

Matrix: Water

Sample ID: MW-4

Date/Time Collected: 3/30/2009 13:00

VOLATILES

Analysis Desc: SW-846 8260B (GCVMS Analysis)

Preparation Batches:

Batch: 1038 SW-846 5030 on 04/02/2009 00:00 by MSV

Analytical Batches:

Batch: 1039 SW-846 8260B (GCVMS Analysis) on 04/03/2009 05:06 by DLY

Parameters	Results		Report Limit	MDL	DF	RegLmt	Batch Information	
	ug/l	Qual					Prep	Analysis
Benzene	ND		5.0	0.35	1		1038	1039
Ethylbenzene	ND		5.0	0.34	1		1038	1039
Toluene	ND		5.0	0.25	1		1038	1039
m,p-Xylene	ND		5.0	0.30	1		1038	1039
o-Xylene	ND		5.0	0.31	1		1038	1039
Xylenes, Total	ND		5.0	0.30	1		1038	1039
4-Bromofluorobenzene (S)	101 %		70-130		1		1038	1039
1,2-Dichloroethane-d4 (S)	97.7 %		71-140		1		1038	1039
Toluene-d8 (S)	98.4 %		61-121		1		1038	1039
Preservation pH	<2				1		1038	1039



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ANALYTICAL RESULTS

Workorder: H09040024 : Federal Com#15

Project Number: NA

Lab ID: H09040024005

Date/Time Received: 4/1/2009 10:00

Matrix: Water

Sample ID: MW-5

Date/Time Collected: 3/30/2009 13:15

VOLATILES

Analysis Desc: SW-846 8260B (GCVMS Analysis)

Preparation Batches:

Batch: 1038 SW-846 5030 on 04/02/2009 00:00 by MSV

Analytical Batches:

Batch: 1039 SW-846 8260B (GCVMS Analysis) on 04/03/2009 05:27 by DLY

Parameters	Results			MDL	DF	RegLmt	Batch Information	
	ug/l	Qual	Report Limit				Prep	Analysis
Benzene	ND		5.0	0.35	1		1038	1039
Ethylbenzene	ND		5.0	0.34	1		1038	1039
Toluene	ND		5.0	0.25	1		1038	1039
m,p-Xylene	ND		5.0	0.30	1		1038	1039
o-Xylene	ND		5.0	0.31	1		1038	1039
Xylenes, Total	ND		5.0	0.30	1		1038	1039
4-Bromofluorobenzene (S)	103 %		70-130		1		1038	1039
1,2-Dichloroethane-d4 (S)	99.9 %		71-140		1		1038	1039
Toluene-d8 (S)	98.2 %		61-121		1		1038	1039
Preservation pH	<2				1		1038	1039



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ANALYTICAL RESULTS

Workorder: H09040024 : Federal Com#15

Project Number: NA

Lab ID: H09040024006

Date/Time Received: 4/1/2009 10:00

Matrix: Water

Sample ID: Duplicate

Date/Time Collected: 3/30/2009 13:05

VOLATILES

Analysis Desc: SW-846 8260B (GCVMS Analysis)

Preparation Batches:

Batch: 1038 SW-846 5030 on 04/02/2009 00:00 by MSV

Analytical Batches:

Batch: 1039 SW-846 8260B (GCVMS Analysis) on 04/03/2009 05:48 by DLY

Parameters	Results	Qual	Report Limit	MDL	DF	RegLmt	Batch Information	
	ug/l						Prep	Analysis
Benzene	ND		5.0	0.35	1		1038	1039
Ethylbenzene	ND		5.0	0.34	1		1038	1039
Toluene	ND		5.0	0.25	1		1038	1039
m,p-Xylene	ND		5.0	0.30	1		1038	1039
o-Xylene	ND		5.0	0.31	1		1038	1039
Xylenes, Total	ND		5.0	0.30	1		1038	1039
4-Bromofluorobenzene (S)	101 %		70-130		1		1038	1039
1,2-Dichloroethane-d4 (S)	99.6 %		71-140		1		1038	1039
Toluene-d8 (S)	97.5 %		61-121		1		1038	1039
Preservation pH	<2				1		1038	1039



