

**3R - 427**

**OCT 2008**

**GWMR**

**03/04/2009**



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

**TETRA TECH, INC.**

March 4, 2009

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

RE: (1) ConocoPhillips Shepherd & Kelsey IE 2008 Quarterly Report  
Bloomfield, New Mexico  
(2) ConocoPhillips Faye Burdette No. 1 2008 Quarterly Report  
Aztec, New Mexico  
(3) ConocoPhillips El Paso IA 2008 Quarterly Report  
Blanco, New Mexico

Dear Mr. von Gonten:

Enclosed please find a copy of the above-referenced documents as compiled by Tetra Tech, Inc., formerly Maxim Technologies, for these Farmington area sites.

Please do not hesitate to contact me at (505) 237-8440 if you have any questions or require additional information.

Sincerely,

Kelly E. Blanchard  
Project Manager/Geologist

Enclosures (3)

**QUARTERLY GROUNDWATER  
MONITORING REPORT  
OCTOBER 2008 SAMPLING EVENT**

**CONOCOPHILLIPS  
EL PASO IA  
BLANCO, NEW MEXICO**

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

February 11, 2009

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# QUARTERLY GROUNDWATER MONITORING REPORT CONOCOPHILLIPS 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 October 25, 2008, at the ConocoPhillips, formerly Burlington Resources, El Paso 1A Site in Blanco, New Mexico. This event represents the first quarter of groundwater sampling conducted by Tetra Tech at the site.

The site is located near the intersection of Highway 64 and county road 4450 east of Blanco, NM. The site can be reached by turning right on county road 4450 and traveling for approximately 300 feet before taking another right, for 0.1 mile at which point travel should continue to the left downhill toward Canyon Largo for 0.4 miles until reaching 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 El Paso 1A site are shown on **Figures 1** and **2**, respectively.

### 1.1 Site History

The history of the ConocoPhillips El Paso 1A 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 Groundwater Monitoring Methodology

#### Groundwater sampling

Monitor well MW-1 was sampled during this event to initiate quarterly groundwater monitoring at the site. Approximately 4 gallons of water, or greater than three well volumes, were purged from the monitoring well before sampling was performed. The purged water was disposed of in the waste water tank located on site (**Figure 2**). A 1.5-inch dedicated bailer was used to purge and collect groundwater samples. The samples were 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 but not limited to benzene, toluene, ethyl-benzene, and xylenes (BTEX) by Environmental Protection Agency (EPA) Method 8260B, semi-volatile organics compounds (SVOC) by EPA Method 8270C, total petroleum hydrocarbons (TPH) by EPA Method SW8015B, ion chromatography by EPA Method E300.0, metals including mercury by EPA Methods SW7470A, 6010B, 6020A, and nitrogen by EPA Method E353.2.

## **2.2 Groundwater Sampling Analytical Results**

The October 2008 analysis of the collected groundwater samples indicates that all contaminants of concern are below the NMWQCC standards. Laboratory analytical data from the October 2008 sampling are summarized on **Table 2**. The field groundwater sampling form is presented in **Appendix A** and the laboratory analytical report is presented in **Appendix B**.

## **3.0 CONCLUSIONS**

Tetra Tech recommends continued quarterly groundwater monitoring and the installation of 3 additional monitoring wells in order to provide sufficient data for site closure. Tetra Tech will conduct future groundwater monitoring following additional monitoring well installation. If results indicate all constituents of concern are below NMWQCC standards, groundwater monitoring will be discontinued and site closure will be requested.

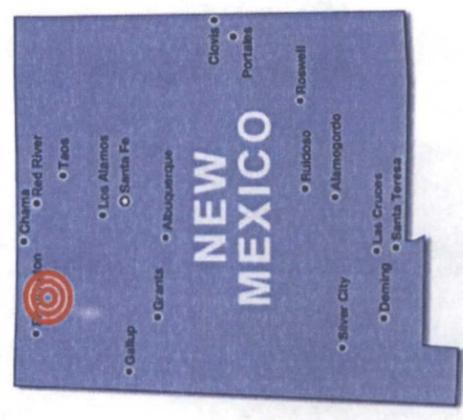
## **FIGURES**

1. Site Location Map
2. Site Layout Map



**FIGURE 1.**

Site Location Map  
 ConocoPhillips  
 El Paso 1A  
 Blanco, NM



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

Approximate ConocoPhillips  
 El Paso 1A  
 Site location

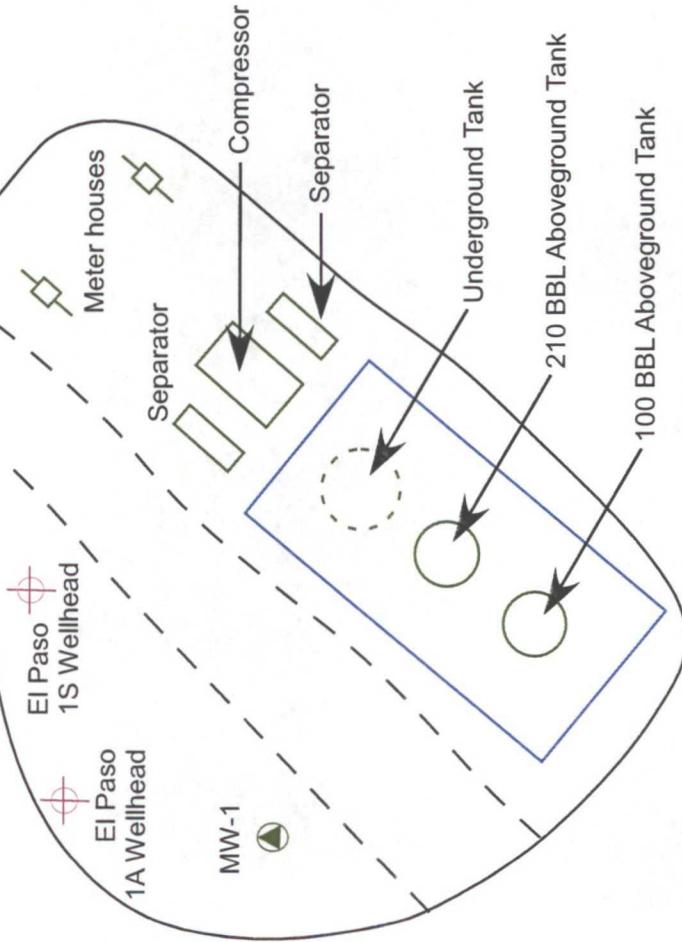


TETRA TECH, INC.

