

3R - 098

DEC 2009
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JUN 2010

3R098

**QUARTERLY GROUNDWATER MONITORING
REPORT**

DECEMBER 2009 SAMPLING EVENT

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

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

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. 9690121.100

June 2010

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QUARTERLY GROUNDWATER MONITORING REPORT CONOCOPHILLIPS COMPANY SHEPHERD & KELSEY 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 December 14, 2009. This sampling event represents the sixth consecutive quarter of groundwater monitoring completed by Tetra Tech at the Site.

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 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 during 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 of MW-1.

2.0 METHODOLOGY AND RESULTS

Quarterly groundwater sampling was conducted on December 14, 2009. 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; and results are displayed 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 December 14, 2009 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 manganese is 0.2 milligrams per liter (mg/L). Groundwater collected from Monitor Well MW-4 was found to contain manganese at concentrations of 0.283 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 March 2010. Please contact Kelly Blanchard at 505-237-8440 or kelly.blanchard@tetrattech.com if you have any questions or require additional information.

FIGURES



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



TETRA TECH, INC.



ConocoPhillips High Resolution Aerial Imagery 2008

FIGURE 2:

SITE DETAIL MAP
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



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 of 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 completed. Soil samples taken from the second excavation show TPH at 992 ppm, and 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 initiated 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.

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
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
				1/30/2009	5.29	90.31
MW-3	20.10	3.0 - 18.0	95.60	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
				1/30/2009	6.33	89.90
				4/1/2009	6.40	89.83
MW-4	20.70	3.7 - 18.7	96.23	6/18/2009	5.51	90.72
				9/21/2009	6.13	90.10
				12/14/2009	5.91	90.32

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	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
MW-2	12/14/2009	<1	<1	<1	<1	NA	NA	NA	0.0539	661
	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
MW-3	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
	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
MW-4	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
	1/30/2009	<5	<5	<5	<5	539	7.29*	19.4*	16.7*	1,000
MW-4	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
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

APPENDIX A



TETRA TECH, INC.

WATER SAMPLING FIELD FORM

Project Name Shepherd & Kelsey 1EPage 1 of 4

Project No. _____

Site Location Bloomfield, NMSite/Well No. MW-1Coded/
Replicate No. _____Date 12/14/09Weather cool, breezyTime Sampling
Began 1520Time 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 _____Held _____ Depth to Water Below MP 5.51 Diameter of Casing 2"Wet _____ Water Column in Well 6.45 Gallons Pumped/Bailed
Prior to Sampling 3Gallons per Foot 0.16Gallons in Well 1.03 x 3 = 3.09 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)	ORP (mV)
1522	10.95	7.18	920	0.598	2.30	28.1
1524	11.01	7.19	920	0.598	2.00	27.2
1525	10.90	7.19	923	0.600	2.15	26.3

Vol
29
2.59
38Sampling Equipment Purge Pump/Bailer

Constituents Sampled

Container Description

Preservative

BTEX 3 40mL VOA's HCl _____Fe, Mn, AP Dissolved plastic - 16 oz none _____TDS 32 oz plastic none _____Remarks light brown in color, no odor, duplicate collectedSampling Personnel Ana M., Christine M. @ 1535

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 1EPage 2 of 4

Project No. _____

Site Location Bloomfield, NMSite/Well No. MW-2 Coded/
Replicate No. _____Date 12/14/09Weather cold, breezy Time Sampling
Began 1405Time Sampling
Completed 1430

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 21.12 Water-Level Elevation _____Held _____ Depth to Water Below MP 4.99 Diameter of Casing 2"Wet _____ Water Column in Well 16.13 Gallons Pumped/Bailed
Prior to Sampling _____Gallons per Foot 0.16Gallons in Well 2.58 x 3 = 7.74 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)	ORP (mV)
1417	13.26	7.67	1098	0.714	4.17	115.5
1421	13.64	7.46	1086	0.706	2.90	96.0
1424	13.53	7.36	1087	0.707	2.58	70.7
1427	13.40	7.32	1086	0.706	2.55	56.8

Vol
49
59
6.25 g
7.59

Sampling Equipment Purge Pump/Bailer

Constituents Sampled

Container Description

Preservative

BTEX 3 40mL VOA's HCl _____Fe, Mn, ~~As~~ Dissolved plastic - 16 oz none _____TDS 32 oz plastic none _____Remarks murky brownish-gray water - no odorSampling Personnel Ann, CM

Well Casing Volumes

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



TETRA TECH, INC.

