3R - 098

JUN 2010
GWMR

SEP 2011

3R098

QUARTERLY GROUNDWATER MONITORING REPORT
JUNE 2010 SAMPLING EVENT

CONOCOPHILLIPS COMPANY
SHEPHERD & KELSEY NO.1E
BLOOMFIELD, NEW MEXICO

OCD # 3RP-98-0
API # - 30-045-24316

Prepared for:

ConocoPhillips

420 South Keeler Avenue
Bartlesville, OK 74004

Prepared by:

TETRA TECH, INC.

6121 Indian School Rd. NE Suite 200
Albuquerque, NM 87110
Tetra Tech Project No. 9690121.100

September 2010

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

QUARTERLY GROUNDWATER MONITORING REPORT CONOCOPHILLIPS COMPANY SHEPHERD & KELSEY NO. 1E BLOOMFIELD, NEW MEXICO

1.0 INTRODUCTION

ConocoPhillips Company (ConocoPhillips) retained Tetra Tech, Inc (Tetra Tech) to perform additional site characterization work and quarterly groundwater monitoring at the Shepherd & Kelsey No. 1E site in Bloomfield, New Mexico (Site). This report presents the results of a quarterly groundwater monitoring event conducted at the Site by Tetra Tech on June 7, 2010. This sampling event represents the seventh consecutive quarter of groundwater monitoring completed by Tetra Tech at the Site to include all four site monitoring wells.

The Site is located on private land leased by ConocoPhillips near the intersection of New Mexico Highway 64 and County Road 5097 in Bloomfield, NM. The Site consists of a gas production well head with associated equipment and installations, and is surrounded by agricultural land. The geographical location coordinates are 36° 42' 6.8"N and 108° 01' 12.2" W; the location and general features of the Site are presented as **Figure 1** and **Figure 2**, respectively.

1.1 Site History

A historical timeline for the Site is presented in **Table 1**, and is discussed in more detail below.

Contaminated soil was discovered at the Site during routine maintenance on June 5, 2007. Envirotech Inc. of Farmington, New Mexico (Envirotech) performed soil excavation (Excavation #1, **Figure 2**) at the Site, during which three soil samples were collected and analyzed for total petroleum hydrocarbons (TPH). The concentration of TPH was found to be below the New Mexico Oil Conservation Department (NMOCD) recommended action level. On June 12, 2007 a separate area of TPH soil contamination was discovered. An excavation of the additional area was performed by Envirotech from June 15 through June 18, 2007 (Excavation #2, **Figure 2**). Soil samples taken during the second excavation were found to be above the NMOCD recommended action level for TPH. Groundwater samples collected from the excavation were found to contain benzene and total xylenes above New Mexico Water Quality Control Commission (NMWQCC) groundwater quality standards. Monitor Well MW-1 was installed by Envirotech on September 26, 2007. Soil and groundwater samples collected during drilling were analyzed for TPH and for benzene, toluene, ethylbenzene and total xylenes (BTEX); results were below NMOCD recommended action levels. In November 2007, Envirotech recommended plugging and abandoning MW-1 and a no further action status from NMOCD. However, in April 2008, NMOCD indicated that further investigation was necessary before closure could be granted.

Tetra Tech began quarterly sampling of MW-1 on October 23, 2008. On January 22, 2009, three additional groundwater monitor wells were installed by WDC Exploration and Drilling of Peralta, NM (WDC), under the supervision of Tetra Tech. Monitor Wells MW-2, MW-3, and MW-4 were initially

sampled on January 30, 2009 and have since been incorporated into the quarterly monitoring schedule with MW-1.

2.0 METHODOLOGY AND RESULTS

Quarterly groundwater sampling was conducted on June 7, 2010. Groundwater samples were collected from Monitor Wells MW-1, MW-2, MW-3 and MW-4. Prior to sampling, depth to groundwater in each well was recorded using a dual interface probe. Results are summarized in **Table 2**.

The casings for all Site monitor wells were surveyed by Tetra Tech in January 2009, with the wellhead assigned an arbitrary reference elevation of 100 feet above mean sea level (amsl). Using this data, it was determined that the groundwater flow direction at the Site is to the south (**Figure 3**).

2.1 Groundwater Sampling Methodology

Monitor Wells MW-1, MW-2, MW-3, and MW-4 were sampled during the June 7, 2010 groundwater monitoring event. Prior to sampling, all monitor wells were purged of at least 3 casing volumes of groundwater using a dedicated 1.5-inch diameter, polyethylene disposable bailer. Groundwater quality parameters were collected using a YSI 556 multi-parameter sonde during each purge. Results were recorded on a Tetra Tech Water Sampling Field Form (**Appendix A**). Groundwater samples were placed in laboratory prepared bottles, packed on ice, and shipped under chain-of-custody documentation to Southern Petroleum Laboratory (SPL) of Houston, Texas. Samples were analyzed for dissolved manganese by EPA Method 6010B; TDS by EPA Method 2540C; and for BTEX by EPA Method 8260B.

2.2 Groundwater Sampling Analytical Results

The New Mexico Water Quality Control Commission (NMWQCC) mandates that groundwater quality in New Mexico be protected, and has issued groundwater quality standards in Title 20, Chapter 6, Part 2, Section 3103 of the New Mexico Administrative Code (20.6.2.3103 NMAC). A historical summary of groundwater analytical results is provided in **Table 3**. The laboratory analytical report is included as **Appendix B**.

- **Manganese**

  The groundwater quality standard for dissolved manganese is 0.2 milligrams per liter (mg/L). Groundwater collected from Monitor Well MW-4 was found to contain dissolved manganese at a concentration of 0.373 mg/L.

- **TDS**

  The groundwater quality standard for TDS is 1000 mg/L. Groundwater collected from Monitor Well MW-4 was found at a concentration of 1300 mg/L.