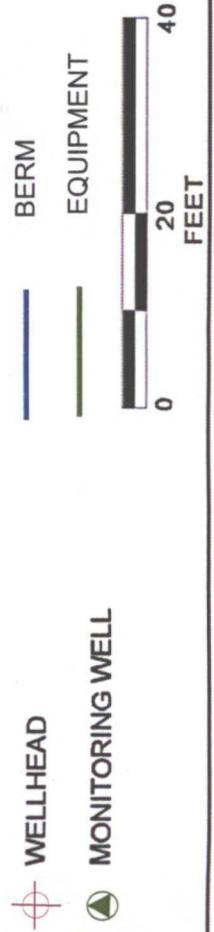
Anticipated groundwater  
flow direction

San Juan River,  
approximately 1 mile

Canyon Largo,  
approximately 0.2 mile



LEGEND



**FIGURE 2:**  
SITE FEATURES MAP  
CONOCOPHILLIPS  
EL PASO 1A  
Sec 29, Twp 29N, Rng 11W  
Blanco, New Mexico



TETRA TECH, INC.



## **TABLES**

I. Site History Timeline

2. Laboratory Analytical Data Summary (October 2008)

**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-09	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 Vorn 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 sampling of MW-1 by Tetra Tech

**Table 2.**  
**Analytical Data El Paso 1A October 25, 2008**

	NM Groundwater Standards	EPA Groundwater Standards	Well ID
<b>Volatile Organic Compounds (ug/L)</b>			
Benzene	10	5	<5
Toluene	750	-	<5
Ethylbenzene	750	700	<5
Xylenes	620	-	<5
Diesel Range Organics	-	-	0.27
<b>General Chemistry (mg/L)</b>			
Chloride	250	250	74.1
Sulfate	600	250 / 400	6400
<b>Inorganic Contaminants (mg/L)</b>			
Calcium	-	-	239
Iron	1	0.3	26
Magnesium	-	-	38.3
Sodium	-	-	3490
Arsenic	0.1	0.05	0.01
Lead	0.05	0.015	0.0175
Barium	1	2	0.0245
Manganese	0.2	0.05	5.49

**Notes**

Concentrations marked **bold** exceed NMWQCC standards  
 Only detected constituents are included on Table 2.

**APPENDIX A**  
**GROUNDWATER SAMPLING FIELD FORM**



# WATER SAMPLING FIELD FORM

Project Name El Paso 1A

Page 1 of 1

Project No. \_\_\_\_\_

Site Location San Juan County, NM

Site/Well No. MW-1

Coded/  
Replicate No. \_\_\_\_\_

Date 10/25/08

Weather Sunny warm

Time Sampling  
Began 1400

Time Sampling  
Completed 1410

### EVACUATION DATA

Description of Measuring Point (MP) TOC

Height of MP Above/Below Land Surface \_\_\_\_\_

MP Elevation \_\_\_\_\_

Total Sounded Depth of Well Below MP 13.2

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

Held \_\_\_\_\_ Depth to Water Below MP 10.96

Diameter of Casing 2"

Wet \_\_\_\_\_ Water Column in Well 2.24

Gallons Pumped/Bailed  
Prior to Sampling 4 gallons

Gallons per Foot 0.16

Gallons in Well 0.36

Sampling Pump Intake Setting  
(feet below land surface) \_\_\_\_\_

Purging Equipment bailer / purge pump X3 = 1.08

### SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (C°)	pH	Conductivity	TDS in g/L	ORP (mV)	DO
<u>1400</u>	<u>58.2</u>	<u>6.81</u>	<u>2814</u>	<u>1432</u>	<u>126</u>	<u>6.1</u>
<u>1405</u>	<u>57.9</u>	<u>6.74</u>	<u>2801</u>	<u>1427</u>	<u>120</u>	<u>6.8</u>

Sampling Equipment Disposable polyethylene bailer

#### Constituents Sampled

#### Container Description

#### Preservative

BTEX, VOCs, SVOCs, Metals 6 3-40 mL glass VOAs 2 Ambers HCL, HNO<sub>3</sub>  
Gen Chem, TPH 2 plastics 16oz, 2 plastics 32oz

Remarks Removed bailer from bottom of well.

Sampling Personnel Christine Mathews, Ana Moreno water is gray & has odor.

Well Casing Volumes			
Gal./ft.	1 ¼" = 0.077	<u>2" = 0.16</u>	3" = 0.37
	1 ½" = 0.10	2 ½" = 0.24	3 ½" = 0.50
			4" = 0.65
			6" = 1.46

**APPENDIX B**

**LABORATORY ANALYTICAL REPORT**



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

**Conoco Phillips**

Certificate of Analysis Number:

**08101626**

<b>Report To:</b> Tetra Tech, Inc. Kelly Blanchard 6121 Indian School Road, N.E. Suite 200 Albuquerque NM 87110- ph: (505) 237-8440      fax:	<b>Project Name:</b> COP EIPaso1A <b>Site:</b> Aztec, NM <b>Site Address:</b>  <b>PO Number:</b> <b>State:</b> New Mexico <b>State Cert. No.:</b> <b>Date Reported:</b> 11/21/2008
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This Report Contains A Total Of 36 Pages

Excluding This Page, Chain Of Custody

And

Any Attachments

11/21/2008

Date



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

**Case Narrative for:  
 Conoco Phillips**

**Certificate of Analysis Number:  
 08101626**

<p><b>Report To:</b></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><b>Project Name:</b> COP EIPaso1A</p> <p><b>Site:</b> Aztec, NM</p> <p><b>Site Address:</b></p> <p><b>PO Number:</b></p> <p><b>State:</b> New Mexico</p> <p><b>State Cert. No.:</b></p> <p><b>Date Reported:</b> 11/21/2008</p>
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All samples received outside the 48-hour hold time for Nitrate and Orthophosphate analysis. Per historical records SPL, Inc continued with analysis.

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.

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.

