

**3R - 434**

**JUN 2010**  
**GWMR**

**06/10/2011**



**TETRATECH, INC.**

**3R434**  
6121 Indian School Rd. NE Suite 200  
Albuquerque, NM 87110  
(505) 237-8440

June 10, 2011

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

RE: ConocoPhillips Company Faye Burdette No. 1 – June 2010 Groundwater Monitoring  
Report  
San Juan County, New Mexico

Dear Mr. von Gonten:

Enclosed please find one copy of the above-referenced document as compiled by Tetra Tech, Inc. for this San Juan County 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)

Cc: Brandon Powell, NMOCD (hardcopy)  
Terry Lauck, ConocoPhillips Company (electronic)

RECEIVED OGD  
2011 JUN 15 P 2:52

**QUARTERLY GROUNDWATER  
MONITORING REPORT  
JUNE 2010 SAMPLING EVENT**

**CONOCOPHILLIPS COMPANY  
FAYE BURDETTE NO. 1  
AZTEC, NEW MEXICO**

API NO. 30-045-09725

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. 9690127.100

July 2010

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3. Groundwater Laboratory Analytical Results Summary

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- Appendix B. Groundwater Laboratory Analytical Report

# QUARTERLY GROUNDWATER MONITORING REPORT CONOCOPHILLIPS FAYE BURDETTE NO. 1, AZTEC, NEW MEXICO

## 1.0 INTRODUCTION

This report presents the results of quarterly groundwater monitoring completed by Tetra Tech, Inc. (Tetra Tech) on June 9, 2010, at the ConocoPhillips Company Faye Burdette No. 1 natural gas well site located on private land in Aztec, New Mexico (Site). This event represents the eighth quarter of groundwater sampling conducted by Tetra Tech at the Site.

The Site is located near the intersection of Highway 550 and Pioneer Avenue in Aztec, NM. The Site consists of a gas production well head and associated equipment and installations. The location and general features of the Site are presented as **Figures 1** and **2**, respectively. A generalized cross section of the site is included as **Figure 3**.

### 1.1 Site History

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

To complete additional investigation and sampling of the Site, Monitor Wells MW-2, MW-3, and MW-4 were installed under the supervision of Tetra Tech during January 2009 at the request of the New Mexico Oil Conservation Division (OCD). All four monitor wells have been incorporated into a quarterly monitoring program that was initiated on January 29, 2009. Site history is outlined in **Table 1**.

## 2.0 METHODOLOGY AND RESULTS

### 2.1 Groundwater Monitoring Methodology

#### Groundwater Elevation Measurements

On June 9, 2010, groundwater elevation measurements were recorded in Monitor Wells MW-1, MW-2, MW-3, and MW-4 using a dual interface probe. Groundwater elevations are detailed in **Table 2**. A groundwater elevation contour map is presented as **Figure 4**. Based on June 2010 monitoring event

data, groundwater flow is to the northwest and is consistent with historic records at this site. The Animas River is approximately 1/3 mile from the site and flows west.

#### Groundwater sampling

Monitor Wells MW-1, MW-2, MW-3, and MW-4 were sampled, representing the eighth round of consecutive quarterly groundwater monitoring at the Site. Approximately three well volumes were purged from each monitor well with a dedicated polyethylene 1.5-inch disposable bailer. Purge water was placed in the on site produced water tank. Groundwater samples were placed in laboratory prepared bottles, packed on ice, and shipped under chain of custody documentation to Southern Petroleum Laboratories in Houston, Texas. The samples were analyzed for the presence of BTEX in accordance with Environmental Protection Agency (EPA) Method 8260B and dissolved manganese according to EPA Method 6010B. Groundwater sampling field forms are included as **Appendix A**.

## **2.2 Groundwater Sampling Analytical Results**

Groundwater quality samples collected during the June 9, 2010 monitoring event indicate that Monitor Well MW-1 exceeds NMWQCC standard for manganese at 1.61 milligrams per liter (mg/L). The NMWQCC standard for manganese is 0.2 mg/L. BTEX concentrations were below laboratory detection limits for all monitor wells. **Table 3** summarizes the laboratory analytical results for the June 2010 groundwater sampling event. The corresponding laboratory analysis report is included in **Appendix B**.

## **3.0 CONCLUSIONS**

Tetra Tech recommends continued quarterly groundwater sampling at the Site in order to provide sufficient data for Site closure. Site closure will be requested when groundwater quality results begin to indicate that all constituents of concern are consistently below NMWQCC groundwater quality standards; or are representative of background conditions at the Site. Please contact Kelly Blanchard at 505-237-8440 or [kelly.blanchard@tetrattech.com](mailto:kelly.blanchard@tetrattech.com) if you have any questions or require additional information.

## **REFERENCES**

Envirotech, Inc. (2007). *Drilling and Groundwater Sampling Report at Faye Burdette No. 1 Aztec, NM*. Prepared for ConocoPhillips, dated December 12, 2007.

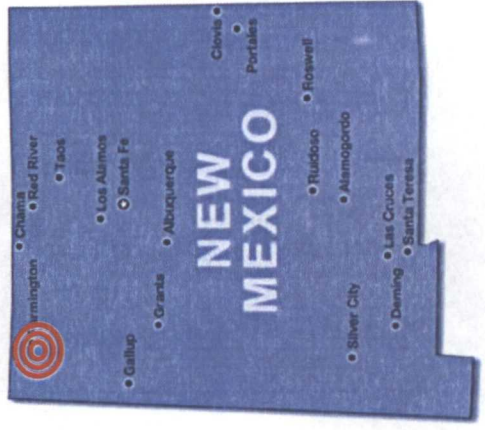
## **FIGURES**

1. Site Location Map
2. Site Layout Map
3. Geologic Cross Section
4. Groundwater Contour Map – April 2010





**FIGURE 1.**  
Site Location Map  
CONOCOPhillips COMPANY  
FAYE BURDETTE NO.1 GAS  
PRODUCTION WELL SITE  
Sec 9, T30N, R11W  
Aztec, New Mexico

