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TETRA TECH, INC.

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Albuquerque, NM 87110
(505) 237-8440

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June 18, 2010

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

RE: (I) ConocoPhillips Company Federal 15 Site, Farmington, New Mexico. 2010 Quarterly
Groundwater Monitoring Report – March 2010

Dear Mr. von Gonten:

Enclosed please find one (I) copy of the above-referenced document as compiled by Tetra Tech, Inc.,
formerly Maxim Technologies, for this Farmington area site.

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

Sincerely,

Kelly E. Blanchard
Project Manager/Geologist

Enclosures (1)

**QUARTERLY GROUNDWATER
MONITORING REPORT
MARCH 2010**

**CONOCOPHILLIPS COMPANY
FEDERAL NO.15
FARMINGTON, SAN JUAN COUNTY, NEW MEXICO**

OCD # 3R087

API # 30-045-20078

Prepared for:



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. 114-690110.100

June 2010

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QUARTERLY GROUNDWATER MONITORING REPORT CONOCOPHILLIPS COMPANY FEDERAL #15 FARMINGTON, SAN JUAN COUNTY, NEW MEXICO

1.0 INTRODUCTION

This report presents the results of quarterly groundwater monitoring completed by Tetra Tech, Inc. (Tetra Tech) on March 29, 2010, at the ConocoPhillips Company Federal No.15 site in Farmington, New Mexico (Site). This event represents the ninth consecutive quarter of groundwater monitoring conducted by Tetra Tech at the Site.

The Site is located on private property, on the north side of Gila Street between Washington Avenue and English Road. 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 as **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 of roughly 15 barrels of condensate was discovered at the Site. 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, Monitor Wells MW-1, MW-2, MW-3, and MW-4 were installed using 2-inch polyvinyl chloride (PVC) pipe on November 16 and 17, 2004 by Biosphere Environmental Sciences and Technologies, LLC. An additional, down-gradient monitor well (MW-5) was installed on 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.

Due to the presence of light non-aqueous phase liquid (LNAPL) and constituent of concern (COC) concentrations, Tetra Tech conducted quarterly groundwater removal events at Monitor Well MW-2. A vacuum truck was used to pump a total of 4,343 gallons from MW-2 between July 2005 and January 2008. Pumped water was disposed of in an on-site produced water tank (**Figure 2**).

Tetra Tech conducted annual groundwater sampling of Monitor Wells MW-1, MW-2, MW-3, MW-4, and MW-5 in November of 2006 and 2007. The details of each sampling event can be found 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 began in March 2008. Most recently a quarterly sampling event took place on March 29, 2010. This event marks the seventh consecutive quarterly groundwater monitoring event at the Site in which groundwater quality results for benzene, toluene, ethylbenzene and total xylenes (BTEX) were below New Mexico Water Quality Control Commission (NMWQCC) groundwater quality standards (GWQS) contained in Title 20, Chapter 6, Part 2, Section 3103 of the New Mexico Administrative Code (20.6.2.3103 NMAC).

2.0 METHODOLOGY AND RESULTS

2.1 Groundwater Monitoring Methodology

Groundwater Elevation Measurements

On March 29, 2010, groundwater elevation measurements were recorded for 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 as **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 29, 2010 groundwater sampling event. Approximately 5 gallons of water, or three well volumes, were purged from each monitor well prior to sampling. A 1.5-inch polyethylene disposable bailer was used in each well to purge and collect groundwater samples. Purged groundwater was disposed of in the on-site produced water tank (**Figure 2**). Samples were placed in laboratory prepared bottles, packed on ice, and shipped under 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 29, 2010 analysis of collected groundwater samples indicates that all analyzed constituents are present in concentrations either below NMWQCC 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 1 microgram per liter ($\mu\text{g/l}$) for each individual BTEX component. Benzene concentrations in MW-2 were detected at 1.8 $\mu\text{g/L}$; a duplicate sample collected from MW-2 contained concentrations of BTEX below NMWQCC standards. Historical laboratory analytical 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 geologic cross section of the Site is included as **Figure 4**.

3.0 CONCLUSIONS

Tetra Tech conducted quarterly pumping events in Monitor Well MW-2 from July 2005 to January 2008. The concentrations of BTEX measured in this well have decreased steadily from January 2005 to March 2010 and are summarized below.

- MW-2 benzene concentrations have decreased from 1,200 µg/L to 1.8 µg/L in March 2010.
- MW-2 toluene concentrations decreased from 3,300 µg/L to less than the laboratory reporting limit of 1 µg/L.
- MW-2 ethylbenzene concentrations decreased from 380 µg/L to less than the laboratory reporting limit of 1 µg/L.
- MW-2 total xylenes concentrations decreased from 3,500 µg/L to less than the laboratory reporting limit of 1 µg/L.

The decrease in BTEX concentrations suggests that pumping events were effective. Tetra Tech has discontinued pumping of Monitor Well MW-2; but 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 1 µg/L in March 2010, while benzene in MW-4 has decreased from 36 µg/L in November 2007 to less than the laboratory reporting limit of 1 µg/L in March 2010. Additionally, chlorides have never been detected above NMWQCC standards in any Site monitor well. Therefore, analysis of this constituent has been discontinued as of the January 2009 sampling event.