Due to limited sample volume, a Matrix Spike (MS) or Matrix Spike Duplicate (MSD) was not extracted with Batch ID: 84920 for the Diesel Range Organics analysis by Method 8015B. A Laboratory Control Sample (LCS) and a Laboratory Control Sample Duplicate (LCSD) were extracted with the analytical batch and serve as the batch quality control (QC). The LCS and LCSD recovered acceptably and precision criteria were met.

Due to limited sample volume, a Matrix Spike (MS) or Matrix Spike Duplicate (MSD) was not extracted with Batch ID:84949 for the Semivolatile Organics analysis by SW846 Method 8270C. A Laboratory Control Sample (LCS) and a Laboratory Control Sample Duplicate (LCSD) were extracted with the analytical batch and serve as the batch quality control (QC). The LCS and LCSD recovered acceptably and precision criteria were met.

Your sample ID "MW-1" (SPL ID: 08101626-01) was randomly selected for use in SPL's quality control program for the Total Nitrate Nitrogen analysis by EPA Method 353.2. The Matrix Spike (MS) recovery was outside of the advisable quality control limits for Batch ID: R256285A due to matrix interference. A Laboratory Control Sample (LCS) was analyzed as a quality control check for the analytical batch and all recoveries were within acceptable limits.

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.

08101626 Page 1  
 11/21/2008

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:

**08101626**

**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:** Aztec, NM  
**Site Address:**  
**PO Number:**  
**State:** New Mexico  
**State Cert. No.:**  
**Date Reported:** 11/21/2008

**Fax To:**

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
MW-1	08101626-01	Water	10/25/2008 2:10:00 PM	10/28/2008 9:30:00 AM		<input type="checkbox"/>
Trip Blank	08101626-02	Water	10/27/2008 2:30:00 PM	10/28/2008 9:30:00 AM		<input type="checkbox"/>

*Erica Cardenas*

11/21/2008

Erica Cardenas  
 Project Manager

Date

Richard R. Reed  
 Laboratory Director

Ted Yen  
 Quality Assurance Officer



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

Client Sample ID: MW-1 Collected: 10/25/2008 14:10 SPL Sample ID: 08101626-01

Site: Aztec, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
<b>DIESEL RANGE ORGANICS</b>				<b>MCL</b>	<b>SW8015B</b>	<b>Units: mg/L</b>	
Diesel Range Organics (C10-C28)	0.27		0.1	1	11/06/08 18:46	NW	4757258
Surr: n-Pentacosane	49.6		% 20-150	1	11/06/08 18:46	NW	4757258

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	10/29/2008 18:43	N_M	1.00

<b>GASOLINE RANGE ORGANICS</b>				<b>MCL</b>	<b>SW8015B</b>	<b>Units: mg/L</b>	
Gasoline Range Organics	ND		0.1	1	11/04/08 2:57	WLW	4749742
Surr: 1,4-Difluorobenzene	90.9		% 60-155	1	11/04/08 2:57	WLW	4749742
Surr: 4-Bromofluorobenzene	105		% 50-158	1	11/04/08 2:57	WLW	4749742

<b>ION CHROMATOGRAPHY</b>				<b>MCL</b>	<b>E300.0</b>	<b>Units: mg/L</b>	
Chloride	74.1		2	4	11/10/08 21:37	TW	4766032
Fluoride	ND		2	4	11/10/08 21:37	TW	4766032
Ortho-phosphate (As P)	ND		5	10	11/20/08 7:20	TW	4780775
Sulfate	6400		250	500	11/11/08 19:56	TW	4766465

<b>MERCURY, TOTAL</b>				<b>MCL</b>	<b>SW7470A</b>	<b>Units: mg/L</b>	
Mercury	ND		0.0002	1	11/06/08 14:22	F_S	4755691

Prep Method	Prep Date	Prep Initials	Prep Factor
SW7470A	11/06/2008 13:18	F_S	1.00

<b>METALS BY METHOD 6010B, TOTAL</b>				<b>MCL</b>	<b>SW6010B</b>	<b>Units: mg/L</b>	
Calcium	239		0.1	1	11/04/08 23:43	S_C	4752071
Iron	26		0.02	1	11/04/08 23:43	S_C	4752071
Magnesium	38.3		0.1	1	11/04/08 23:43	S_C	4752071
Manganese	5.49		0.005	1	11/04/08 23:43	S_C	4752071
Sodium	3490		5	10	11/05/08 11:15	S_C	4752126

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3010A	10/31/2008 15:00	BDG	1.00

<b>METALS BY METHOD 6020A, TOTAL</b>				<b>MCL</b>	<b>SW6020A</b>	<b>Units: mg/L</b>	
Arsenic	0.01		0.005	1	11/06/08 14:00	AL_H	4755589
Barium	0.0215		0.005	1	11/06/08 14:00	AL_H	4755589
Cadmium	ND		0.005	1	11/06/08 14:00	AL_H	4755589
Chromium	ND		0.005	1	11/06/08 14:00	AL_H	4755589
Lead	0.0175		0.005	1	11/06/08 14:00	AL_H	4755589
Selenium	ND		0.005	1	11/06/08 14:00	AL_H	4755589
Silver	ND		0.005	1	11/06/08 14:00	AL_H	4755589

**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: 10/25/2008 14:10 SPL Sample ID: 08101626-01

Site: Aztec, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
Prep Method		Prep Date		Prep Initials		Prep Factor	
SW3010A		10/31/2008 15:00		BDG		1.00	
<b>NITRATE NITROGEN (AS N), TOTAL</b>				<b>MCL</b>	<b>E353.2</b>	<b>Units: mg/L</b>	
Nitrogen, Nitrate (As N)		ND	0.5	1	11/03/08 15:17	TW	4757606