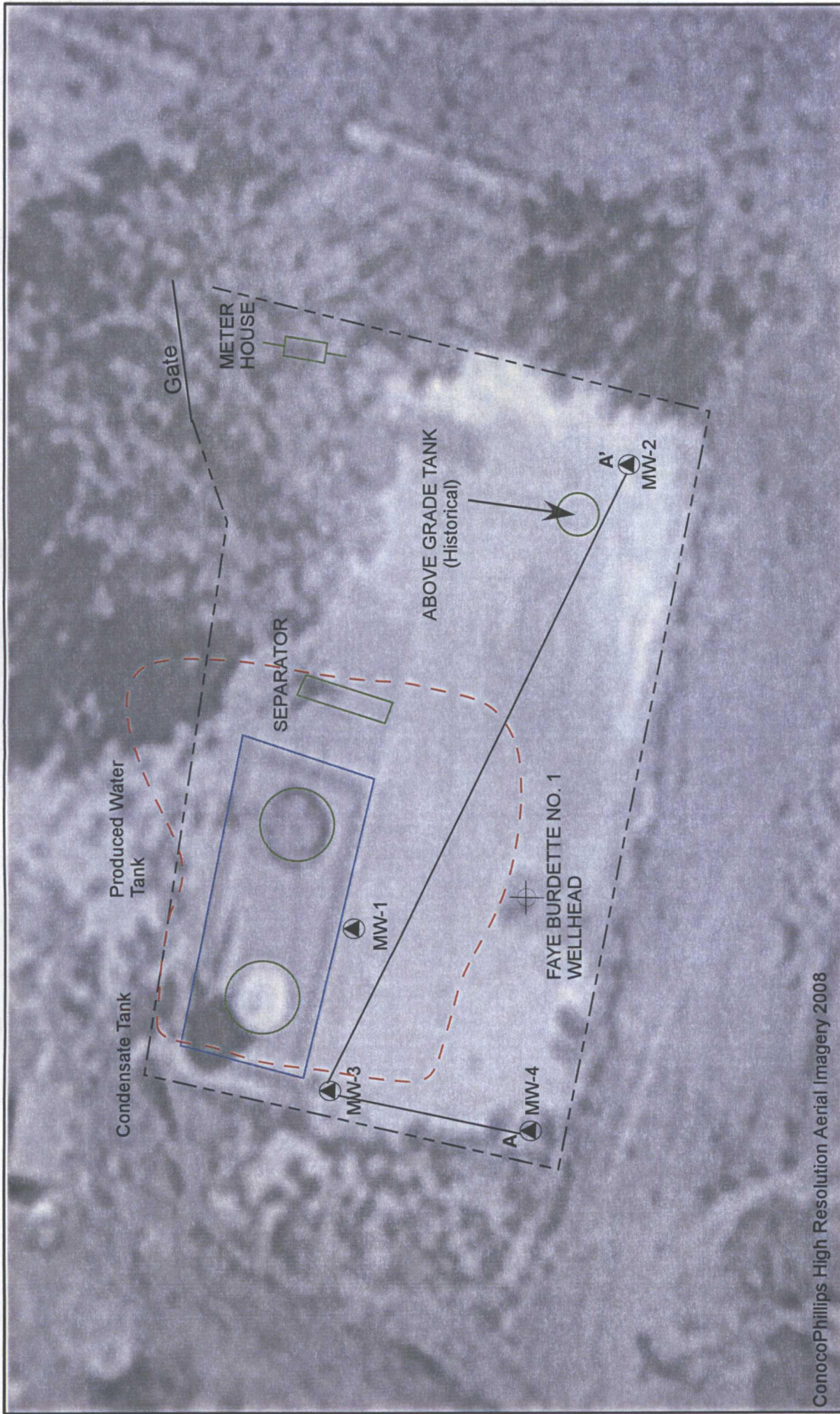


Approximate ConocoPhillips  
Faye Burdette No.1 Site  
location



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ConocoPhillips High Resolution Aerial Imagery 2008



TETRA TECH, INC.

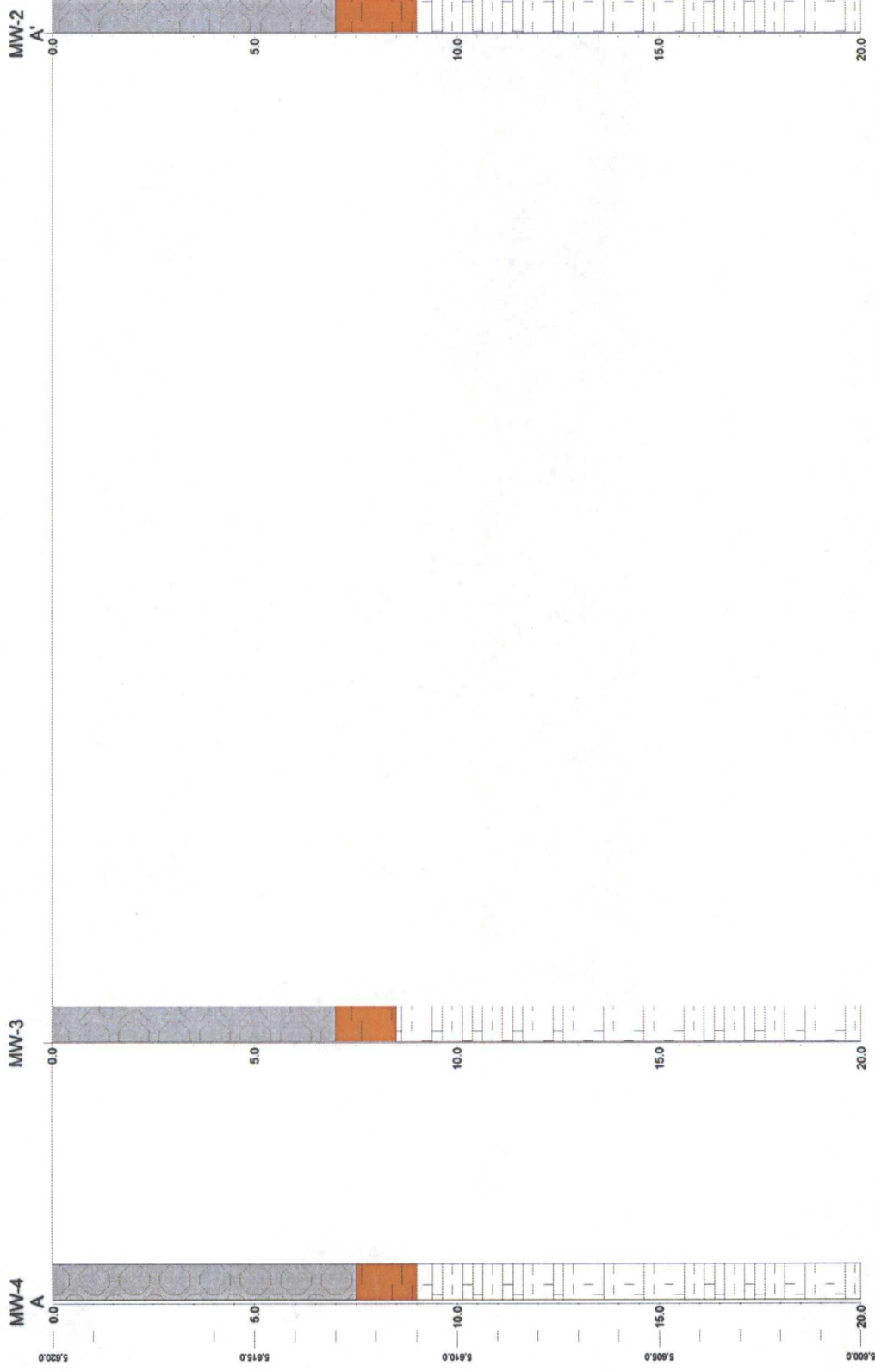
# LEGEND

- MONITORING WELL
- BERM
- FENCE LINE
- EQUIPMENT
- APPROXIMATE 2007 EXCAVATION AREA



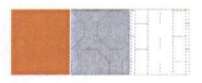
**FIGURE 2.**  
**Site Layout Map**  
**CONOCOPHILLIPS COMPANY**  
**FAYE BURDETTE NO.1 GAS**  
**PRODUCTION WELL SITE**  
**Sec 9, T30N, R11W**  
**Aztec, New Mexico**