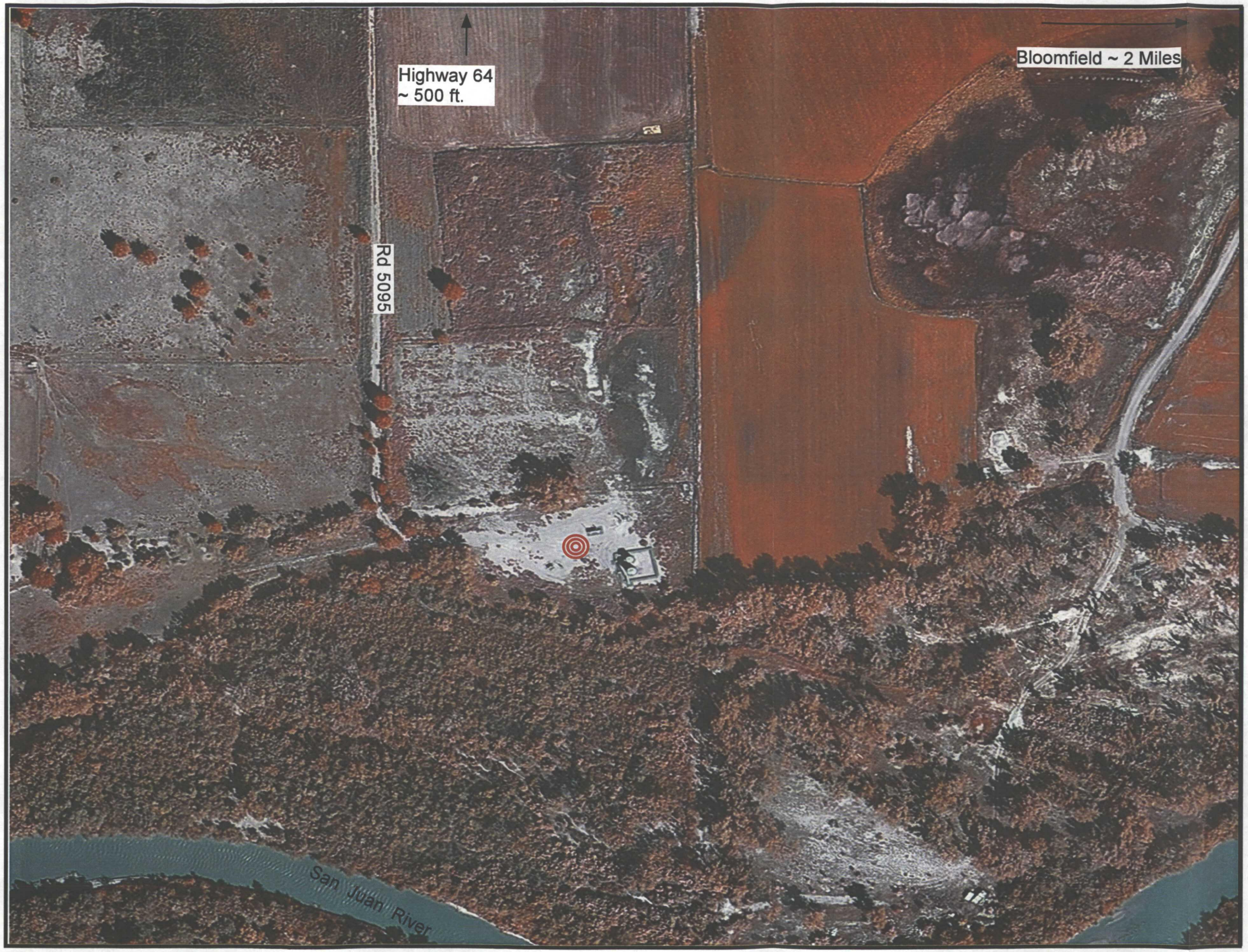
3.0 CONCLUSIONS

In order to move toward Site closure with NMOCD, continued groundwater quality monitoring is recommended for BTEX and dissolved manganese. Furthermore, Tetra Tech recommends continued

monitoring of total dissolved solids (TDS) to determine if seasonal trends are influencing Site groundwater quality.

The next groundwater monitoring event is scheduled for September 2010. Please contact Kelly Blanchard at 505-237-8440 or kelly.blanchard@tetratech.com if you have any questions or require additional information.

FIGURES



ConocoPhillips High Resolution Aerial IR Photography 2008

FIGURE 1.

Site Location Map
ConocoPhillips Company
Shepherd & Kelsey No. 1E
Bloomfield, NM
36° 42' 6.8" N
108° 01' 12.2" W

Approximate Site location

N

TETRA TECH, INC.

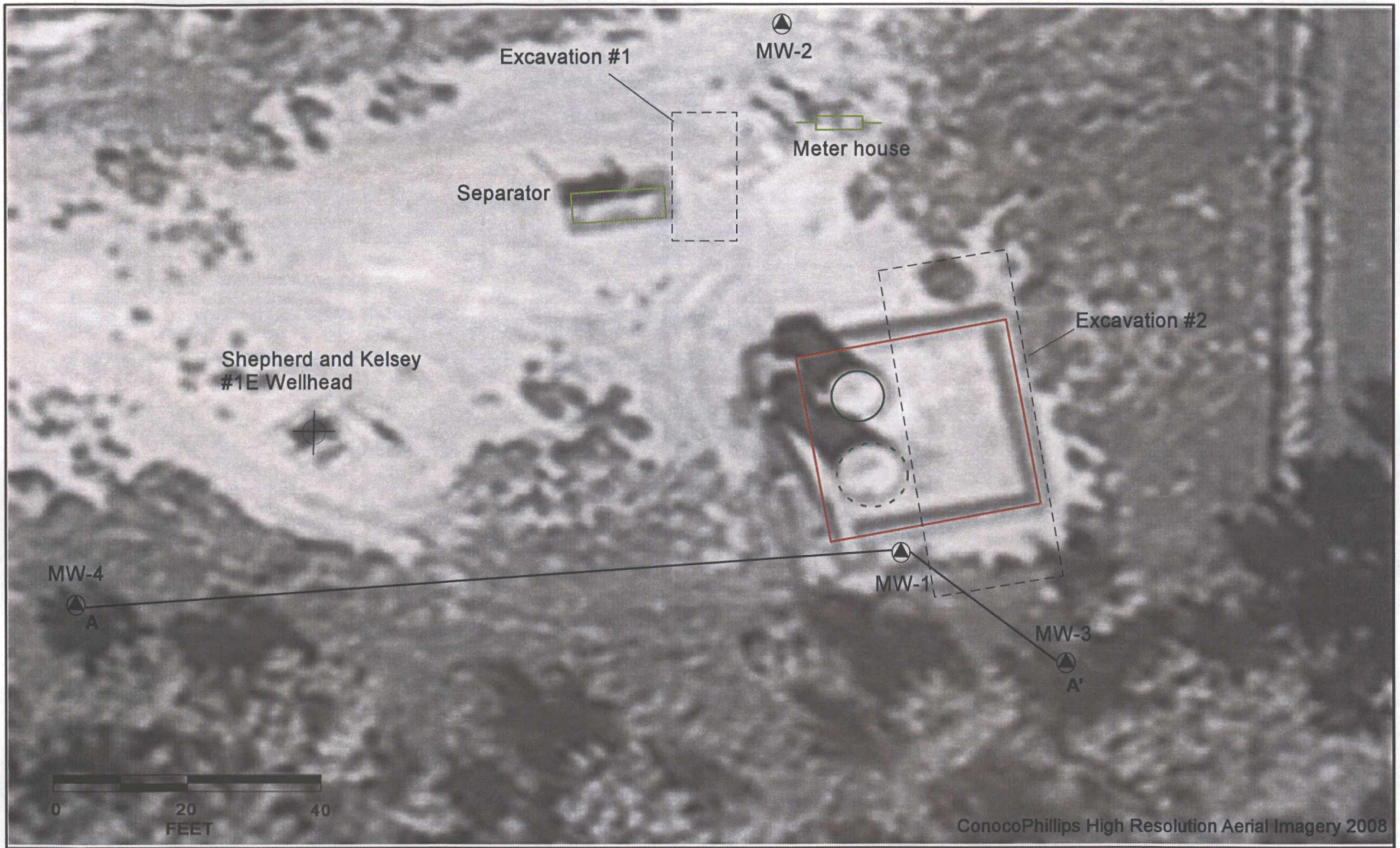


FIGURE 2:
SITE DETAIL MAP
CONOCOPHILLIPS COMPANY
SHEPHERD & KELSEY No.1E
Section 29 of T29N, R11W
Bloomfield, New Mexico

