

3R - 427

**QUARTERLY
GWMR**

08/07/2009

3R427

**QUARTERLY GROUNDWATER
MONITORING REPORT
JUNE 2009 SAMPLING EVENT
CONOCOPHILLIPS COMPANY
EL PASO IA
API No. 30-045-22778
BLANCO, NEW MEXICO**

RECEIVED OCD
2009 OCT -7 P 1:14

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. 96900122.100

August 7, 2009

TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
1.1	Site History.....	1
2.0	METHODOLOGY AND RESULTS.....	1
2.1	Monitoring Summary.....	1
2.2	Groundwater Monitoring Methodology.....	1
2.3	Groundwater Sampling Analytical Results.....	2
3.0	CONCLUSIONS.....	2

FIGURES

1. Site Location Map
2. Site Layout Map
3. Groundwater Elevation Contour Map

TABLES

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

APPENDICES

- Appendix A. Groundwater Sampling Field Forms
- Appendix B. Groundwater Laboratory Analytical Report

QUARTERLY GROUNDWATER MONITORING REPORT CONOCOPHILLIPS COMPANY EL PASO 1A, BLANCO, NEW MEXICO

1.0 INTRODUCTION

This report presents the results of quarterly groundwater monitoring completed by Tetra Tech, Inc. (Tetra Tech) on June 18, 2009 at the ConocoPhillips Company El Paso 1A site in Blanco, New Mexico (Site). This event represents the third quarter of groundwater sampling conducted by Tetra Tech at the Site.

The Site is located 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 1S and well head 1A and 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 June 18, 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 such as 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 a Tetra Tech Water Sampling Field Form which is included as **Appendix A**.

All purged groundwater was contained in a plastic 5 gallon container and disposed of in the Site waste 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, and metals including mercury by EPA Methods 7470A, 6010B, 6020A.

2.3 Groundwater Sampling Analytical Results

The June 2009 analysis of the collected groundwater samples indicates that all BTEX constituents are below New Mexico Water Quality Control Commission (NMWQCC) groundwater quality standards. Groundwater laboratory analytical results are summarized in **Table 3**. Fluoride concentrations of 2.04 milligrams per liter (mg/L), 1.68 mg/L, and 2.25 mg/L were found in monitor wells MW-1, MW-3 and MW-4, respectively. These are above the NMWQCC standard of 1.6 mg/L for fluoride. MW-4 had an aluminum concentration of slightly above the NMWQCC standard for aluminum. Sulfate, manganese and iron concentrations are above NMWQCC standards in all four Site monitor wells. The groundwater laboratory analytical report is presented 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.

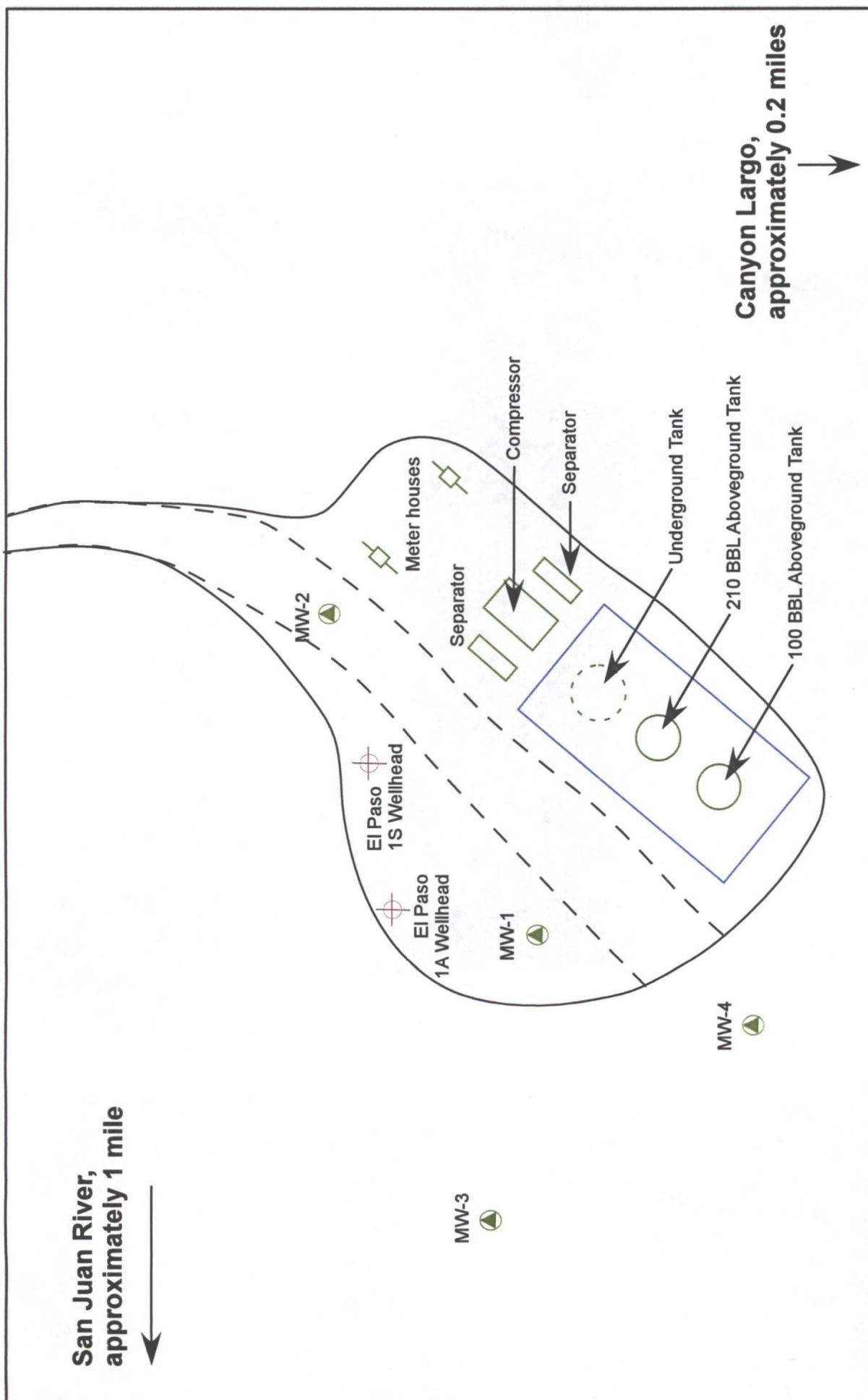
FIGURES

- 1. Site Location Map**
- 2. Site Layout Map**
- 3. Groundwater Elevation Contour Map**