The March 2010 sampling event represents the seventh sampling event in which all analyzed constituents are present in concentrations either below NMWQCC standards or were not detected above their respective laboratory reporting limits. The next sampling event will take place during June of 2010. If all constituents are below NMWQCC standards, a site closure report will be submitted.

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

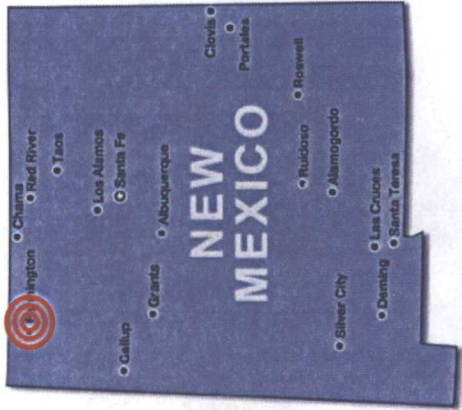
- I. Site Location Map
2. Site Layout Map
3. Groundwater Elevation Contour Map
4. Geologic Cross Section



ConocoPhillipsHigh Resolution Aerial Imagery

FIGURE 1.

Site Location Map
ConocoPhillips Company
Federal No.15
Farmington, NM



Approximate ConocoPhillips
Federal #15 Site location

Latitude = 36.759339 deg N
Longitude = -108.149891 deg W








TETRA TECH, INC.



ConocoPhillips High Resolution Aerial Imagery

Figure 3: Groundwater Elevation Contour Map 03/29/2010

ConocoPhillips Company
Federal No.15
Farmington, New Mexico

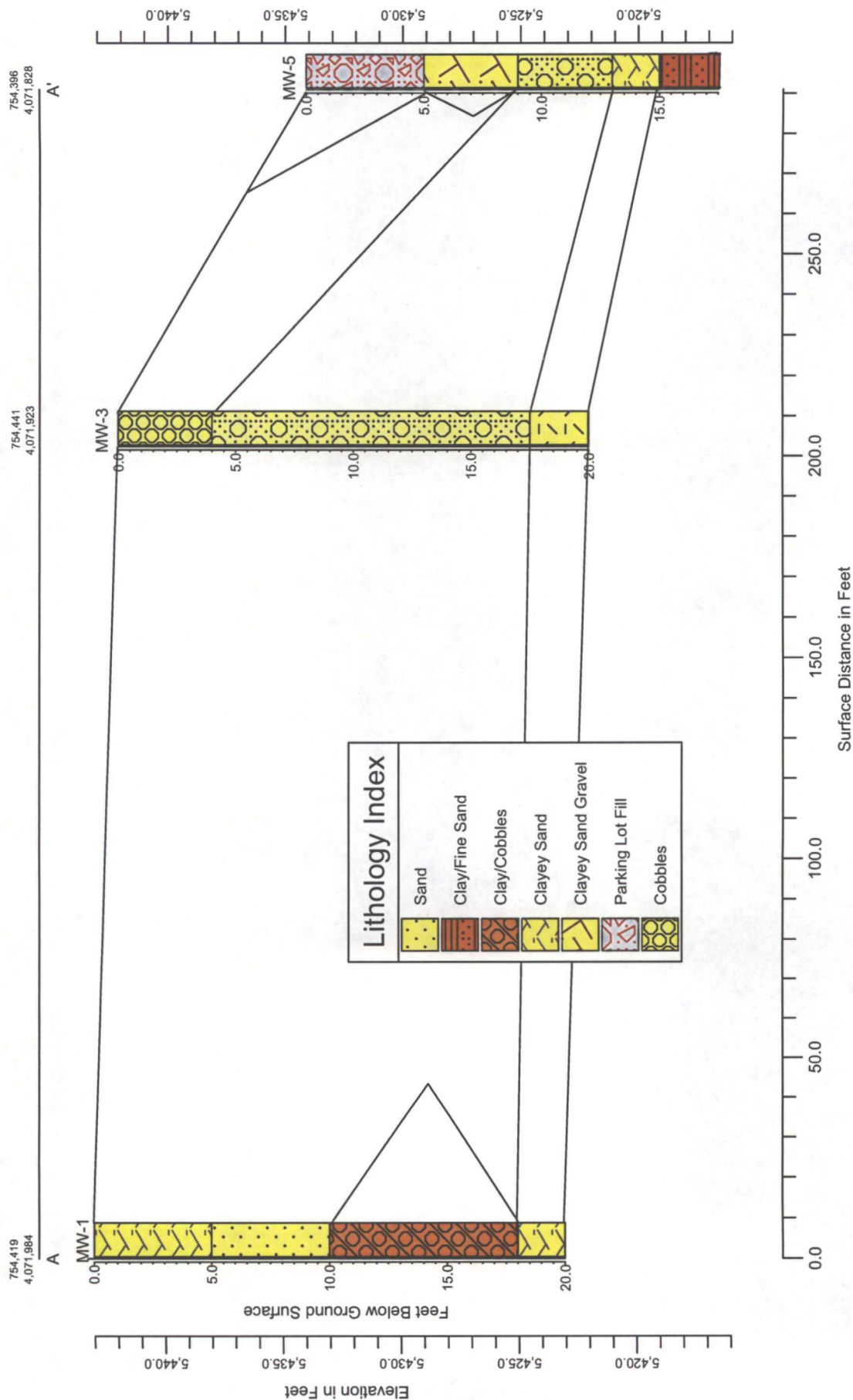
-  Monitoring Well
-  Well Head
-  Groundwater contour line
-  Inferred groundwater contour line
-  General Site Boundary



TETRA TECH, INC.