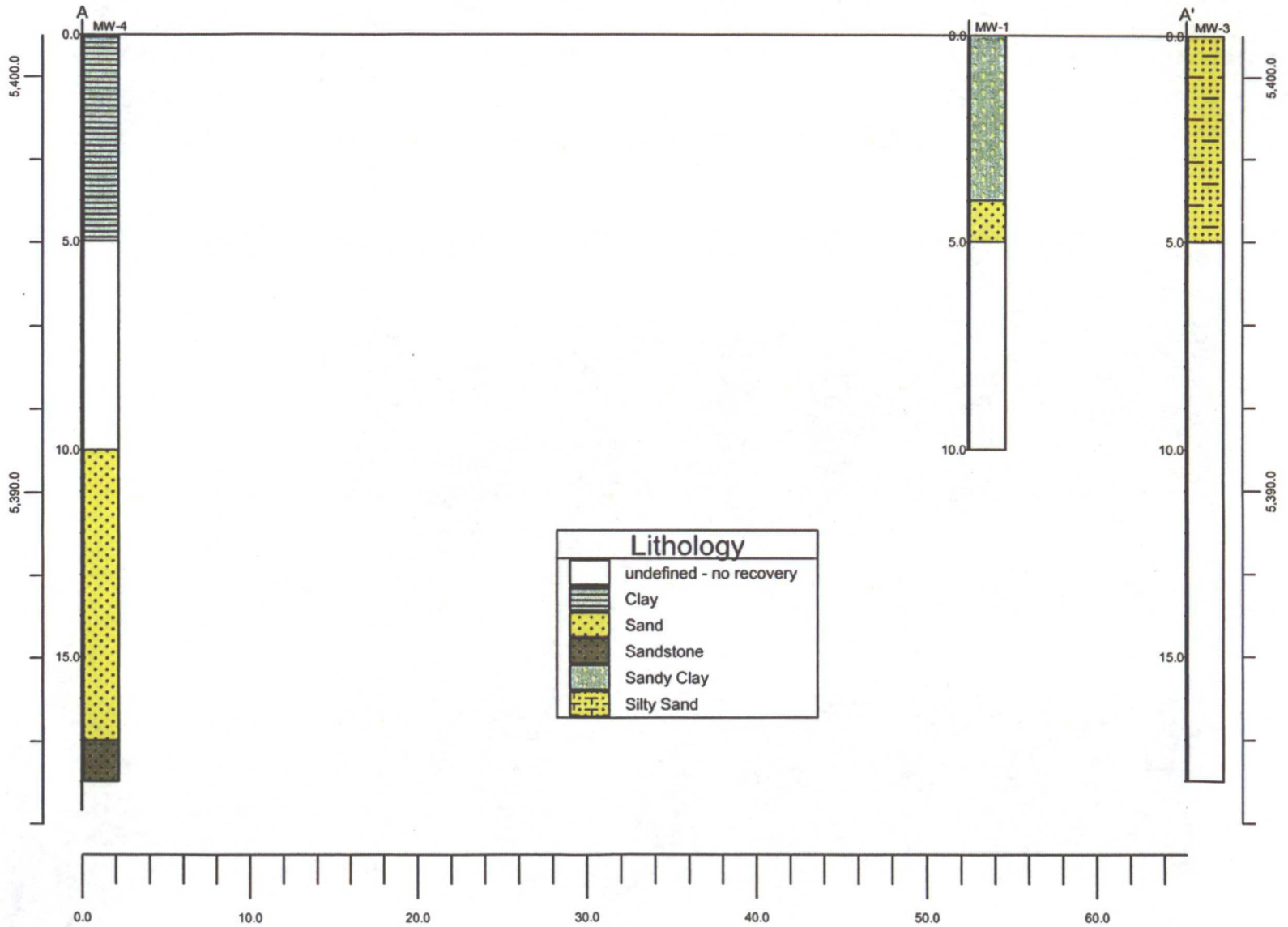
LEGEND

- WELLHEAD
- CONDENSATE TANK
- PRODUCED WATER TANK
- BERM
- EQUIPMENT
- PLAN VIEW OF CROSS-SECTION A A'

N

TETRA TECH, INC.

Figure 3.
Shepherd & Kelsey No. 1E - Cross-Section A-A'



TETRA TECH

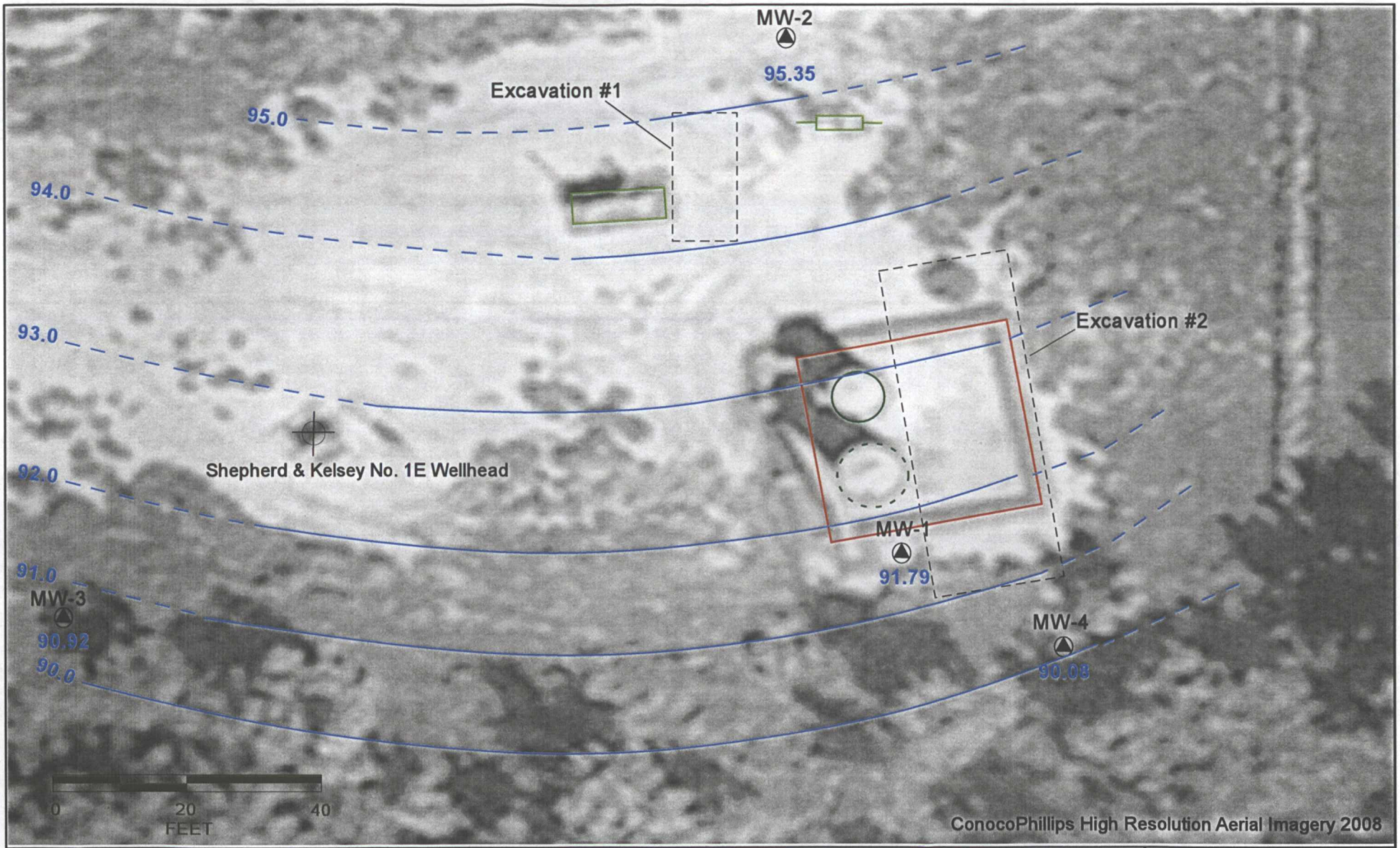


FIGURE 4:
GROUNDWATER CONTOUR MAP
JUNE 2010
CONOCOPHILLIPS COMPANY
SHEPHERD & KELSEY No.1E
Section 29 of T29N, R11W
Bloomfield, New Mexico

LEGEND

- WELLHEAD
- MONITORING WELL
- BERM
- EQUIPMENT
- CONDENSATE TANK
- PRODUCED WATER TANK
- GROUNDWATER CONTOUR LINE
- INFERRED GROUNDWATER CONTOUR LINE

N

TETRA TECH, INC.