WATER SAMPLING FIELD FORM

Project Name Shepherd & Kelsey 1EPage 3 of 4

Project No. _____

Site Location Bloomfield, NMSite/Well No. MW-3Coded/
Replicate No. _____Date 12/14/09Weather cool, breezyTime Sampling
Began 1500Time Sampling
Completed 1515

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 2000 Water-Level Elevation _____Held _____ Depth to Water Below MP 5.19 Diameter of Casing 2"Wet _____ Water Column in Well 14.92 Gallons Pumped/Bailed Prior to Sampling 7.25 gallons

Gallons per Foot _____ 0.16

Gallons in Well 2.3872Sampling Pump Intake Setting
(feet below land surface) _____Purging Equipment Purge pump / Bailer X3 = 7.16

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (°C)	pH	Conductivity (µS/cm³)	TDS (g/L)	DO (mg/L)	ORP (mV)
1507	11.12	7.20	1015	0.660	2.00	37.8
1509	11.00	7.18	1034	0.672	2.60	35.2
1512	11.02	7.16	1024	0.666	2.38	30.2

Volume (gal)
4.75
6.00 gal
7.25

Sampling Equipment Purge Pump/Bailer

Constituents Sampled

Container Description

Preservative

BTEX _____ 3 40mL VOA's _____ HCl _____

Fe, Mn, Al Dissolved plastic _____ none _____TDS _____Remarks H₂O clear for the most part, slightly cloudy @ 5 gallons

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 Shepherd & Kelsey 1EPage 4 of 4

Project No. _____

Site Location Bloomfield, NMSite/Well No. MW-4Coded/
Replicate No. _____Date 12/14/09Weather cold, sunnyTime Sampling
Began 1435Time Sampling
Completed 1450

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 5.91Diameter of Casing 2"Wet _____ Water Column in Well 14.96Gallons Pumped/Bailed
Prior to Sampling _____Gallons per Foot 0.16Gallons in Well 2.31 x 3 = 6.9Sampling 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)	ORP (mV)
1446	14.50	7.7	1447	0.941	1.23	14.0
1448	14.77	7.18	1177	0.765	1.25	14.2
1450	14.93	7.16	1131	0.735	1.10	16.6

Vol
6.78
7.9
7.259Sampling Equipment Purge Pump/Bailer

Constituents Sampled

Container Description

Preservative

BTEX _____

3 40mL VOA's _____

HCl _____

Fe, Mn, Al Dissolved

plastic _____

none _____

TDS _____

Remarks orange particles at top, murky brown waterSampling Personnel Ana M., Christine M.

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

R:\Share\Maxim Forms\Field Forms\SK1E Water Sampling Field Forms.xls

APPENDIX B



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

Conoco Phillips

Certificate of Analysis Number:

09120602

<u>Report To:</u> Tetra Tech, Inc. Kelly Blanchard 6121 Indian School Road, N.E. Suite 200 Albuquerque NM 87110- ph: (505) 237-8440 fax:	<u>Project Name:</u> COP Shep Kelsey1E <u>Site:</u> Bloomfield, NM <u>Site Address:</u> <u>PO Number:</u> <u>State:</u> New Mexico <u>State Cert. No.:</u> <u>Date Reported:</u> 12/28/2009
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This Report Contains A Total Of 15 Pages

Excluding This Page, Chain Of Custody

And

Any Attachments

12/28/2009

Date



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

Case Narrative for:
Conoco Phillips

Certificate of Analysis Number:

09120602

Report To: Tetra Tech, Inc. Kelly Blanchard 6121 Indian School Road, N.E. Suite 200 Albuquerque NM 87110- ph: (505) 237-8440 fax:	Project Name: COP Shep Kelsey1E Site: Bloomfield, NM Site Address: PO Number: State: New Mexico State Cert. No.: Date Reported: 12/28/2009
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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.