**Qualifiers:**

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

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



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

Client Sample ID: MW-1

Collected: 10/25/2008 14:10

SPL Sample ID: 08101626-01

Site: Aztec, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
<b>SEMIVOLATILE ORGANICS BY METHOD 8270C</b>				<b>MCL</b>	<b>SW8270C</b>	<b>Units: ug/L</b>	
1,2,4-Trichlorobenzene	ND		5	1	11/06/08 16:28	GY	4755842
1,2-Dichlorobenzene	ND		5	1	11/06/08 16:28	GY	4755842
1,2-Diphenylhydrazine	ND		10	1	11/06/08 16:28	GY	4755842
1,3-Dichlorobenzene	ND		5	1	11/06/08 16:28	GY	4755842
1,4-Dichlorobenzene	ND		5	1	11/06/08 16:28	GY	4755842
2,4,5-Trichlorophenol	ND		10	1	11/06/08 16:28	GY	4755842
2,4,6-Trichlorophenol	ND		5	1	11/06/08 16:28	GY	4755842
2,4-Dichlorophenol	ND		5	1	11/06/08 16:28	GY	4755842
2,4-Dimethylphenol	ND		5	1	11/06/08 16:28	GY	4755842
2,4-Dinitrophenol	ND		25	1	11/06/08 16:28	GY	4755842
2,4-Dinitrotoluene	ND		5	1	11/06/08 16:28	GY	4755842
2,6-Dinitrotoluene	ND		5	1	11/06/08 16:28	GY	4755842
2-Chloronaphthalene	ND		5	1	11/06/08 16:28	GY	4755842
2-Chlorophenol	ND		5	1	11/06/08 16:28	GY	4755842
2-Methylnaphthalene	ND		5	1	11/06/08 16:28	GY	4755842
2-Nitroaniline	ND		25	1	11/06/08 16:28	GY	4755842
2-Nitrophenol	ND		5	1	11/06/08 16:28	GY	4755842
3,3'-Dichlorobenzidine	ND		10	1	11/06/08 16:28	GY	4755842
3-Nitroaniline	ND		25	1	11/06/08 16:28	GY	4755842
4,6-Dinitro-2-methylphenol	ND		25	1	11/06/08 16:28	GY	4755842
4-Bromophenyl phenyl ether	ND		5	1	11/06/08 16:28	GY	4755842
4-Chloro-3-methylphenol	ND		5	1	11/06/08 16:28	GY	4755842
4-Chloroaniline	ND		5	1	11/06/08 16:28	GY	4755842
4-Chlorophenyl phenyl ether	ND		5	1	11/06/08 16:28	GY	4755842
4-Nitroaniline	ND		25	1	11/06/08 16:28	GY	4755842
4-Nitrophenol	ND		25	1	11/06/08 16:28	GY	4755842
Acenaphthene	ND		5	1	11/06/08 16:28	GY	4755842
Acenaphthylene	ND		5	1	11/06/08 16:28	GY	4755842
Aniline	ND		5	1	11/06/08 16:28	GY	4755842
Anthracene	ND		5	1	11/06/08 16:28	GY	4755842
Benz(a)anthracene	ND		5	1	11/06/08 16:28	GY	4755842
Benzo(a)pyrene	ND		5	1	11/06/08 16:28	GY	4755842
Benzo(b)fluoranthene	ND		5	1	11/06/08 16:28	GY	4755842
Benzo(g,h,i)perylene	ND		5	1	11/06/08 16:28	GY	4755842
Benzo(k)fluoranthene	ND		5	1	11/06/08 16:28	GY	4755842
Benzoic acid	ND		25	1	11/06/08 16:28	GY	4755842
Benzyl alcohol	ND		5	1	11/06/08 16:28	GY	4755842
Bis(2-chloroethoxy)methane	ND		5	1	11/06/08 16:28	GY	4755842
Bis(2-chloroethyl)ether	ND		5	1	11/06/08 16:28	GY	4755842

**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: 10/25/2008 14:10 SPL Sample ID: 08101626-01

Site: Aztec, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
Bis(2-chloroisopropyl)ether	ND		5	1	11/06/08 16:28	GY	4755842
Bis(2-ethylhexyl)phthalate	ND		5	1	11/06/08 16:28	GY	4755842
Butyl benzyl phthalate	ND		5	1	11/06/08 16:28	GY	4755842
Carbazole	ND		5	1	11/06/08 16:28	GY	4755842
Chrysene	ND		5	1	11/06/08 16:28	GY	4755842
Dibenz(a,h)anthracene	ND		5	1	11/06/08 16:28	GY	4755842
Dibenzofuran	ND		5	1	11/06/08 16:28	GY	4755842
Diethyl phthalate	ND		5	1	11/06/08 16:28	GY	4755842
Dimethyl phthalate	ND		5	1	11/06/08 16:28	GY	4755842
Di-n-butyl phthalate	ND		5	1	11/06/08 16:28	GY	4755842
Di-n-octyl phthalate	ND		5	1	11/06/08 16:28	GY	4755842
Fluoranthene	ND		5	1	11/06/08 16:28	GY	4755842
Fluorene	ND		5	1	11/06/08 16:28	GY	4755842
Hexachlorobenzene	ND		5	1	11/06/08 16:28	GY	4755842
Hexachlorobutadiene	ND		5	1	11/06/08 16:28	GY	4755842
Hexachlorocyclopentadiene	ND		5	1	11/06/08 16:28	GY	4755842
Hexachloroethane	ND		5	1	11/06/08 16:28	GY	4755842
Indeno(1,2,3-cd)pyrene	ND		5	1	11/06/08 16:28	GY	4755842
Isophorone	ND		5	1	11/06/08 16:28	GY	4755842
Naphthalene	ND		5	1	11/06/08 16:28	GY	4755842
Nitrobenzene	ND		5	1	11/06/08 16:28	GY	4755842
N-Nitrosodi-n-propylamine	ND		5	1	11/06/08 16:28	GY	4755842
N-Nitrosodiphenylamine	ND		5	1	11/06/08 16:28	GY	4755842
Pentachlorophenol	ND		25	1	11/06/08 16:28	GY	4755842
Phenanthrene	ND		5	1	11/06/08 16:28	GY	4755842
Phenol	ND		5	1	11/06/08 16:28	GY	4755842
Pyrene	ND		5	1	11/06/08 16:28	GY	4755842
Pyridine	ND		5	1	11/06/08 16:28	GY	4755842
2-Methylphenol	ND		5	1	11/06/08 16:28	GY	4755842
3 & 4-Methylphenol	ND		5	1	11/06/08 16:28	GY	4755842
Surr: 2,4,6-Tribromophenol	60.0		% 10-123	1	11/06/08 16:28	GY	4755842
Surr: 2-Fluorobiphenyl	74.0		% 23-116	1	11/06/08 16:28	GY	4755842
Surr: 2-Fluorophenol	30.7		% 16-110	1	11/06/08 16:28	GY	4755842
Surr: Nitrobenzene-d5	72.0		% 21-114	1	11/06/08 16:28	GY	4755842
Surr: Phenol-d5	28.0		% 10-110	1	11/06/08 16:28	GY	4755842
Surr: Terphenyl-d14	74.0		% 22-141	1	11/06/08 16:28	GY	4755842