**FIGURE 3:**  
**Geologic Cross Section**  
 CONOCOPHILLIPS COMPANY  
 FAYE BURDETTE NO. 1 GAS  
 PRODUCTION WELL SITE  
 Sec 9, T30N, R11W  
 San Juan County, New Mexico

**LEGEND**

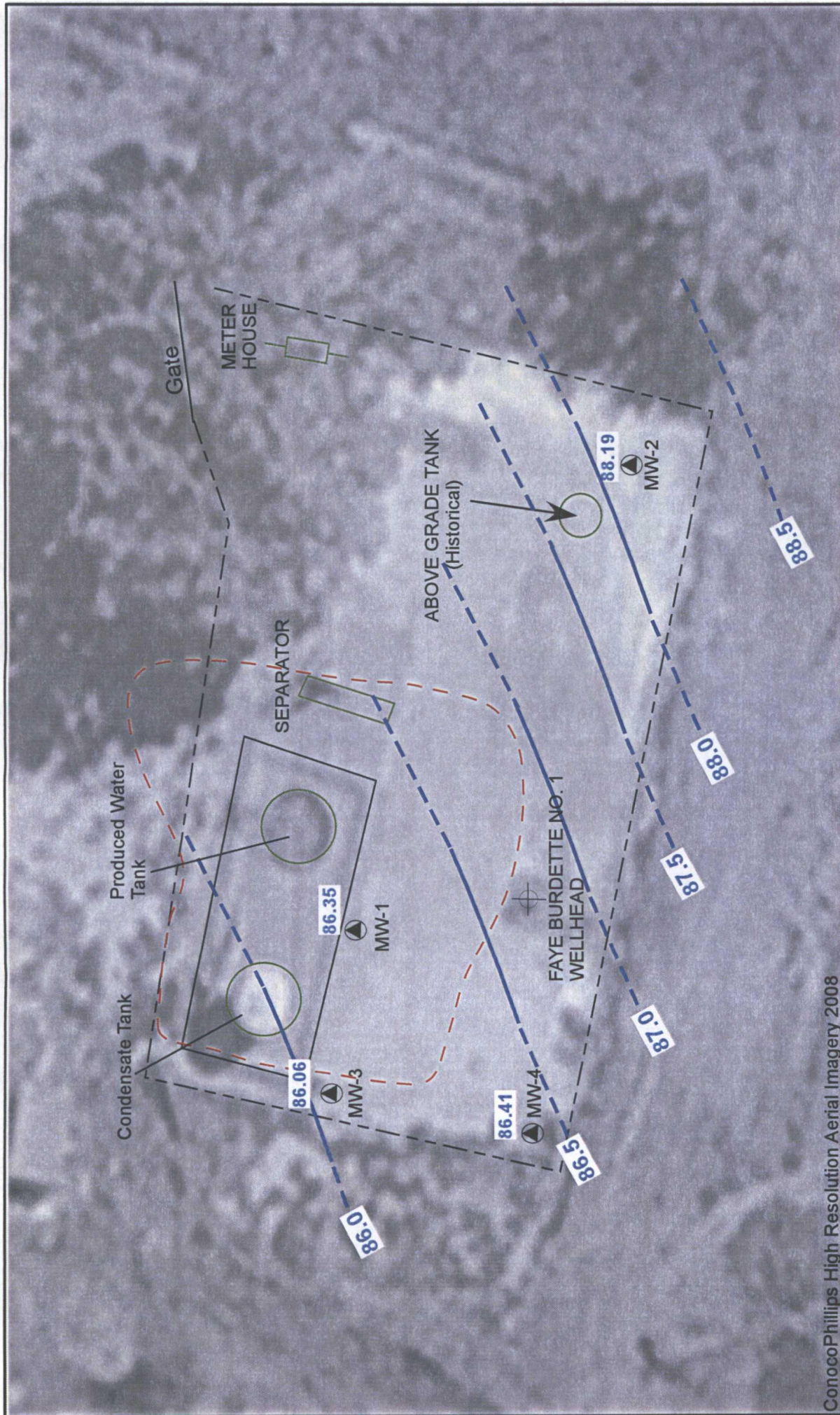


Medium grained sand  
 Silty Sand  
 Undefined



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ConocoPhillips High Resolution Aerial Imagery 2008

**Figure 4.**

## Groundwater Elevation Contour

**Map - June 2010**

CONOCOPHILLIPS COMPANY

FAYE BURDETTE NO. 1 GAS

PRODUCTION WELL SITE

Sec 9, T30N, R11W

Aztec, New Mexico

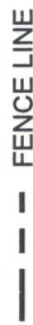
### LEGEND



MONITORING WELL



BERM



FENCE LINE



EQUIPMENT



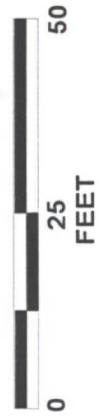
APPROXIMATE 2007  
EXCAVATION AREA



GROUNDWATER ELEVATION  
CONTOUR (dashed where inferred)



