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SEP 2009

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**QUARTERLY GROUNDWATER
MONITORING REPORT
SEPTEMBER 2009 SAMPLING EVENT**

**CONOCOPHILLIPS COMPANY
EL PASO NO.1A
SAN JUAN COUNTY, NEW MEXICO**

API # 30-045-22778

Prepared for:



420 South Keeler Avenue
Bartlesville, OK 74004

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Albuquerque, NM 87110
Tetra Tech Project No. 96900122.100

May 2010

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QUARTERLY GROUNDWATER MONITORING REPORT CONOCOPHILLIPS COMPANY EL PASO NO. 1A, SAN JUAN COUNTY, NEW MEXICO

1.0 INTRODUCTION

This report presents the results of quarterly groundwater monitoring completed by Tetra Tech, Inc. (Tetra Tech) on September 29, 2009 at the ConocoPhillips Company El Paso No. 1A site in San Juan County, New Mexico (Site). This event represents the fifth quarter of groundwater sampling conducted by Tetra Tech at the Site.

The Site is located on BLM land east of Blanco, NM near the intersection of New Mexico Highway 64 and County Road 4450 in Section 29, Township 29 North, Range 11 West. The Site can be reached by turning right on County Road 4450 and traveling for approximately 300 feet before taking another right and continuing for 0.1 mile, finally turning left toward Canyon Largo and continuing 0.4 miles to the Site. The Site consists of two gas production wells; well head El Paso No. 1S and well head El Paso No. 1A with associated equipment and installations. The location and general features of the Site are shown on **Figures 1** and **2**, respectively.

1.1 Site History

The history of the Site is outlined in **Table 1**.

2.0 METHODOLOGY AND RESULTS

The following subsections describe the groundwater monitoring methodology and sampling analytical results.

2.1 Monitoring Summary

Groundwater samples were collected from monitor wells MW-1, MW-2, MW-3, and MW-4 on September 29, 2009. Prior to sampling, depth to groundwater was measured in all monitor wells. A groundwater contour map, showing a general flow direction to the west, is provided in **Figure 3**. Groundwater elevation data is included in **Table 2**.

2.2 Groundwater Monitoring Methodology

Approximately 3 casing volumes were purged from each monitor well prior to sampling or until measured groundwater parameters including temperature, pH, conductivity, total dissolved solids (TDS), oxidation-reduction potential (ORP) and dissolved oxygen (DO), had stabilized. Groundwater parameters were collected using a YSI 556 multi-parameter sonde. Observed parameters for each well were recorded on Tetra Tech Groundwater Sampling Field Forms which are included as **Appendix A**.

All purged groundwater was contained in a plastic 5 gallon container and disposed of in the Site produced water tank (**Figure 2**). A 1.5-inch dedicated bailer was used to purge and collect groundwater samples. The samples were then placed in laboratory prepared bottles, packed on ice, and shipped with chain of custody documentation to Southern Petroleum Laboratory located in Houston, Texas. The samples were analyzed for presence of volatile organic compounds (VOC) including benzene, toluene, ethylbenzene, and xylenes (BTEX) by Environmental Protection Agency (EPA) Method 8260B, ion chromatography by EPA Method E300.0, total dissolved solids (TDS) by EPA Method 2540C, and dissolved metals including aluminum, iron and manganese by EPA Method 6010B.

This was the first quarter dissolved metals analysis was conducted. Total metals testing was conducted during prior events as requested by the Oil Conservation Division (OCD) in April of 2008; however, since all New Mexico Water Quality Control Commission (NMWQCC) drinking water standards pertain to dissolved metals concentrations, Tetra Tech requested and received approval from the OCD on September 8, 2009 to run dissolved metals analyses for only those metals which had exceeded the NMWQCC drinking water standards for metals previously run by total metals analysis. The dissolved metals samples were collected in unpreserved containers supplied by the laboratory, which were filtered and preserved by laboratory personnel prior to analysis for dissolved metals. Dissolved metals testing will continue for metals exceeding NMWQCC drinking water standards.

2.3 Groundwater Sampling Analytical Results

The September 2009 analysis of the collected groundwater samples indicates that all BTEX constituents are below NMWQCC groundwater quality standards. Groundwater laboratory analytical results are summarized in **Table 3**. A figure showing all NMWQCC standard exceedences is provided as **Figure 4**.

- **Fluoride**

The groundwater quality standard for fluoride is 1.6 milligrams per liter (mg/L). Groundwater collected from monitor well MW-4 contained fluoride at a concentration slightly above the standard at 2.26 mg/L.

- **Sulfate**

The groundwater quality standard for sulfate is 600 mg/L. Groundwater collected from monitor wells MW-1, MW-2, MW-3 and MW-4 were found to contain sulfate at concentrations of 8,030 mg/L, 29,800 mg/L, 6,890 mg/L and 5,340 mg/L, respectively.

- **Manganese**

The groundwater quality standard for dissolved manganese is 0.2 mg/L. Groundwater collected from monitor wells MW-1, MW-2 and MW-3 were found to contain manganese at concentrations of 1.42 mg/L, 2.03 mg/L and 0.432 mg/L, respectively.

- **Total Dissolved Solids**

The groundwater quality standard for TDS is 1,000 mg/L. Groundwater collected from monitor wells MW-1, MW-2, MW-3 and MW-4 were found to contain TDS at concentrations of 10,600 mg/L, 31,800 mg/L, 8,630 mg/L and 6,760 mg/L, respectively.

The corresponding laboratory analysis report for the September 2009 groundwater sampling event, including quality control summaries, are 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 indicate that all constituents of concern are consistently below NMWQCC groundwater quality standards or have reached Site-specific background levels. Please contact Kelly Blanchard at 505-237-8440 or kelly.blanchard@tetrattech.com if you have any questions or require additional information.

FIGURES

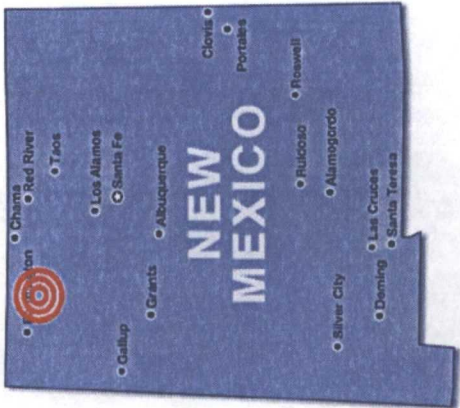
- 1. Site Location Map**
- 2. Site Layout Map**
- 3. Groundwater Elevation Contour Map**
- 4. Groundwater Concentration Map**
- 5. Site Cross Section**



ConocoPhillips High Resolution Aerial Imagery

FIGURE 1.

Site Location Map
ConocoPhillips
Company
El Paso 1A
San Juan County, NM



Directions from HW 64 to
ConocoPhillips
El Paso 1A site Location

Approximate ConocoPhillips
El Paso 1A
Site location



TETRA TECH, INC.