San Juan River,
approximately 1 mile



Canyon Largo,
approximately 0.2 miles



LEGEND

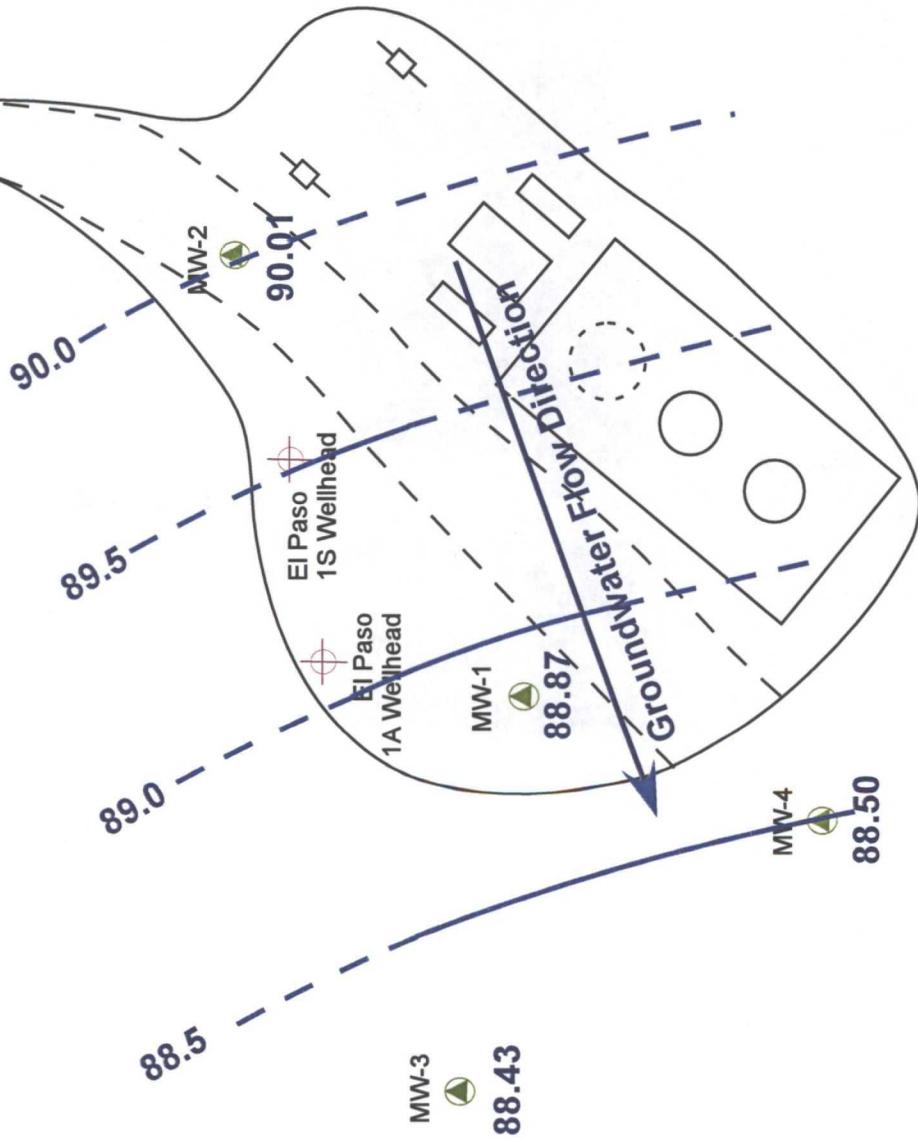
- WELLHEAD
 - MONITOR WELL
 - BERM
 - EQUIPMENT
- 0 20 40
FEET

FIGURE 2:
SITE LAYOUT MAP
CONOCOPHILLIPS COMPANY
EL PASO 1A
Sec 20, Twp 29N, Rng 09W
Blanco, New Mexico



TETRA TECH, INC.

San Juan River,
approximately 1 mile

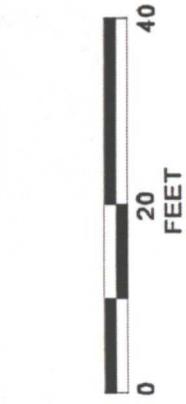


Canyon Largo,
approximately 0.2 mile



LEGEND

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



TETRA TECH, INC.

FIGURE 3:
GROUNDWATER ELEVATION
CONTOUR MAP
CONOCOPHILLIPS COMPANY
EL PASO 1A
Sec 20, Twp 29N, Rng 09W
Blanco, New Mexico

TABLES

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

Table 1. Site History Timeline - ConocoPhillips El Paso 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-3 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.

Table 2. Groundwater Elevation Data Summary - ConocoPhillips El Paso 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	--
MW-2	20.74	3-17.9	98.72	4/2/2009	10.33	89.19
				6/18/2009	10.65	88.87
				4/2/2009	8.49	90.23
MW-3	21.10	3.1-18.1	98.175	6/18/2009	8.71	90.01
				4/2/2009	9.71	88.47
				6/18/2009	9.75	88.43
MW-4	20.82	2.9-17.9	98.28	4/2/2009	9.74	88.54
				6/18/2009	9.78	88.50

ft = Feet

TOC = Top of casing

bgs = below ground surface

* Elevation relative to wellhead

NS = Not Sampled (quarters not sampled were due to a change in consulting responsibilities from Lodestar LLC to Tetra Tech Inc.)

NM = Not Measured

Table 3. Groundwater Laboratory Analytical Results Summary - ConocoPhillips El Paso 1A

Constituent			Groundwater Sample ID				NMWQCC Ground Water Quality Standard
Ions	Method	Units	MW-1	MW-2	MW-3	MW-4	
Fluoride	E300.0	mg/L	2.04	0.67	1.68	2.25	1.6
Sulfate	E300.0	mg/L	7,970	17,000	5,750	5,300	600
Metals, Total	Method	Units					NMWQCC Ground Water Quality Standard
Mercury	SW7470A	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	0.002
Aluminum	SW6010B	mg/L	2.1	1.49	3.75	5.52	5
Boron	SW6010B	mg/L	0.439	0.494	0.417	0.463	0.75
Calcium	SW6010B	mg/L	147	270	65.7	62.9	NE
Iron	SW6010B	mg/L	7.66	1.23	5.3	6.91	1.0
Magnesium	SW6010B	mg/L	30.8	85.9	21.3	13.5	NE
Potassium	SW6010B	mg/L	11.2	27.2	10.3	9.42	NE
Sodium	SW6010B	mg/L	3390	6490	2530	2570	NE
Strontium	SW6010B	mg/L	7.34	23.3	4.92	4.54	NE
Tin	SW6010B	mg/L	<0.005	<0.005	<0.005	<0.005	NE
Antimony	SW6020A	mg/L	<0.005	<0.005	<0.005	<0.005	NE
Arsenic	SW6020A	mg/L	<0.005	<0.005	0.015	<0.005	0.1
Barium	SW6020A	mg/L	0.019	0.0408	0.0481	0.0261	1.0
Beryllium	SW6020A	mg/L	<0.004	<0.004	<0.004	<0.004	NE
Cadmium	SW6020A	mg/L	<0.005	<0.005	<0.005	<0.005	0.01
Chromium	SW6020A	mg/L	<0.005	<0.005	<0.005	0.00829	0.05
Cobalt	SW6020A	mg/L	<0.005	0.00518	<0.005	<0.005	0.05
Copper	SW6020A	mg/L	<0.025	<0.025	<0.025	<0.025	1.0
Lead	SW6020A	mg/L	<0.005	<0.005	<0.005	<0.005	0.05
Manganese	SW6020A	mg/L	3.06	1.92	0.454	0.333	0.2
Molybdenum	SW6020A	mg/L	0.01	0.018	<0.01	<0.01	1.0
Nickel	SW6020A	mg/L	<0.005	0.00641	<0.005	<0.005	0.2
Selenium	SW6020A	mg/L	<0.025	<0.025	<0.025	<0.025	0.05
Silver	SW6020A	mg/L	<0.005	<0.005	<0.005	<0.005	0.05
Thallium	SW6020A	mg/L	<0.005	<0.005	<0.005	<0.005	NE
Vanadium	SW6020A	mg/L	0.0066	0.00636	0.0127	0.00985	NE
Zinc	SW6020A	mg/L	0.056	0.134	0.0681	0.0703	10
VOCs (detections and BTEX only)	Method	Units					NMWQCC Ground Water Quality Standard
Benzene	8260B	µg/L	<5	<5	<5	<5	10
Toluene	8260B	µg/L	<5	<5	<5	<5	750
Ethylbenzene	8260B	µg/L	<5	<5	15	<5	750
Total Xylenes	8260B	µg/L	<5	<5	87	<5	620

Notes:

- MW = monitoring well
- NMWQCC = New Mexico Water Quality Control Commission
- VOCs = volatile organic compounds
- mg/L = milligrams per liter
- µg/L = micrograms per liter
- NE = not established

APPENDIX A
GROUNDWATER SAMPLING FIELD FORMS



WATER SAMPLING FIELD FORM

Project No. El Paso 1A 1 of 4
 Site Location Blanco, NM
 Site/Well No. MW-2 Coded/Replicate No. _____ Date 6/18/09
 Weather sunny, 75° Time Sampling Began 850 Time Sampling Completed 0900

EVACUATION DATA

Description of Measuring Pt (MP) _____
 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 8.71 Diameter of Casing 2 inch / 4 inch
 Wet _____ Water Column in Well 12.04 Gallons Pumped/Bailed Prior to Sampling _____
 Gallons per Foot 0.14 Sampling Pump Intake (feet below land surface) _____
 Gallons in Well 1.92 (x3)
 Purging Equipment = 5.76

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature	pH	Conductivity	TDSg/L	DO	DO%	ORP	Other
857	14.70	8.07	21990	14.29	3.20	33.6	171.6	
900	14.28	8.07	22609	14.70	2.78	28.9	142.1	
903	14.30	8.07	23333	15.16	2.16	23.0	129.8	