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## **TABLES**

1. Site History Timeline
2. Groundwater Elevation Data Summary
3. Groundwater Laboratory Analytical Results Summary

**Table 1. Site History Timeline - ConocoPhillips Company Faye Burdette No. 1**

DATE	ACTIVITY
29-Apr-1962	Well was spudded by Southwest Production Company.
1-Sep-1963	Ownership of well transferred to Beta Development Company.
21-Feb-1983	NMOCD inspection noted a leaky 2-inch valve on a storage tank.
15-Aug-1988	Ownership of well transferred to Mesa Operating Limited Partnership.
1-Jul-1991	Ownership of well transferred to Conoco Inc.
24-May-2007	A small (<25 gallons) release occurred from the produced water tank after a rusty spot was scraped off. Follow-up excavation encountered evidence of pre-existing hydrocarbon-impacted soil, apparently related to a former earthen pit beneath the tank.
Jul-07	Contaminated soil excavated from the Site. Two ground water samples were obtained at the time of this excavation, and one (1) of these samples was found to contain total xylenes above the State of New Mexico drinking water standard.
26-Sep-07	Ground water monitoring well installed to a depth of 15 feet below ground surface (bgs) by Envirotech Inc. of Farmington, NM (Envirotech). A soil sample obtained from the well boring was analyzed for benzene, BTEX and total petroleum hydrocarbons (TPH). Results were below NMOCD regulations of 10 parts per million (ppm), 50 ppm, and 100 ppm, respectively. A ground water sample was collected from the temporary monitoring well (MW-1) and analyzed for BTEX; results were below the State of New Mexico drinking water standard for this constituent. Depth to ground water recorded at 9.5 feet bgs.
Nov-07	Envirotech report recommends plugging and abandonment of the temporary ground water monitoring well and a no further action determination for the Site (Envirotech, 2007).
Apr-08	Oil Conservation Division of NM Energy, Minerals, and Resources Dept. indicates additional investigation and sampling is necessary for closure consideration during a meeting with Glenn Von Gonten.
22-Oct-08	1st quarter sampling of MW-1 by Tetra Tech.
Jan-09	WDC installed additional Monitoring Wells MW-2, MW-3 and MW-4 under the supervision of Tetra Tech.
29-Jan-09	Second quarter sampling of MW-1 by Tetra Tech. Initial sampling of Monitoring Wells MW-2, MW-3, and MW-4.
31-Mar-09	Third consecutive quarter of sampling MW-1 by Tetra Tech. Second quarter sampling of Monitoring Wells MW-2, MW-3, and MW-4.
17-Jun-09	Fourth consecutive quarter of sampling MW-1 by Tetra Tech. Third quarter of sampling Monitoring Wells MW-2, MW-3, and MW-4.
22-Sep-09	Fifth consecutive quarter of sampling MW-1 by Tetra Tech. Fourth consecutive quarter of sampling Monitoring Wells MW-2, MW-3, and MW-4. Sampling for total metals discontinued as requested by NMOCD. Sampling for select dissolved metals based on total metals analyses begins since standards are based on these.
16-Dec-09	Sixth consecutive quarter sampling of MW-1 by Tetra Tech. Fifth consecutive quarter sampling of Monitoring Wells MW-2, MW-3, and MW-4 for BTEX and dissolved manganese only.
1-Apr-10	Seventh consecutive quarter sampling of MW-1 by Tetra Tech. Sixth consecutive quarter sampling of Monitoring Wells MW-2, MW-3, and MW-4 for BTEX and dissolved manganese only.
9-Jun-10	Eighth consecutive quarter sampling of MW-1 by Tetra Tech. Seventh consecutive quarter sampling of Monitoring Wells MW-2, MW-3, and MW-4 for BTEX and dissolved manganese only.

Table 2. Groundwater Elevation Data Summary - ConocoPhillips Company Faye Burdette No. 1

Well ID	Total Depth (ft bgs)	Screen Interval (ft)	*Elevation (ft) (TOC)	Date Measured	Depth to Groundwater (ft below TOC)	Relative Groundwater Elevation
MW-1	17.52	4.8 - 14.8	97.66	10/22/2008	10.91	86.75
				1/29/2009	11.72	85.94
				3/31/2009	11.88	85.78
				6/17/2009	11.24	86.42
				9/22/2009	10.87	86.79
				12/16/2009	11.56	86.1
MW-2	19.45	5.0 - 20.0	98.54	4/1/2010	11.91	85.75
				6/9/2010	11.31	86.35
				1/29/2009	10.91	87.63
				3/31/2009	11.12	87.42
				6/17/2009	10.48	88.06
				9/22/2009	10.76	87.78
MW-3	22.96	5.0 - 20.0	97.16	12/16/2009	10.61	87.93
				4/1/2010	11.2	87.34
				6/9/2010	10.35	88.19
				1/29/2009	11.44	85.72
				3/31/2009	11.62	85.54
				6/17/2009	10.97	86.19
MW-4	22.28	5.0 - 20.0	97.06	9/22/2009	10.57	86.59
				12/16/2009	11.32	85.84
				4/1/2010	11.66	85.50
				6/9/2010	11.1	86.06
				1/29/2009	11.02	86.04
				3/31/2009	11.18	85.88
				6/17/2009	10.59	86.47
				9/22/2009	10.16	86.90
				12/16/2009	10.87	86.19
				4/1/2010	11.04	86.02
				6/9/2010	10.65	86.41

ft = Feet

TOC = Top of casing

bgs = below ground surface

\* Elevation relative to an arbitrary point set at 100 feet



Table 3. Groundwater Laboratory Analytical Results - ConocoPhillips Company Faye Burdette No. 1

Well ID	Date	Aluminum (mg/L)	Iron (mg/L)	Manganese (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
MW-1	10/22/2008	NA	3.74*	2.09*	<5	<5	<5	<5
	1/29/2009	2.14*	2.77*	1.41*	<5	<5	<5	<5
	3/31/2009	3.64*	4.83*	1.24*	<5	<5	<5	<5
	6/17/2009	2.5*	5.58*	2.47*	<5	<5	<5	<5
	9/22/2009	0.443	0.445	1.44	<1	<1	<1	<1
	12/16/2009	NA	NA	0.732	<1	<1	<1	<1
MW-1 Duplicate	4/1/2010	NA	NA	1.71	<1	<1	<1	<1
	6/9/2010	NA	NA	1.61	<1	<1	<1	<1
	1/29/2009	NA	NA	NA	<5	<5	<5	<5
	3/31/2009	NA	NA	NA	<5	<5	<5	<5
	6/17/2009	2.83	6.13*	2.52*	<5	<5	<5	<5
	9/22/2009	NA	NA	NA	<1	<1	<1	<1
MW-2	12/16/2009	NA	NA	NA	<1	<1	<1	<1
	4/1/2010	NA	NA	NA	<1	<1	<1	<1
	6/9/2010	NA	NA	NA	<1	<1	<1	<1
	1/29/2009	4.15*	3.15*	1.79*	<5	<5	<5	<5
	3/31/2009	1.17*	1.02*	0.326*	<5	<5	<5	<5
	6/17/2009	3.4*	2.8*	1.37*	<5	<5	<5	<5
MW-3	9/22/2009	<0.1	<0.02	0.0264	<1	<1	<1	<1
	12/16/2009	NA	NA	0.0654	<1	<1	<1	<1
	4/1/2010	NA	NA	0.16	<1	<1	<1	<1
	6/9/2010	NA	NA	0.0323	<1	<1	<1	<1
	1/29/2009	1.82*	2.24*	0.374*	<5	<5	<5	<5
	3/31/2009	1.64*	1.91*	0.271*	<5	<5	<5	<5
MW-4	6/17/2009	1.68*	2.14*	0.628*	<5	<5	<5	<5
	9/22/2009	<0.1	0.0291	0.0201	<1	<1	<1	<1
	12/16/2009	NA	NA	0.0607	<1	<1	<1	<1
	4/1/2010	NA	NA	0.0232	<1	<1	<1	<1
	6/9/2010	NA	NA	<0.005	<1	<1	<1	<1
	1/29/2009	6.92*	3.17*	4.15*	<5	<5	<5	<5
MW-4	3/31/2009	4.21*	3.22*	1.45*	<5	<5	<5	<5
	6/17/2009	2.43*	2.05*	0.854*	<5	<5	<5	<5
	9/22/2009	<0.1	0.108	0.476	<1	<1	<1	<1
	12/16/2009	NA	NA	0.0149	<1	<1	<1	<1
	4/1/2010	NA	NA	<0.005	<1	<1	<1	<1
	6/9/2010	NA	NA	<0.005	<1	<1	<1	<1
Method		SW6010B	SW6010B	SW6010B	8260B	8260B	8260B	8260B
NMWQCC Groundwater Quality Standard		5.0	1.0	0.2	10	750	750	620