San Juan River,
approximately 1 mile

Approximate location
of February 2007 hydrocarbon
impact

El Paso No.
1A Wellhead

El Paso No.
1S Wellhead

MW-2

Meter houses

Separator

MW-1

Compressor

Separator

Underground Produced Water Tank

210 BBL Aboveground Condensate Tank

100 BBL Aboveground Condensate Tank

Canyon Largo,
approximately 0.2 miles

MW-3

MW-4

FIGURE 2:

SITE LAYOUT MAP
CONOCOPHILLIPS COMPANY
EL PASO No. 1A
Sec 20, Twp 29N, Rng 09W
San Juan County, New Mexico

LEGEND



WELLHEAD



MONITOR WELL

BERM

EQUIPMENT



TETRA TECH, INC.

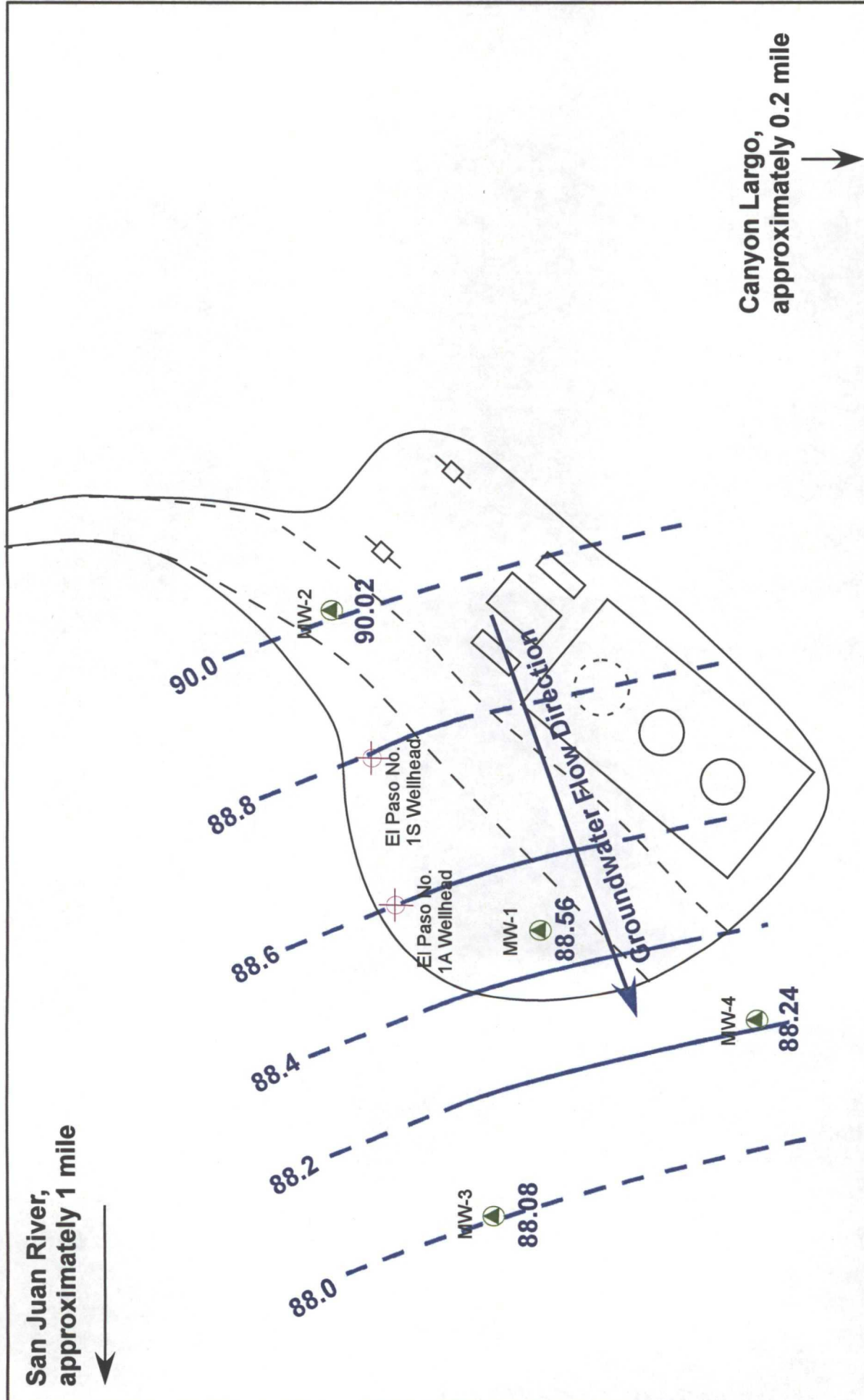





FIGURE 3:
 GROUNDWATER ELEVATION
 CONTOUR MAP
 CONOCOPHILLIPS COMPANY
 EL PASO No. 1A
 Sec 20, Twp 29N, Rng 09W
 San Juan County, New Mexico

LEGEND

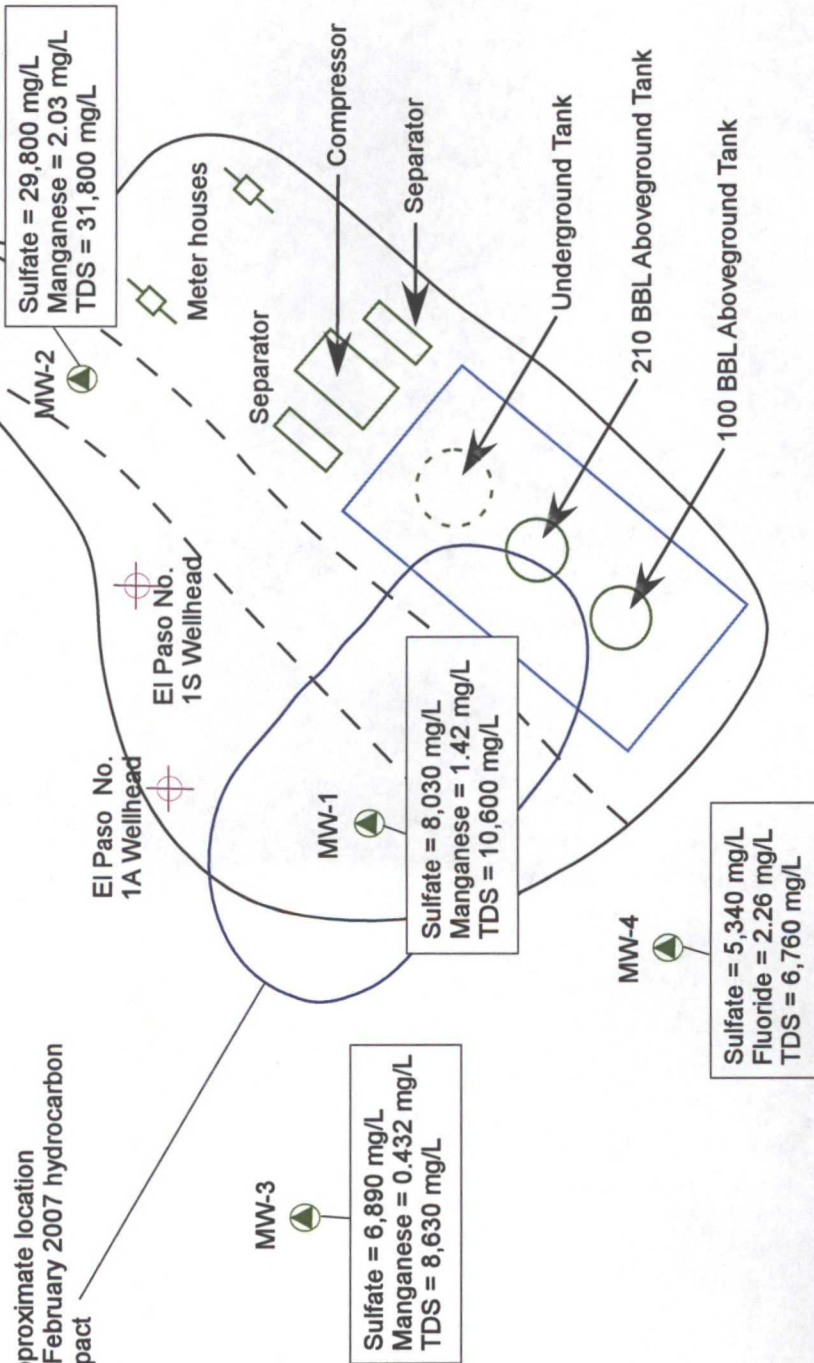
-  WELLHEAD
-  MONITOR WELL
-  GROUNDWATER ELEVATION
CONTOURS (dashed where inferred)