Sampling Equipment Low Flow Pump / Disposable Bailer

Constituents Sampled	Container Description	Preservative
<u>BTEX</u>	<u>3 VOAs</u>	<u>HCl</u>
<u>Total Metals</u>	<u>1-32oz plastic</u>	<u>HNO3</u>
<u>Fluoride, Sulfate</u>	<u>1-32oz plastic</u>	<u>none</u>

Remarks _____

Sampling Personnel _____

Well Casing Volumes				
Gal./ft.	1 1/4" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1 1/2" = 0.10	2 1/2" = 0.24	3 1/2" = 0.50	6" = 1.46



WATER SAMPLING FIELD FORM

Project No. El Paso 1A 2 of 2
 Site Location Blanco, NM
 Site/Well No. MW-1 Coded/Replicate No. _____ Date 6/18/09
 Weather Sunny, 75° Time Sampling Began 0915 Time Sampling Completed 0920

EVACUATION DATA

Description of Measuring Pt (MP) _____
 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 10.65 Diameter of Casing 2 Inch / 4 inch
 Wet _____ Water Column in Well 2.93 Gallons Pumped/Bailed Prior to Sampling _____
 Gallons per Foot 0.16 Sampling Pump Intake (feet below land surface) _____
 Gallons in Well 0.47 x 3
 Purgig Equipment = 1.41

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature	pH	Conductivity	TDS $\mu\text{g/L}$	DO	DO%	ORP	Other
0918	16.04	7.78	13357	8.1683	2.45	29.7	-62.7	
0922	16.00	7.60	13353	8.1679	2.12	27.9	-76.7	

Sampling Equipment Low Flow Pump / Disposable Bailor

Constituents Sampled	Container Description	Preservative
<u>BTEX</u>	<u>40ml VOA's</u>	<u>HCl</u>
<u>Fl, SO₄</u>	<u>32oz plastic</u>	<u>—</u>
<u>Metals</u>	<u>32oz plastic</u>	<u>NO₃</u>

Remarks Well smells like manure, lt. grey, no sheen

Sampling Personnel _____

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" = 1.48



WATER SAMPLING FIELD FORM

Project No. El Paso IA 3 of 4
 Site Location Blanco, NM
 Site/Well No. MW-4 Coded/Replicate No. _____ Date 6/18/09
 Weather hot, sunny 80° Time Sampling Began 0935 Time Sampling Completed 0945

EVACUATION DATA

Description of Measuring Pt (MP) _____
 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 9.78 Diameter of Casing 2 inch / 4 inch
 Wet _____ Water Column in Well 11.08 Gallons Pumped/Bailed Prior to Sampling 5.5
 Gallons per Foot 0.16 Sampling Pump Intake (feet below land surface) _____
 Gallons in Well 1.77 x 3 = 5.31

Purging Equipment _____

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature	pH	Conductivity	TDS	DO	DO%	ORP	Other
9:39	15.20	8.39	9015	5.810	5.12	46.6	-87.0	
9:41	14.91	8.38	9005	5.854	3.82	37.8	-85.4	
9:44	14.67	8.37	8992	5.846	2.86	28.6	-83.0	

Sampling Equipment Low Flow Pump / Disposable Bailer

Constituents Sampled	Container Description	Preservative
<u>BTEX</u>	<u>3 VOAs</u>	<u>HCl</u>
<u>Total Metals</u>	<u>1-32oz plastic</u>	<u>HNO₃</u>
<u>Fluoride, Sulfate</u>	<u>"</u>	<u>none</u>

Remarks _____
 Sampling Personnel GD, AM

Well Casing Volumes				
Gal./ft.	1 1/4" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1 1/2" = 0.10	2 1/2" = 0.24	3 1/2" = 0.50	6" = 1.46



WATER SAMPLING FIELD FORM

4 of 4

Project No. El Paso 1A

Site Location Blanco, NM

Site/Well No. MW-3 Coded/Replicate No. _____

Date 6/18/09

Weather hot, 80° Time Sampling Began 0955

Time Sampling Completed 1015

EVACUATION DATA

duplicate @ 1000

Description of Measuring Pt (MP) _____

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 9.75 Diameter of Casing 2 inch / 4 inch

Wet _____ Water Column In Well 11.36 Gallons Pumped/Bailed Prior to Sampling _____

Gallons per Foot 0.16

Gallons in Well 1.82 x 3 Sampling Pump Intake (feet below land surface) _____

Purging Equipment = 5.46

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature	pH	Conductivity	TDS	DO	DO%	ORP	Other
1000	15.98	8.61	10070	6.546	0.88	9.2	-155.0	
1004	15.87	8.54	9684	6.292	3.42	32.9	-181.5	
1007	15.83	8.60	9763	6.349	2.99	28.6	-193.1	

Sampling Equipment Low Flow Pump / Disposable Bailor

Constituents Sampled	Container Description	Preservative
<u>RTEX</u>	<u>3 VOLS</u>	<u>HCl</u>
<u>Total Metals</u>	<u>1 - 32oz plastic</u>	<u>HNO3</u>
<u>Fluoride, Sulfates</u>	<u>"</u>	<u>none</u>

Remarks gray color; strong sulfuric odor

Sampling Personnel GD, AM

Well Casing Volumes			
Gal./ft.	1 1/4" = 0.077	2" = 0.16	3" = 0.37
	1 1/2" = 0.10	2 1/2" = 0.24	3 1/2" = 0.50
			4" = 0.65
			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:

09061075

<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 EIPaso1A <u>Site:</u> Blanco,NM <u>Site Address:</u> <u>PO Number:</u> <u>State:</u> New Mexico <u>State Cert. No.:</u> <u>Date Reported:</u> 7/5/2009
--	--

This Report Contains A Total Of 29 Pages

Excluding This Page, Chain Of Custody

And

Any Attachments

7/6/2009

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:
09061075

<p>Report To:</p> <p>Tetra Tech, Inc. Kelly Blanchard 6121 Indian School Road, N.E. Suite 200 Albuquerque NM 87110- ph: (505) 237-8440 fax:</p>	<p>Project Name: COP EIPaso1A</p> <p>Site: Blanco, NM</p> <p>Site Address:</p> <p>PO Number:</p> <p>State: New Mexico</p> <p>State Cert. No.:</p> <p>Date Reported: 7/5/2009</p>
--	---

I. SAMPLE RECEIPT:

Upon receipt of your samples, the lab received a set of trip blanks not listed on the chain.

II: ANALYSES AND EXCEPTIONS:

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

III. CERTIFICATION:

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.

IV. 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.

09061075 Page 1

7/6/2009

Erica Cardenas
 Project Manager

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

Date



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

Conoco Phillips

Certificate of Analysis Number:

09061075

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 EIPaso1A
Site: Blanco, NM
Site Address:
PO Number:
State: New Mexico
State Cert. No.:
Date Reported: 7/5/2009

Fax To:

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
MW-1	09061075-01	Water	6/18/2009 9:20:00 AM	6/19/2009 9:30:00 AM	327822	<input type="checkbox"/>
MW-2	09061075-02	Water	6/18/2009 9:00:00 AM	6/19/2009 9:30:00 AM		<input type="checkbox"/>
MW-3	09061075-03	Water	6/18/2009 10:15:00 AM	6/19/2009 9:30:00 AM		<input type="checkbox"/>
MW-4	09061075-04	Water	6/18/2009 9:35:00 AM	6/19/2009 9:30:00 AM		<input type="checkbox"/>
Duplicate	09061075-05	Water	6/18/2009 10:00:00 AM	6/19/2009 9:30:00 AM		<input type="checkbox"/>
Trip Blank (SPL)	09061075-06	Water	6/17/2009	6/19/2009 9:30:00 AM		<input type="checkbox"/>

Erica Cardenas

7/6/2009

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: 06/18/2009 9:20

SPL Sample ID: 09061075-01

Site: Blanco, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
ION CHROMATOGRAPHY				MCL	E300.0	Units: mg/L	
Fluoride	2.04		0.5	1	06/22/09 20:29	BDG	5080232
Sulfate	7970		500	1000	06/26/09 18:46	BDG	5087230