Figure 4.

Federal No. 15 - Cross-Section A-A'



TABLES

I. Site History Timeline

2. Groundwater Elevation Summary (January 2005 – March 2010)

3. Laboratory Analytical Data Summary (January 2005 – March 2010)

Table 1. Site History Timeline - ConocoPhillips Company Federal No. 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. First quarter of compliance with all COCs below NMWQCC standards.
January 22, 2009	Monitor Well Sampling	Continuation of quarterly sampling for monitor wells MW-1, MW-2, MW-3, MW-4, and MW-5. Second quarter of compliance with all COCs below NMWQCC standards.
March 30, 2009	Monitor Well Sampling	Continuation of quarterly sampling for monitor wells MW-1, MW-2, MW-3, MW-4, and MW-5. Third quarter of compliance with all COCs below NMWQCC standards.
June 16, 2009	Monitor Well Sampling	Continuation of quarterly sampling for monitor wells MW-1, MW-2, MW-3, MW-4, and MW-5. Fourth quarter of compliance with all COCs below NMWQCC standards.
September 28, 2009	Monitor Well Sampling	Continuation of quarterly sampling for monitor wells MW-1, MW-2, MW-3, MW-4, and MW-5. Fifth quarter of compliance with all COCs below NMWQCC standards.
December 16, 2009	Monitor Well Sampling	Continuation of quarterly sampling for monitor wells MW-1, MW-2, MW-3, MW-4, and MW-5. Sixth quarter of compliance with all COCs below NMWQCC standards.
March 29, 2010	Monitor Well Sampling	Continuation of quarterly sampling for monitor wells MW-1, MW-2, MW-3, MW-4, and MW-5. Seventh quarter of compliance with all COCs below NMWQCC standards.

Table 2. Groundwater Elevation Summary (January 2005 - March 2010) - ConocoPhillips Company Federal No.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
				6/16/2009	8.78		5429.21
				9/28/2009	9.51		5428.48
				12/16/2009	9.31		5428.68
MW-2	11/17/2004	20	5 - 20	3/29/2010	9.47	5437.33	5428.52
				1/18/2005	9.49		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
				6/16/2009	8.73		5428.60
				9/28/2009	9.48		5427.85
				12/16/2009	9.49		5427.84
				3/29/2010	9.62		5427.71

Table 2. Groundwater Elevation Summary (January 2005 - March 2010) - ConocoPhillips Company Federal No.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-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
				6/16/2009	8.23		5426.90
				9/28/2009	8.85		5426.28
				12/16/2009	8.94		5426.19
				3/29/2010	9.05		5426.08
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
				6/16/2009	8.18		5426.50
				9/28/2009	8.71		5425.97
				12/16/2009	8.72		5425.96
				3/29/2010	8.72		5425.96

Table 2. Groundwater Elevation Summary (January 2005 - March 2010) - ConocoPhillips Company Federal No.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-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
				6/16/2009	9.89		5424.27
				9/28/2009	10.53		5423.63
				12/18/2009	11.46		5422.70
				3/29/2010	11.81		5422.35

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 2010) - ConocoPhillips Company Federal No. 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
	10/19/2005	<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
	6/16/2009	<5.0	<5.0	<5.0	<5.0	NA	NA	NA	NA	NA
	9/28/2009	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA
	12/16/2009	<1.0	1	<1.0	<1.0	NA	NA	NA	NA	NA
	3/29/2010	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA
	1/18/2005	1200	3300	380	3500	72	34	51	157	41
	Duplicate	1300	3700	410	3800	NA	NA	NA	NA	NA
MW-2	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
	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
	6/16/2009	<5.0	<5.0	<5.0	5.1	NA	NA	NA	NA	NA
	Duplicate	<5.0	<5.0	<5.0	<5.0	NA	NA	NA	NA	NA
MW-3	9/28/2009	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA
	Duplicate	3.4	<1.0	1.8	3.4	NA	NA	NA	NA	NA
	12/16/2009	5	<1.0	1.9	2.1	NA	NA	NA	NA	NA
	Duplicate	1.9	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA
	3/29/2010	1.8	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA
	Duplicate	<1.0	<1.0	<1.0	<1.0	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
	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
	6/16/2009	<5.0	<5.0	<5.0	<5.0	NA	NA	NA	NA	NA
	9/28/2009	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA
	12/16/2009	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA
	3/29/2010	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA

Table 3. Groundwater Laboratory Analytical Results Summary (January 2005 - March 2010) - ConocoPhillips Company Federal No. 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-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
	11/17/2007	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
	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
	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
	6/16/2009	<5.0	<5.0	<5.0	<5.0	NA	NA	NA	NA	NA
	9/28/2009	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA
	12/16/2009	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA
	3/29/2010	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA
	10/20/2005	<1.0	<1.0	<1.0	<2.0	<10	<10	<10	<10	73
MW-5	11/14/2006	<1.0	<1.0	<1.0	<2.0	<10	<10	<10	<10	79
	11/17/2007	<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
	3/30/2009	<5.0	<5.0	<5.0	<5.0	NA	NA	NA	NA	NA
	6/16/2009	<5.0	<5.0	<5.0	<5.0	NA	NA	NA	NA	NA
	9/28/2009	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA
	12/16/2009	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA
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



TETRA TECH, INC.