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	10/30/2008 16:53	LLL	1.00

**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: 10/25/2008 14:10

SPL Sample ID: 08101626-01

Site: Aztec, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
<b>VOLATILE ORGANICS BY METHOD 8260B</b>				<b>MCL</b>	<b>SW8260B</b>	<b>Units: ug/L</b>	
1,1,1,2-Tetrachloroethane	ND		5	1	10/31/08 20:07	E_G	4746727
1,1,1-Trichloroethane	ND		5	1	10/31/08 20:07	E_G	4746727
1,1,2,2-Tetrachloroethane	ND		5	1	10/31/08 20:07	E_G	4746727
1,1,2-Trichloroethane	ND		5	1	10/31/08 20:07	E_G	4746727
1,1-Dichloroethane	ND		5	1	10/31/08 20:07	E_G	4746727
1,1-Dichloroethene	ND		5	1	10/31/08 20:07	E_G	4746727
1,1-Dichloropropene	ND		5	1	10/31/08 20:07	E_G	4746727
1,2,3-Trichlorobenzene	ND		5	1	10/31/08 20:07	E_G	4746727
1,2,3-Trichloropropane	ND		5	1	10/31/08 20:07	E_G	4746727
1,2,4-Trichlorobenzene	ND		5	1	10/31/08 20:07	E_G	4746727
1,2,4-Trimethylbenzene	ND		5	1	10/31/08 20:07	E_G	4746727
1,2-Dibromo-3-chloropropane	ND		5	1	10/31/08 20:07	E_G	4746727
1,2-Dibromoethane	ND		5	1	10/31/08 20:07	E_G	4746727
1,2-Dichlorobenzene	ND		5	1	10/31/08 20:07	E_G	4746727
1,2-Dichloroethane	ND		5	1	10/31/08 20:07	E_G	4746727
1,2-Dichloropropane	ND		5	1	10/31/08 20:07	E_G	4746727
1,3,5-Trimethylbenzene	ND		5	1	10/31/08 20:07	E_G	4746727
1,3-Dichlorobenzene	ND		5	1	10/31/08 20:07	E_G	4746727
1,3-Dichloropropane	ND		5	1	10/31/08 20:07	E_G	4746727
1,4-Dichlorobenzene	ND		5	1	10/31/08 20:07	E_G	4746727
2,2-Dichloropropane	ND		5	1	10/31/08 20:07	E_G	4746727
2-Butanone	ND		20	1	10/31/08 20:07	E_G	4746727
2-Chloroethyl vinyl ether	ND		10	1	10/31/08 20:07	E_G	4746727
2-Chlorotoluene	ND		5	1	10/31/08 20:07	E_G	4746727
2-Hexanone	ND		10	1	10/31/08 20:07	E_G	4746727
4-Chlorotoluene	ND		5	1	10/31/08 20:07	E_G	4746727
4-Isopropyltoluene	ND		5	1	10/31/08 20:07	E_G	4746727
4-Methyl-2-pentanone	ND		10	1	10/31/08 20:07	E_G	4746727
Acetone	ND		100	1	10/31/08 20:07	E_G	4746727
Acrylonitrile	ND		50	1	10/31/08 20:07	E_G	4746727
Benzene	ND		5	1	10/31/08 20:07	E_G	4746727
Bromobenzene	ND		5	1	10/31/08 20:07	E_G	4746727
Bromochloromethane	ND		5	1	10/31/08 20:07	E_G	4746727
Bromodichloromethane	ND		5	1	10/31/08 20:07	E_G	4746727
Bromoform	ND		5	1	10/31/08 20:07	E_G	4746727
Bromomethane	ND		10	1	10/31/08 20:07	E_G	4746727
Carbon disulfide	ND		5	1	10/31/08 20:07	E_G	4746727
Carbon tetrachloride	ND		5	1	10/31/08 20:07	E_G	4746727
Chlorobenzene	ND		5	1	10/31/08 20:07	E_G	4746727

**Qualifiers:**

ND/U - Not Detected at the Reporting Limit

B/V - Analyte detected in the associated Method Blank

\* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Estimated Value exceeds calibration curve

TNTC - Too numerous to count

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



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

Client Sample ID: MW-1

Collected: 10/25/2008 14:10

SPL Sample ID: 08101626-01

Site: Aztec, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
Chloroethane	ND		10	1	10/31/08 20:07	E_G	4746727
Chloroform	ND		5	1	10/31/08 20:07	E_G	4746727
Chloromethane	ND		10	1	10/31/08 20:07	E_G	4746727
Dibromochloromethane	ND		5	1	10/31/08 20:07	E_G	4746727
Dibromomethane	ND		5	1	10/31/08 20:07	E_G	4746727
Dichlorodifluoromethane	ND		10	1	10/31/08 20:07	E_G	4746727
Ethylbenzene	ND		5	1	10/31/08 20:07	E_G	4746727
Hexachlorobutadiene	ND		5	1	10/31/08 20:07	E_G	4746727
Isopropylbenzene	ND		5	1	10/31/08 20:07	E_G	4746727
Methyl tert-butyl ether	ND		5	1	10/31/08 20:07	E_G	4746727
Methylene chloride	ND		5	1	10/31/08 20:07	E_G	4746727
Naphthalene	ND		5	1	10/31/08 20:07	E_G	4746727
n-Butylbenzene	ND		5	1	10/31/08 20:07	E_G	4746727
n-Propylbenzene	ND		5	1	10/31/08 20:07	E_G	4746727
sec-Butylbenzene	ND		5	1	10/31/08 20:07	E_G	4746727
Styrene	ND		5	1	10/31/08 20:07	E_G	4746727
tert-Butylbenzene	ND		5	1	10/31/08 20:07	E_G	4746727
Tetrachloroethene	ND		5	1	10/31/08 20:07	E_G	4746727
Toluene	ND		5	1	10/31/08 20:07	E_G	4746727
Trichloroethene	ND		5	1	10/31/08 20:07	E_G	4746727
Trichlorofluoromethane	ND		5	1	10/31/08 20:07	E_G	4746727
Vinyl acetate	ND		10	1	10/31/08 20:07	E_G	4746727
Vinyl chloride	ND		10	1	10/31/08 20:07	E_G	4746727
cis-1,2-Dichloroethene	ND		5	1	10/31/08 20:07	E_G	4746727
cis-1,3-Dichloropropene	ND		5	1	10/31/08 20:07	E_G	4746727
m,p-Xylene	ND		5	1	10/31/08 20:07	E_G	4746727
o-Xylene	ND		5	1	10/31/08 20:07	E_G	4746727
trans-1,2-Dichloroethene	ND		5	1	10/31/08 20:07	E_G	4746727
trans-1,3-Dichloropropene	ND		5	1	10/31/08 20:07	E_G	4746727
1,2-Dichloroethene (total)	ND		5	1	10/31/08 20:07	E_G	4746727
Xylenes, Total	ND		5	1	10/31/08 20:07	E_G	4746727
Surr: 1,2-Dichloroethane-d4	104		% 62-130	1	10/31/08 20:07	E_G	4746727
Surr: 4-Bromofluorobenzene	100		% 70-130	1	10/31/08 20:07	E_G	4746727
Surr: Toluene-d8	104		% 74-122	1	10/31/08 20:07	E_G	4746727