TETRA TECH, INC.

San Juan River,
approximately 1 mile

Approximate location
of February 2007 hydrocarbon
impact



Canyon Largo,
approximately 0.2 miles

LEGEND

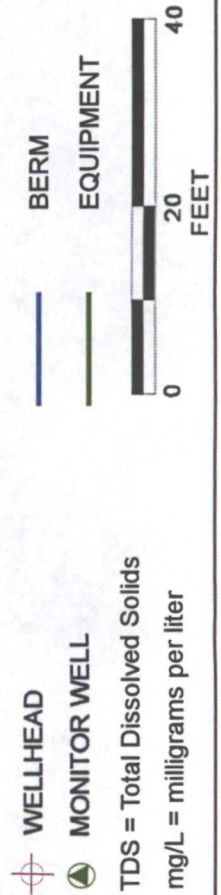


FIGURE 4:
GROUNDWATER QUALITY STANDARD
EXCEEDENCES CONCENTRATION MAP
CONOCOPHILLIPS COMPANY
EL PASO No. 1A
Sec 20, Twp 29N, Rng 09W
San Juan County, New Mexico



TETRA TECH, INC.

El Paso 1A Cross Section

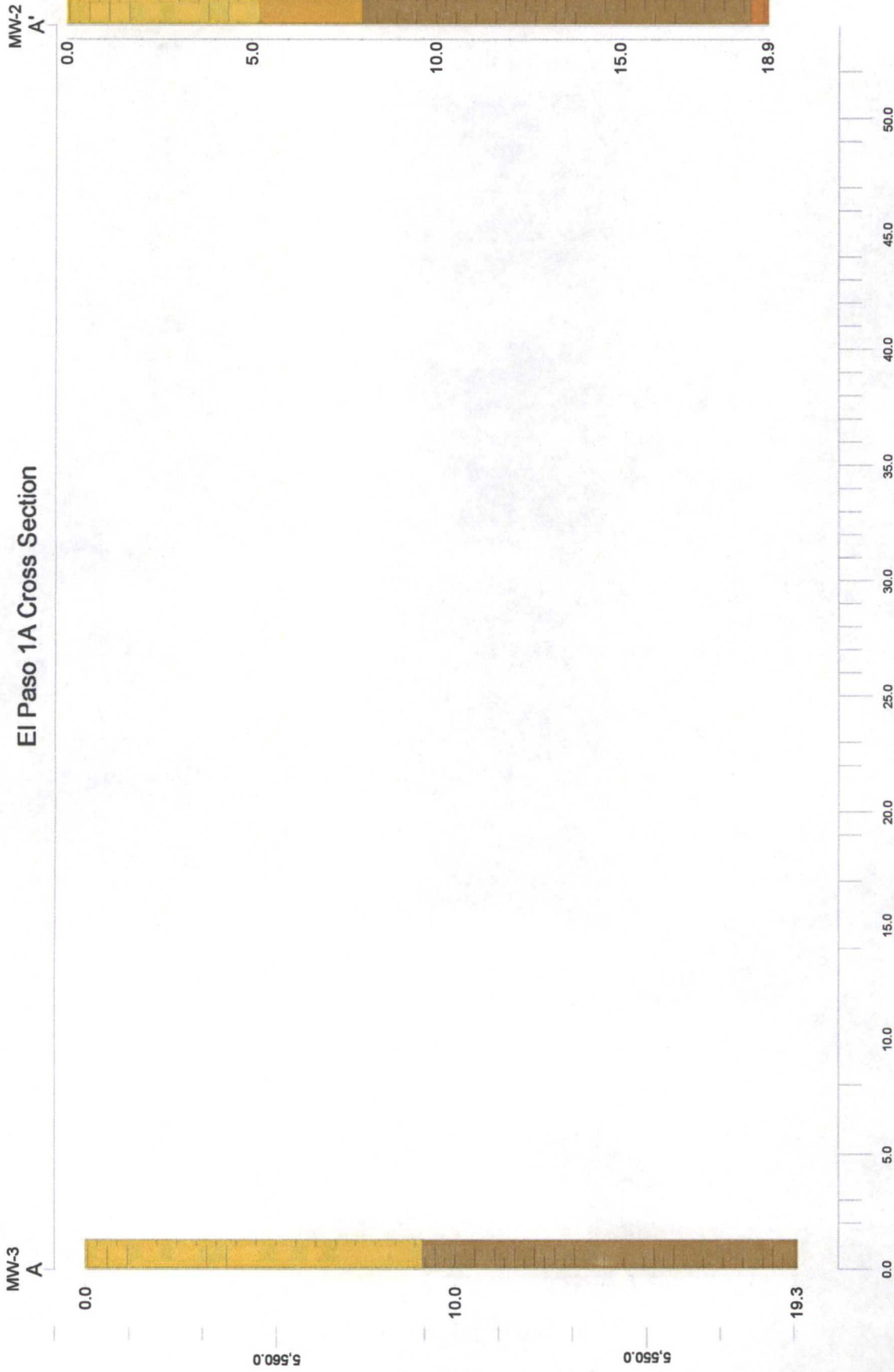
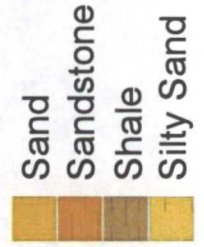


FIGURE 5:
 GENERALIZED GEOLOGIC CROSS SECTION
 CONOCOPHILLIPS COMPANY
 El Paso No. 1A
 Sec 20, T29N, R09W
 San Juan County, New Mexico

LEGEND



Note: Lithology descriptions based on spit-spoon collection during drilling; some information is inferred based on drill cuttings and driller feedback during well boring advancement.