WATER SAMPLING FIELD FORM

Project Name Federal #15Page 1 of 5

Project No. _____

Site Location Farmington, NMSite/Well No. MW-1Coded/
Replicate No. Date 3-29-10

Weather _____

Time Sampling
Began 131510Time Sampling
Completed 1530

EVACUATION DATA

Description of Measuring Point (MP) Top of Casing

Height of MP Above/Below Land Surface _____ MP Elevation _____

Total Sounded Depth of Well Below MP 20 Water-Level Elevation _____Held _____ Depth to Water Below MP 9.47 Diameter of Casing 2"Wet _____ Water Column in Well 10.53 Gallons Pumped/Bailed
Prior to Sampling _____Gallons per Foot 0.16Gallons in Well 1.68 x 3 Sampling Pump Intake Setting
(feet below land surface) _____Purging Equipment Purge pump / Bailer = 5.05

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (°C)	pH	Conductivity (µS/cm³)	TDS (g/L)	DO (mg/L)	ORP (mV)
1522	10.5	6.42	1721	1.119	10.23	-21.2
1525	10.39	6.25	1671	1.086	6.21	-23.5
1528	10.47	6.07	1238	1.130	8.75	-24.1
1530	10.41	6.02	1714	1.114	4.46	-25.5

DO%
85.2
58.9
45.7
40.9

Sampling Equipment Purge Pump/Bailer

Constituents Sampled	Container Description	Preservative
BTEX	3 40mL VOA's	HCl

Remarks _____

Sampling Personnel Kelly Blanchard, Christine Mathias

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 2 of 5

Project No. _____

Site Location Farmington, NMSite/Well No. MW-2Coded/
Replicate No. _____Date 3/29/10Weather Sunny & warmTime Sampling
Began 15:35Time Sampling
Completed 1545

EVACUATION DATA

Description of Measuring Point (MP) Top of Casing

Height of MP Above/Below Land Surface _____

MP Elevation _____

Total Sounded Depth of Well Below MP 20

Water-Level Elevation _____

Held _____ Depth to Water Below MP 9.62Diameter of Casing 2"Wet _____ Water Column in Well 10.38Gallons Pumped/Bailed
Prior to Sampling 5.5 gallonsGallons per Foot 0.16Gallons in Well 1.66 x 3Sampling Pump Intake Setting
(feet below land surface) _____Purging Equipment Purge pump / Bailer = 4.98

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (°C)	pH	Conductivity (µS/cm³)	TDS (g/L)	DO (mg/L)	ORP (mV)
<u>15:39</u>	<u>11.75</u>	<u>6.16</u>	<u>2261</u>	<u>1.470</u>	<u>3.29</u>	<u>-146.9</u>
<u>15:40</u>	<u>11.75</u>	<u>6.18</u>	<u>2251</u>	<u>1.461</u>	<u>3.38</u>	<u>-145.4</u>
<u>15:41</u>	<u>11.76</u>	<u>6.11</u>	<u>2250</u>	<u>1.461</u>	<u>3.27</u>	<u>-142.8</u>

DO %
30.2
31.7
30.1

Sampling Equipment Purge Pump/Bailer

Constituents Sampled

Container Description

Preservative

BTEX 3 40mL VOA's HClRemarks strong bio odor (sulfury) long white stringy gelatinous material

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



TETRA TECH, INC.

WATER SAMPLING FIELD FORM

Project Name Federal #15Page 3 of 5

Project No. _____

Site Location Farmington, NMSite/Well No. MW-3Coded/
Replicate No. _____Date 3/29/10Weather Sunny, WarmTime Sampling
Began 1555Time Sampling
Completed 1610

EVACUATION DATA

Description of Measuring Point (MP) Top of Casing

Height of MP Above/Below Land Surface _____ MP Elevation _____

Total Sounded Depth of Well Below MP 20 Water-Level Elevation _____Held _____ Depth to Water Below MP 9.05 Diameter of Casing 2"Wet _____ Water Column in Well 10.95 Gallons Pumped/Bailed
Prior to Sampling _____Gallons per Foot 0.16Gallons in Well 1.75 x 3 = Sampling Pump Intake Setting
(feet below land surface) _____Purging Equipment Purge pump / Bailer 5.26

SAMPLING DATA/FIELD PARAMETERS

Vol	Time	Temperature (°C)	pH	Conductivity (µS/cm³)	TDS (g/L)	DO (mg/L)	ORP (mV)	DO%
3.75	1604	12.17	6.30	1887	1.227	4.82	-36.4	45.4
4	1606	12.14	6.32	1897	1.232	4.81	-36.1	45.2
4.75	1608	12.15	6.32	1901	1.236	4.79	-35.1	44.6
5.05	1609	12.13	6.33	1904	1.237	4.65	-34.9	43.1

Sampling Equipment Purge Pump/Bailer

Constituents Sampled

Container Description

Preservative

BTEX 3 40mL VOA's HClRemarks Obstruction @ approximately 12 feet (roots), tan sandy sediment.Sampling Personnel Christine Mathews & Kelly Blanchard bailer is only half full each time.