MERCURY, TOTAL				MCL	SW7470A	Units: mg/L	
Mercury	ND		0.0002	1	06/26/09 14:57	F_S	5086994

Prep Method	Prep Date	Prep Initials	Prep Factor
SW7470A	06/26/2009 10:10	F_S	1.00

METALS BY METHOD 6010B, TOTAL				MCL	SW6010B	Units: mg/L	
Aluminum	2.1		0.1	1	06/26/09 15:48	EG	5090122
Boron	0.439		0.1	1	06/26/09 15:48	EG	5088522
Calcium	147		0.1	1	06/26/09 15:48	EG	5088522
Iron	7.66		0.02	1	06/26/09 15:48	EG	5088522
Magnesium	30.8		0.1	1	06/26/09 15:48	EG	5088522
Potassium	11.2		1	1	06/26/09 15:48	EG	5088522
Sodium	3390		2	20	06/28/09 20:51	EG	5089007
Strontium	7.34		0.5	10	06/28/09 20:46	EG	5089006
Tin	ND		0.005	1	06/26/09 15:48	EG	5088522

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3010A	06/22/2009 9:00	AB1	1.00

METALS BY METHOD 6020A, TOTAL				MCL	SW6020A	Units: mg/L	
Antimony	ND		0.005	1	06/30/09 1:13	S_C	5091958
Arsenic	ND		0.005	1	06/30/09 1:13	S_C	5091958
Barium	0.019		0.005	1	06/30/09 1:13	S_C	5091958
Beryllium	ND		0.004	1	06/30/09 16:02	AL_H	5093563
Cadmium	ND		0.005	1	06/30/09 1:13	S_C	5091958
Chromium	ND		0.005	1	06/30/09 1:13	S_C	5091958
Cobalt	ND		0.005	1	06/30/09 1:13	S_C	5091958
Copper	ND		0.025	5	06/30/09 21:50	S_C	5093734
Lead	ND		0.005	1	06/30/09 1:13	S_C	5091958
Manganese	3.06		0.005	1	06/30/09 1:13	S_C	5091958
Molybdenum	0.01		0.01	1	06/30/09 1:13	S_C	5091958
Nickel	ND		0.005	1	06/30/09 1:13	S_C	5091958
Selenium	ND		0.025	5	06/30/09 21:50	S_C	5093734
Silver	ND		0.005	1	06/30/09 1:13	S_C	5091958
Thallium	ND		0.005	1	06/30/09 1:13	S_C	5091958
Vanadium	0.0066		0.005	1	06/30/09 1:13	S_C	5091958
Zinc	0.056		0.01	1	06/30/09 1:13	S_C	5091958

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B/V - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL
 E - Estimated Value exceeds calibration curve
 TNTC - Too numerous to count



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

Client Sample ID: MW-1

Collected: 06/18/2009 9:20

SPL Sample ID: 09061075-01

Site: Blanco, NM

Analyses/Method Result QUAL Rep.Limit Dil. Factor Date Analyzed Analyst Seq. #

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3010A	06/22/2009 9:00	AB1	1.00

VOLATILE ORGANICS BY METHOD 8260B				MCL	SW8260B	Units: ug/L	
Benzene	ND		5	1	06/27/09 1:59	LT	5087980
Ethylbenzene	ND		5	1	06/27/09 1:59	LT	5087980
Toluene	ND		5	1	06/27/09 1:59	LT	5087980
m,p-Xylene	ND		5	1	06/27/09 1:59	LT	5087980
o-Xylene	ND		5	1	06/27/09 1:59	LT	5087980
Xylenes, Total	ND		5	1	06/27/09 1:59	LT	5087980
Surr: 1,2-Dichloroethane-d4	105		% 78-116	1	06/27/09 1:59	LT	5087980
Surr: 4-Bromofluorobenzene	93.1		% 74-125	1	06/27/09 1:59	LT	5087980
Surr: Toluene-d8	93.5		% 82-118	1	06/27/09 1:59	LT	5087980

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: 06/18/2009 9:00

SPL Sample ID: 09061075-02

Site: Blanco, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
ION CHROMATOGRAPHY				MCL	E300.0	Units: mg/L	
Fluoride	0.67		0.5	1	06/22/09 20:49	BDG	5080233
Sulfate	17000		500	1000	06/26/09 19:05	BDG	5087231

MERCURY, TOTAL				MCL	SW7470A	Units: mg/L	
Mercury	ND		0.0002	1	06/26/09 14:59	F_S	5086995

Prep Method	Prep Date	Prep Initials	Prep Factor
SW7470A	06/26/2009 10:10	F_S	1.00

METALS BY METHOD 6010B, TOTAL				MCL	SW6010B	Units: mg/L	
Aluminum	1.49		0.1	1	06/26/09 15:52	EG	5090123
Boron	0.494		0.1	1	06/26/09 15:52	EG	5088523
Calcium	270		0.1	1	06/26/09 15:52	EG	5088523
Iron	1.23		0.02	1	06/26/09 15:52	EG	5088523
Magnesium	85.9		0.1	1	06/26/09 15:52	EG	5088523
Potassium	27.2		1	1	06/26/09 15:52	EG	5088523
Sodium	6490		2	20	06/28/09 21:00	EG	5089009
Strontium	23.3		0.5	10	06/28/09 20:55	EG	5089008
Tin	ND		0.005	1	06/26/09 15:52	EG	5088523

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3010A	06/22/2009 9:00	AB1	1.00

METALS BY METHOD 6020A, TOTAL				MCL	SW6020A	Units: mg/L	
Antimony	ND		0.005	1	06/30/09 1:19	S_C	5091959
Arsenic	ND		0.005	1	06/30/09 1:19	S_C	5091959
Barium	0.0408		0.005	1	06/30/09 1:19	S_C	5091959
Beryllium	ND		0.004	1	06/30/09 16:08	AL_H	5093564
Cadmium	ND		0.005	1	06/30/09 1:19	S_C	5091959
Chromium	ND		0.005	1	06/30/09 1:19	S_C	5091959
Cobalt	0.00518		0.005	1	06/30/09 1:19	S_C	5091959
Copper	ND		0.025	5	06/30/09 21:55	S_C	5093735
Lead	ND		0.005	1	06/30/09 1:19	S_C	5091959
Manganese	1.92		0.005	1	06/30/09 1:19	S_C	5091959
Molybdenum	0.018		0.01	1	06/30/09 1:19	S_C	5091959
Nickel	0.00641		0.005	1	06/30/09 1:19	S_C	5091959
Selenium	ND		0.025	5	06/30/09 21:55	S_C	5093735
Silver	ND		0.005	1	06/30/09 1:19	S_C	5091959
Thallium	ND		0.005	1	06/30/09 1:19	S_C	5091959
Vanadium	0.00636		0.005	1	06/30/09 1:19	S_C	5091959
Zinc	0.134		0.01	1	06/30/09 1:19	S_C	5091959

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B/V - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL
 E - Estimated Value exceeds calibration curve
 TNTC - Too numerous to count



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

Client Sample ID: MW-2

Collected: 06/18/2009 9:00

SPL Sample ID: 09061075-02

Site: Blanco, NM

Analyses/Method Result QUAL Rep.Limit Dil. Factor Date Analyzed Analyst Seq. #

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3010A	06/22/2009 9:00	AB1	1.00

VOLATILE ORGANICS BY METHOD 8260B

			MCL	SW8260B	Units: ug/L	
Benzene	ND	5	1	06/29/09 11:42	LT	5090531
Ethylbenzene	ND	5	1	06/29/09 11:42	LT	5090531
Toluene	ND	5	1	06/29/09 11:42	LT	5090531
m,p-Xylene	ND	5	1	06/29/09 11:42	LT	5090531
o-Xylene	ND	5	1	06/29/09 11:42	LT	5090531
Xylenes, Total	ND	5	1	06/29/09 11:42	LT	5090531
Surr: 1,2-Dichloroethane-d4	102	% 78-116	1	06/29/09 11:42	LT	5090531
Surr: 4-Bromofluorobenzene	86.8	% 74-125	1	06/29/09 11:42	LT	5090531
Surr: Toluene-d8	94.3	% 82-118	1	06/29/09 11:42	LT	5090531

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B/V - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL
 E - Estimated Value exceeds calibration curve
 TNTC - Too numerous to count