**Notes:**

MW = monitoring well

NMWQCC = New Mexico Water Quality Control Commission

Constituents in **BOLD** exceed NMWQCC groundwater quality standards

mg/L = milligrams per liter

µg/L = micrograms per liter

NA = not analyzed

&lt;5 = result below laboratory detection limit

Total Metals analysis run for all samples through June 2009; September 2009 dissolved metals analysis run in order to compare to standards

\* = total metals analysis result (NMWQCC standards do not apply)

## **APPENDIX A**



## WATER SAMPLING FIELD FORM

Project Name Faye Burdette No. 1Page 1 of 4

act No. \_\_\_\_\_

Site Location Aztec, NMSite/Well No. MW-1Coded/  
Replicate No. Dup @ 1140 Date 6/19/10Weather Sunny, hotTime Sampling  
Began 1125Time Sampling  
Completed 1135

## 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 47.52 / 17.50 Water-Level Elevation \_\_\_\_\_Held \_\_\_\_\_ Depth to Water Below MP 11.31 Diameter of Casing 2"Wet \_\_\_\_\_ Water Column in Well 6.19 Gallons Pumped/Bailed  
Prior to Sampling 3.0Gallons per Foot 0.16Gallons in Well 9904 x 3 =  
2977Sampling Pump Intake Setting  
(feet below land surface) \_\_\_\_\_Purging Equipment Purge pump / Bailer

## SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (°C)	pH	Conductivity (µS/cm³)	TDS (g/L)	DO (mg/L)	DO %	ORP (mV)	Volume (gal.)
<u>1128</u>	<u>13.86</u>	<u>7.39</u>	<u>1.329</u>	<u>—</u>	<u>28.2</u>	<u>28.2</u>	<u>-2.0</u>	<u>2</u>
<u>1129</u>	<u>13.38</u>	<u>7.31</u>	<u>1.316</u>	<u>—</u>	<u>1.24</u>	<u>12.0</u>	<u>-1.1</u>	<u>2.5</u>
<u>1131</u>	<u>13.16</u>	<u>7.20</u>	<u>1.345</u>	<u>—</u>	<u>1.03</u>	<u>9.8</u>	<u>0.6</u>	<u>3.0</u>

Sampling Equipment Purge Pump/Bailer

Constituents Sampled \_\_\_\_\_ Container Description \_\_\_\_\_ Preservative \_\_\_\_\_

BTEX \_\_\_\_\_ 3 40mL VOA's \_\_\_\_\_ HCl \_\_\_\_\_

Dissolved Mn \_\_\_\_\_ 16 oz Plastic \_\_\_\_\_ None \_\_\_\_\_

Remarks water is tan; no green or odor detectedSampling Personnel CM & CB

## 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





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## WATER SAMPLING FIELD FORM

Project Name Faye Burdette No. 1Page 2 of 4

ject No. \_\_\_\_\_

Site Location Aztec, NMSite/Well No. MW-2Coded/  
Replicate No. \_\_\_\_\_Date 6/9/10Weather Sunny, hotTime Sampling  
Began 1045Time Sampling  
Completed 1105

## 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 19.45

Water-Level Elevation \_\_\_\_\_

Held \_\_\_\_\_ Depth to Water Below MP 10.35Diameter of Casing 2"Wet \_\_\_\_\_ Water Column in Well 9.1Gallons Pumped/Bailed  
Prior to Sampling 4.5Gallons per Foot 0.16Gallons in Well 1.456Sampling Pump Intake  
(feet below land) \_\_\_\_\_Purging Equipment Purge pump / BailerX3 = 4.368

## SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (°C)	pH	Conductivity (µS/cm³)	TDS (g/L)	DO (mg/L)	DO %	ORP (mV)	Volume (gal.)
<u>11:00</u>	<u>14.46</u>	<u>6.76</u>	<u>1.150</u>	<u>—</u>	<u>2.04</u>	<u>20.0</u>	<u>133.0</u>	<u>3.253</u>
<u>11:01</u>	<u>13.76</u>	<u>6.84</u>	<u>1.128</u>	<u>—</u>	<u>2.09</u>	<u>20.1</u>	<u>124.0</u>	<u>4.0</u>
<u>11:03</u>	<u>13.65</u>	<u>6.70</u>	<u>1.124</u>	<u>—</u>	<u>2.23</u>	<u>21.4</u>	<u>126.7</u>	<u>4.5</u>

Sampling Equipment Purge Pump/Bailer

## Constituents Sampled

## Container Description

## Preservative

BTEX3 40mL VOA'sHClDissolved Mn16 oz PlasticNoneRemarks white surface swirls in bucket could be salts from EPA in the bucketSampling Personnel CM & CB

## 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



## WATER SAMPLING FIELD FORM

Project Name Faye Burdette No. 1Page 3 of 4

ject No. \_\_\_\_\_

Site Location Aztec, NMSite/Well No. MW-3

Coded/

Replicate No. \_\_\_\_\_

Date

Weather Sunny, hot

Time Sampling

Began 11:25

Time Sampling

Completed 11:45

## 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 22.96

Water-Level Elevation \_\_\_\_\_

Held \_\_\_\_\_ Depth to Water Below MP 11.10Diameter of Casing 2"Wet \_\_\_\_\_ Water Column in Well 11.86Gallons Pumped/Bailed  
Prior to Sampling \_\_\_\_\_Gallons per Foot 0.16Gallons in Well 1.8976Sampling Pump Intake Setting  
(feet below land surface) \_\_\_\_\_

Purging Equipment

Purge pump / BailerX3 = 5.693

## SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (°C)	pH	Conductivity (µS/cm³)	TDS (g/L)	DO (mg/L)	DO %	ORP (mV)	Volume (gal.)
<u>1136</u>	<u>12.93</u>	<u>7.13</u>	<u>1.185</u>	<u>—</u>	<u>1.21</u>	<u>11.5</u>	<u>64.2</u>	<u>4.5</u>
<u>1138</u>	<u>12.97</u>	<u>7.10</u>	<u>1.188</u>	<u>—</u>	<u>1.38</u>	<u>13.0</u>	<u>79.2</u>	<u>5.0</u>
<u>1141</u>	<u>12.91</u>	<u>7.19</u>	<u>1.188</u>	<u>—</u>	<u>1.17</u>	<u>11.1</u>	<u>83.3</u>	<u>5.5</u>

Sampling Equipment

Purge Pump/Bailer

Constituents Sampled

Container Description

Preservative

BTEX3 40mL VOA'sHClDissolved Mn16 oz PlasticNone

Remarks \_\_\_\_\_

Sampling Personnel CM & CB

## 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



TETRATECH, INC.