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 5

Project No. _____

Site Location Farmington, NMSite/Well No. MW-4 Coded/
Replicate No. Duplicate @ 1620 Date 3/29/10Weather Sunny, warm Time Sampling
Began 1615 Time Sampling
Completed 1625

EVACUATION DATA

Description of Measuring Point (MP) Top of Casing

Height of MP Above/Below Land Surface _____ MP Elevation _____

Total Sounded Depth of Well Below MP 20 Water-Level Elevation _____Held _____ Depth to Water Below MP 8.81 Diameter of Casing 2"Wet _____ Water Column in Well 11.19 Gallons Pumped/Bailed
Prior to Sampling 6 gallonsGallons per Foot 0.16Gallons in Well 1.79 x 3 Sampling Pump Intake Setting
(feet below land surface) _____Purging Equipment Purge pump / Bailer = 5.37

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (°C)	pH	Conductivity (µS/cm ³)	TDS (g/L)	DO (mg/L)	ORP (mV)
1523	12.12	6.29	211	1.424	6.97	-41.1
1524	12.18	6.28	218	1.423	4.14	-41.5
1525	12.14	6.28	218	1.423	3.61	-42.2

DO %
48.3
38.0
33.3Sampling Equipment Purge Pump/Bailer

Constituents Sampled

Container Description

Preservative

BTEX 3 40mL VOA's HCl

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



TETRA TECH, INC.

WATER SAMPLING FIELD FORM

Project Name Federal #15Page 5 of 5

Project No. _____

Site Location Farmington, NMSite/Well No. MW-5Coded/
Replicate No. _____Date 3/29/10Weather Sunny, warmTime Sampling
Began 1648Time Sampling
Completed 1700

EVACUATION DATA

Description of Measuring Point (MP) Top of Casing

Height of MP Above/Below Land Surface _____ MP Elevation _____

Total Sounded Depth of Well Below MP 17.5 Water-Level Elevation _____Held _____ Depth to Water Below MP 11.81 Diameter of Casing 2"Wet _____ Water Column in Well 5.69 Gallons Pumped/Bailed
Prior to Sampling _____Gallons per Foot 0.16Gallons in Well 91 x 3 Sampling Pump Intake Setting
(feet below land surface) _____Purging Equipment Purge pump / Bailer = 2.73

SAMPLING DATA/FIELD PARAMETERS

	Time	Temperature (°C)	pH	Conductivity (µS/cm³)	TDS (g/L)	DO (mg/L)	ORP (mV)	DO (%)
2.25	1554	11.20	6.32	2086	1.356	4.02	-43.4	36.2
2.50	1555	11.23	6.32	2084	1.355	4.07	-43.4	37.7
2.75	1556	11.21	6.34	2084	1.355	4.13	-43.0	38.1

Sampling Equipment Purge Pump/Bailer

Constituents Sampled _____ Container Description _____ Preservative _____

BTEX 3 40mL VOA's HCl

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

R:\Share\Maxim Forms\Field Forms\Fed 15 Water Sampling Field Forms.xls

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 15, 2010

Workorder: H10040006

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

Project: Federal 15
Project Number: COP - Federal 15
Site: Farmington, NM
PO Number: 4511988512
NELAC Cert. No.: T104704205-09-1

This Report Contains A Total Of 17 Pages

Excluding Any Attachments



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Suite 200
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Project: Federal 15
Project Number: COP - Federal 15
Site: Farmington, NM
PO Number: 4511988512
NELAC Cert. No.: T104704205-09-1

I. SAMPLE RECEIPT:

All samples were received intact. The internal ice chest temperatures were measured on receipt and are recorded on the attached Sample Receipt Checklist.

II: ANALYSES AND EXCEPTIONS:

There were no exceptions noted.

III. GENERAL REPORTING COMMENTS:

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.



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Certificate of Analysis

April 15, 2010

Workorder: H10040006

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

Project: Federal 15
Project Number: COP - Federal 15
Site: Farmington, NM
PO Number: 4511988512
NELAC Cert. No.: T104704205-09-1

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or by his designee, as verified by the following signature.