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

Client Sample ID: MW-3

Collected: 06/18/2009 10:15 SPL Sample ID: 09061075-03

Site: Blanco, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
ION CHROMATOGRAPHY				MCL	E300.0	Units: mg/L	
Fluoride	1.68		0.5	1	06/22/09 21:08	BDG	5080234
Sulfate	5750		500	1000	06/26/09 19:24	BDG	5087232

MERCURY, TOTAL				MCL	SW7470A	Units: mg/L	
Mercury	ND		0.0002	1	06/26/09 15:01	F_S	5086996

Prep Method	Prep Date	Prep Initials	Prep Factor
SW7470A	06/26/2009 10:10	F_S	1.00

METALS BY METHOD 6010B, TOTAL				MCL	SW6010B	Units: mg/L	
Aluminum	3.75		0.1	1	06/26/09 15:57	EG	5090125
Boron	0.417		0.1	1	06/26/09 15:57	EG	5088524
Calcium	65.7		0.1	1	06/26/09 15:57	EG	5088524
Iron	5.3		0.02	1	06/26/09 15:57	EG	5088524
Magnesium	21.3		0.1	1	06/26/09 15:57	EG	5088524
Potassium	10.3		1	1	06/26/09 15:57	EG	5088524
Sodium	2530		2	20	06/28/09 21:08	EG	5089011
Strontium	4.92		0.5	10	06/28/09 21:04	EG	5089010
Tin	ND		0.005	1	06/26/09 15:57	EG	5088524

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3010A	06/22/2009 9:00	AB1	1.00

METALS BY METHOD 6020A, TOTAL				MCL	SW6020A	Units: mg/L	
Antimony	ND		0.005	1	06/30/09 1:25	S_C	5091960
Arsenic	0.015		0.005	1	06/30/09 1:25	S_C	5091960
Barium	0.0481		0.005	1	06/30/09 1:25	S_C	5091960
Beryllium	ND		0.004	1	06/30/09 16:14	AL_H	5093567
Cadmium	ND		0.005	1	06/30/09 1:25	S_C	5091960
Chromium	ND		0.005	1	06/30/09 1:25	S_C	5091960
Cobalt	ND		0.005	1	06/30/09 1:25	S_C	5091960
Copper	ND		0.025	5	06/30/09 22:00	S_C	5093736
Lead	ND		0.005	1	06/30/09 1:25	S_C	5091960
Manganese	0.454		0.005	1	06/30/09 1:25	S_C	5091960
Molybdenum	ND		0.01	1	06/30/09 1:25	S_C	5091960
Nickel	ND		0.005	1	06/30/09 1:25	S_C	5091960
Selenium	ND		0.025	5	06/30/09 22:00	S_C	5093736
Silver	ND		0.005	1	06/30/09 1:25	S_C	5091960
Thallium	ND		0.005	1	06/30/09 1:25	S_C	5091960
Vanadium	0.0127		0.005	1	06/30/09 1:25	S_C	5091960
Zinc	0.0681		0.01	1	06/30/09 1:25	S_C	5091960

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B/V - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL
 E - Estimated Value exceeds calibration curve
 TNTC - Too numerous to count



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

Client Sample ID: MW-3

Collected: 06/18/2009 10:15 SPL Sample ID: 09061075-03

Site: Blanco, NM

Analyses/Method Result QUAL Rep.Limit Dil. Factor Date Analyzed Analyst Seq. #

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3010A	06/22/2009 9:00	AB1	1.00

VOLATILE ORGANICS BY METHOD 8260B				MCL	SW8260B	Units: ug/L		
Benzene	ND		5	1	06/29/09 12:07	LT		5090533
Ethylbenzene	15		5	1	06/29/09 12:07	LT		5090533
Toluene	ND		5	1	06/29/09 12:07	LT		5090533
m,p-Xylene	87		5	1	06/29/09 12:07	LT		5090533
o-Xylene	ND		5	1	06/29/09 12:07	LT		5090533
Xylenes, Total	87		5	1	06/29/09 12:07	LT		5090533
Surr: 1,2-Dichloroethane-d4	100	%	78-116	1	06/29/09 12:07	LT		5090533
Surr: 4-Bromofluorobenzene	94.1	%	74-125	1	06/29/09 12:07	LT		5090533
Surr: Toluene-d8	97.9	%	82-118	1	06/29/09 12:07	LT		5090533

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B/V - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL
 E - Estimated Value exceeds calibration curve
 TNTC - Too numerous to count



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

Client Sample ID: MW-4

Collected: 06/18/2009 9:35

SPL Sample ID: 09061075-04

Site: Blanco, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
ION CHROMATOGRAPHY				MCL	E300.0	Units: mg/L	
Fluoride	2.25		0.5	1	06/22/09 21:27	BDG	5080235
Sulfate	5300		500	1000	06/26/09 19:43	BDG	5087233
MERCURY, TOTAL				MCL	SW7470A	Units: mg/L	
Mercury	ND		0.0002	1	06/26/09 15:03	F_S	5086997

Prep Method	Prep Date	Prep Initials	Prep Factor
SW7470A	06/26/2009 10:10	F_S	1.00

METALS BY METHOD 6010B, TOTAL				MCL	SW6010B	Units: mg/L	
Aluminum	5.52		0.1	1	06/26/09 16:01	EG	5090126
Boron	0.463		0.1	1	06/26/09 16:01	EG	5088525
Calcium	62.9		0.1	1	06/26/09 16:01	EG	5088525
Iron	6.91		0.02	1	06/26/09 16:01	EG	5088525
Magnesium	13.5		0.1	1	06/26/09 16:01	EG	5088525
Potassium	9.42		1	1	06/26/09 16:01	EG	5088525
Sodium	2570		2	20	06/28/09 21:17	EG	5089013
Strontium	4.54		0.5	10	06/28/09 21:13	EG	5089012
Tin	ND		0.005	1	06/26/09 16:01	EG	5088525

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3010A	06/22/2009 9:00	AB1	1.00

METALS BY METHOD 6020A, TOTAL				MCL	SW6020A	Units: mg/L	
Antimony	ND		0.005	1	06/30/09 1:30	S_C	5091961
Arsenic	ND		0.005	1	06/30/09 1:30	S_C	5091961
Barium	0.0261		0.005	1	06/30/09 1:30	S_C	5091961
Beryllium	ND		0.004	1	06/30/09 16:19	AL_H	5093569
Cadmium	ND		0.005	1	06/30/09 1:30	S_C	5091961
Chromium	0.00829		0.005	1	06/30/09 1:30	S_C	5091961
Cobalt	ND		0.005	1	06/30/09 1:30	S_C	5091961
Copper	ND		0.025	5	06/30/09 22:05	S_C	5093737
Lead	ND		0.005	1	06/30/09 1:30	S_C	5091961
Manganese	0.333		0.005	1	06/30/09 1:30	S_C	5091961
Molybdenum	ND		0.01	1	06/30/09 1:30	S_C	5091961
Nickel	ND		0.005	1	06/30/09 1:30	S_C	5091961
Selenium	ND		0.025	5	06/30/09 22:05	S_C	5093737
Silver	ND		0.005	1	06/30/09 1:30	S_C	5091961
Thallium	ND		0.005	1	06/30/09 1:30	S_C	5091961
Vanadium	0.00985		0.005	1	06/30/09 1:30	S_C	5091961
Zinc	0.0703		0.01	1	06/30/09 1:30	S_C	5091961

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B/V - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL
 E - Estimated Value exceeds calibration curve
 TNTC - Too numerous to count



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

Client Sample ID: MW-4

Collected: 06/18/2009 9:35

SPL Sample ID: 09061075-04

Site: Blanco, NM

Analyses/Method Result QUAL Rep.Limit Dil. Factor Date Analyzed Analyst Seq. #

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3010A	06/22/2009 9:00	AB1	1.00