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
Project Manager

09120602 Page 1

12/28/2009

Date

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



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

Conoco Phillips

Certificate of Analysis Number:

09120602

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

Project Name: COP Shep Kelsey1E
Site: Bloomfield, NM
Site Address:

PO Number:
State: New Mexico
State Cert. No.:
Date Reported: 12/28/2009

Fax To:

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
MW-2	09120602-01	Water	12/14/2009 2:30:00 PM	12/15/2009 9:00:00 AM	292713	☐
MW-3	09120602-02	Water	12/14/2009 3:15:00 PM	12/15/2009 9:00:00 AM	292713	☐
MW-4	09120602-03	Water	12/14/2009 2:50:00 PM	12/15/2009 9:00:00 AM	292712	☐
MW-1	09120602-04	Water	12/14/2009 3:30:00 PM	12/15/2009 9:00:00 AM	292712	☐
Duplicate	09120602-05	Water	12/14/2009 3:35:00 PM	12/15/2009 9:00:00 AM	292712	☐
Trip Blank	09120602-06	Water	12/14/2009 4:30:00 PM	12/15/2009 9:00:00 AM	292712	☐

12/28/2009

Erica Cardenas
Project Manager

Date

Kesavalu M. Bagawandoss Ph.D., J.D.
Laboratory Director

Ted Yen
Quality Assurance Officer



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

Client Sample ID: MW-2

Collected: 12/14/2009 14:30 SPL Sample ID: 09120602-01

Site: Bloomfield, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
METALS BY METHOD 6010B, DISSOLVED				MCL	SW6010B	Units: mg/L	
Manganese	0.106		0.005	1	12/23/09 18:01	EG	5342391

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3005A	12/15/2009 19:30	M_W	1.00

TOTAL DISSOLVED SOLIDS				MCL	SM2540 C	Units: mg/L	
Total Dissolved Solids (Residue, Filterable)	764		10	1	12/15/09 18:00	CFS	5330444

VOLATILE ORGANICS BY METHOD 8260B				MCL	SW8260B	Units: ug/L	
Benzene	ND		1	1	12/19/09 18:13	JC	5335436
Ethylbenzene	ND		1	1	12/19/09 18:13	JC	5335436
Toluene	ND		1	1	12/19/09 18:13	JC	5335436
m,p-Xylene	ND		1	1	12/19/09 18:13	JC	5335436
o-Xylene	ND		1	1	12/19/09 18:13	JC	5335436
Xylenes, Total	ND		1	1	12/19/09 18:13	JC	5335436
Surr: 1,2-Dichloroethane-d4	106	%	70-130	1	12/19/09 18:13	JC	5335436
Surr: 4-Bromofluorobenzene	93.7	%	74-125	1	12/19/09 18:13	JC	5335436
Surr: Toluene-d8	97.1	%	82-118	1	12/19/09 18:13	JC	5335436

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



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

Client Sample ID: MW-3

Collected: 12/14/2009 15:15 SPL Sample ID: 09120602-02

Site: Bloomfield, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
METALS BY METHOD 6010B, DISSOLVED				MCL	SW6010B	Units: mg/L	
Manganese	0.154		0.005	1	12/23/09 18:06	EG	5342392

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3005A	12/15/2009 19:30	M_W	1.00

TOTAL DISSOLVED SOLIDS				MCL	SM2540 C	Units: mg/L	
Total Dissolved Solids (Residue, Filterable)	712		10	1	12/15/09 18:00	CFS	5330445

VOLATILE ORGANICS BY METHOD 8260B				MCL	SW8260B	Units: ug/L	
Benzene	ND		1	1	12/19/09 18:41	JC	5335437
Ethylbenzene	ND		1	1	12/19/09 18:41	JC	5335437
Toluene	ND		1	1	12/19/09 18:41	JC	5335437
m,p-Xylene	ND		1	1	12/19/09 18:41	JC	5335437
o-Xylene	ND		1	1	12/19/09 18:41	JC	5335437
Xylenes, Total	ND		1	1	12/19/09 18:41	JC	5335437
Surr: 1,2-Dichloroethane-d4	94.6	%	70-130	1	12/19/09 18:41	JC	5335437
Surr: 4-Bromofluorobenzene	94.3	%	74-125	1	12/19/09 18:41	JC	5335437
Surr: Toluene-d8	96.0	%	82-118	1	12/19/09 18:41	JC	5335437

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



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

Client Sample ID: MW-4

Collected: 12/14/2009 14:50 SPL Sample ID: 09120602-03

Site: Bloomfield, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
METALS BY METHOD 6010B, DISSOLVED				MCL	SW6010B	Units: mg/L	
Manganese	0.283		0.005	1	12/23/09 18:11	EG	5342393

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3005A	12/15/2009 19:30	M_W	1.00

TOTAL DISSOLVED SOLIDS				MCL	SM2540 C	Units: mg/L	
Total Dissolved Solids (Residue, Filterable)	861		10	1	12/15/09 18:00	CFS	5330446