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B/V - Analyte detected in the associated Method Blank

\* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Estimated Value exceeds calibration curve

TNTC - Too numerous to count

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference



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

Client Sample ID: Trip Blank

Collected: 10/27/2008 14:30

SPL Sample ID: 08101626-02

Site: Aztec, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
<b>VOLATILE ORGANICS BY METHOD 8260B</b>				<b>MCL</b>	<b>SW8260B</b>	<b>Units: ug/L</b>	
1,1,1,2-Tetrachloroethane	ND		5	1	10/31/08 17:52	E_G	4746724
1,1,1-Trichloroethane	ND		5	1	10/31/08 17:52	E_G	4746724
1,1,2,2-Tetrachloroethane	ND		5	1	10/31/08 17:52	E_G	4746724
1,1,2-Trichloroethane	ND		5	1	10/31/08 17:52	E_G	4746724
1,1-Dichloroethane	ND		5	1	10/31/08 17:52	E_G	4746724
1,1-Dichloroethene	ND		5	1	10/31/08 17:52	E_G	4746724
1,1-Dichloropropene	ND		5	1	10/31/08 17:52	E_G	4746724
1,2,3-Trichlorobenzene	ND		5	1	10/31/08 17:52	E_G	4746724
1,2,3-Trichloropropane	ND		5	1	10/31/08 17:52	E_G	4746724
1,2,4-Trichlorobenzene	ND		5	1	10/31/08 17:52	E_G	4746724
1,2,4-Trimethylbenzene	ND		5	1	10/31/08 17:52	E_G	4746724
1,2-Dibromo-3-chloropropane	ND		5	1	10/31/08 17:52	E_G	4746724
1,2-Dibromoethane	ND		5	1	10/31/08 17:52	E_G	4746724
1,2-Dichlorobenzene	ND		5	1	10/31/08 17:52	E_G	4746724
1,2-Dichloroethane	ND		5	1	10/31/08 17:52	E_G	4746724
1,2-Dichloropropane	ND		5	1	10/31/08 17:52	E_G	4746724
1,3,5-Trimethylbenzene	ND		5	1	10/31/08 17:52	E_G	4746724
1,3-Dichlorobenzene	ND		5	1	10/31/08 17:52	E_G	4746724
1,3-Dichloropropane	ND		5	1	10/31/08 17:52	E_G	4746724
1,4-Dichlorobenzene	ND		5	1	10/31/08 17:52	E_G	4746724
2,2-Dichloropropane	ND		5	1	10/31/08 17:52	E_G	4746724
2-Butanone	ND		20	1	10/31/08 17:52	E_G	4746724
2-Chloroethyl vinyl ether	ND		10	1	10/31/08 17:52	E_G	4746724
2-Chlorotoluene	ND		5	1	10/31/08 17:52	E_G	4746724
2-Hexanone	ND		10	1	10/31/08 17:52	E_G	4746724
4-Chlorotoluene	ND		5	1	10/31/08 17:52	E_G	4746724
4-Isopropyltoluene	ND		5	1	10/31/08 17:52	E_G	4746724
4-Methyl-2-pentanone	ND		10	1	10/31/08 17:52	E_G	4746724
Acetone	ND		100	1	10/31/08 17:52	E_G	4746724
Acrylonitrile	ND		50	1	10/31/08 17:52	E_G	4746724
Benzene	ND		5	1	10/31/08 17:52	E_G	4746724
Bromobenzene	ND		5	1	10/31/08 17:52	E_G	4746724
Bromochloromethane	ND		5	1	10/31/08 17:52	E_G	4746724
Bromodichloromethane	ND		5	1	10/31/08 17:52	E_G	4746724
Bromoform	ND		5	1	10/31/08 17:52	E_G	4746724
Bromomethane	ND		10	1	10/31/08 17:52	E_G	4746724
Carbon disulfide	ND		5	1	10/31/08 17:52	E_G	4746724
Carbon tetrachloride	ND		5	1	10/31/08 17:52	E_G	4746724
Chlorobenzene	ND		5	1	10/31/08 17:52	E_G	4746724