TETRA TECH, INC.

TABLES

- I. Site History Timeline**
- 2. Groundwater Elevation Data Summary**
- 3. Groundwater Laboratory Analytical Results Summary**

Table 1. Site History Timeline - ConocoPhillips Company El Paso No. 1A

DATE	ACTIVITY
Feb-07	Hydrocarbon-impacted soils discovered during trench work being conducted for a new flowline. Original source of contamination is unknown.
Feb-07	Contaminated soil excavated from the Site. Soil samples collected and analyzed for benzene, toluene, ethylbenzene and total xylenes (BTEX) were below NMOCD regulations.
21-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). 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.
21-Sep-07	A ground water sample was collected from the temporary monitoring well and analyzed for BTEX; results were below the State of New Mexico drinking water standard for this constituent.
27-Sep-07	Depth to groundwater measured at seven (7) feet bgs.
Sep-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
25-Oct-08	1st quarter sampling of MW-1 by Tetra Tech
Jan-09	Attempt to install additional monitoring wells; roads not accessible by drill rig due to winter weather conditions.
28-Jan-09	2nd quarter groundwater sampling of MW-1 by Tetra Tech. Groundwater samples were lost by Southern Petroleum Laboratory. No data was received from January sampling.
3-4-March-09	Monitoring wells MW-2, MW-3, MW-4 installed and developed by WDC overseen by Tetra Tech. Soil samples were collected from MW-3 and MW-2 boring locations.
2-Apr-09	3rd quarter groundwater sampling conducted by Tetra Tech. First quarter of sampling to include all 4 monitoring wells. A baseline suite was collected for MW-1, MW-2, MW-3 and MW-4.
18-Jun-09	2nd quarter groundwater sampling conducted by Tetra Tech to include wells MW-1, MW-2, MW-3 and MW-4.
29-Sep-09	3rd quarter groundwater sampling conducted by Tetra Tech to include wells MW-1, MW-2, MW-3 and MW-4. Samples collected for dissolved metals exceeding standards that were previously run by the total metals test method; Al, Mn, Fe.

Table 2. Groundwater Elevation Data Summary - ConocoPhillips Company El Paso No. 1A

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	13.35	4'8"-9'8"	99.52	9/21/2007	7.00	92.52
				10/25/2008	10.92	88.60
				1/30/2009	NM	NM
				4/2/2009	10.33	89.19
				6/18/2009	10.65	88.87
				9/29/2009	10.96	88.56
MW-2	20.74	3-17.9	98.72	4/2/2009	8.49	90.23
				6/18/2009	8.71	90.01
				9/29/2009	8.70	90.02
MW-3	21.10	3.1-18.1	98.175	4/2/2009	9.71	88.47
				6/18/2009	9.75	88.43
				9/29/2009	10.10	88.08
MW-4	20.82	2.9-17.9	98.28	4/2/2009	9.74	88.54
				6/18/2009	9.78	88.50
				9/29/2009	10.04	88.24

ft = Feet

TOC = Top of casing

bgs = below ground surface

* Elevation relative to wellhead, set at an arbitrary elevation of 100 feet above mean sea level

NM = Not Measured

Table 3. Groundwater Laboratory Analytical Results Summary - ConocoPhillips Company El Paso No. 1A

Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Fluoride (mg/L)	Sulfate (mg/L)	Aluminum (mg/L)	Iron (mg/L)	Manganese (mg/L)	Total Dissolved Solids (mg/L)
MW-1	9/21/2007	1.4	0.5	<0.2	0.3	NS	NS	NS	NS	NS	NA
	10/25/2008	<0.5	<0.5	<0.5	<0.5	<2	6400	NS	26*	5.49*	NA
	1/30/2009	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/2/2009	<0.5	<0.5	<0.5	<0.5	1.92	7580	2.21*	29.6*	3.14*	10000
	6/18/2009	<5	<5	<5	<5	2.04	7970	2.1*	7.66*	3.06*	NA
MW-2	9/29/2009	<1	<1	<1	<1	1.56	8030	<0.1	0.0237	1.42	10600
	4/2/2009	<0.5	<0.5	<0.5	<0.5	<0.5	15900	0.705*	0.751*	1.16*	22500
	6/18/2009	<5	<5	<5	<5	0.67	17000	1.49*	1.23*	1.92*	NA
	9/29/2009	<1	<1	<1	<1	<0.5	29800	<0.1	<0.02	2.03	31800
	4/2/2009	<0.5	<0.5	52	362	1.68	4090	5.47*	9.31*	0.788*	7530
MW-3	6/18/2009	<5	<5	15	87	1.68	5750	3.75*	5.3*	0.454*	NA
	9/29/2009	<1	<1	2.7	20	1.47	6890	0.224	0.14	0.432	8630
	4/2/2009	<0.5	<0.5	<0.5	<0.5	2.42	4750	2.1*	2.12*	0.396*	6660
	6/18/2009	<5	<5	<5	<5	2.25	5300	5.52*	6.91*	0.333*	NA
	9/29/2009	<1	<1	<1	<1	2.26	5340	0.943	0.393	0.134	6760
NMWQCC Standards		10 (µg/L)	750 (µg/L)	750 (µg/L)	620 (µg/L)	1.6 (mg/L)	600 (mg/L)	5 (mg/L)	1 (mg/L)	0.2 (mg/L)	1000 (mg/L)

Explanation

ND = Not Detected

NMWQCC = New Mexico Water Quality Control Commission

mg/L = milligrams per liter (parts per million)

µg/L = micrograms per liter (parts per billion)

NA = Not Analyzed due to laboratory error

<0.7 = Below laboratory detection limit of 0.7 µg/L

Bold = concentrations that exceed the NMWQCC limits

* = Results reported for total metals analysis, results can not be compared to NMWQCC Standards for dissolved metals

APPENDIX A
GROUNDWATER SAMPLING FIELD FORMS



TETRA TECH, INC.