Erica Cardenas, Senior Project Manager

Enclosures



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

SAMPLE SUMMARY

Workorder: H10040006 : Federal 15

Project Number: COP - Federal 15

Lab ID	Sample ID	Matrix	COC ID	Date/Time Collected	Date/Time Received
H10040006001	MW-1	Water		3/29/2010 15:30	4/1/2010 09:00
H10040006002	MW-2	Water		3/29/2010 16:45	4/1/2010 09:00
H10040006003	MW-3	Water		3/29/2010 16:10	4/1/2010 09:00
H10040006004	MW-4	Water		3/29/2010 16:25	4/1/2010 09:00
H10040006005	MW-5	Water		3/29/2010 17:00	4/1/2010 09:00
H10040006006	Duplicate	Water		3/29/2010 16:20	4/1/2010 09:00
H10040006007	Trip Blank	Water		3/29/2010 17:15	4/1/2010 09:00



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ANALYTICAL RESULTS

Workorder: H10040006 : Federal 15

Project Number: COP - Federal 15

Lab ID: H10040006001

Date/Time Received: 4/1/2010 09:00

Matrix: Water

Sample ID: MW-1

Date/Time Collected: 3/29/2010 15:30

VOLATILES

Analysis Desc: SW-846 8260B

SW-846 5030 Analytical Batches:

Batch: 1709 SW-846 8260B on 04/05/2010 12:23 by JMC

Parameters	Results			MDL	DF	RegLmt	Batch Information	
	ug/l	Qual	Report Limit				Prep	Analysis
Benzene	ND		1.0	0.10	1			1709
Ethylbenzene	ND		1.0	0.15	1			1709
Toluene	ND		1.0	0.29	1			1709
m,p-Xylene	ND		1.0	0.18	1			1709
o-Xylene	ND		1.0	0.13	1			1709
Xylenes, Total	ND		1.0	0.13	1			1709
4-Bromofluorobenzene (S)	91.8 %		74-125		1			1709
1,2-Dichloroethane-d4 (S)	104 %		70-130		1			1709
Toluene-d8 (S)	100 %		82-118		1			1709



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ANALYTICAL RESULTS

Workorder: H10040006 : Federal 15

Project Number: COP - Federal 15

Lab ID: H10040006002

Date/Time Received: 4/1/2010 09:00

Matrix: Water

Sample ID: MW-2

Date/Time Collected: 3/29/2010 16:45

VOLATILES

Analysis Desc: SW-846 8260B

SW-846 5030 Analytical Batches:

Batch: 1709 SW-846 8260B on 04/05/2010 13:45 by JMC

Parameters	Results		Report Limit	MDL	DF	RegLmt	Batch Information	
	ug/l	Qual					Prep	Analysis
Benzene	1.8		1.0	0.10	1			1709
Ethylbenzene	ND		1.0	0.15	1			1709
Toluene	ND		1.0	0.29	1			1709
m,p-Xylene	ND		1.0	0.18	1			1709
o-Xylene	ND		1.0	0.13	1			1709
Xylenes, Total	ND		1.0	0.13	1			1709
4-Bromofluorobenzene (S)	94.8 %		74-125		1			1709
1,2-Dichloroethane-d4 (S)	97.2 %		70-130		1			1709
Toluene-d8 (S)	100 %		82-118		1			1709



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ANALYTICAL RESULTS

Workorder: H10040006 : Federal 15

Project Number: COP - Federal 15

Lab ID: H10040006003

Date/Time Received: 4/1/2010 09:00

Matrix: Water

Sample ID: MW-3

Date/Time Collected: 3/29/2010 16:10

VOLATILES

Analysis Desc: SW-846 8260B

SW-846 5030 Analytical Batches:

Batch: 1709 SW-846 8260B on 04/05/2010 14:13 by JMC

Parameters	Results			MDL	DF	RegLmt	Batch Information	
	ug/l	Qual	Report Limit				Prep	Analysis
Benzene	ND		1.0	0.10	1			1709
Ethylbenzene	ND		1.0	0.15	1			1709
Toluene	ND		1.0	0.29	1			1709
m,p-Xylene	ND		1.0	0.18	1			1709
o-Xylene	ND		1.0	0.13	1			1709
Xylenes, Total	ND		1.0	0.13	1			1709
4-Bromofluorobenzene (S)	90.3 %		74-125		1			1709
1,2-Dichloroethane-d4 (S)	97.5 %		70-130		1			1709
Toluene-d8 (S)	99.7 %		82-118		1			1709



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ANALYTICAL RESULTS

Workorder: H10040006 : Federal 15

Project Number: COP - Federal 15

Lab ID: H10040006004

Date/Time Received: 4/1/2010 09:00

Matrix: Water

Sample ID: MW-4

Date/Time Collected: 3/29/2010 16:25

VOLATILES

Analysis Desc: SW-846 8260B

SW-846 5030 Analytical Batches:

Batch: 1709 SW-846 8260B on 04/05/2010 14:40 by JMC

Parameters	Results			MDL	DF	RegLmt	Batch Information	
	ug/l	Qual	Report Limit				Prep	Analysis
Benzene	ND		1.0	0.10	1			1709
Ethylbenzene	ND		1.0	0.15	1			1709
Toluene	ND		1.0	0.29	1			1709
m,p-Xylene	ND		1.0	0.18	1			1709
o-Xylene	ND		1.0	0.13	1			1709
Xylenes, Total	ND		1.0	0.13	1			1709
4-Bromofluorobenzene (S)	95.5 %		74-125		1			1709
1,2-Dichloroethane-d4 (S)	100 %		70-130		1			1709
Toluene-d8 (S)	101 %		82-118		1			1709