TABLES

Table 1. Site History Timeline - ConocoPhillips Company Shepherd and Kelsey No. 1E

DATE	ACTIVITY
5-Jun-07	Hydrocarbon-impacted soil discovered during routine maintenance at the Site. Soil excavation was performed at the Site, and three soil samples were obtained. Sample results showed total petroleum hydrocarbon (TPH) concentrations below the NMOCD regulations of 100 parts per million (ppm). Original source of contamination is unknown.
12-Jun-07	A separate area of TPH soil contamination discovered.
June 15-18, 2007	A 50 foot by 20 foot by 4 foot excavation was completed. Soil samples taken from the second excavation show TPH at 992 ppm. Water samples obtained show benzene and total xylenes above State of New Mexico drinking water standards.
26-Sep-07	Ground water monitoring well installed to a depth of ten (10) feet below ground surface (bgs) by Envirotech Inc. of Farmington, NM (Envirotech). Depth to groundwater recorded at four (4) feet bgs. Soil and groundwater samples obtained for TPH, benzene, and benzene, toluene, ethylbenzene and total xylenes (BTEX) were below the respective NMOCD regulations of 100 ppm, 10 ppm and 50 ppm.
Nov-07	Envirotech report recommends plugging and abandonment of the temporary ground water monitoring well and no further action 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.
23-Oct-08	1st quarter sampling of MW-1 by Tetra Tech.
Jan-09	Installed additional monitoring wells MW-2, MW-3 and MW-4.
30-Jan-09	2nd quarter sampling of MW-1 by Tetra Tech; initial sampling of MW-2, MW-3, and MW-4.
1-Apr-09	Quarterly sampling of monitor wells MW-1, MW-2, MW-3, and MW-4.
18-Jun-09	Quarterly sampling of monitor wells MW-1, MW-2, MW-3, and MW-4.
21-Sep-09	Quarterly sampling of monitor wells MW-1, MW-2, MW-3, and MW-4. Dissolved metals analysis initated at the Site for metals with elevated *total* metal concentrations.
14-Dec-09	Quarterly sampling of monitor wells MW-1, MW-2, MW-3, and MW-4.
31-Mar-10	Quarterly sampling of monitor wells MW-1, MW-2, MW-3, and MW-4.
7-Jun-10	Quarterly sampling of monitor wells MW-1, MW-2, MW-3, and MW-4.

Table 2. Groundwater Elevation Data Summary - ConocoPhillips Company Shepherd & Kelsey No. 1E

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	12	2.5-10.0	96.53	10/23/2008	4.02	92.51
				1/30/2009	5.7	90.83
				4/1/2009	5.9	90.63
				6/18/2009	4.01	92.52
				9/21/2009	5.62	90.91
				12/14/2009	5.51	91.02
				3/31/2010	5.72	90.81
				6/7/2010	4.74	91.79
MW-2	20.30	3.0 - 18.0	98.05	1/30/2009	5.41	92.64
				4/1/2009	5.78	92.27
				6/18/2009	2.50	95.55
				9/21/2009	4.60	93.45
				12/14/2009	4.99	93.06
				3/31/2010	5.53	92.52
				6/7/2010	2.70	95.35
MW-3	20.10	3.0 - 18.0	95.60	1/30/2009	5.29	90.31
				4/1/2009	5.46	90.14
				6/18/2009	3.64	91.96
				9/21/2009	5.25	90.35
				12/14/2009	5.19	90.41
				3/31/2010	5.30	90.30
				6/7/2010	5.52	90.08
MW-4	20.70	3.7 - 18.7	96.23	1/30/2009	6.33	89.90
				4/1/2009	6.40	89.83
				6/18/2009	5.51	90.72
				9/21/2009	6.13	90.10
				12/14/2009	5.91	90.32
				3/31/2010	6.10	90.13
				6/7/2010	5.31	90.92

ft = Feet

TOC = Top of casing

bgs = below ground surface

* Elevation relative to wellhead

Table 3. Groundwater Laboratory Analytical Results - ConocoPhillips Company Shepherd & Kelsey No. 1E

Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Sulfate (mg/L)	Aluminum (mg/L)	Iron (mg/L)	Manganese (mg/L)	Total Dissolved Solids (mg/L)
MW-1	9/26/2007	0.4	0.4	0.5	1.1	NA	NA	NA	NA	NA
	10/23/2008	< 5	< 5	< 5	< 5	438	NA	2.59*	0.417*	NA
	1/30/2009	< 5	< 5	< 5	< 5	303	0.658*	1.45*	0.276*	692
	4/1/2009	< 5	< 5	< 5	< 5	258	1.19*	1.9*	0.416*	**1,340**
	6/18/2009	< 5	< 5	< 5	< 5	NA	0.187*	0.209*	NA**	NA
	9/21/2009	< 1	< 1	< 1	< 2	324	< 0.1	0.0458	0.0356	700
	12/14/2009	< 1	< 1	< 1	< 1	NA	NA	NA	0.0539	661
	3/31/2010	< 1	< 1	< 1	< 1	NA	NA	NA	0.0662	697
	6/7/2010	< 1	< 1	< 1	< 1	NA	NA	NA	0.0599	778
MW-2	1/30/2009	< 5	< 5	< 5	< 5	**706**	11.3*	22.4*	2.06*	**1,130**
	4/1/2009	< 5	< 5	< 5	< 5	**613**	4.39*	11.3*	0.964*	**1,420**
	6/18/2009	< 5	< 5	< 5	< 5	NA	2.38*	4.01*	NA**	NA
	9/21/2009	< 1	< 1	< 1	< 2	421	< 0.1	< 0.02	0.158	740
	12/14/2009	< 1	< 1	< 1	< 1	NA	NA	NA	0.106	764
	3/31/2010	< 1	< 1	< 1	< 1	NA	NA	NA	0.144	804
	6/7/2010	< 1	< 1	< 1	< 1	NA	NA	NA	0.152	826
MW-3	1/30/2009	< 5	< 5	< 5	< 5	427	4.34*	5.77*	0.675*	918
	4/1/2009	< 5	< 5	< 5	< 5	416	1.45*	3.0*	0.615*	**1,010**
	6/18/2009	< 5	< 5	< 5	< 5	NA	0.67*	1.57*	NA**	NA
	9/21/2009	< 1	< 1	< 1	< 2	359	< 0.1	< 0.02	0.115	733
	12/14/2009	< 1	< 1	< 1	< 1	NA	NA	NA	0.154	712
	3/31/2010	< 1	< 1	< 1	< 1	NA	NA	NA	**0.219**	898
	6/7/2010	< 1	< 1	< 1	< 1	NA	NA	NA	0.132	841
MW-4	1/30/2009	< 5	< 5	< 5	< 5	539	7.29*	19.4*	16.7*	**1,000**
	4/1/2009	< 5	< 5	< 5	< 5	512	11.4*	23.4*	3.36*	**1,010**
	6/18/2009	< 5	< 5	< 5	< 5	NA	0.344*	0.362*	NA**	NA
	9/21/2009	< 1	< 1	< 1	< 2	472	< 0.1	0.0376	**0.286**	963
	12/14/2009	< 1	< 1	< 1	<1	NA	NA	NA	**0.283**	861
	3/31/2010	< 1	< 1	< 1	<1	NA	NA	NA	**0.336**	**1000**
	6/7/2010	< 1	< 1	< 1	< 1	NA	NA	NA	**0.373**	**1300**
NMWQCC Groundwater Quality Standard		**10 (µg/L)**	**750 (µg/L)**	**750 (µg/L)**	**620 (µg/L)**	**600 (mg/L)**	**5 (mg/L)**	**1 (mg/L)**	**0.2 (mg/L)**	**1000 (mg/L)**