WATER SAMPLING FIELD FORM

Project Name El Paso 1APage 1 of 4

Project No. _____

Site Location Blanco, NMSite/Well No. MW-1Coded/
Replicate No. 1415Date 9-29-09Weather SunnyTime Sampling
Began 1413Time Sampling
Completed 1420

EVACUATION DATA

Duplicate 1413

Description of Measuring Point (MP) Top of Casing

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

Total Sounded Depth of Well Below MP 13.58 Water-Level Elevation _____Held _____ Depth to Water Below MP 10.1 10.96 Diameter of Casing 2"Wet _____ Water Column in Well 2.62 Gallons Pumped/Bailed Prior to Sampling _____Gallons per Foot 0.4192 0.16Gallons in Well 1.2576Sampling Pump Intake Setting
(feet below land surface) _____Purging Equipment Purge pump/Bailer

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (°C)	pH	Conductivity (µS/cm)	TDS (g/L)	DO (mg/L)	ORP (mV)
1413	20.27	7.36	11881	7.722	4.72	-70.8
1415	20.29	7.37	11851	7.702	3.20	-85.5
1416	20.26	7.40	11798	7.668	2.43	-100.8

12.6
119.8
120.3

Sampling Equipment Purge Pump/Bailer

Constituents Sampled

Container Description

Preservative

BTEX 3 40mL VOA's HCl _____Total Metals Al, Mn, Fe 16 32 oz. plastic HNO₃Flouride, Sulfate, TDS 16 32 oz. plastic none _____Remarks Black particulate in water observedSampling 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



TETRA TECH, INC.

WATER SAMPLING FIELD FORM

Project Name El Paso 1APage 2 of 4

Project No. _____

Site Location Blanco, NMSite/Well No. MW-2Coded/
Replicate No. _____Date 9-29-09Weather SunnyTime Sampling
Began 1345Time Sampling
Completed 1410

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 20.75

Water-Level Elevation _____

Held _____ Depth to Water Below MP 8.7Diameter of Casing 2"Wet _____ Water Column in Well 12.05Gallons Pumped/Bailed
Prior to Sampling _____Gallons per Foot 0.16Gallons in Well 1.93 x 3 = 5.79 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)
1357	18.04	7.53	28070	18.25	4.77	-36.5
1359	17.86	7.47	28179	18.32	2.35	-43.7
1401	17.75	7.46	28177	18.32	2.81	-46.3

129.1
109.7
332.7

Sampling Equipment Purge Pump/Bailer

Constituents Sampled

Container Description

Preservative

BTEX 3 40mL VOA's

HCl _____

Total Metals Al, Mn, Fe 16 32 oz. plasticHNO₃ (dissolved preserved @ Lab)Fluoride, Sulfate, TDS 16 32 oz. plastic

none _____

Remarks water is yellowSampling 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



TETRA TECH, INC.

WATER SAMPLING FIELD FORM

Project Name El Paso 1APage 3 of 4

Project No. _____

Site Location Blanco, NMSite/Well No. MW-3Coded/
Replicate No. _____Date 9-29-09Weather SunnyTime Sampling
Began 1328Time Sampling
Completed 1335

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 21.11

Water-Level Elevation _____

Held _____ Depth to Water Below MP 10.1Diameter of Casing 2"Wet _____ Water Column in Well 11.01Gallons Pumped/Bailed
Prior to Sampling 5.75 gallonsGallons per Foot 0.16Gallons in Well 1.766 x 3Sampling Pump Intake Setting
(feet below land surface) _____Purging Equipment Purge pump / Bailer 5.28

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (°C)	pH	Conductivity (µS/cm³)	TDS (g/L)	DO (mg/L)	ORP (mV)
<u>1328</u>	<u>14.109</u>	<u>8.13</u>	<u>9933</u>	<u>10.468</u>	<u>2.58</u>	<u>-128.5</u>
<u>1331</u>	<u>19.100</u>	<u>8.30</u>	<u>9803</u>	<u>6.370</u>	<u>1.44</u>	<u>-169.9</u>
<u>1333</u>	<u>19.52</u>	<u>8.30</u>	<u>9755</u>	<u>6.341</u>	<u>1.11</u>	<u>-186.3</u>

62.6
530.4
1100 Max
466.5

Sampling Equipment Purge Pump/Bailer

Constituents Sampled

Container Description

Preservative

BTEX 3 40mL VOA's HCl _____Total Metals Al, Fe, Mn 16 32 oz. plastic HNO₃Fluoride, Sulfate, TDS 16 32 oz. plastic none _____Remarks H₂O, dark gray, slight weathered Hydrocarbon odor or bio odorSampling Personnel CM, CR no sheet

Well Casing Volumes

Gal./ft.	1 ¼" = 0.077	2" = 0.16	3" = 0.37	4" = 0.67
	1 ½" = 0.10	2 ½" = 0.24	3 ½" = 0.50	6" = 1.1



TETRA TECH, INC.

WATER SAMPLING FIELD FORM

Project Name El Paso 1APage 4 of 4

Project No. _____

Site Location Blanco, NMSite/Well No. MW-4Coded/
Replicate No. _____Date 9-29-09Weather SunnyTime Sampling
Began 1250Time Sampling
Completed 1320

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 20.86

Water-Level Elevation _____

Held _____ Depth to Water Below MP 10.04Diameter of Casing 2"Wet _____ Water Column in Well 10.82Gallons Pumped/Bailed
Prior to Sampling 6 gallonsGallons per Foot 0.16Gallons in Well 1.73 x 3 = 5.19Sampling 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)
13:12	18.07	8.14	7847	5.133	3.40	-27.5
13:14	17.60	7.98	8126	5.282	2.45	-36.8
13:19	17.61	8.08	8069	5.245	2.21	-41.9

Turbidity
562.0
1100 max
1020Sampling Equipment Purge Pump/Bailer

Constituents Sampled

Container Description

Preservative

BTEX 3 40mL VOA's HClTotal Metals Al, Fe, Mn 16 32 oz. plastic HNO₃Fluoride, Sulfate TDS 16 32 oz. plastic noneRemarks H₂O light gray/brown, no odor or sheenSampling 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

APPENDIX B

GROUNDWATER LABORATORY ANALYTICAL REPORT



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

Conoco Phillips

Certificate of Analysis Number:

09100090

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 EIPaso1A Site: Blanco, NM Site Address: PO Number: State: New Mexico State Cert. No.: Date Reported: 10/14/2009
---	--

This Report Contains A Total Of 17 Pages

Excluding This Page, Chain Of Custody

And

Any Attachments

10/14/2009

Date

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



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

Case Narrative for:
Conoco Phillips

Certificate of Analysis Number:

09100090

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 EIPaso1A Site: Blanco, NM Site Address: PO Number: State: New Mexico State Cert. No.: Date Reported: 10/14/2009
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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:

SW8260B Volatile Organics:
SW8270C Semivolatile Organics:
E608 Pesticides:
TCLP Metals:
Wet Chemistry:

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

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

09100090 Page 1

10/14/2009

Date



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

Conoco Phillips

Certificate of Analysis Number:

09100090

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 ElPaso1A
Site: Blanco, NM
Site Address:

PO Number:
State: New Mexico
State Cert. No.:
Date Reported: 10/14/2009

Fax To:

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
MW-1	09100090-01	Water	9/29/2009 2:20:00 PM	10/2/2009 9:15:00 AM	331800	<input type="checkbox"/>
MW-2	09100090-02	Water	9/29/2009 2:10:00 PM	10/2/2009 9:15:00 AM	331800	<input type="checkbox"/>
MW-3	09100090-03	Water	9/29/2009 1:35:00 PM	10/2/2009 9:15:00 AM	331800	<input type="checkbox"/>
MW-4	09100090-04	Water	9/29/2009 1:20:00 PM	10/2/2009 9:15:00 AM	331800	<input type="checkbox"/>
Duplicate	09100090-05	Water	9/29/2009 2:15:00 PM	10/2/2009 9:15:00 AM	331800	<input type="checkbox"/>
Trip Blank	09100090-06	Water	10/1/2009 4:20:00 PM	10/2/2009 9:15:00 AM	331800	<input type="checkbox"/>

Erica Cardenas

10/14/2009

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-1

Collected: 09/29/2009 14:20

SPL Sample ID: 09100090-01

Site: Blanco, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
ION CHROMATOGRAPHY				MCL	E300.0	Units: mg/L	
Fluoride	1.56		0.5	1	10/03/09 10:03	BDG	5231036
Sulfate	8030		250	500	10/03/09 10:20	BDG	5231037
METALS BY METHOD 6010B, DISSOLVED				MCL	SW6010B	Units: mg/L	
Aluminum	ND		0.1	1	10/13/09 10:55	AB1	5243642
Iron	0.0237		0.02	1	10/13/09 10:55	AB1	5243642
Manganese	1.42		0.005	1	10/13/09 10:55	AB1	5243642

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3005A	10/05/2009 15:30	R_V	1.00

TOTAL DISSOLVED SOLIDS				MCL	SM2540 C	Units: mg/L	
Total Dissolved Solids (Residue, Filterable)	10600		100	10	10/02/09 17:00	CFS	5229582
VOLATILE ORGANICS BY METHOD 8260B				MCL	SW8260B	Units: ug/L	
Benzene	ND		1	1	10/08/09 20:51	LU_L	5238640
Ethylbenzene	ND		1	1	10/08/09 20:51	LU_L	5238640
Toluene	ND		1	1	10/08/09 20:51	LU_L	5238640
m,p-Xylene	ND		1	1	10/08/09 20:51	LU_L	5238640
o-Xylene	ND		1	1	10/08/09 20:51	LU_L	5238640
Xylenes, Total	ND		1	1	10/08/09 20:51	LU_L	5238640
Surr: 1,2-Dichloroethane-d4	96.0	%	78-116	1	10/08/09 20:51	LU_L	5238640
Surr: 4-Bromofluorobenzene	101	%	74-125	1	10/08/09 20:51	LU_L	5238640
Surr: Toluene-d8	99.8	%	82-118	1	10/08/09 20:51	LU_L	5238640

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-2

Collected: 09/29/2009 14:10 SPL Sample ID: 09100090-02

Site: Blanco, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
ION CHROMATOGRAPHY				MCL	E300.0	Units: mg/L	
Fluoride	ND		0.5	1	10/03/09 10:36	BDG	5231038
Sulfate	29800		1000	2000	10/03/09 12:17	BDG	5231043
METALS BY METHOD 6010B, DISSOLVED				MCL	SW6010B	Units: mg/L	
Aluminum	ND		0.1	1	10/13/09 11:43	AB1	5243653
Iron	ND		0.02	1	10/13/09 11:43	AB1	5243653
Manganese	2.03		0.005	1	10/13/09 11:43	AB1	5243653

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3005A	10/05/2009 15:30	R_V	1.00

TOTAL DISSOLVED SOLIDS				MCL	SM2540 C	Units: mg/L	
Total Dissolved Solids (Residue, Filterable)	31800		200	20	10/02/09 17:00	CFS	5229583
VOLATILE ORGANICS BY METHOD 8260B				MCL	SW8260B	Units: ug/L	
Benzene	ND		1	1	10/08/09 18:08	LU_L	5238634
Ethylbenzene	ND		1	1	10/08/09 18:08	LU_L	5238634
Toluene	ND		1	1	10/08/09 18:08	LU_L	5238634
m,p-Xylene	ND		1	1	10/08/09 18:08	LU_L	5238634
o-Xylene	ND		1	1	10/08/09 18:08	LU_L	5238634
Xylenes, Total	ND		1	1	10/08/09 18:08	LU_L	5238634
Surr: 1,2-Dichloroethane-d4	93.2	%	78-116	1	10/08/09 18:08	LU_L	5238634
Surr: 4-Bromofluorobenzene	98.8	%	74-125	1	10/08/09 18:08	LU_L	5238634
Surr: Toluene-d8	99.7	%	82-118	1	10/08/09 18:08	LU_L	5238634

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
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Client Sample ID: MW-3

Collected: 09/29/2009 13:35

SPL Sample ID: 09100090-03

Site: Blanco, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
ION CHROMATOGRAPHY			MCL	E300.0	Units: mg/L		
Fluoride	1.47		0.5	1	10/03/09 11:10	BDG	5231039
Sulfate	6890		250	500	10/03/09 11:27	BDG	5231040

METALS BY METHOD 6010B, DISSOLVED			MCL	SW6010B	Units: mg/L		
Aluminum	0.224		0.1	1	10/13/09 11:47	AB1	5243654
Iron	0.14		0.02	1	10/13/09 11:47	AB1	5243654
Manganese	0.432		0.005	1	10/13/09 11:47	AB1	5243654

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3005A	10/05/2009 15:30	R_V	1.00

TOTAL DISSOLVED SOLIDS			MCL	SM2540 C	Units: mg/L		
Total Dissolved Solids (Residue, Filterable)	8630		50	5	10/02/09 17:00	CFS	5229584

VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
Benzene	ND		1	1	10/08/09 20:23	LU_L	5238639
Ethylbenzene	2.7		1	1	10/08/09 20:23	LU_L	5238639
Toluene	ND		1	1	10/08/09 20:23	LU_L	5238639
m,p-Xylene	20		1	1	10/08/09 20:23	LU_L	5238639
o-Xylene	ND		1	1	10/08/09 20:23	LU_L	5238639
Xylenes, Total	20		1	1	10/08/09 20:23	LU_L	5238639
Surr: 1,2-Dichloroethane-d4	93.1	%	78-116	1	10/08/09 20:23	LU_L	5238639
Surr: 4-Bromofluorobenzene	98.6	%	74-125	1	10/08/09 20:23	LU_L	5238639
Surr: Toluene-d8	99.0	%	82-118	1	10/08/09 20:23	LU_L	5238639

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
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Client Sample ID: MW-4