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

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



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

Client Sample ID: Trip Blank

Collected: 10/27/2008 14:30

SPL Sample ID: 08101626-02

Site: Aztec, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
Chloroethane	ND		10	1	10/31/08 17:52	E_G	4746724
Chloroform	ND		5	1	10/31/08 17:52	E_G	4746724
Chloromethane	ND		10	1	10/31/08 17:52	E_G	4746724
Dibromochloromethane	ND		5	1	10/31/08 17:52	E_G	4746724
Dibromomethane	ND		5	1	10/31/08 17:52	E_G	4746724
Dichlorodifluoromethane	ND		10	1	10/31/08 17:52	E_G	4746724
Ethylbenzene	ND		5	1	10/31/08 17:52	E_G	4746724
Hexachlorobutadiene	ND		5	1	10/31/08 17:52	E_G	4746724
Isopropylbenzene	ND		5	1	10/31/08 17:52	E_G	4746724
Methyl tert-butyl ether	ND		5	1	10/31/08 17:52	E_G	4746724
Methylene chloride	ND		5	1	10/31/08 17:52	E_G	4746724
Naphthalene	ND		5	1	10/31/08 17:52	E_G	4746724
n-Butylbenzene	ND		5	1	10/31/08 17:52	E_G	4746724
n-Propylbenzene	ND		5	1	10/31/08 17:52	E_G	4746724
sec-Butylbenzene	ND		5	1	10/31/08 17:52	E_G	4746724
Styrene	ND		5	1	10/31/08 17:52	E_G	4746724
tert-Butylbenzene	ND		5	1	10/31/08 17:52	E_G	4746724
Tetrachloroethene	ND		5	1	10/31/08 17:52	E_G	4746724
Toluene	ND		5	1	10/31/08 17:52	E_G	4746724
Trichloroethene	ND		5	1	10/31/08 17:52	E_G	4746724
Trichlorofluoromethane	ND		5	1	10/31/08 17:52	E_G	4746724
Vinyl acetate	ND		10	1	10/31/08 17:52	E_G	4746724
Vinyl chloride	ND		10	1	10/31/08 17:52	E_G	4746724
cis-1,2-Dichloroethene	ND		5	1	10/31/08 17:52	E_G	4746724
cis-1,3-Dichloropropene	ND		5	1	10/31/08 17:52	E_G	4746724
m,p-Xylene	ND		5	1	10/31/08 17:52	E_G	4746724
o-Xylene	ND		5	1	10/31/08 17:52	E_G	4746724
trans-1,2-Dichloroethene	ND		5	1	10/31/08 17:52	E_G	4746724
trans-1,3-Dichloropropene	ND		5	1	10/31/08 17:52	E_G	4746724
1,2-Dichloroethene (total)	ND		5	1	10/31/08 17:52	E_G	4746724
Xylenes, Total	ND		5	1	10/31/08 17:52	E_G	4746724
Surr: 1,2-Dichloroethane-d4	104		% 62-130	1	10/31/08 17:52	E_G	4746724
Surr: 4-Bromofluorobenzene	98.0		% 70-130	1	10/31/08 17:52	E_G	4746724
Surr: Toluene-d8	104		% 74-122	1	10/31/08 17:52	E_G	4746724

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: Diesel Range Organics
Method: SW8015B

WorkOrder: 08101626
Lab Batch ID: 84920

Method Blank

Samples in Analytical Batch:

RunID: HP\_Z\_081106A-4757246 Units: mg/L
Analysis Date: 11/06/2008 14:26 Analyst: NW
Preparation Date: 10/29/2008 18:43 Prep By: N\_M Method SW3510C

Lab Sample ID 08101626-01C
Client Sample ID MW-1

Table with 3 columns: Analyte, Result, Rep Limit. Rows include Diesel Range Organics (C10-C28) and Surr: n-Pentacosane.

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

RunID: HP\_Z\_081106A-4757247 Units: mg/L
Analysis Date: 11/06/2008 14:48 Analyst: NW
Preparation Date: 10/29/2008 18:43 Prep By: N\_M Method SW3510C

Table with 11 columns: Analyte, LCS Spike Added, LCS Result, LCS Percent Recovery, LCSD Spike Added, LCSD Result, LCSD Percent Recovery, RPD, RPD Limit, Lower Limit, Upper Limit. Rows include Diesel Range Organics (C10-C28) and Surr: n-Pentacosane.

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: Gasoline Range Organics
Method: SW8015B

WorkOrder: 08101626
Lab Batch ID: R255843

Method Blank

Samples in Analytical Batch:

RunID: HP\_P\_081103A-4749727 Units: mg/L
Analysis Date: 11/03/2008 17:55 Analyst: WLW
Preparation Date: 11/03/2008 17:55 Prep By: Method SW5030B
Lab Sample ID: 08101626-01B
Client Sample ID: MW-1

Table with 3 columns: Analyte, Result, Rep Limit. Rows include Gasoline Range Organics, Surr: 1,4-Difluorobenzene, and Surr: 4-Bromofluorobenzene.

Laboratory Control Sample (LCS)

RunID: HP\_P\_081103A-4749736 Units: mg/L
Analysis Date: 11/03/2008 22:40 Analyst: WLW
Preparation Date: 11/03/2008 22:40 Prep By: Method SW5030B

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Rows include Gasoline Range Organics, Surr: 1,4-Difluorobenzene, and Surr: 4-Bromofluorobenzene.

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

Sample Spiked: 08101530-02
RunID: HP\_P\_081103A-4749733 Units: mg/L
Analysis Date: 11/03/2008 21:15 Analyst: WLW

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 Gasoline Range Organics, Surr: 1,4-Difluorobenzene, and Surr: 4-Bromofluorobenzene.

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

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HOUSTON, TX 77054
(713) 660-0901

Conoco Phillips
COP EIPaso1A

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

WorkOrder: 08101626
Lab Batch ID: 85019

Method Blank

Samples in Analytical Batch:

RunID: TJA\_081104A-4752057 Units: mg/L Lab Sample ID Client Sample ID
Analysis Date: 11/04/2008 22:40 Analyst: S\_C 08101626-01E MW-1
Preparation Date: 10/31/2008 15:00 Prep By: BDG Method SW3010A

Table with 3 columns: Analyte, Result, Rep Limit. Rows include Calcium, Iron, Magnesium, Manganese, Sodium.

Laboratory Control Sample (LCS)

RunID: TJA\_081104A-4752058 Units: mg/L
Analysis Date: 11/04/2008 22:44 Analyst: S\_C
Preparation Date: 10/31/2008 15:00 Prep By: BDG Method SW3010A

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

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

Sample Spiked: 08101725-02
RunID: TJA\_081104A-4752060 Units: mg/L
Analysis Date: 11/04/2008 22:53 Analyst: S\_C
Preparation Date: 10/31/2008 15:00 Prep By: BDG 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 Calcium, Iron, Magnesium, Manganese.