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ANALYTICAL RESULTS

Workorder: H10040006 : Federal 15

Project Number: COP - Federal 15

Lab ID: H10040006005

Date/Time Received: 4/1/2010 09:00

Matrix: Water

Sample ID: MW-5

Date/Time Collected: 3/29/2010 17:00

VOLATILES

Analysis Desc: SW-846 8260B

SW-846 5030 Analytical Batches:

Batch: 1709 SW-846 8260B on 04/05/2010 15:08 by JMC

Parameters	Results		Report Limit	MDL	DF	RegLmt	Batch Information	
	ug/l	Qual					Prep	Analysis
Benzene	ND		1.0	0.10	1			1709
Ethylbenzene	ND		1.0	0.15	1			1709
Toluene	ND		1.0	0.29	1			1709
m,p-Xylene	ND		1.0	0.18	1			1709
o-Xylene	ND		1.0	0.13	1			1709
Xylenes, Total	ND		1.0	0.13	1			1709
4-Bromofluorobenzene (S)	93 %		74-125		1			1709
1,2-Dichloroethane-d4 (S)	105 %		70-130		1			1709
Toluene-d8 (S)	102 %		82-118		1			1709



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ANALYTICAL RESULTS

Workorder: H10040006 : Federal 15

Project Number: COP - Federal 15

Lab ID: **H10040006006**

Date/Time Received: 4/1/2010 09:00

Matrix: Water

Sample ID: **Duplicate**

Date/Time Collected: 3/29/2010 16:20

VOLATILES

Analysis Desc: SW-846 8260B

SW-846 5030 Analytical Batches:

Batch: 1709 SW-846 8260B on 04/05/2010 15:36 by JMC

Parameters	Results			MDL	DF	RegLmt	Batch Information	
	ug/l	Qual	Report Limit				Prep	Analysis
Benzene	ND		1.0	0.10	1			1709
Ethylbenzene	ND		1.0	0.15	1			1709
Toluene	ND		1.0	0.29	1			1709
m,p-Xylene	ND		1.0	0.18	1			1709
o-Xylene	ND		1.0	0.13	1			1709
Xylenes, Total	ND		1.0	0.13	1			1709
4-Bromofluorobenzene (S)	96 %		74-125		1			1709
1,2-Dichloroethane-d4 (S)	97.8 %		70-130		1			1709
Toluene-d8 (S)	101 %		82-118		1			1709



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ANALYTICAL RESULTS

Workorder: H10040006 : Federal 15

Project Number: COP - Federal 15

Lab ID: H10040006007

Date/Time Received: 4/1/2010 09:00

Matrix: Water

Sample ID: Trip Blank

Date/Time Collected: 3/29/2010 17:15

VOLATILES

Analysis Desc: SW-846 8260B

SW-846 5030 Analytical Batches:

Batch: 1709 SW-846 8260B on 04/05/2010 16:03 by JMC

Parameters	Results		Report Limit	MDL	DF	RegLmt	Batch Information	
	ug/l	Qual					Prep	Analysis
Benzene	ND		1.0	0.10	1			1709
Ethylbenzene	ND		1.0	0.15	1			1709
Toluene	ND		1.0	0.29	1			1709
m,p-Xylene	ND		1.0	0.18	1			1709
o-Xylene	ND		1.0	0.13	1			1709
Xylenes, Total	ND		1.0	0.13	1			1709
4-Bromofluorobenzene (S)	93.3 %		74-125		1			1709
1,2-Dichloroethane-d4 (S)	98.1 %		70-130		1			1709
Toluene-d8 (S)	101 %		82-118		1			1709



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QUALITY CONTROL DATA

Workorder: H10040006 : Federal 15

Project Number: COP - Federal 15

QC Batch: MSV/1708

Analysis Method: SW-846 8260B

QC Batch Method: SW-846 5030

Preparation: 04/05/2010 00:00 by JMC

Associated Lab Samples:	H10040006001	H10040006002	H10040006003	H10040006004	H10040006005	H10040006006
	H10040006007	H10040014001	H10040014003	H10040014004	H10040014005	H10040019001
	H10040019002	H10040019003	H10040019004	H10040019005	H10040019006	

METHOD BLANK: 37519

Analysis Date/Time Analyst: 04/05/2010 11:55 JMC

Parameter	Units	Blank Result	Qualifiers	Reporting Limit
Benzene	ug/l	ND		1.0
Ethylbenzene	ug/l	ND		1.0
Toluene	ug/l	ND		1.0
m,p-Xylene	ug/l	ND		1.0
o-Xylene	ug/l	ND		1.0
Xylenes, Total	ug/l	ND		1.0
4-Bromofluorobenzene (S)	%	95.4		74-125
1,2-Dichloroethane-d4 (S)	%	94.2		70-130
Toluene-d8 (S)	%	102		82-118