VOLATILE ORGANICS BY METHOD 8260B				MCL	SW8260B	Units: ug/L	
Benzene	ND		1	1	12/19/09 19:08	JC	5335438
Ethylbenzene	ND		1	1	12/19/09 19:08	JC	5335438
Toluene	ND		1	1	12/19/09 19:08	JC	5335438
m,p-Xylene	ND		1	1	12/19/09 19:08	JC	5335438
o-Xylene	ND		1	1	12/19/09 19:08	JC	5335438
Xylenes, Total	ND		1	1	12/19/09 19:08	JC	5335438
Surr: 1,2-Dichloroethane-d4	104	%	70-130	1	12/19/09 19:08	JC	5335438
Surr: 4-Bromofluorobenzene	92.9	%	74-125	1	12/19/09 19:08	JC	5335438
Surr: Toluene-d8	97.7	%	82-118	1	12/19/09 19:08	JC	5335438

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



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

Client Sample ID: MW-1

Collected: 12/14/2009 15:30 SPL Sample ID: 09120602-04

Site: Bloomfield, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
METALS BY METHOD 6010B, DISSOLVED				MCL	SW6010B	Units: mg/L	
Manganese	0.0539		0.005	1	12/23/09 18:15	EG	5342394

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3005A	12/15/2009 19:30	M_W	1.00

TOTAL DISSOLVED SOLIDS				MCL	SM2540 C	Units: mg/L	
Total Dissolved Solids (Residue, Filterable)	661		10	1	12/15/09 18:00	CFS	5330447

VOLATILE ORGANICS BY METHOD 8260B				MCL	SW8260B	Units: ug/L	
Benzene	ND		1	1	12/19/09 19:35	JC	5335439
Ethylbenzene	ND		1	1	12/19/09 19:35	JC	5335439
Toluene	ND		1	1	12/19/09 19:35	JC	5335439
m,p-Xylene	ND		1	1	12/19/09 19:35	JC	5335439
o-Xylene	ND		1	1	12/19/09 19:35	JC	5335439
Xylenes, Total	ND		1	1	12/19/09 19:35	JC	5335439
Surr: 1,2-Dichloroethane-d4	96.9	%	70-130	1	12/19/09 19:35	JC	5335439
Surr: 4-Bromofluorobenzene	95.2	%	74-125	1	12/19/09 19:35	JC	5335439
Surr: Toluene-d8	96.7	%	82-118	1	12/19/09 19:35	JC	5335439

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



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

Client Sample ID: Duplicate

Collected: 12/14/2009 15:35

SPL Sample ID: 09120602-05

Site: Bloomfield, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B				MCL	SW8260B	Units: ug/L	
Benzene	ND		1	1	12/19/09 20:03	JC	5335440
Ethylbenzene	ND		1	1	12/19/09 20:03	JC	5335440
Toluene	ND		1	1	12/19/09 20:03	JC	5335440
m,p-Xylene	ND		1	1	12/19/09 20:03	JC	5335440
o-Xylene	ND		1	1	12/19/09 20:03	JC	5335440
Xylenes, Total	ND		1	1	12/19/09 20:03	JC	5335440
Surr: 1,2-Dichloroethane-d4	99.5		% 70-130	1	12/19/09 20:03	JC	5335440
Surr: 4-Bromofluorobenzene	92.5		% 74-125	1	12/19/09 20:03	JC	5335440
Surr: Toluene-d8	95.0		% 82-118	1	12/19/09 20:03	JC	5335440

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



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

Client Sample ID: Trip Blank

Collected: 12/14/2009 16:30

SPL Sample ID: 09120602-06

Site: Bloomfield, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B				MCL	SW8260B	Units: ug/L	
Benzene	ND		1	1	12/19/09 20:30	JC	5335441
Ethylbenzene	ND		1	1	12/19/09 20:30	JC	5335441
Toluene	ND		1	1	12/19/09 20:30	JC	5335441
m,p-Xylene	ND		1	1	12/19/09 20:30	JC	5335441
o-Xylene	ND		1	1	12/19/09 20:30	JC	5335441
Xylenes, Total	ND		1	1	12/19/09 20:30	JC	5335441
Surr: 1,2-Dichloroethane-d4	104		% 70-130	1	12/19/09 20:30	JC	5335441
Surr: 4-Bromofluorobenzene	92.7		% 74-125	1	12/19/09 20:30	JC	5335441
Surr: Toluene-d8	97.3		% 82-118	1	12/19/09 20:30	JC	5335441