## WATER SAMPLING FIELD FORM

Project Name Faye Burdette No. 1Page 4 of 4

act No. \_\_\_\_\_

Site Location Aztec, NMSite/Well No. MW-4

Coded/

Replicate No. \_\_\_\_\_

Date 6/9/10Weather Sunny, hot

Time Sampling

Began 1045

Time Sampling

Completed 1115

## 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 22.28

Water-Level Elevation \_\_\_\_\_

Held \_\_\_\_\_ Depth to Water Below MP 10.65Diameter of Casing 2"Wet \_\_\_\_\_ Water Column in Well 11.63Gallons Pumped/Bailed  
Prior to Sampling 5.75Gallons per Foot 0.16Gallons in Well 1.86Sampling Pump Intake Setting  
(feet below land surface) \_\_\_\_\_

Purging Equipment

Purge pump / Bailer X3 = 5.58

## SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (°C)	pH	Conductivity (µS/cm³)	TDS (g/L)	DO (mg/L)	DO %	ORP (mV)	Volume (gal.)
1112	13.02	7.42	1.292	—	3.42	29.0	143.7	4.5
1113	13.03	7.35	1.307	—	2.10	19.7	142.7	5.0
1114	12.97	7.22	1.323	—	1.72	15.9	144.2	5.5

Sampling Equipment

Purge Pump/Bailer

Constituents Sampled

Container Description

Preservative

BTEX

3 40mL VOA's

HCl

Dissolved Mn

16 oz Plastic

None

Remarks water is brown and silty; no odor or greenSampling Personnel CM & CB

## 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**



SPL Inc.  
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Fax: (713) 660-8975

### Certificate of Analysis

June 24, 2010

**Workorder: H10060286**

Cassandra Brown  
Tetra Tech, Inc.  
6121 Indian School Road NE  
Suite 200  
Albuquerque, NM 87110

**Project: Faye Burdette No. 1**

Project Number: Faye Burdette No. 1

Site: Aztec, NM

PO Number: ENFOS

NELAC Cert. No.: T104704205-09-1

This Report Contains A Total Of 19 Pages

Excluding Any Attachments



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## Certificate of Analysis

June 24, 2010

**Workorder: H10060286**

Cassandra Brown  
Tetra Tech, Inc.  
6121 Indian School Road NE  
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**Project: Faye Burdette No. 1**  
Project Number: Faye Burdette No. 1  
Site: Aztec, NM  
PO Number: ENFOS  
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:

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

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.



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### Certificate of Analysis

June 24, 2010

Workorder: H10060286

Cassandra Brown  
Tetra Tech, Inc.  
6121 Indian School Road NE  
Suite 200  
Albuquerque, NM 87110

Project: Faye Burdette No. 1  
Project Number: Faye Burdette No. 1  
Site: Aztec, NM  
PO Number: ENFOS  
NELAC Cert. No.: T104704205-09-1

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.

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



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## SAMPLE SUMMARY

Workorder: H10060286 : Faye Burdette No. 1

Project Number: Faye Burdette No. 1

Lab ID	Sample ID	Matrix	COC ID	Date/Time Collected	Date/Time Received
H10060286001	MW-1	Water		6/9/2010 11:35	6/11/2010 09:15
H10060286002	MW-2	Water		6/9/2010 11:05	6/11/2010 09:15
H10060286003	MW-3	Water		6/9/2010 11:45	6/11/2010 09:15
H10060286004	Duplicate	Water		6/9/2010 11:40	6/11/2010 09:15
H10060286005	Trip Blank	Water		6/10/2010 08:20	6/11/2010 09:15
H10060286006	MW-4	Water		6/9/2010 11:15	6/11/2010 09:15





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## ANALYTICAL RESULTS

Workorder: H10060286 : Faye Burdette No. 1

Project Number: Faye Burdette No. 1

Lab ID: H10060286001

Date/Time Received: 6/11/2010 09:15

Matrix: Water

Sample ID: MW-1

Date/Time Collected: 6/9/2010 11:35

### ICP DISSOLVED METALS

Analysis Desc: SW-846 6010B

Preparation Batches:

Batch: 1822 SW-846 3010A on 06/11/2010 13:30 by R\_V

Analytical Batches:

Batch: 1461 SW-846 6010B on 06/22/2010 23:07 by EBG

Parameters	Results					Batch Information	
	mg/l	Qual	Report Limit	MDL	DF	RegLmt	Prep Analysis
Manganese	1.61		0.00500	0.000300	1		1822 1461

### VOLATILES

Analysis Desc: SW-846 8260B

SW-846 5030 Analytical Batches:

Batch: 2055 SW-846 8260B on 06/18/2010 02:00 by JMC

Parameters	Results					Batch Information	
	ug/l	Qual	Report Limit	MDL	DF	RegLmt	Prep Analysis
Benzene	ND		1.0	0.10	1		2055
Ethylbenzene	ND		1.0	0.15	1		2055
Toluene	ND		1.0	0.29	1		2055
m,p-Xylene	ND		1.0	0.18	1		2055
o-Xylene	ND		1.0	0.13	1		2055
Xylenes, Total	ND		1.0	0.13	1		2055
4-Bromofluorobenzene (S)	90.4 %		74-125		1		2055
1,2-Dichloroethane-d4 (S)	84.9 %		70-130		1		2055
Toluene-d8 (S)	101 %		82-118		1		2055



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## ANALYTICAL RESULTS

Workorder: H10060286 : Faye Burdette No. 1

Project Number: Faye Burdette No. 1

Lab ID: H10060286002

Date/Time Received: 6/11/2010 09:15

Matrix: Water

Sample ID: MW-2

Date/Time Collected: 6/9/2010 11:05

### ICP DISSOLVED METALS

Analysis Desc: SW-846 6010B

Preparation Batches:

Batch: 1822 SW-846 3010A on 06/11/2010 13:30 by R\_V

Analytical Batches:

Batch: 1461 SW-846 6010B on 06/22/2010 23:13 by EBG

Parameters	Results	Qual	Report Limit	MDL	DF	RegLmt	Batch Information	
	mg/l						Prep	Analysis
Manganese	0.0323		0.00500	0.000300	1		1822	1461

### VOLATILES

Analysis Desc: SW-846 8260B

SW-846 5030 Analytical Batches:

Batch: 2055 SW-846 8260B on 06/18/2010 02:28 by JMC

Parameters	Results	Qual	Report Limit	MDL	DF	RegLmt	Batch Information	
	ug/l						Prep	Analysis
Benzene	ND		1.0	0.10	1			2055
Ethylbenzene	ND		1.0	0.15	1			2055
Toluene	ND		1.0	0.29	1			2055
m,p-Xylene	ND		1.0	0.18	1			2055
o-Xylene	ND		1.0	0.13	1			2055
Xylenes, Total	ND		1.0	0.13	1			2055
4-Bromofluorobenzene (S)	90.1 %		74-125		1			2055
1,2-Dichloroethane-d4 (S)	84.2 %		70-130		1			2055
Toluene-d8 (S)	102 %		82-118		1			2055