Notes:
MW = monitor well
NMWQCC = New Mexico Water Quality Control Commission
Constituents in **BOLD** exceed NMWQCC Groundwater Quality Standards
VOCs = volatile organic compounds
mg/L = milligrams per liter
µg/L = micrograms per liter
NA** = not analyzed due to lab error
NA = not analyzed
NE = not established
TDS - total dissolved solids
Total Xylenes = the sum of m,p-xylene and o-xylene.
* = Results reported for total metals analysis, results can not be compared to NMWQCC Standards for dissolved metals
Analytical results for 9/26/2007 are presented as reported by Envirotech Inc.

APPENDIX A

TETRA TECH, INC.

WATER SAMPLING FIELD FORM

Project Name Shepherd & Kelsey 1E — Page 1 of 4

Project No. —

Site Location Bloomfield, NM — DUP 1535

Site/Well No. MW-1 — Coded/Replicate No. — Date 6/7/10

Weather Sunny, hot 95° — Time Sampling Began ~~1520~~ ~~1525~~ — Time 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 11.96 — Water-Level Elevation —

Hold — Depth to Water Below MP 4.74 — Diameter of Casing 2"

Wet — Water Column in Well 7.22 — Gallons Pumped/Bailed Prior to Sampling 3.5 gal

Gallons per Foot 0.16

Gallons in Well 1.156 x 3 = 3.46 — Sampling 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.)
1523	14.79	7.53	1.014	—	2.44	22.2	136.7	1.5
1529	14.71	7.50	1.009	—	1.34	13.0	112.6	2
1526	14.14	7.46	1.008	—	1.31	12.7	96.6	3.25

Sampling Equipment Purge Pump/Bailer

Constituents Sampled	Container Description	Preservative
BTEX	3 40mL VOA's	HCl
Dissolved Mn	16 oz Plastic	None
TDS	16 oz Plastic	None

Remarks H_2O is clear to slightly cloudy, no odor or sheen observed

Sampling Personnel Christine Mathews & Cassie Brown

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 Shepherd & Kelsey 1E — Page 2 of 4

ject No.

Site Location Bloomfield, NM

Site/Well No. MW-2 — Coded/ Replicate No.

Date 6/7/10

Weather Sunny, Hot 95° — Time Sampling Began 1450 — Time Sampling Completed 1505

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 20.2 — Water-Level Elevation

Held — Depth to Water Below MP 2.70 — Diameter of Casing 2" — Gallons Pumped/Bailed Prior to Sampling 8.5 gallons

Wet — Water Column in Well 17.5

Gallons per Foot 0.16

Gallons in Well 2.8 X 3 = 8.4 MS

Sampling Pump Intake Setting (feet below land surface)

Purging Equipment Purge pump / Bailer

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (°C)	pH	Conductivity (uS/cm³)	TDS (g/L)	DO (mg/L)	DO %	ORP (mV)	Volume (gal.)
1459	13.00	6.38	1.270	—	2.4 ~~9.9~~	19.9	89.0	4
1501	12.50	6.86	1.258	—	1.69	17.0	72.4	5.5
1503	12.33	6.53	1.254	—	1.18	11.7	76.0	6.5
1505	12.04	6.50	1.~~23~~9	—	1.13	10.4	69.8	7.0

Sampling Equipment Purge Pump/Bailer

Constituents Sampled	Container Description	Preservative
BTEX	3 40mL VOA's	HCl
Dissolved Mn	16 oz Plastic	None
TDS	16 oz Plastic	None

Remarks H_2O is brown and silty, no sheen or odor observed

Sampling Personnel Christine Mathews & Cassie Brown

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 Shepherd & Kelsey 1E — Page 3 of 4

ect No.

Site Location Bloomfield, NM

Site/Well No. MW-3 — Coded/ Replicate No. — Date 6/7/10

Weather sunny, hot 95° — Time Sampling Began 1525 — Time Sampling Completed 1540

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 20.11 — Water-Level Elevation

Held ____ Depth to Water Below MP 5.52 — Diameter of Casing 2"

Wet ____ Water Column in Well 14.59 — Gallons Pumped/Bailed Prior to Sampling 7.25

Gallons per Foot 0.16

Gallons in Well 2.33 — Sampling Pump Intake Setting (feet below land surface)

Purging Equipment Purge pump / Bailer X3= 7.00

SAMPLING DATA/FIELD PARAMETERS

MS

Time	Temperature (°C)	pH	Conductivity (µS/cm³)	TDS (g/L)	DO (mg/L)	DO %	ORP (mV)	Volume (gal.)
1535	12.82	7.49	1.171	—	1.27	11.8	66.4	5
1537	12.63	7.45	1.156	—	1.19	11.2	58.9	6
1539	12.38	7.38	1.160	—	1.81	17.1	57.8	7

Sampling Equipment Purge Pump/Bailer

Constituents Sampled	Container Description	Preservative
BTEX	3 40mL VOA's	HCl
Dissolved Mn	16 oz Plastic	None
TDS	16 oz Plastic	None

Remarks H2O clear, slightly cloudy, no odor or sheen observed

Sampling Personnel Christine Mathews and Cassie Braun

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 Shepherd & Kelsey 1E — Page 4 of 4

act No.

Site Location Bloomfield, NM

Site/Well No. MW-4 — Coded/ Replicate No. — Date 6/7/10

Weather Sunny, Hot 95° — Time Sampling Began 1540 — Time Sampling Completed 1605

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 20.37 — Water-Level Elevation

Held — Depth to Water Below MP 5.31 — Diameter of Casing 2"

Wet — Water Column in Well 15.06 — Gallons Pumped/Bailed Prior to Sampling

Gallons per Foot 0.16

Gallons in Well 2.4096 X3=7.22 — Sampling 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.)
1557	12.84	7.48	1.541	—	2.0	18.4	36.6	5.25
1569	12.35	7.47	1.530	—	1.43	12.8	32.3	6.5
1601	12.35	7.45	1.528	—	1.00	9.3	25.7	7.25

Sampling Equipment Purge Pump/Bailer

Constituents Sampled	Container Description	Preservative
BTEX	3 40mL VOA's	HCl
Dissolved Mn	16 oz Plastic	None
TDS	16 oz Plastic	None

Remarks H2O slightly murky brown, no odor or sheen observed

Sampling Personnel Christine Matheus & Cassie Brown

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

Certificate of Analysis

June 24, 2010

Workorder: H10060245

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

Project: Shepherd & Kelsey #1E

Project Number: Shepherd & Kelsey #1E

Site: Bloomfield, New Mexico

PO Number: ENFOS

NELAC Cert. No.: T104704205-09-1

This Report Contains A Total Of 18 Pages

Excluding Any Attachments

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

Certificate of Analysis

June 24, 2010

Workorder: H10060245

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

Project: Shepherd & Kelsey #1E

Project Number: Shepherd & Kelsey #1E

Site: Bloomfield, New Mexico

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.