VOLATILE ORGANICS BY METHOD 8260B

MCL

SW8260B

Units: ug/L

Benzene	ND		5	1	06/29/09 12:32	LT	5090535
Ethylbenzene	ND		5	1	06/29/09 12:32	LT	5090535
Toluene	ND		5	1	06/29/09 12:32	LT	5090535
m,p-Xylene	ND		5	1	06/29/09 12:32	LT	5090535
o-Xylene	ND		5	1	06/29/09 12:32	LT	5090535
Xylenes, Total	ND		5	1	06/29/09 12:32	LT	5090535
Surr: 1,2-Dichloroethane-d4	103	%	78-116	1	06/29/09 12:32	LT	5090535
Surr: 4-Bromofluorobenzene	89.4	%	74-125	1	06/29/09 12:32	LT	5090535
Surr: Toluene-d8	86.8	%	82-118	1	06/29/09 12:32	LT	5090535

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: 06/18/2009 10:00 SPL Sample ID: 09061075-05

Site: Blanco, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
ION CHROMATOGRAPHY				MCL	E300.0	Units: mg/L	
Fluoride	1.71		0.5	1	06/22/09 21:46	BDG	5080236
Sulfate	5580		500	1000	06/26/09 20:03	BDG	5087234

MERCURY, TOTAL				MCL	SW7470A	Units: mg/L	
Mercury	ND		0.0002	1	06/26/09 15:06	F_S	5086998

Prep Method	Prep Date	Prep Initials	Prep Factor
SW7470A	06/26/2009 10:10	F_S	1.00

METALS BY METHOD 6010B, TOTAL				MCL	SW6010B	Units: mg/L	
Aluminum	3.19		0.1	1	06/26/09 16:05	EG	5090127
Boron	0.407		0.1	1	06/26/09 16:05	EG	5088526
Calcium	63.9		0.1	1	06/26/09 16:05	EG	5088526
Iron	4.35		0.02	1	06/26/09 16:05	EG	5088526
Magnesium	20.4		0.1	1	06/26/09 16:05	EG	5088526
Potassium	9.85		1	1	06/26/09 16:05	EG	5088526
Sodium	2580		2	20	06/28/09 21:26	EG	5089015
Strontium	4.92		0.5	10	06/28/09 21:22	EG	5089014
Tin	ND		0.005	1	06/26/09 16:05	EG	5088526

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3010A	06/22/2009 9:00	AB1	1.00

METALS BY METHOD 6020A, TOTAL				MCL	SW6020A	Units: mg/L	
Antimony	ND		0.005	1	06/30/09 1:36	S_C	5091962
Arsenic	0.015		0.005	1	06/30/09 1:36	S_C	5091962
Barium	0.0513		0.005	1	06/30/09 1:36	S_C	5091962
Beryllium	ND		0.004	1	06/30/09 16:42	AL_H	5093576
Cadmium	ND		0.005	1	06/30/09 1:36	S_C	5091962
Chromium	ND		0.005	1	06/30/09 1:36	S_C	5091962
Cobalt	ND		0.005	1	06/30/09 1:36	S_C	5091962
Copper	ND		0.025	5	06/30/09 22:10	S_C	5093738
Lead	ND		0.005	1	06/30/09 1:36	S_C	5091962
Manganese	0.411		0.005	1	06/30/09 1:36	S_C	5091962
Molybdenum	ND		0.01	1	06/30/09 1:36	S_C	5091962
Nickel	ND		0.005	1	06/30/09 1:36	S_C	5091962
Selenium	ND		0.025	5	06/30/09 22:10	S_C	5093738
Silver	ND		0.005	1	06/30/09 1:36	S_C	5091962
Thallium	ND		0.005	1	06/30/09 1:36	S_C	5091962
Vanadium	0.011		0.005	1	06/30/09 1:36	S_C	5091962
Zinc	0.0578		0.01	1	06/30/09 1:36	S_C	5091962

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B/V - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL
 E - Estimated Value exceeds calibration curve
 TNTC - Too numerous to count



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

Client Sample ID: Duplicate

Collected: 06/18/2009 10:00 SPL Sample ID: 09061075-05

Site: Blanco, NM

Analyses/Method Result QUAL Rep.Limit Dil. Factor Date Analyzed Analyst Seq. #

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3010A	06/22/2009 9:00	AB1	1.00

VOLATILE ORGANICS BY METHOD 8260B				MCL	SW8260B	Units: ug/L		
Benzene	ND		5	1	06/29/09 12:57	LT		5090537
Ethylbenzene	14		5	1	06/29/09 12:57	LT		5090537
Toluene	ND		5	1	06/29/09 12:57	LT		5090537
m,p-Xylene	86		5	1	06/29/09 12:57	LT		5090537
o-Xylene	ND		5	1	06/29/09 12:57	LT		5090537
Xylenes, Total	86		5	1	06/29/09 12:57	LT		5090537
Surr: 1,2-Dichloroethane-d4	101	%	78-116	1	06/29/09 12:57	LT		5090537
Surr: 4-Bromofluorobenzene	95.5	%	74-125	1	06/29/09 12:57	LT		5090537
Surr: Toluene-d8	92.5	%	82-118	1	06/29/09 12:57	LT		5090537

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B/V - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL
 E - Estimated Value exceeds calibration curve
 TNTC - Too numerous to count

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, Total
Method: SW6010B

WorkOrder: 09061075
Lab Batch ID: 91317a

Method Blank

Samples in Analytical Batch:

RunID: ICP2_090626A-5088512 Units: mg/L
Analysis Date: 06/26/2009 15:05 Analyst: EG
Preparation Date: 06/22/2009 9:00 Prep By: AB1 Method: SW3010A

Lab Sample ID Client Sample ID
09061075-01B MW-1
09061075-02B MW-2
09061075-03B MW-3
09061075-04B MW-4
09061075-05B Duplicate

Table with 3 columns: Analyte, Result, Rep Limit. Rows include Boron, Calcium, Iron, Magnesium, Potassium, Tin.

Laboratory Control Sample (LCS)

RunID: ICP2_090626A-5088513 Units: mg/L
Analysis Date: 06/26/2009 15:10 Analyst: EG
Preparation Date: 06/22/2009 9:00 Prep By: AB1 Method: SW3010A

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Rows include Boron, Calcium, Iron, Magnesium, Potassium, Tin.

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

Sample Spiked: 09061012-01
RunID: ICP2_090626A-5088515 Units: mg/L
Analysis Date: 06/26/2009 15:18 Analyst: EG
Preparation Date: 06/22/2009 10:00 Prep By: AB1 Method: SW3010A

Table with 12 columns: Analyte, Sample Result, MS Spike Added, MS Result, MS % Recovery, MSD Spike Added, MSD Result, MSD % Recovery, RPD, RPD Limit, Low Limit, High Limit. Rows include Boron, Calcium.

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: Metals by Method 6010B, Total
Method: SW6010B

WorkOrder: 09061075
Lab Batch ID: 91317a

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

Sample Spiked: 09061012-01
RunID: ICP2_090626A-5088515 Units: mg/L
Analysis Date: 06/26/2009 15:18 Analyst: EG
Preparation Date: 06/22/2009 10:00 Prep By: AB1 Method: SW3010A

Table with 12 columns: Analyte, Sample Result, MS Spike Added, MS Result, MS % Recovery, MSD Spike Added, MSD Result, MSD % Recovery, RPD, RPD Limit, Low Limit, High Limit. Rows include Iron, Magnesium, Potassium, and Tin.

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: Metals by Method 6020A, Total
Method: SW6020A

WorkOrder: 09061075
Lab Batch ID: 91317A-I

Method Blank

Samples in Analytical Batch:

RunID: ICPMS2_090629A-5091950 Units: mg/L
Analysis Date: 06/30/2009 0:28 Analyst: S_C
Preparation Date: 06/22/2009 9:00 Prep By: AB1 Method: SW3010A

Lab Sample ID Client Sample ID
09061075-01B MW-1
09061075-02B MW-2
09061075-03B MW-3
09061075-04B MW-4
09061075-05B Duplicate

Table with 3 columns: Analyte, Result, Rep Limit. Lists various elements like Antimony, Arsenic, Barium, etc., with results mostly as ND and limits as 0.005 or 0.01.

Laboratory Control Sample (LCS)

RunID: ICPMS2_090629A-5091951 Units: mg/L
Analysis Date: 06/30/2009 0:33 Analyst: S_C
Preparation Date: 06/22/2009 9:00 Prep By: AB1 Method: SW3010A

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Shows recovery percentages for various elements like Antimony, Arsenic, Barium, etc.