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## ANALYTICAL RESULTS

Workorder: H10060286 : Faye Burdette No. 1

Project Number: Faye Burdette No. 1

Lab ID: H10060286003

Date/Time Received: 6/11/2010 09:15

Matrix: Water

Sample ID: MW-3

Date/Time Collected: 6/9/2010 11:45

### ICP DISSOLVED METALS

Analysis Desc: SW-846 6010B

Preparation Batches:

Batch: 1822 SW-846 3010A on 06/11/2010 13:30 by R\_V

Analytical Batches:

Batch: 1461 SW-846 6010B on 06/22/2010 23:19 by EBG

Parameters	Results					Batch Information	
	mg/l	Qual	Report Limit	MDL	DF	RegLmt	Prep Analysis
Manganese	ND		0.00500	0.000300	1		1822 1461

### VOLATILES

Analysis Desc: SW-846 8260B

SW-846 5030 Analytical Batches:

Batch: 2055 SW-846 8260B on 06/18/2010 02:56 by JMC

Parameters	Results					Batch Information	
	ug/l	Qual	Report Limit	MDL	DF	RegLmt	Prep Analysis
Benzene	ND		1.0	0.10	1		2055
Ethylbenzene	ND		1.0	0.15	1		2055
Toluene	ND		1.0	0.29	1		2055
m,p-Xylene	ND		1.0	0.18	1		2055
o-Xylene	ND		1.0	0.13	1		2055
Xylenes, Total	ND		1.0	0.13	1		2055
4-Bromofluorobenzene (S)	90.4 %		74-125		1		2055
1,2-Dichloroethane-d4 (S)	84.3 %		70-130		1		2055
Toluene-d8 (S)	102 %		82-118		1		2055



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## ANALYTICAL RESULTS

Workorder: H10060286 : Faye Burdette No. 1

Project Number: Faye Burdette No. 1

Lab ID: H10060286004

Date/Time Received: 6/11/2010 09:15

Matrix: Water

Sample ID: Duplicate

Date/Time Collected: 6/9/2010 11:40

### VOLATILES

Analysis Desc: SW-846 8260B

SW-846 5030 Analytical Batches:

Batch: 2055 SW-846 8260B on 06/18/2010 03:24 by JMC

Parameters	Results				Batch Information			
	ug/l	Qual	Report Limit	MDL	DF	RegLmt	Prep	Analysis
Benzene	ND		1.0	0.10	1			2055
Ethylbenzene	ND		1.0	0.15	1			2055
Toluene	ND		1.0	0.29	1			2055
m,p-Xylene	ND		1.0	0.18	1			2055
o-Xylene	ND		1.0	0.13	1			2055
Xylenes, Total	ND		1.0	0.13	1			2055
4-Bromofluorobenzene (S)	91.5 %		74-125		1			2055
1,2-Dichloroethane-d4 (S)	85.7 %		70-130		1			2055
Toluene-d8 (S)	101 %		82-118		1			2055



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## ANALYTICAL RESULTS

Workorder: H10060286 : Faye Burdette No. 1

Project Number: Faye Burdette No. 1

Lab ID: H10060286005

Date/Time Received: 6/11/2010 09:15

Matrix: Water

Sample ID: Trip Blank

Date/Time Collected: 6/10/2010 08:20

### VOLATILES

Analysis Desc: SW-846 8260B

SW-846 5030 Analytical Batches:

Batch: 2057 SW-846 8260B on 06/18/2010 11:44 by JMC

Parameters	Results				DF	RegLmt	Batch Information	
	ug/l	Qual	Report Limit	MDL			Prep	Analysis
Benzene	ND		1.0	0.10	1			2057
Ethylbenzene	ND		1.0	0.15	1			2057
Toluene	ND		1.0	0.29	1			2057
m,p-Xylene	ND		1.0	0.18	1			2057
o-Xylene	ND		1.0	0.13	1			2057
Xylenes, Total	ND		1.0	0.13	1			2057
4-Bromofluorobenzene (S)	90.7 %		74-125		1			2057
1,2-Dichloroethane-d4 (S)	85.2 %		70-130		1			2057
Toluene-d8 (S)	102 %		82-118		1			2057





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## ANALYTICAL RESULTS

Workorder: H10060286 : Faye Burdette No. 1

Project Number: Faye Burdette No. 1

Lab ID: H10060286006

Date/Time Received: 6/11/2010 09:15

Matrix: Water

Sample ID: MW-4

Date/Time Collected: 6/9/2010 11:15

### ICP DISSOLVED METALS

Analysis Desc: SW-846 6010B

Preparation Batches:

Batch: 1822 SW-846 3010A on 06/11/2010 13:30 by R\_V

Analytical Batches:

Batch: 1461 SW-846 6010B on 06/22/2010 23:25 by EBG

Parameters	Results					Batch Information	
	mg/l	Qual	Report Limit	MDL	DF	RegLmt	Prep Analysis
Manganese	ND		0.00500	0.000300	1	1822	1461

### VOLATILES

Analysis Desc: SW-846 8260B

SW-846 5030 Analytical Batches:

Batch: 2057 SW-846 8260B on 06/18/2010 12:12 by JMC

Parameters	Results					Batch Information	
	ug/l	Qual	Report Limit	MDL	DF	RegLmt	Prep Analysis
Benzene	ND		1.0	0.10	1		2057
Ethylbenzene	ND		1.0	0.15	1		2057
Toluene	ND		1.0	0.29	1		2057
m,p-Xylene	ND		1.0	0.18	1		2057
o-Xylene	ND		1.0	0.13	1		2057
Xylenes, Total	ND		1.0	0.13	1		2057
4-Bromofluorobenzene (S)	89.6 %		74-125		1		2057
1,2-Dichloroethane-d4 (S)	84.7 %		70-130		1		2057
Toluene-d8 (S)	101 %		82-118		1		2057



## QUALITY CONTROL DATA

Workorder: H10060286 : Faye Burdette No. 1

Project Number: Faye Burdette No. 1

QC Batch: DIGM/1822 Analysis Method: SW-846 6010B  
QC Batch Method: SW-846 3010A Preparation: 06/11/2010 13:30 by R\_V  
Associated Lab Samples: H10060283001 H10060283002 H10060283003 H10060283004 H10060284001 H10060284002  
H10060284003 H10060286001 H10060286002 H10060286003 H10060286006

METHOD BLANK: 50489

Analysis Date/Time Analyst: 06/21/2010 16:22 EBG

Parameter	Units	Blank Result	Qualifiers	Reporting Limit
Manganese	mg/l	ND		0.00500

LABORATORY CONTROL SAMPLE: 50490

Analysis Date/Time Analyst: 06/21/2010 16:28 EBG

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits
Manganese	mg/l	0.10	0.0963	96.3	80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 50491 50492 Original: H10060283004

MS Analysis Date/Time Analyst: 06/21/2010 16:40 EBG

MSD Analysis Date/Time Analyst: 06/21/2010 16:46 EBG

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Manganese	mg/l	1.06	0.10	1.11	1.115	NC	NC	75-125	NC	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.