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

Certificate of Analysis

June 24, 2010

Workorder: H10060245

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

Project: Shepherd & Kelsey #1E

Project Number: Shepherd & Kelsey #1E

Site: Bloomfield, New Mexico

PO Number: ENFOS

NELAC Cert. No.: T104704205-09-1

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

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

SAMPLE SUMMARY

Workorder: H10060245 : Shepherd & Kelsey #1E

Project Number: Shepherd & Kelsey #1E

Lab ID	Sample ID	Matrix	COC ID	Date/Time Collected	Date/Time Received
H10060245001	MW-1	Water		6/7/2010 15:30	6/10/2010 09:30
H10060245002	MW-2	Water		6/7/2010 15:05	6/10/2010 09:30
H10060245003	MW-3	Water		6/7/2010 15:40	6/10/2010 09:30
H10060245004	MW-4	Water		6/7/2010 16:05	6/10/2010 09:30
H10060245005	Duplicate	Water		6/7/2010 15:35	6/10/2010 09:30
H10060245006	Trip Blank	Water		6/9/2010 07:55	6/10/2010 09:30

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

ANALYTICAL RESULTS

Workorder: H10060245 : Shepherd & Kelsey #1E

Project Number: Shepherd & Kelsey #1E

Lab ID: **H10060245001**
Sample ID: **MW-1**

Date/Time Received: 6/10/2010 09:30
Date/Time Collected: 6/7/2010 15:30

Matrix: Water

WET CHEMISTRY

Analysis Desc: SM 2540 C
Analytical Batches:
Batch: 1649 SM 2540 C on 06/12/2010 12:15 by CFS

Parameters	Results mg/l	Qual	Report Limit	MDL	DF	RegLmt	Batch Information Prep	Analysis
Residue, Filterable (TDS)	778		10.0	3.94	1			1649

ICP DISSOLVED METALS

Analysis Desc: SW-846 6010B
Preparation Batches:
Batch: 1819 SW-846 3010A on 06/10/2010 15:00 by R_V
Analytical Batches:
Batch: 1456 SW-846 6010B on 06/18/2010 14:57 by EBG

Parameters	Results mg/l	Qual	Report Limit	MDL	DF	RegLmt	Batch Information Prep	Analysis
Manganese	0.0599		0.00500	0.000300	1		1819	1456

VOLATILES

Analysis Desc: SW-846 8260B
SW-846 5030Analytical Batches:
Batch: 2036 SW-846 8260B on 06/11/2010 15:26 by LKL

Parameters	Results ug/l	Qual	Report Limit	MDL	DF	RegLmt	Batch Information Prep	Analysis
Benzene	ND		1.0	0.10	1			2036
Ethylbenzene	ND		1.0	0.15	1			2036
Toluene	ND		1.0	0.29	1			2036
m,p-Xylene	ND		1.0	0.18	1			2036
o-Xylene	ND		1.0	0.13	1			2036
Xylenes, Total	ND		1.0	0.13	1			2036
4-Bromofluorobenzene (S)	103 %		74-125		1			2036
1,2-Dichloroethane-d4 (S)	90.5 %		70-130		1			2036
Toluene-d8 (S)	95 %		82-118		1			2036

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

ANALYTICAL RESULTS

Workorder: H10060245 : Shepherd & Kelsey #1E

Project Number: Shepherd & Kelsey #1E

Lab ID: **H10060245002**
Sample ID: **MW-2**

Date/Time Received: 6/10/2010 09:30
Date/Time Collected: 6/7/2010 15:05

Matrix: Water

WET CHEMISTRY

Analysis Desc: SM 2540 C
Analytical Batches:
Batch: 1649 SM 2540 C on 06/12/2010 12:15 by CFS

Parameters	Results mg/l	Qual	Report Limit	MDL	DF	RegLmt	Batch Information Prep	Analysis
Residue, Filterable (TDS)	826		10.0	3.94	1			1649

ICP DISSOLVED METALS

Analysis Desc: SW-846 6010B
Preparation Batches:
Batch: 1819 SW-846 3010A on 06/10/2010 15:00 by R_V
Analytical Batches:
Batch: 1456 SW-846 6010B on 06/18/2010 15:21 by EBG

Parameters	Results mg/l	Qual	Report Limit	MDL	DF	RegLmt	Batch Information Prep	Analysis
Manganese	0.152		0.00500	0.000300	1		1819	1456

VOLATILES

Analysis Desc: SW-846 8260B
SW-846 5030Analytical Batches:
Batch: 2036 SW-846 8260B on 06/11/2010 16:47 by LKL

Parameters	Results ug/l	Qual	Report Limit	MDL	DF	RegLmt	Batch Information Prep	Analysis
Benzene	ND		1.0	0.10	1			2036
Ethylbenzene	ND		1.0	0.15	1			2036
Toluene	ND		1.0	0.29	1			2036
m,p-Xylene	ND		1.0	0.18	1			2036
o-Xylene	ND		1.0	0.13	1			2036
Xylenes, Total	ND		1.0	0.13	1			2036
4-Bromofluorobenzene (S)	106 %		74-125		1			2036
1,2-Dichloroethane-d4 (S)	92.9 %		70-130		1			2036
Toluene-d8 (S)	96.7 %		82-118		1			2036

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

ANALYTICAL RESULTS

Workorder: H10060245 : Shepherd & Kelsey #1E

Project Number: Shepherd & Kelsey #1E

Lab ID: **H10060245003**

Date/Time Received: 6/10/2010 09:30

Matrix: Water

Sample ID: **MW-3**

Date/Time Collected: 6/7/2010 15:40

WET CHEMISTRY

Analysis Desc: SM 2540 C

Analytical Batches:

Batch: 1649 SM 2540 C on 06/12/2010 12:15 by CFS

Parameters	Results mg/l	Qual	Report Limit	MDL	DF	RegLmt	Batch Information Prep	Analysis
Residue, Filterable (TDS)	841		10.0	3.94	1			1649

ICP DISSOLVED METALS

Analysis Desc: SW-846 6010B

Preparation Batches:

Batch: 1819 SW-846 3010A on 06/10/2010 15:00 by R_V

Analytical Batches:

Batch: 1456 SW-846 6010B on 06/18/2010 15:28 by EBG

Parameters	Results mg/l	Qual	Report Limit	MDL	DF	RegLmt	Batch Information Prep	Analysis
Manganese	0.132		0.00500	0.000300	1		1819	1456

VOLATILES

Analysis Desc: SW-846 8260B

SW-846 5030Analytical Batches:

Batch: 2036 SW-846 8260B on 06/11/2010 17:14 by LKL

Parameters	Results ug/l	Qual	Report Limit	MDL	DF	RegLmt	Batch Information Prep	Analysis
Benzene	ND		1.0	0.10	1			2036
Ethylbenzene	ND		1.0	0.15	1			2036
Toluene	ND		1.0	0.29	1			2036
m,p-Xylene	ND		1.0	0.18	1			2036
o-Xylene	ND		1.0	0.13	1			2036
Xylenes, Total	ND		1.0	0.13	1			2036
4-Bromofluorobenzene (S)	105 %		74-125		1			2036
1,2-Dichloroethane-d4 (S)	94.9 %		70-130		1			2036
Toluene-d8 (S)	96 %		82-118		1			2036

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

ANALYTICAL RESULTS

Workorder: H10060245 : Shepherd & Kelsey #1E

Project Number: Shepherd & Kelsey #1E

Lab ID: **H10060245004**
Sample ID: **MW-4**

Date/Time Received: 6/10/2010 09:30
Date/Time Collected: 6/7/2010 16:05

Matrix: Water

WET CHEMISTRY

Analysis Desc: SM 2540 C
Analytical Batches:
Batch: 1649 SM 2540 C on 06/12/2010 12:15 by CFS

Parameters	Results mg/l	Qual	Report Limit	MDL	DF	RegLmt	Batch Information Prep	Analysis
Residue, Filterable (TDS)	1300		10.0	3.94	1			1649

ICP DISSOLVED METALS

Analysis Desc: SW-846 6010B
Preparation Batches:
Batch: 1819 SW-846 3010A on 06/10/2010 15:00 by R_V
Analytical Batches:
Batch: 1456 SW-846 6010B on 06/18/2010 15:34 by EBG

Parameters	Results mg/l	Qual	Report Limit	MDL	DF	RegLmt	Batch Information Prep	Analysis
Manganese	0.373		0.00500	0.000300	1		1819	1456

VOLATILES

Analysis Desc: SW-846 8260B
SW-846 5030Analytical Batches:
Batch: 2036 SW-846 8260B on 06/11/2010 17:40 by LKL

Parameters	Results ug/l	Qual	Report Limit	MDL	DF	RegLmt	Batch Information Prep	Analysis
Benzene	ND		1.0	0.10	1			2036
Ethylbenzene	ND		1.0	0.15	1			2036
Toluene	ND		1.0	0.29	1			2036
m,p-Xylene	ND		1.0	0.18	1			2036
o-Xylene	ND		1.0	0.13	1			2036
Xylenes, Total	ND		1.0	0.13	1			2036
4-Bromofluorobenzene (S)	104 %		74-125		1			2036
1,2-Dichloroethane-d4 (S)	93 %		70-130		1			2036
Toluene-d8 (S)	94.1 %		82-118		1			2036

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

ANALYTICAL RESULTS

Workorder: H10060245 : Shepherd & Kelsey #1E

Project Number: Shepherd & Kelsey #1E

Lab ID: **H10060245005**

Date/Time Received: 6/10/2010 09:30

Matrix: Water

Sample ID: **Duplicate**

Date/Time Collected: 6/7/2010 15:35

VOLATILES

Analysis Desc: SW-846 8260B

SW-846 5030Analytical Batches:

Batch: 2036 SW-846 8260B on 06/11/2010 18:05 by LKL

Parameters	Results ug/l	Qual	Report Limit	MDL	DF	RegLmt	Batch Information Prep	Analysis
Benzene	ND		1.0	0.10	1			2036
Ethylbenzene	ND		1.0	0.15	1			2036
Toluene	ND		1.0	0.29	1			2036
m,p-Xylene	ND		1.0	0.18	1			2036
o-Xylene	ND		1.0	0.13	1			2036
Xylenes, Total	ND		1.0	0.13	1			2036
4-Bromofluorobenzene (S)	103 %		74-125		1			2036
1,2-Dichloroethane-d4 (S)	93.2 %		70-130		1			2036
Toluene-d8 (S)	94.8 %		82-118		1			2036

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

ANALYTICAL RESULTS

Workorder: H10060245 : Shepherd & Kelsey #1E | Project Number: Shepherd & Kelsey #1E

Lab ID: **H10060245006** | Date/Time Received: 6/10/2010 09:30 | Matrix: Water

Sample ID: **Trip Blank** | Date/Time Collected: 6/9/2010 07:55

VOLATILES

Analysis Desc: SW-846 8260B | SW-846 5030Analytical Batches:

Batch: 2036 SW-846 8260B on 06/11/2010 15:00 by LKL

Parameters	Results ug/l	Qual	Report Limit	MDL	DF	RegLmt	Batch Information Prep	Analysis
Benzene	ND		1.0	0.10	1			2036
Ethylbenzene	ND		1.0	0.15	1			2036
Toluene	ND		1.0	0.29	1			2036
m,p-Xylene	ND		1.0	0.18	1			2036
o-Xylene	ND		1.0	0.13	1			2036
Xylenes, Total	ND		1.0	0.13	1			2036
4-Bromofluorobenzene (S)	103 %		74-125		1			2036
1,2-Dichloroethane-d4 (S)	100 %		70-130		1			2036
Toluene-d8 (S)	94.1 %		82-118		1			2036

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

QUALITY CONTROL DATA

Workorder: H10060245 : Shepherd & Kelsey #1E — Project Number: Shepherd & Kelsey #1E

QC Batch: DIGM/1819 — Analysis Method: SW-846 6010B

QC Batch Method: SW-846 3010A — Preparation: 06/10/2010 15:00 by R_V

Associated Lab Samples: H10060237001, H10060237002, H10060237003, H10060237004, H10060241001, H10060241002, H10060241003, H10060243001, H10060243002, H10060243003, H10060243004, H10060245001, H10060245002, H10060245003, H10060245004, H10060247001, H10060247002, H10060247003, H10060247005

METHOD BLANK: 50257

Analysis Date/Time Analyst: 06/18/2010 13:14 EBG

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

LABORATORY CONTROL SAMPLE: 50258

Analysis Date/Time Analyst: 06/18/2010 13:20 EBG

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits
Manganese	mg/l	0.10	0.1008	101	80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 50259 50260 Original: H10060241001

MS Analysis Date/Time Analyst: 06/18/2010 13:32 EBG

MSD Analysis Date/Time Analyst: 06/18/2010 13:38 EBG

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Manganese	mg/l	0.206	0.10	0.3011	0.3025	95.5	96.9	75-125	0.5	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.

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

QUALITY CONTROL DATA

Workorder: H10060245 : Shepherd & Kelsey #1E — Project Number: Shepherd & Kelsey #1E

QC Batch: WETS/1649 — Analysis Method: SM 2540 C

QC Batch Method: SM 2540 C

Associated Lab Samples: H10060196001, H10060241001, H10060241002, H10060241003, H10060245001, H10060245002, H10060245003, H10060245004, H10060247001, H10060247002, H10060247003, H10060247005

METHOD BLANK: 50631

Analysis Date/Time Analyst: 06/12/2010 12:15 CFS

Parameter	Units	Blank Result	Qualifiers	Reporting Limit
Residue, Filterable (TDS)	mg/l	ND		10.0

LABORATORY CONTROL SAMPLE & LCSD: 50632 50633

LCS Analysis Date/Time Analyst: 06/12/2010 12:15 CFS

LCSD Analysis Date/Time 06/12/2010 12:15 CFS

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD
Residue, Filterable (TDS)	mg/l	200	201.0	199.0	100	99.5	95-107	1.0	10

SAMPLE DUPLICATE: 50635 Original: H10060247005

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	DF
WET CHEMISTRY						2
Residue, Filterable (TDS)	mg/l	3380	3380	0.1	10	2

SAMPLE DUPLICATE: 50636 Original: H10060241001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	DF
WET CHEMISTRY						2
Residue, Filterable (TDS)	mg/l	2580	2580	0.1	10	2

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.