Collected: 09/29/2009 13:20

SPL Sample ID: 09100090-04

Site: Blanco, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
ION CHROMATOGRAPHY				MCL	E300.0	Units: mg/L	
Fluoride	2.26		0.5	1	10/03/09 11:43	BDG	5231041
Sulfate	5340		250	500	10/03/09 12:00	BDG	5231042
METALS BY METHOD 6010B, DISSOLVED				MCL	SW6010B	Units: mg/L	
Aluminum	0.943		0.1	1	10/13/09 11:52	AB1	5243655
Iron	0.393		0.02	1	10/13/09 11:52	AB1	5243655
Manganese	0.134		0.005	1	10/13/09 11:52	AB1	5243655
Prep Method	Prep Date	Prep Initials	Prep Factor				
SW3005A	10/05/2009 15:30	R_V	1.00				
TOTAL DISSOLVED SOLIDS				MCL	SM2540 C	Units: mg/L	
Total Dissolved Solids (Residue, Filterable)	6760		40	4	10/02/09 17:00	CFS	5229585
VOLATILE ORGANICS BY METHOD 8260B				MCL	SW8260B	Units: ug/L	
Benzene	ND		1	1	10/08/09 19:29	LU_L	5238637
Ethylbenzene	ND		1	1	10/08/09 19:29	LU_L	5238637
Toluene	ND		1	1	10/08/09 19:29	LU_L	5238637
m,p-Xylene	ND		1	1	10/08/09 19:29	LU_L	5238637
o-Xylene	ND		1	1	10/08/09 19:29	LU_L	5238637
Xylenes, Total	ND		1	1	10/08/09 19:29	LU_L	5238637
Surr: 1,2-Dichloroethane-d4	94.5	%	78-116	1	10/08/09 19:29	LU_L	5238637
Surr: 4-Bromofluorobenzene	102	%	74-125	1	10/08/09 19:29	LU_L	5238637
Surr: Toluene-d8	98.7	%	82-118	1	10/08/09 19:29	LU_L	5238637

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: 09/29/2009 14:15

SPL Sample ID: 09100090-05

Site: Blanco, 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	10/08/09 19:56	LU_L	5238638
Ethylbenzene	ND		1	1	10/08/09 19:56	LU_L	5238638
Toluene	ND		1	1	10/08/09 19:56	LU_L	5238638
m,p-Xylene	ND		1	1	10/08/09 19:56	LU_L	5238638
o-Xylene	ND		1	1	10/08/09 19:56	LU_L	5238638
Xylenes, Total	ND		1	1	10/08/09 19:56	LU_L	5238638
Surr: 1,2-Dichloroethane-d4	96.9		% 78-116	1	10/08/09 19:56	LU_L	5238638
Surr: 4-Bromofluorobenzene	103		% 74-125	1	10/08/09 19:56	LU_L	5238638
Surr: Toluene-d8	100		% 82-118	1	10/08/09 19:56	LU_L	5238638

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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Client Sample ID: Trip Blank

Collected: 10/01/2009 16:20

SPL Sample ID: 09100090-06

Site: Blanco, 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	10/08/09 17:41	LU_L	5238633
Ethylbenzene	ND		1	1	10/08/09 17:41	LU_L	5238633
Toluene	ND		1	1	10/08/09 17:41	LU_L	5238633
m,p-Xylene	ND		1	1	10/08/09 17:41	LU_L	5238633
o-Xylene	ND		1	1	10/08/09 17:41	LU_L	5238633
Xylenes, Total	ND		1	1	10/08/09 17:41	LU_L	5238633
Surr: 1,2-Dichloroethane-d4	97.8		% 78-116	1	10/08/09 17:41	LU_L	5238633
Surr: 4-Bromofluorobenzene	102		% 74-125	1	10/08/09 17:41	LU_L	5238633
Surr: Toluene-d8	99.1		% 82-118	1	10/08/09 17:41	LU_L	5238633

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

Quality Control Documentation



Quality Control Report

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

Conoco Phillips COP EIPaso1A

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

WorkOrder: 09100090
Lab Batch ID: 94379

Method Blank

RunID: ICP2_091013A-5243640 Units: mg/L
Analysis Date: 10/13/2009 10:46 Analyst: AB1
Preparation Date: 10/05/2009 15:30 Prep By: R_V Method SW3005A

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09100090-01B	MW-1
09100090-02B	MW-2
09100090-03B	MW-3
09100090-04B	MW-4

Analyte	Result	Rep Limit
Aluminum	ND	0.1
Iron	ND	0.02
Manganese	ND	0.005

Laboratory Control Sample (LCS)

RunID: ICP2_091013A-5243641 Units: mg/L
Analysis Date: 10/13/2009 10:50 Analyst: AB1
Preparation Date: 10/05/2009 15:30 Prep By: R_V Method SW3005A

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Aluminum	1.000	1.070	107.0	80	120
Iron	1.000	1.013	101.3	80	120
Manganese	1.000	1.038	103.8	80	120

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

Sample Spiked: 09100090-01
RunID: ICP2_091013A-5243643 Units: mg/L
Analysis Date: 10/13/2009 10:59 Analyst: AB1
Preparation Date: 10/05/2009 15:30 Prep By: R_V 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
Aluminum	ND	1	1.037	100.7	1	1.109	107.9	6.710	20	75	125
Iron	0.02370	1	0.9650	94.13	1	1.010	98.63	4.557	20	75	125
Manganese	1.424	1	2.355	93.10	1	2.432	100.8	3.217	20	75	125

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B/V - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
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

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 EIPaso1A

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 09100090
Lab Batch ID: R285926

Method Blank

RunID: K_091008C-5238632 Units: ug/L
Analysis Date: 10/08/2009 13:11 Analyst: LU_L

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	95.1	78-116
Surr: 4-Bromofluorobenzene	98.8	74-125
Surr: Toluene-d8	98.9	82-118

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09100090-01A	MW-1
09100090-02A	MW-2
09100090-03A	MW-3
09100090-04A	MW-4
09100090-05A	Duplicate
09100090-06A	Trip Blank

Laboratory Control Sample (LCS)

RunID: K_091008C-5238631 Units: ug/L
Analysis Date: 10/08/2009 12:17 Analyst: LU_L

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	20.0	19.8	99.0	74	123
Ethylbenzene	20.0	18.8	94.2	72	127
Toluene	20.0	19.1	95.3	74	126
m,p-Xylene	40.0	37.6	93.9	71	129
o-Xylene	20.0	19.4	97.2	74	130
Xylenes, Total	60	57	95	71	130
Surr: 1,2-Dichloroethane-d4	50.0	48	96.0	78	116
Surr: 4-Bromofluorobenzene	50.0	49.9	99.7	74	125
Surr: Toluene-d8	50.0	49.8	99.5	82	118

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

Sample Spiked: 09100090-02
RunID: K_091008C-5238635 Units: ug/L
Analysis Date: 10/08/2009 18:35 Analyst: LU_L

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B/V - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
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

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 ElPaso1A

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 09100090
Lab Batch ID: R285926