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ANALYTICAL RESULTS

Workorder: H09040024 : Federal Com#15

Project Number: NA

Lab ID: H09040024007

Date/Time Received: 4/1/2009 10:00

Matrix: Water

Sample ID: Trip Blank

Date/Time Collected: 3/30/2009 13:30

VOLATILES

Analysis Desc: SW-846 8260B (GCVMS Analysis)

Preparation Batches:

Batch: 1044 SW-846 5030 on 04/07/2009 00:00 by MSV

Analytical Batches:

Batch: 1045 SW-846 8260B (GCVMS Analysis) on 04/07/2009 02:29 by DLY

Parameters	Results			MDL	DF	RegLmt	Batch Information	
	ug/l	Qual	Report Limit				Prep	Analysis
Benzene	ND		5.0	0.35	1		1044	1045
Ethylbenzene	ND		5.0	0.34	1		1044	1045
Toluene	ND		5.0	0.25	1		1044	1045
m,p-Xylene	ND		5.0	0.30	1		1044	1045
o-Xylene	ND		5.0	0.31	1		1044	1045
Xylenes, Total	ND		5.0	0.30	1		1044	1045
4-Bromofluorobenzene (S)	102 %		70-130		1		1044	1045
1,2-Dichloroethane-d4 (S)	104 %		71-140		1		1044	1045
Toluene-d8 (S)	95.3 %		61-121		1		1044	1045
Preservation pH	<2				1		1044	1045



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QUALITY CONTROL DATA

Workorder: H09040024 : Federal Com#15

Project Number: NA

QC Batch: GVMS/1038

Analysis Method: SW-846 8260B (GCVMS Analysis)

QC Batch Method: SW-846 5030

Preparation: 04/02/2009 00:00 by MSV

Associated Lab Samples: H09040024001 H09040024002 H09040024003 H09040024004 H09040024005 H09040024006

METHOD BLANK: 6920

Analysis Date/Time Analyst: 04/03/2009 00:50 DLY

Parameter	Units	Blank Result	Qualifiers	Reporting Limit
Benzene	ug/l	ND		5.0
Ethylbenzene	ug/l	ND		5.0
Toluene	ug/l	ND		5.0
m,p-Xylene	ug/l	ND		5.0
o-Xylene	ug/l	ND		5.0
Xylenes, Total	ug/l	ND		5.0
4-Bromofluorobenzene (S)	%	102		70-130
1,2-Dichloroethane-d4 (S)	%	96.7		71-140
Toluene-d8 (S)	%	98.4		61-121

LABORATORY CONTROL SAMPLE: 6921

Analysis Date/Time Analyst: 04/02/2009 23:26 DLY

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits
Benzene	ug/l	20	20.6	103	70-130
Ethylbenzene	ug/l	20	20.1	100	70-130
Toluene	ug/l	20	20.7	103	73-130
m,p-Xylene	ug/l	40	41.1	103	70-130
o-Xylene	ug/l	20	20.9	105	70-130
Xylenes, Total	ug/l	60	61.99	103	70-130
4-Bromofluorobenzene (S)	%			100	70-130
1,2-Dichloroethane-d4 (S)	%			103	71-140
Toluene-d8 (S)	%			102	61-121

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 6922

6923

Original: H09040022001

MS Analysis Date/Time Analyst: 04/03/2009 07:58 DLY

MSD Analysis Date/Time Analyst: 04/03/2009 08:20 DLY

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Benzene	ug/l	ND	20	22.3	20.4	111	102	67-202	8.5	20
Ethylbenzene	ug/l	0.3	20	21.0	19.7	105	98.3	49-165	6.6	20
Toluene	ug/l	ND	20	21.8	20.5	109	102	48-162	6.6	20
m,p-Xylene	ug/l	0.26	40	42.4	39.6	106	99.1	44-167	6.7	20

QC results presented in the QC Control Data 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. Also, MS/MSD % recoveries are calculated by the SPL LIMS using any detected value greater than the MDL.