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

QUALITY CONTROL DATA

Workorder: H10060245 : Shepherd & Kelsey #1E — Project Number: Shepherd & Kelsey #1E

QC Batch: MSV/2035 — Analysis Method: SW-846 8260B

QC Batch Method: SW-846 5030 — Preparation: 06/11/2010 00:00 by LKL

Associated Lab Samples: H10060245001, H10060245002, H10060245003, H10060245004, H10060245005, H10060245006, H10060247001, H10060247002, H10060247003, H10060247004, H10060247005, H10060247006

METHOD BLANK: 50773

Analysis Date/Time Analyst: 06/11/2010 12:10 LKL

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)	%	105		74-125
1,2-Dichloroethane-d4 (S)	%	95.7		70-130
Toluene-d8 (S)	%	97.2		82-118

LABORATORY CONTROL SAMPLE: 50774

Analysis Date/Time Analyst: 06/11/2010 11:42 LKL

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits
Benzene	ug/l	20	19.4	96.9	74-123
Ethylbenzene	ug/l	20	17.7	88.3	72-127
Toluene	ug/l	20	18.8	93.9	74-126
m,p-Xylene	ug/l	40	36.7	91.7	71-129
o-Xylene	ug/l	20	18.4	92.0	74-130
Xylenes, Total	ug/l	60	55.08	91.8	71-130
4-Bromofluorobenzene (S)	%			104	74-125
1,2-Dichloroethane-d4 (S)	%			92.4	70-130
Toluene-d8 (S)	%			96.5	82-118

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 50775 50776 Original: H10060245001

MS Analysis Date/Time Analyst: 06/11/2010 15:52 LKL

MSD Analysis Date/Time Analyst: 06/11/2010 16:22 LKL

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Benzene	ug/l	ND	20	19.9	19.7	99.7	98.4	70-124	1.3	20
Ethylbenzene	ug/l	ND	20	18.3	18.4	91.3	91.9	35-175	0.6	20
Toluene	ug/l	ND	20	19.3	18.7	96.3	93.3	70-131	3.2	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.

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

QUALITY CONTROL DATA

Workorder: H10060245 : Shepherd & Kelsey #1E — Project Number: Shepherd & Kelsey #1E

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 50775 50776 Original: H10060245001

MS Analysis Date/Time Analyst: 06/11/2010 15:52 LKL

MSD Analysis Date/Time Analyst: 06/11/2010 16:22 LKL

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	35.7	35.8	89.3	89.6	35-175	0.3	20
o-Xylene	ug/l	ND	20	18.4	18.5	92.1	92.6	35-175	0.6	20
Xylenes, Total	ug/l	ND	60	54.15	54.36	90.2	90.6	35-175	0.4	20
4-Bromofluorobenzene (S)	%	103				107	102	74-125		30
1,2-Dichloroethane-d4 (S)	%	90.5				94.1	93.2	70-130		30
Toluene-d8 (S)	%	95				94.7	94.5	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.

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

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 then 25%
TNTC	Too numerous to count

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: H10060245 : Shepherd & Kelsey #1E

Project Number: Shepherd & Kelsey #1E

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
H10060245001	**MW-1**	SW-846 3010A	DIGM/1819	SW-846 6010B	ICP/1456
H10060245002	**MW-2**	SW-846 3010A	DIGM/1819	SW-846 6010B	ICP/1456
H10060245003	**MW-3**	SW-846 3010A	DIGM/1819	SW-846 6010B	ICP/1456
H10060245004	**MW-4**	SW-846 3010A	DIGM/1819	SW-846 6010B	ICP/1456
H10060245001	**MW-1**	SM 2540 C	WETS/1649		
H10060245002	**MW-2**	SM 2540 C	WETS/1649		
H10060245003	**MW-3**	SM 2540 C	WETS/1649		
H10060245004	**MW-4**	SM 2540 C	WETS/1649		
H10060245001	**MW-1**	SW-846 5030	MSV/2035	SW-846 8260B	MSV/2036
H10060245002	**MW-2**	SW-846 5030	MSV/2035	SW-846 8260B	MSV/2036
H10060245003	**MW-3**	SW-846 5030	MSV/2035	SW-846 8260B	MSV/2036
H10060245004	**MW-4**	SW-846 5030	MSV/2035	SW-846 8260B	MSV/2036
H10060245005	**Duplicate**	SW-846 5030	MSV/2035	SW-846 8260B	MSV/2036
H10060245006	**Trip Blank**	SW-846 5030	MSV/2035	SW-846 8260B	MSV/2036

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

Sample Receipt Checklist

WorkOrder:	H10060245	Received By	LOG
Date and Time	06/10/2010 09:30	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: Contact Date & Time:

Client Name Contacted:

Client Instructions:

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

SPL, Inc.

Analysis Request & Chain of Custody Record

H10060245

290418

page ____ of ____

Client Name: Tetra Tech W Conoco Phillips
Address: 6121 Indian School Rd. NE Ste 200 #6: NM 8246
City: Albuquerque State: NM Zip: 87110
Phone/Fax: (505) 237-8440
Client Contact: Kelly Blanchard Email: Kelly.blanchard@tetratech.com
Project Name/No.: Skelly Unit #1E
Site Name:
Site Location: Blanco, NM
Invoice To: Ph:

SAMPLE ID	DATE	TIME	comp	grab	matrix (W=water S=soil O=oil A=air SL=sludge E=encore X=other)	bottle (P=plastic A=amber glass G=glass V=vial X=other)	size (1=1 liter 4=4oz 40=vial 8=8oz 16=16oz X=other)	pres. (1=HCl 2=HNO3 3=H2SO4 X=other)	Number of Containers	Requested Analysis: TDS	Dissolved Mn	BTEX
MW-1	6/7/10	1530		X	W	P	16	2	2	X	X	
MW-1	6/7/10	1530		X	W	V	40	1	3			X
MW-2	6/7/10	1505		X	W	P	16	2	2	X	X	
MW-2	6/7/10	1505		X	W	V	40	1	3			X
MW-3	6/7/10	1540		X	W	P	16	2	2	X	X	
MW-3	6/7/10	1540		X	W	V	40	1	3			X
MW-4	6/7/10	1605		X	W	V	16	2	2	X	X	
MW-4	6/7/10	1605		X	W	V	40	1	3			X
Duplicate	6/7/10	1535		X	W	V	40	1	3			X
Blank	6/9/10	0755			W	V	40	1	2			X

Client/Consultant Remarks:

Laboratory remarks:

Intact? Y N
Ice? Y N
Temp: 2.0

Requested TAT

- 1 Business Day
- 2 Business Days
- 3 Business Days
- Contract
- Standard
- Other
- Rush TAT requires prior notice

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

Special Detection Limits (specify):

PM review (initial):

1. Relinquished by Sampler:	date 6/9/10	time 0900	2. Received by:
3. Relinquished by:	date	time	4. Received by:
5. Relinquished by:	date 6/10/10	time 9:30	6. Received by Laboratory: Amanda Vickers

8880 Interchange Drive
Houston, TX 77054 (713) 660-0901

500 Ambassador Caffery Parkway
Scott, LA 70583 (337) 237-4775

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