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B/V - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Estimated Value exceeds calibration curve

TNTC - Too numerous to count

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference

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Quality Control Documentation



Quality Control Report

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

Conoco Phillips COP Shep Kelsey1E

Analysis: Metals by Method 6010B, Dissolved
Method: SW6010B

WorkOrder: 09120602
Lab Batch ID: 96450

Method Blank

RunID: ICP2_091223B-5342380 Units: mg/L
Analysis Date: 12/23/2009 17:09 Analyst: EG
Preparation Date: 12/15/2009 19:30 Prep By: M_ Method SW3005A

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09120602-01C	MW-2
09120602-02C	MW-3
09120602-03C	MW-4
09120602-04C	MW-1

Analyte	Result	Rep Limit
Manganese	ND	0.005

Laboratory Control Sample (LCS)

RunID: ICP2_091223B-5342381 Units: mg/L
Analysis Date: 12/23/2009 17:13 Analyst: EG
Preparation Date: 12/15/2009 19:30 Prep By: M_ Method SW3005A

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Manganese	1.000	1.033	103.3	80	120

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

Sample Spiked: 09120605-03
RunID: ICP2_091223B-5342383 Units: mg/L
Analysis Date: 12/23/2009 17:23 Analyst: EG
Preparation Date: 12/15/2009 19:30 Prep By: M_ Method SW3005A

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Manganese	2.395	1	3.347	95.20	1	3.397	100.2	1.483	20	75	125

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte Detected In The Associated Method Blank
J - Estimated Value Between MDL And PQL
E - Estimated Value exceeds calibration curve
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

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



Quality Control Report

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

Conoco Phillips COP Shep Kelsey1E

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 09120602
Lab Batch ID: R291807

Method Blank

RunID: Q_091219A-5335426 Units: ug/L
Analysis Date: 12/19/2009 13:46 Analyst: JC

Analyte	Result	Rep Limit
Benzene	ND	1.0
Ethylbenzene	ND	1.0
Toluene	ND	1.0
m,p-Xylene	ND	1.0
o-Xylene	ND	1.0
Xylenes, Total	ND	1.0
Surr: 1,2-Dichloroethane-d4	95.7	70-130
Surr: 4-Bromofluorobenzene	93.7	74-125
Surr: Toluene-d8	96.9	82-118

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09120602-01A	MW-2
09120602-02A	MW-3
09120602-03A	MW-4
09120602-04A	MW-1
09120602-05A	Duplicate
09120602-06A	Trip Blank

Laboratory Control Sample (LCS)

RunID: Q_091219A-5335425 Units: ug/L
Analysis Date: 12/19/2009 13:20 Analyst: JC

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	20.0	18.3	91.6	74	123
Ethylbenzene	20.0	18.0	89.8	72	127
Toluene	20.0	18.1	90.4	74	126
m,p-Xylene	40.0	36.8	92.0	71	129
o-Xylene	20.0	18.7	93.4	74	130
Xylenes, Total	60.0	55.5	92.5	71	130
Surr: 1,2-Dichloroethane-d4	50.0	48.4	96.8	70	130
Surr: 4-Bromofluorobenzene	50.0	50.7	101	74	125
Surr: Toluene-d8	50.0	47.5	94.9	82	118

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

Sample Spiked: 09120620-06
RunID: Q_091219A-5335431 Units: ug/L
Analysis Date: 12/19/2009 15:59 Analyst: JC

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte Detected In The Associated Method Blank
J - Estimated Value Between MDL And PQL
E - Estimated Value exceeds calibration curve
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

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



Quality Control Report

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

Conoco Phillips

COP Shep Kelsey1E

Analysis: Volatile Organics by Method 8260B

WorkOrder: 09120602

Method: SW8260B

Lab Batch ID: R291807

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Benzene	ND	20	17.3	86.4	20	17.8	88.9	2.77	22	70	124
Ethylbenzene	ND	20	17.1	85.4	20	16.4	81.8	4.32	20	76	122
Toluene	ND	20	17.2	86.0	20	17.9	89.5	4.03	24	80	117
m,p-Xylene	ND	40	34.9	87.2	40	35.1	87.7	0.595	20	69	127
o-Xylene	ND	20	18.6	93.1	20	19.0	94.9	1.89	20	84	114
Xylenes, Total	ND	60	53.5	89.2	60	54.1	90.1	1.05	20	69	127
Surr: 1,2-Dichloroethane-d4	ND	50	49.2	98.4	50	49.6	99.3	0.842	30	70	130
Surr: 4-Bromofluorobenzene	ND	50	51.1	102	50	51.1	102	0.0606	30	74	125
Surr: Toluene-d8	ND	50	48.4	96.7	50	48.0	96.1	0.699	30	82	118