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: Metals by Method 6020A, Total
Method: SW6020A

WorkOrder: 09061075
Lab Batch ID: 91317A-I

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

Sample Spiked: 09061012-01
RunID: ICPMS2_090629A-5091953 Units: mg/L
Analysis Date: 06/30/2009 0:45 Analyst: S_C
Preparation Date: 06/22/2009 10:00 Prep By: AB1 Method: SW3010A

Table with 12 columns: Analyte, Sample Result, MS Spike Added, MS Result, MS % Recovery, MSD Spike Added, MSD Result, MSD % Recovery, RPD, RPD Limit, Low Limit, High Limit. Rows include Antimony, Arsenic, Barium, Cadmium, Chromium, Cobalt, Lead, Manganese, Molybdenum, Nickel, Silver, Thallium, Vanadium, and Zinc.

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: Metals by Method 6010B, Total
Method: SW6010B

WorkOrder: 09061075
Lab Batch ID: 91317b

Method Blank

Samples in Analytical Batch:

RunID: ICP2_090628A-5088996 Units: mg/L
Analysis Date: 06/28/2009 20:04 Analyst: EG
Preparation Date: 06/22/2009 9:00 Prep By: AB1 Method: SW3010A

Lab Sample ID Client Sample ID
09061075-01B MW-1
09061075-02B MW-2
09061075-03B MW-3
09061075-04B MW-4
09061075-05B Duplicate

Table with 3 columns: Analyte, Result, Rep Limit. Rows for Aluminum, Sodium, Strontium.

Laboratory Control Sample (LCS)

RunID: ICP2_090628A-5088997 Units: mg/L
Analysis Date: 06/28/2009 20:08 Analyst: EG
Preparation Date: 06/19/2009 15:00 Prep By: M_K Method: SW3010A

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Rows for Aluminum, Sodium, Strontium.

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

Sample Spiked: 09061012-01
RunID: ICP2_090628A-5088999 Units: mg/L
Analysis Date: 06/28/2009 20:17 Analyst: EG
Preparation Date: 06/22/2009 10:00 Prep By: AB1 Method: SW3010A

Table with 12 columns: Analyte, Sample Result, MS Spike Added, MS Result, MS % Recovery, MSD Spike Added, MSD Result, MSD % Recovery, RPD, RPD Limit, Low Limit, High Limit. Rows for Aluminum, Sodium, Strontium.

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: Metals by Method 6020A, Total
Method: SW6020A

WorkOrder: 09061075
Lab Batch ID: 91317B-I

Method Blank

Samples in Analytical Batch:

RunID: ICPMS2_090630A-5093574 Units: mg/L
Analysis Date: 06/30/2009 16:36 Analyst: AL_H
Preparation Date: 06/22/2009 9:00 Prep By: AB1 Method: SW3010A
Lab Sample ID: 09061075-01B Client Sample ID: MW-1
09061075-02B MW-2
09061075-03B MW-3
09061075-04B MW-4
09061075-05B Duplicate

Table with 3 columns: Analyte, Result, Rep Limit. Row: Beryllium, ND, 0.004

Laboratory Control Sample (LCS)

RunID: ICPMS2_090630A-5093558 Units: mg/L-
Analysis Date: 06/30/2009 15:34 Analyst: AL_H
Preparation Date: 06/22/2009 9:00 Prep By: AB1 Method: SW3010A

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Row: Beryllium, 0.1000, 0.1096, 109.6, 80, 120

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

Sample Spiked: 09061012-01
RunID: ICPMS2_090630A-5093560 Units: mg/L
Analysis Date: 06/30/2009 15:45 Analyst: AL_H
Preparation Date: 06/22/2009 10:00 Prep By: AB1 Method: SW3010A

Table with 12 columns: Analyte, Sample Result, MS Spike Added, MS Result, MS % Recovery, MSD Spike Added, MSD Result, MSD % Recovery, RPD, RPD Limit, Low Limit, High Limit. Row: Beryllium, ND, 0.1, 0.1072, 107.2, 0.1, 0.1057, 105.7, 1.409, 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: Metals by Method 6020A, Total
Method: SW6020A

WorkOrder: 09061075
Lab Batch ID: 91317-I

Method Blank

Samples in Analytical Batch:

RunID: ICPMS_090623A-5081601 Units: mg/L
Analysis Date: 06/24/2009 6:08 Analyst: AL_H
Preparation Date: 06/22/2009 9:00 Prep By: AB1 Method: SW3010A

Lab Sample ID Client Sample ID
09061075-01B MW-1
09061075-02B MW-2
09061075-03B MW-3
09061075-04B MW-4
09061075-05B Duplicate

Table with 3 columns: Analyte, Result, Rep Limit. Rows for Copper and Selenium, both with ND results and 0.005 limits.

Laboratory Control Sample (LCS)

RunID: ICPMS_090623A-5081602 Units: mg/L
Analysis Date: 06/24/2009 6:13 Analyst: AL_H
Preparation Date: 06/22/2009 9:00 Prep By: AB1 Method: SW3010A

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Rows for Copper and Selenium with various spike and recovery values.

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

Sample Spiked: 09061012-01
RunID: ICPMS_090623A-5081604 Units: mg/L
Analysis Date: 06/24/2009 6:23 Analyst: AL_H
Preparation Date: 06/22/2009 10:00 Prep By: AB1 Method: SW3010A

Table with 12 columns: Analyte, Sample Result, MS Spike Added, MS Result, MS % Recovery, MSD Spike Added, MSD Result, MSD % Recovery, RPD, RPD Limit, Low Limit, High Limit. Rows for Copper and Selenium.

- 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: Mercury, Total
Method: SW7470A

WorkOrder: 09061075
Lab Batch ID: 91490

Method Blank

Samples in Analytical Batch:

RunID: HGLC_090626A-5086979 Units: mg/L
Analysis Date: 06/26/2009 14:12 Analyst: F_S
Preparation Date: 06/26/2009 10:10 Prep By: F_S Method: SW7470A

Lab Sample ID Client Sample ID
09061075-01B MW-1
09061075-02B MW-2
09061075-03B MW-3
09061075-04B MW-4
09061075-05B Duplicate

Table with 3 columns: Analyte, Result, Rep Limit. Row: Mercury, ND, 0.0002

Laboratory Control Sample (LCS)

RunID: HGLC_090626A-5086980 Units: mg/L
Analysis Date: 06/26/2009 14:15 Analyst: F_S
Preparation Date: 06/26/2009 10:10 Prep By: F_S Method: SW7470A

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Row: Mercury, 0.002000, 0.001947, 97.37, 80, 120

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

Sample Spiked: 09060865-03
RunID: HGLC_090626A-5086982 Units: mg/L
Analysis Date: 06/26/2009 14:19 Analyst: F_S
Preparation Date: 06/26/2009 10:10 Prep By: F_S Method: SW7470A

Table with 12 columns: Analyte, Sample Result, MS Spike Added, MS Result, MS % Recovery, MSD Spike Added, MSD Result, MSD % Recovery, RPD, RPD Limit, Low Limit, High Limit. Row: Mercury, ND, 0.002, 0.001593, 79.64, 0.002, 0.001622, 81.09, 1.807, 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: 09061075
Lab Batch ID: R276708

Method Blank

Samples in Analytical Batch:

RunID: N_090626E-5087979 Units: ug/L
Analysis Date: 06/26/2009 23:28 Analyst: LT

Lab Sample ID Client Sample ID
09061075-01A MW-1

Table with 3 columns: Analyte, Result, Rep Limit. Rows include Benzene, Ethylbenzene, Toluene, m,p-Xylene, o-Xylene, Xylenes, Total, and various Surrogate compounds.

Laboratory Control Sample (LCS)

RunID: N_090626E-5087978 Units: ug/L
Analysis Date: 06/26/2009 23:02 Analyst: LT

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Rows include Benzene, Ethylbenzene, Toluene, m,p-Xylene, o-Xylene, Xylenes, Total, and various Surrogate compounds.