## QUALITY CONTROL DATA

Workorder: H10060286 : Faye Burdette No. 1

Project Number: Faye Burdette No. 1

QC Batch: MSV/2054

Analysis Method: SW-846 8260B

QC Batch Method: SW-846 5030

Preparation: 06/17/2010 00:00 by JMC

Associated Lab Samples: H10060284001 H10060284002 H10060284003 H10060284004 H10060284005 H10060286001  
H10060286002 H10060286003 H10060286004

METHOD BLANK: 51692

Analysis Date/Time Analyst: 06/17/2010 18:07 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)	%	89.9		74-125
1,2-Dichloroethane-d4 (S)	%	84.5		70-130
Toluene-d8 (S)	%	103		82-118

LABORATORY CONTROL SAMPLE: 51693

Analysis Date/Time Analyst: 06/17/2010 17:39 JMC

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits
Benzene	ug/l	20	17.1	85.3	74-123
Ethylbenzene	ug/l	20	20.6	103	72-127
Toluene	ug/l	20	22.6	113	74-126
m,p-Xylene	ug/l	40	41.5	104	71-129
o-Xylene	ug/l	20	21.2	106	74-130
Xylenes, Total	ug/l	60	62.76	105	71-130
4-Bromofluorobenzene (S)	%			99.4	74-125
1,2-Dichloroethane-d4 (S)	%			81.7	70-130
Toluene-d8 (S)	%			105	82-118

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 51694

51695

Original: H10060398003

MS Analysis Date/Time Analyst: 06/17/2010 21:23 JMC

MSD Analysis Date/Time Analyst: 06/17/2010 21:51 JMC

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Benzene	ug/l	1	20	17.3	17.3	86.3	86.4	70-124	0.1	20
Ethylbenzene	ug/l	1	20	20.5	20.1	102	101	35-175	1.6	20
Toluene	ug/l	1	20	22.3	22.6	112	113	70-131	1.3	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: H10060286 : Faye Burdette No. 1

Project Number: Faye Burdette No. 1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 51694

51695

Original: H10060398003

MS Analysis Date/Time Analyst: 06/17/2010 21:23 JMC

MSD Analysis Date/Time Analyst: 06/17/2010 21:51 JMC

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
m,p-Xylene	ug/l	1	40	41.7	40.8	104	102	35-175	2.2	20
o-Xylene	ug/l	1	20	21.0	20.8	105	104	35-175	0.6	20
Xylenes, Total	ug/l	1	60	62.69	61.65	104	103	35-175	1.7	20
4-Bromofluorobenzene (S)	%	ND				99.8	99.7	74-125		30
1,2-Dichloroethane-d4 (S)	%	ND				82.9	81.4	70-130		30
Toluene-d8 (S)	%	ND				105	105	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.



## QUALITY CONTROL DATA

Workorder: H10060286 : Faye Burdette No. 1

Project Number: Faye Burdette No. 1

QC Batch: MSV/2056

Analysis Method: SW-846 8260B

QC Batch Method: SW-846 5030

Preparation: 06/18/2010 00:00 by JMC

Associated Lab Samples: H10060283001 H10060283002 H10060283003 H10060283004 H10060283005 H10060284003  
H10060284004 H10060286005 H10060286006 H10060430001

METHOD BLANK: 51942

Analysis Date/Time Analyst: 06/18/2010 11:15 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)	%	90.6		74-125
1,2-Dichloroethane-d4 (S)	%	83.1		70-130
Toluene-d8 (S)	%	103		82-118

LABORATORY CONTROL SAMPLE: 51943

Analysis Date/Time Analyst: 06/18/2010 10:48 JMC

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits
Benzene	ug/l	20	16.7	83.6	74-123
Ethylbenzene	ug/l	20	20.1	101	72-127
Toluene	ug/l	20	21.5	107	74-126
m,p-Xylene	ug/l	40	40.4	101	71-129
o-Xylene	ug/l	20	20.9	104	74-130
Xylenes, Total	ug/l	60	61.34	102	71-130
4-Bromofluorobenzene (S)	%			98.1	74-125
1,2-Dichloroethane-d4 (S)	%			81.3	70-130
Toluene-d8 (S)	%			103	82-118

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 51944

51945

Original: H10060283005

MS Analysis Date/Time Analyst: 06/18/2010 15:52 JMC

MSD Analysis Date/Time Analyst: 06/18/2010 16:20 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	17.3	16.6	86.3	82.8	70-124	4.1	20
Ethylbenzene	ug/l	ND	20	19.6	19.5	97.9	97.7	35-175	0.3	20
Toluene	ug/l	ND	20	21.9	21.7	109	108	70-131	1.1	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: H10060286 : Faye Burdette No. 1

Project Number: Faye Burdette No. 1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 51944

51945

Original: H10060283005

MS Analysis Date/Time Analyst: 06/18/2010 15:52 JMC

MSD Analysis Date/Time Analyst: 06/18/2010 16:20 JMC

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
m,p-Xylene	ug/l	ND	40	39.3	39.4	98.2	98.6	35-175	0.3	20
o-Xylene	ug/l	ND	20	20.1	19.8	101	98.8	35-175	1.8	20
Xylenes, Total	ug/l	ND	60	59.42	59.19	99.0	98.6	35-175	0.4	20
4-Bromofluorobenzene (S)	%	92.6				97.8	96.5	74-125		30
1,2-Dichloroethane-d4 (S)	%	85.8				81.1	82.2	70-130		30
Toluene-d8 (S)	%	102				103	103	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.





### Legend

(S) - Indicates analyte is a surrogate

Qualifier	Qualifier Description
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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%
TNTC	Too numerous to count



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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: H10060286 : Faye Burdette No. 1

Project Number: Faye Burdette No. 1

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
H10060286001	MW-1	SW-846 3010A	DIGM/1822	SW-846 6010B	ICP/1461
H10060286002	MW-2	SW-846 3010A	DIGM/1822	SW-846 6010B	ICP/1461
H10060286003	MW-3	SW-846 3010A	DIGM/1822	SW-846 6010B	ICP/1461
H10060286006	MW-4	SW-846 3010A	DIGM/1822	SW-846 6010B	ICP/1461
H10060286001	MW-1	SW-846 5030	MSV/2054	SW-846 8260B	MSV/2055
H10060286002	MW-2	SW-846 5030	MSV/2054	SW-846 8260B	MSV/2055
H10060286003	MW-3	SW-846 5030	MSV/2054	SW-846 8260B	MSV/2055
H10060286004	Duplicate	SW-846 5030	MSV/2054	SW-846 8260B	MSV/2055
H10060286005	Trip Blank	SW-846 5030	MSV/2056	SW-846 8260B	MSV/2057
H10060286006	MW-4	SW-846 5030	MSV/2056	SW-846 8260B	MSV/2057



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### Sample Receipt Checklist

WorkOrder:	H10060286	Received By	LOG
Date and Time	06/11/2010 09:15	Carrier Name:	FEDEXS
Temperature:	2.0°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? 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 & Chain of Custody Record

**SPL, Inc.**

H10060286

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