Qualifiers: ND/U - Not Detected at the Reporting Limit

B - Analyte Detected In The Associated Method Blank

J - Estimated Value Between MDL And PQL

E - Estimated Value exceeds calibration curve

N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

TNTC - Too numerous to count

MI - Matrix Interference

D - Recovery Unreportable due to Dilution

* - Recovery Outside Advisable QC Limits

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

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Quality Control Report

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

Conoco Phillips COP Shep Kelsey1E

Analysis: Total Dissolved Solids
Method: SM2540 C

WorkOrder: 09120602
Lab Batch ID: R291514

Method Blank

RunID: WET_091215N-5330436 Units: mg/L
Analysis Date: 12/15/2009 18:00 Analyst: CFS

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09120602-01B	MW-2
09120602-02B	MW-3
09120602-03B	MW-4
09120602-04B	MW-1

Analyte	Result	Rep Limit
Total Dissolved Solids (Residue,Filterable)	ND	10

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

RunID: WET_091215N-5330438 Units: mg/L
Analysis Date: 12/15/2009 18:00 Analyst: CFS

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Total Dissolved Solids (Residue,Filterabl	200.0	199.0	99.50	200.0	202.0	101.0	1.5	10	95	107

Sample Duplicate

Original Sample: 09120578-03
RunID: WET_091215N-5330442 Units: mg/L
Analysis Date: 12/15/2009 18:00 Analyst: CFS

Analyte	Sample Result	DUP Result	RPD	RPD Limit
Total Dissolved Solids (Residue,Filterabl	686	688	0.291	10

Qualifiers: ND/U - Not Detected at the Reporting Limit
B - Analyte Detected In The Associated Method Blank
J - Estimated Value Between MDL And PQL
E - Estimated Value exceeds calibration curve
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

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

*Sample Receipt Checklist
And
Chain of Custody*



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

Sample Receipt Checklist

Workorder:	09120602	Received By:	RE
Date and Time Received:	12/15/2009 9:00:00 AM	Carrier name:	Fedex-Standard Overnight
Temperature:	1.8°C	Chilled by:	Water Ice

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

*VOA Preservation Checked After Sample Analysis

SPL Representative:

Contact Date & Time:

Client Name Contacted:

Non Conformance
Issues:

Client Instructions:



SPL, Inc.

Analysis Request & Chain of Custody Record

SPL Workorder No. 292712

09/20602 page 1 of 1

Client Name: Tetra Tech / ConocoPhillips
Address: 6121 Indian School Rd Ste 200
City Albuquerque, State NM Zip 87110
Phone/Fax: 505.237.8440 505.237.8656
Client Contact: Kelly Blanchard Email: Kelly.Blanchard@tetra-tech.com
Project Name/No.:
Site Name: Shepherd & Kelsey IE
Site Location: Bloomfield, NM
Invoice To: ConocoPhillips

Ph: TIME DATE SAMPLE ID

MW-2	12.14.09	1430	X	grab	W=water S=soil O=oil A=air SL=sediment E=encore X=other	matrix	P=plastic A=amber glass O=glass V=vial X=other	bottle	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	BTEX	Disolved Manganese	TDS
MW-2	12.14.09	1430	X								3	X		
MW-3	12.14.09	1515	X								2	X		
MW-3	12.14.09	1515	X								3	X		
MW-4	12.14.09	1450	X								2	X		
MW-4	12.14.09	1450	X								3	X		
MW-1	12.14.09	1530	X								2	X		
MW-1	12.14.09	1530	X								3	X		
Duplicate	12.14.09	1535	X								2	X		
Trap Blank	12.14.09	1630	X								3	X		

Client/Consultant Remarks:

Laboratory remarks:

Intact? ☐ Y ☐ N
Ice? ☐ Y ☐ N
Temp: 1.82

PM review (initial):

Requested TAT

- ☐ 1 Business Day ☐ Contract
☐ 2 Business Days ☒ Standard
☐ 3 Business Days
☐ 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 ☐1. Relinquished by: Matthew
3. Relinquished by:

2. Received by:

time 1645
date 12.14.09

4. Received by:

time 0900
date 12/15/096. Received by Laboratory: Matthew☐ 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