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QUALITY CONTROL DATA

Workorder: H09040024 : Federal Com#15

Project Number: NA

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 6922 6923 Original: H09040022001

MS Analysis Date/Time Analyst: 04/03/2009 07:58 DLY

MSD Analysis Date/Time Analyst: 04/03/2009 08:20 DLY

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
o-Xylene	ug/l	ND	20	21.4	20.3	107	101	54-158	5.8	20
Xylenes, Total	ug/l	ND	60	63.73	59.93	106	99.9	44-167	5.9	20
4-Bromofluorobenzene (S)	%	ND				100	100	70-130		30
1,2-Dichloroethane-d4 (S)	%	ND				107	105	71-140		30
Toluene-d8 (S)	%	ND				102	102	61-121		30

QC results presented in the QC Control Data 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. Also, MS/MSD % recoveries are calculated by the SPL LIMS using any detected value greater than the MDL.



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QUALITY CONTROL DATA

Workorder: H09040024 : Federal Com#15

Project Number: NA

QC Batch:	GVMS/1044	Analysis Method:	SW-846 8260B (GCVMS Analysis)			
QC Batch Method:	SW-846 5030	Preparation:	04/07/2009 00:00 by MSV			
Associated Lab Samples:	H09040024007	H09040098001	H09040098002	H09040098003	H09040098004	H09040098005
	H09040098006	H09040098007	H09040098008	H09040098009	H09040098010	H09040098012
	H09040098013	H09040098014				

METHOD BLANK: 7807

Analysis Date/Time Analyst: 04/07/2009 02:08 DLY

Parameter	Units	Blank Result	Qualifiers	Reporting Limit
Benzene	ug/l	ND		5.0
Ethylbenzene	ug/l	ND		5.0
Toluene	ug/l	ND		5.0
m,p-Xylene	ug/l	ND		5.0
o-Xylene	ug/l	ND		5.0
Xylenes, Total	ug/l	ND		5.0
4-Bromofluorobenzene (S)	%	101		70-130
1,2-Dichloroethane-d4 (S)	%	104		71-140
Toluene-d8 (S)	%	95.8		61-121

LABORATORY CONTROL SAMPLE: 7808

Analysis Date/Time Analyst: 04/07/2009 01:04 DLY

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits
Benzene	ug/l	20	20.7	103	70-130
Ethylbenzene	ug/l	20	19.8	99.0	70-130
Toluene	ug/l	20	21.0	105	73-130
m,p-Xylene	ug/l	40	38.9	97.4	70-130
o-Xylene	ug/l	20	20.9	105	70-130
Xylenes, Total	ug/l	60	59.88	99.8	70-130
4-Bromofluorobenzene (S)	%			100	70-130
1,2-Dichloroethane-d4 (S)	%			107	71-140
Toluene-d8 (S)	%			96.2	61-121

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 7809

7810

Original: H09040098002

MS Analysis Date/Time Analyst: 04/07/2009 09:48 DLY

MSD Analysis Date/Time Analyst: 04/07/2009 10:09 DLY

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Benzene	ug/l	ND	20	20.8	19.0	104	95.2	67-202	8.8	20
Ethylbenzene	ug/l	ND	20	19.5	19.0	97.5	95.1	49-165	2.5	20

QC results presented in the QC Control Data 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. Also, MS/MSD % recoveries are calculated by the SPL LIMS using any detected value greater than the MDL.



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QUALITY CONTROL DATA

Workorder: H09040024 : Federal Com#15

Project Number: NA

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 7809

7810

Original: H09040098002

MS Analysis Date/Time Analyst: 04/07/2009 09:48 DLY

MSD Analysis Date/Time Analyst: 04/07/2009 10:09 DLY

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Toluene	ug/l	ND	20	21.3	20.2	107	101	48-162	5.8	20
m,p-Xylene	ug/l	0.087	40	39.8	38.9	99.5	97.2	44-167	2.3	20
o-Xylene	ug/l	ND	20	20.7	20.2	103	101	54-158	2.0	20
Xylenes, Total	ug/l	ND	60	60.48	59.1	101	98.5	44-167	2.5	20
4-Bromofluorobenzene (S)	%	102				99.2	101	70-130		30
1,2-Dichloroethane-d4 (S)	%	102				108	102	71-140		30
Toluene-d8 (S)	%	94.3				97.4	95.8	61-121		30

QC results presented in the QC Control Data 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. Also, MS/MSD % recoveries are calculated by the SPL LIMS using any detected value greater than the MDL.