LABORATORY CONTROL SAMPLE: 37520

Analysis Date/Time Analyst: 04/05/2010 11:28 JMC

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits
Benzene	ug/l	20	19.4	97.2	74-123
Ethylbenzene	ug/l	20	19.0	95.1	72-127
Toluene	ug/l	20	19.6	98.2	74-126
m,p-Xylene	ug/l	40	39.1	97.8	71-129
o-Xylene	ug/l	20	19.5	97.7	74-130
Xylenes, Total	ug/l	60	58.64	97.7	71-130
4-Bromofluorobenzene (S)	%			96.8	74-125
1,2-Dichloroethane-d4 (S)	%			96.8	70-130
Toluene-d8 (S)	%			100	82-118

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 37521

37522

Original: H10040006001

MS Analysis Date/Time Analyst: 04/05/2010 12:50 JMC

MSD Analysis Date/Time Analyst: 04/05/2010 13:18 JMC

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Benzene	ug/l	ND	20	19.2	19.5	95.8	97.4	70-124	1.7	20
Ethylbenzene	ug/l	ND	20	20.0	18.8	99.9	94.2	35-175	5.9	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: H10040006 : Federal 15

Project Number: COP - Federal 15

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 37521 37522 Original: H10040006001

MS Analysis Date/Time Analyst: 04/05/2010 12:50 JMC

MSD Analysis Date/Time Analyst: 04/05/2010 13:18 JMC

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Toluene	ug/l	ND	20	19.8	19.7	98.9	98.5	70-131	0.4	20
m,p-Xylene	ug/l	ND	40	40.2	38.7	100	96.8	35-175	3.7	20
o-Xylene	ug/l	ND	20	19.9	19.6	99.3	97.8	35-175	1.6	20
Xylenes, Total	ug/l	ND	60	60.04	58.27	100	97.1	35-175	3.0	20
4-Bromofluorobenzene (S)	%	91.8				98.6	98.1	74-125		30
1,2-Dichloroethane-d4 (S)	%	104				95.2	101	70-130		30
Toluene-d8 (S)	%	100				102	101	82-118		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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Legend

(S) - Indicates analyte is a surrogate

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



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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: H10040006 : Federal 15

Project Number: COP - Federal 15

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
H10040006001	MW-1	SW-846 5030	MSV/1708	SW-846 8260B	MSV/1709
H10040006002	MW-2	SW-846 5030	MSV/1708	SW-846 8260B	MSV/1709
H10040006003	MW-3	SW-846 5030	MSV/1708	SW-846 8260B	MSV/1709
H10040006004	MW-4	SW-846 5030	MSV/1708	SW-846 8260B	MSV/1709
H10040006005	MW-5	SW-846 5030	MSV/1708	SW-846 8260B	MSV/1709
H10040006006	Duplicate	SW-846 5030	MSV/1708	SW-846 8260B	MSV/1709
H10040006007	Trip Blank	SW-846 5030	MSV/1708	SW-846 8260B	MSV/1709



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Sample Receipt Checklist

WorkOrder:	H10040006	Received By	BAF
Date and Time	04/01/2010 09:00	Carrier Name:	FEDEXS
Temperature:	4.0°C	Chilled By:	Water Ice

1. Shipping container/cooler in good condition? YES
2. Custody seals intact on shipping container/cooler? YES
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?
Sample MW-2 container time says 15:45 chain says 16:45, used time from chain. NO
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:

Contact Date & Time:

Client Name Contacted:

Client Instructions:



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SPL, Inc.
Analysis Request & Chain of Custody Record

Client Name: Tetra Tech / Cape Phillips
Address: 6121 Indian School Rd Ste 200
City: Albuquerque State: NM Zip: 87110
Phone/Fax: 505.257.8440
Client Contact: Kell Blanchard Email: kellblanchard@tetra.com
Project Name/No.: Federal 15
Site Name: _____
Site Location: Farmington NM
Invoice To: Cape Phillips #451988512

SAMPLE ID	DATE	TIME	comp.	grab	matrix	bottle	size	pres.	Number of Containers
MW-1	3.29.10	1530		X	W	V	40	1	3
MW-2	3.29.10	1645		X	W	V	40	1	3
MW-3	3.29.10	1610		X	W	V	40	1	3
MW-4	3.29.10	1625		X	W	V	40	1	3
MW-5	3.29.10	1700		X	W	V	40	1	3
Duplicate	3.29.10	1620		X	W	V	40	1	3
Imp Blank	3.29.10	1715		X	W	V	40	1	2

Client/Consultant Remarks: _____ Laboratory Remarks: _____

Requested TAT: ☒ Rush TAT requires prior notice

Special Reporting Requirements: Results: ☐ Fax ☐ Email ☒ Print ☒ ICA REC-AP

1. Relinquished by: MICHAEL BLANCHARD date: 3.31.10 time: 7:30

2. Received by: _____

3. Relinquished by: _____ date: _____ time: _____

4. Received by: _____

5. Relinquished by: _____ date: 4/1/10 time: 9:00

6. Received by: Steve G

Intact? ☒ Ice? ☒ Temp: 4/0 PM review (initials): _____

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500 Ambassador Caffery Parkway
Scott, LA 70583 (337) 247-4775

459 Hughes Drive
Traverse City MI 49686 (231) 947-5777

Barcode: H10040006
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