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	19.3	96.6	20	19.5	97.3	0.701	22	70	124
Ethylbenzene	ND	20	17.1	85.6	20	17.0	85.2	0.433	20	76	122
Toluene	ND	20	17.2	86.1	20	17.5	87.4	1.51	24	80	117
m,p-Xylene	ND	40	34.3	85.8	40	34.0	85.1	0.796	20	69	127
o-Xylene	ND	20	17.5	87.3	20	17.2	85.9	1.61	20	84	114
Xylenes, Total	ND	60	51.8	86.3	60	51.2	85.4	1.07	20	69	127
Surr: 1,2-Dichloroethane-d4	ND	50	49.5	99.0	50	50.6	101	2.27	30	78	116
Surr: 4-Bromofluorobenzene	ND	50	48.4	96.8	50	47.7	95.4	1.46	30	74	125
Surr: Toluene-d8	ND	50	49.7	99.5	50	48.6	97.1	2.37	30	82	118

Qualifiers: ND/U - Not Detected at the Reporting Limit
B/V - 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 EIPaso1A

Analysis: Total Dissolved Solids
Method: SM2540 C

WorkOrder: 09100090
Lab Batch ID: R285374A

Method Blank

RunID: WET_091003F-5229574 Units: mg/L
Analysis Date: 10/02/2009 17:00 Analyst: CFS

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09100090-01C	MW-1
09100090-02C	MW-2
09100090-03C	MW-3
09100090-04C	MW-4

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

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

RunID: WET_091003F-5229576 Units: mg/L
Analysis Date: 10/02/2009 17:00 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	202.0	101.0	200.0	201.0	100.5	0.5	10	95	107

Sample Duplicate

Original Sample: 09100118-01
RunID: WET_091003F-5229586 Units: mg/L
Analysis Date: 10/02/2009 17:00 Analyst: CFS

Analyte	Sample Result	DUP Result	RPD	RPD Limit
Total Dissolved Solids (Residue,Filterabl	737	739	0.271	10

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B/V - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
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.
TN/C - Too numerous to count

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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10/14/2009 2:36:04 PM



Quality Control Report

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

Conoco Phillips
COP EIPaso1A

Analysis: Ion Chromatography
Method: E300.0

WorkOrder: 09100090
Lab Batch ID: R285458

Method Blank

RunID: IC2_091003A-5231032 Units: mg/L
Analysis Date: 10/03/2009 8:41 Analyst: BDG

Analyte	Result	Rep Limit
Fluoride	ND	0.50
Sulfate	ND	0.50

Samples in Analytical Batch:

<u>Lab Sample ID</u>	<u>Client Sample ID</u>
09100090-01C	MW-1
09100090-02C	MW-2
09100090-03C	MW-3
09100090-04C	MW-4

Laboratory Control Sample (LCS)

RunID: IC2_091003A-5231033 Units: mg/L
Analysis Date: 10/03/2009 8:57 Analyst: BDG

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Fluoride	10.00	10.33	103.3	85	115
Sulfate	10.00	10.22	102.2	85	115

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

Sample Spiked: 09100103-04
RunID: IC2_091003A-5231052 Units: mg/L
Analysis Date: 10/03/2009 15:55 Analyst: BDG

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Sulfate	48.93	50	96.42	94.99	10	98.70	N/C	N/C	20	80	120

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B/V - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
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

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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10/14/2009 2:36:04 PM



Quality Control Report

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

Conoco Phillips COP EIPaso1A

Analysis: Ion Chromatography
Method: E300.0

WorkOrder: 09100090
Lab Batch ID: R285458A

Method Blank

RunID: IC2_091003A-5231032 Units: mg/L
Analysis Date: 10/03/2009 8:41 Analyst: BDG

Analyte	Result	Rep Limit
Fluoride	ND	0.50
Sulfate	ND	0.50

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09100090-01C	MW-1
09100090-02C	MW-2
09100090-03C	MW-3
09100090-04C	MW-4

Laboratory Control Sample (LCS)

RunID: IC2_091003A-5231033 Units: mg/L
Analysis Date: 10/03/2009 8:57 Analyst: BDG

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Fluoride	10.00	10.33	103.3	85	115
Sulfate	10.00	10.22	102.2	85	115

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

Sample Spiked: 09100090-03
RunID: IC2_091003A-5231044 Units: mg/L
Analysis Date: 10/03/2009 12:34 Analyst: BDG

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Fluoride	1.467	10	10.65	91.86	10	11.83	103.6	10.49	20	80	120

Qualifiers: ND/U - Not Detected at the Reporting Limit
B/V - 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:	09100090	Received By:	AMV
Date and Time Received:	10/2/2009 9:15:00 AM	Carrier name:	Fedex-Priority
Temperature:	1.0°C	Chilled by:	Water Ice

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

*VOA Preservation Checked After Sample Analysis

SPL Representative:
Client Name Contacted:

Contact Date & Time:

Non Conformance
Issues:

Client Instructions:



Analysis Request & Chain of Custody Record

SPL Workorder No. 0016090

331800

Page _____ of _____

Client Name:	Tetra Tech / Conae Phillips		
Address:	6121 Indian / School Rd Ste 200		
City	Albuquerque	State	NM
Zip	87106		
Phone/Fax:	505.237.8440		
Client Contact:	Kelly Blanchard		
Project Name/No.:	El Paso 1A		
Email:	kelly.blanchard@tetratech.com		

Site Name: _____
 Site Location: Blanco, NM
 Invoice To: ConocoPhillips Ph: _____




Ph:

SAMPLE ID	DATE	TIME	comp	grab
MW-1	9.29.09	1420		X
MW-1	9.29.09	1420		X
MW-2	9.29.09	1410		X
MW-2	9.29.09	1410		X
MW-3	9.29.09	1335		X
MW-3	9.29.09	1335		X
MW-4	9.29.09	1320		X
MW-4	9.29.09	1320		X
Duplicate	9.29.09	1415		X
Trip Blank	10-1-09	1620		

Client/Consultant Remarks:

Laboratory remarks:

Please filter and present metals container prior to analysis

Requested TAT <input type="checkbox"/> 1 Business Day <input type="checkbox"/> Contract <input type="checkbox"/> 2 Business Days <input type="checkbox"/> Standard <input type="checkbox"/> 3 Business Days <input type="checkbox"/> Other _____		Special Reporting Requirements Results: Fax <input type="checkbox"/> Email <input type="checkbox"/> PDF <input type="checkbox"/> Standard QC <input type="checkbox"/> Level 3 QC <input type="checkbox"/> Level 4 QC <input type="checkbox"/> TX TRRP <input type="checkbox"/> LA RECAP <input type="checkbox"/>		Special Detection Limits (specify):		PM review (initial): 	
1. <input type="checkbox"/> Residuals not complete 2. <input type="checkbox"/> Relinquished by: 		date 10-1-09 time 16:30		2. Received by:		3. Received by:	
3. Relinquished by:		date time		4. Received by:		5. Received by Laboratory:	
5. Relinquished by:		date 10/2/09 time 9:15		6. Received by Laboratory:			

Rush TAT requires prior notice

 **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**