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

Sample Spiked: 09061075-01
RunID: N_090626E-5087981 Units: ug/L
Analysis Date: 06/27/2009 2:24 Analyst: LT

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: 09061075
Lab Batch ID: R276708

Table with 12 columns: Analyte, Sample Result, MS Spike Added, MS Result, MS % Recovery, MSD Spike Added, MSD Result, MSD % Recovery, RPD, RPD Limit, Low Limit, High Limit. Rows include Benzene, Ethylbenzene, Toluene, m,p-Xylene, o-Xylene, Xylenes, Total, and various Surrogate compounds.

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: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 09061075
Lab Batch ID: R276866

Method Blank

Samples in Analytical Batch:

RunID: N_090629B-5090528 Units: ug/L
Analysis Date: 06/29/2009 9:11 Analyst: LT

Lab Sample ID Client Sample ID
09061075-02A MW-2
09061075-03A MW-3
09061075-04A MW-4
09061075-05A Duplicate

Table with 3 columns: Analyte, Result, Rep Limit. Rows include Benzene, Ethylbenzene, Toluene, m,p-Xylene, o-Xylene, Xylenes, Total, and various Surrogate standards.

Laboratory Control Sample (LCS)

RunID: N_090629B-5090527 Units: ug/L
Analysis Date: 06/29/2009 8:46 Analyst: LT

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Rows include Benzene, Ethylbenzene, Toluene, m,p-Xylene, o-Xylene, Xylenes, Total, and various Surrogate standards.

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

Sample Spiked: 09060975-01
RunID: N_090629B-5090541 Units: ug/L
Analysis Date: 06/29/2009 14:12 Analyst: LT

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: 09061075
Lab Batch ID: R276866

Table with 12 columns: Analyte, Sample Result, MS Spike Added, MS Result, MS % Recovery, MSD Spike Added, MSD Result, MSD % Recovery, RPD, RPD Limit, Low Limit, High Limit. Rows include Benzene, Ethylbenzene, Toluene, m,p-Xylene, o-Xylene, Xylenes, Total, and various Surrogate standards.

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: Ion Chromatography
Method: E300.0

WorkOrder: 09061075
Lab Batch ID: R276225

Method Blank

Samples in Analytical Batch:

RunID: IC2_090622A-5080219 Units: mg/L
Analysis Date: 06/22/2009 12:34 Analyst: BDG

Lab Sample ID Client Sample ID
09061075-01C MW-1
09061075-02C MW-2
09061075-03C MW-3
09061075-04C MW-4
09061075-05C Duplicate

Table with 3 columns: Analyte, Result, Rep Limit. Row: Fluoride, ND, 0.50

Laboratory Control Sample (LCS)

RunID: IC2_090622A-5080220 Units: mg/L
Analysis Date: 06/22/2009 12:54 Analyst: BDG

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Row: Fluoride, 10.00, 10.76, 107.6, 85, 115

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

Sample Spiked: 09060957-01
RunID: IC2_090622A-5080238 Units: mg/L
Analysis Date: 06/22/2009 22:25 Analyst: BDG

Table with 12 columns: Analyte, Sample Result, MS Spike Added, MS Result, MS % Recovery, MSD Spike Added, MSD Result, MSD % Recovery, RPD, RPD Limit, Low Limit, High Limit. Row: Fluoride, 47.75, 200, 217.9, 85.07, 200, 203.0, 77.61*, 7.095, 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.



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: 09061075
Lab Batch ID: R276654A

Method Blank

Samples in Analytical Batch:

RunID: IC2_090626A-5087226 Units: mg/L
Analysis Date: 06/26/2009 16:05 Analyst: BDG

Lab Sample ID Client Sample ID
09061075-01C MW-1
09061075-02C MW-2
09061075-03C MW-3
09061075-04C MW-4
09061075-05C Duplicate

Table with 3 columns: Analyte, Result, Rep Limit. Row: Sulfate, ND, 0.50

Laboratory Control Sample (LCS)

RunID: IC2_090626A-5087227 Units: mg/L
Analysis Date: 06/26/2009 16:24 Analyst: BDG

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Row: Sulfate, 10.00, 9.926, 99.26, 85, 115

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

Sample Spiked: 09061274-01
RunID: IC2_090626A-5087239 Units: mg/L
Analysis Date: 06/26/2009 22:37 Analyst: BDG

Table with 12 columns: Analyte, Sample Result, MS Spike Added, MS Result, MS % Recovery, MSD Spike Added, MSD Result, MSD % Recovery, RPD, RPD Limit, Low Limit, High Limit. Row: Sulfate, ND, 10, 9.530, 95.30, 10, 9.497, 94.97, 0.3469, 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.

*Sample Receipt Checklist
And
Chain of Custody*



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

Sample Receipt Checklist

Workorder:	09061075	Received By:	RE
Date and Time Received:	6/19/2009 9:30:00 AM	Carrier name:	Fedex-Standard Overnight
Temperature:	0.7°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?
 1. Received a set of trip blanks not listed on chain. 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 WORKBOOK NO.

327822

09061075

page of

Client Name: Tetra Tech
 Address: 621 Indian School Rd. NE Suite 700
 City Albuquerque State NM Zip 87102
 Phone/Fax: 505-237-8440
 Client Contact: Kelly Blanchard Email: Kelly.Blanchard@tetratech.com
 Project Name/No.: El Paso LA
 Site Name: Blanco, NM

matrix	bottle	size	pres.	Number of Containers	Requested Analysis
W=water S=soil O=oil A=air SL=sledge E=encore X=other	P=plastic A=amber glass G=glass V=vial X=other	1=1 liter 4=4oz 40=vial 8=8oz 16=16oz X=other	1=HCl 2=HNO3 3=H2SO4 X=other	3	BTEX
W	V	40	1	3	X
W	V	40	1	3	X
W	V	40	1	3	X
W	V	40	1	3	X
W	V	40	1	3	X
W	P	X	2	1	X
W	P	X	2	1	X
W	P	X	2	1	X
W	P	X	2	1	X
W	P	X	2	1	X

SAMPLE ID	DATE	TIME	comp	grab
MW-1	6/18/09	0920		X
MW-2	6/18/09	0900		X
MW-3	6/18/09	1015		X
MW-4	6/18/09	0935		X
Duplicate	6/18/09	1000		X
MW-1	6/18/09	0920		X
MW-2	6/18/09	0900		X
MW-3	6/18/09	1015		X
MW-4	6/18/09	0935		X
Duplicate	6/18/09	1000		X

Client/Consultant Remarks: Laboratory remarks: Intact? Ice? Temp: 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 E-mail PDF
 Standard QC Level 3 QC Level 4 QC TX TRRP LA RECAP

1. Relinquished by Sampler: date 6/18/09
 3. Relinquished by: date
 5. Relinquished by: date

2. Received by: date 6/18/09 time 1430
 4. Received by: date
 6. Received by Laboratory: date 6/19/09 time 930

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



SPL, Inc.

Analysis Request & Chain of Custody Record

DE LA VIGORANES INV.

327824

09061075

page of

Client Name: Tetra Tech
 Address: 6021 Indian School Rd. NE Suite 200
 City Albuquerque State NM Zip 87110
 Phone/Fax: 505-237-8440
 Client Contact: Kelly Blanchard Email: Kelly.blanchard@tetra-tech.com
 Project Name/No.: El Paso 1A
 Site Name:
 Site Location: Blanco, NM

SAMPLE ID	DATE	TIME	Ph:	
			comp	grab
MW-1	6/18/09	0920	X	X
MW-2	6/18/09	0900	X	X
MW-3	6/18/09	1015	X	X
MW-4	6/18/09	0935	X	X
Duplicate	6/18/09	1000	X	X

matrix	bottle	size	pres.	Number of Containers	Requested Analysis
W=water S=soil O=oil A=air SL=sludge F=encore X=other	P=plastic A=amber glass G=glass V=vial X=other	1=1 liter 4=4oz 40=vial 8=8oz 16=16oz X=other	1=HCl 2=HNO3 3=H2SO4 X=other	1	Fluoride, Sulfate
	P	X	X	1	X
	P	X	X	1	X
	P	X	X	1	X
	P	X	X	1	X
	P	X	X	1	X

Client/Consultant Remarks: Laboratory remarks: Intact? Ice? Temp: 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 Sampler: date 6/18/09
2. Received by: time 1430
3. Relinquished by: date
4. Received by: time
5. Relinquished by: date 6/19/09 time 930
6. Received by Laboratory: date 6/19/09 time 930

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