Legend

(S) - Indicates analyte is a surrogate

Qualifier	Qualifier Description
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*	Recovery/RPD value outside QC limits
C	MTBE results were not confirmed by GCMS
D	Recovery out of range due to dilution
E	Results exceed calibration range
H	Exceeds holding time
I	Estimated value, between MDL and PQL (Florida)
J	Estimated value
JN	The analysis indicates the presence of an analyte
MI	Matrix Interference
N	Recovery outside of control limits
NC	Not Calculable (Sample Duplicate)
NC	Not Calculated - Sample concentration > 4 times the spike
P	Pesticide dual column results, greater than 25%
Q	Received past holding time



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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: H09040024 : Federal Com#15

Project Number: NA

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
H09040024001	MW-1	SW-846 5030	GVMS/1038	SW-846 8260B (GCVMS Analysis)	GVMS/1039
H09040024002	MW-2	SW-846 5030	GVMS/1038	SW-846 8260B (GCVMS Analysis)	GVMS/1039
H09040024003	MW-3	SW-846 5030	GVMS/1038	SW-846 8260B (GCVMS Analysis)	GVMS/1039
H09040024004	MW-4	SW-846 5030	GVMS/1038	SW-846 8260B (GCVMS Analysis)	GVMS/1039
H09040024005	MW-5	SW-846 5030	GVMS/1038	SW-846 8260B (GCVMS Analysis)	GVMS/1039
H09040024006	Duplicate	SW-846 5030	GVMS/1038	SW-846 8260B (GCVMS Analysis)	GVMS/1039
H09040024007	Trip Blank	SW-846 5030	GVMS/1044	SW-846 8260B (GCVMS Analysis)	GVMS/1045



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Sample Receipt Checklist

WorkOrder:	H09040024	Received By	LOG
Date and Time	04/01/2009 10:00	Carrier Name:	FEDEXP
Temperature:	3.0°C	Chilled By:	Water Ice

1. Shipping container/cooler in good condition? YES
2. Custody seals intact on shipping container/cooler? Not Present
3. Custody seals intact on sample bottles? Not Present
4. Chain of custody present? YES
5. Chain of custody signed when relinquished and received? YES
6. Chain of custody agrees with sample labels? YES
7. Samples in proper container/bottle? YES
8. Samples containers intact? YES
9. Sufficient sample volume for indicated test? YES
10. All samples received within holding time? YES
11. Container/Temp Blank temperature in compliance? YES
12. Water - VOA vials have zero headspace? YES
13. Water - Preservation checked upon receipt(except VOA*)? Not Applicable

*VOA Preservation Checked After Sample Analysis

SPL Representative:
Client Name Contacted:
Client Instructions:

Contact Date & Time:



Analysis Request and Chain c

3690 Interchange Drive, Houston, TX 77054

Company Name: Tetra Tech / Conoco Phillips
 Contact: Kelly Blanchard
 Address: 6121 Indian School Rd. NE, Ste. 200
 Phone/Fax: (505) 237-8440 / (505) 237-8656
 E-mail Address: kelly.blanchard@tetratech.com
 Invoice To: ConocoPhillips
 Purchase Order No:

Project Name/No: Federal Com #15

Site Address: Gila Street Farmington, NM
 Sampled By: K. Blanchard, Christine Muehler's

QA/QC Level: ☐ LVL 3 ☐ Other ☐ Sludge ☐ Other

Sampling Event Description: ☒ Quality ☐ Semi-Annual ☐ WC-Waste Char. ☐ Other (describe below)

Container Type: Preservative

Number Containers: 3

Consistent Remarks: 3.0c

Laboratory Remarks: PM review

Received by: Kelly Blanchard

Relinquished by: Kelly Blanchard

Relinquished by: Kelly Blanchard

Relinquished by: Kelly Blanchard

Relinquished by: Kelly Blanchard

Relinquished by: Kelly Blanchard

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