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

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

WorkOrder: 08101626  
Lab Batch ID: 85019

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

Sample Spiked: 08101725-02  
RunID: TJA\_081104A-4752060 Units: mg/L  
Analysis Date: 11/04/2008 22:53 Analyst: S\_C  
Preparation Date: 10/31/2008 15:00 Prep By: BDG Method SW3010A

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Sodium	4678	1	4547	N/C	1	4751	N/C	N/C	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

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Analysis: Metals by Method 6020A, Total
Method: SW6020A

WorkOrder: 08101626
Lab Batch ID: 85019d-I

Method Blank

Samples in Analytical Batch:

RunID: ICPMS\_081104A-4750503 Units: mg/L
Analysis Date: 11/04/2008 13:42 Analyst: AL\_H
Preparation Date: 10/31/2008 15:00 Prep By: BDG Method SW3010A

Lab Sample ID 08101626-01E
Client Sample ID MW-1

Table with 3 columns: Analyte, Result, Rep Limit. Rows include Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver.

Laboratory Control Sample (LCS)

RunID: ICPMS\_081104A-4750511 Units: mg/L
Analysis Date: 11/04/2008 14:41 Analyst: AL\_H
Preparation Date: 10/31/2008 15:00 Prep By: BDG Method SW3010A

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Rows include Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver.

Post Digestion Spike (PDS) / Post Digestion Spike Duplicate (PDSD)

Sample Spiked: 08101725-02
RunID: ICPMS\_081104A-4750512 Units: mg/L
Analysis Date: 11/04/2008 14:46 Analyst: AL\_H

Table with 12 columns: Analyte, Sample Result, PDS Spike Added, PDS Result, PDS % Recovery, PDSD Spike Added, PDSD Result, PDSD % Recovery, RPD, RPD Limit, Low Limit, High Limit. Rows include Arsenic, Cadmium.

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

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Analysis: Metals by Method 6020A, Total
Method: SW6020A

WorkOrder: 08101626
Lab Batch ID: 85019d-I

Table with 12 columns: Silver, ND, 0.1, 0.06299, 62.99 \*, 0.1, 0.06274, 62.74 \*, 0.3977, 20, 75, 125

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

Sample Spiked: 08101725-02
RunID: ICPMS\_081104A-4750505 Units: mg/L
Analysis Date: 11/04/2008 13:56 Analyst: AL\_H
Preparation Date: 10/31/2008 15:00 Prep By: BDG 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 Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver.

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

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Analysis: Mercury, Total
Method: SW7470A

WorkOrder: 08101626
Lab Batch ID: 85178

Method Blank

Samples in Analytical Batch:

RunID: HGLC\_081106A-4755670 Units: mg/L Lab Sample ID Client Sample ID
Analysis Date: 11/06/2008 13:32 Analyst: F\_S 08101626-01E MW-1
Preparation Date: 11/06/2008 13:18 Prep By: F\_S Method SW7470A

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

Laboratory Control Sample (LCS)

RunID: HGLC\_081106A-4755671 Units: mg/L
Analysis Date: 11/06/2008 13:35 Analyst: F\_S
Preparation Date: 11/06/2008 13:18 Prep By: F\_S Method SW7470A

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Row: Mercury, 0.002000, 0.001983, 99.15, 80, 120

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

Sample Spiked: 08101734-09
RunID: HGLC\_081106A-4755673 Units: mg/L
Analysis Date: 11/06/2008 13:39 Analyst: F\_S
Preparation Date: 11/06/2008 13:18 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, 0.001885, 94.26, 0.002, 0.001843, 92.14, 2.266, 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

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Analysis: Semivolatile Organics by Method 8270C
Method: SW8270C

WorkOrder: 08101626
Lab Batch ID: 84949

Method Blank

Samples in Analytical Batch:

RunID: H\_081106B-4755273 Units: ug/L
Analysis Date: 11/06/2008 10:56 Analyst: GY
Preparation Date: 10/30/2008 16:53 Prep By: LLL Method SW3510C

Lab Sample ID Client Sample ID
08101626-01D MW-1

Table with 3 columns: Analyte, Result, Rep Limit. Lists various chemical compounds and their detection results (ND) and reporting limits (e.g., 5.0, 10, 25).

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

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COP EIPaso1A

Analysis: Semivolatile Organics by Method 8270C
Method: SW8270C

WorkOrder: 08101626
Lab Batch ID: 84949

Method Blank

RunID: H\_081106B-4755273 Units: ug/L
Analysis Date: 11/06/2008 10:56 Analyst: GY
Preparation Date: 10/30/2008 16:53 Prep By: LLL Method SW3510C

Table with 3 columns: Analyte, Result, Rep Limit. Lists various chemical compounds and their detection results (ND) and reporting limits.

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

RunID: H\_081106B-4755274 Units: ug/L
Analysis Date: 11/06/2008 11:26 Analyst: GY
Preparation Date: 10/30/2008 16:53 Prep By: LLL Method SW3510C

Table with 11 columns: Analyte, LCS Spike Added, LCS Result, LCS Percent Recovery, LCSD Spike Added, LCSD Result, LCSD Percent Recovery, RPD, RPD Limit, Lower Limit, Upper Limit. Shows data for 1,2,4-Trichlorobenzene and 1,2-Dichlorobenzene.

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

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Analysis: Semivolatile Organics by Method 8270C
Method: SW8270C

WorkOrder: 08101626
Lab Batch ID: 84949

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

RunID: H\_081106B-4755274 Units: ug/L
Analysis Date: 11/06/2008 11:26 Analyst: GY
Preparation Date: 10/30/2008 16:53 Prep By: LLL Method SW3510C

Table with 11 columns: Analyte, LCS Spike Added, LCS Result, LCS Percent Recovery, LCSD Spike Added, LCSD Result, LCSD Percent Recovery, RPD, RPD Limit, Lower Limit, Upper Limit. Rows list various chemical compounds and their corresponding values.

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

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Analysis: Semivolatle Organics by Method 8270C
Method: SW8270C

WorkOrder: 08101626
Lab Batch ID: 84949

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

RunID: H\_081106B-4755274 Units: ug/L
Analysis Date: 11/06/2008 11:26 Analyst: GY
Preparation Date: 10/30/2008 16:53 Prep By: LLL Method SW3510C

Table with 11 columns: Analyte, LCS Spike Added, LCS Result, LCS Percent Recovery, LCSD Spike Added, LCSD Result, LCSD Percent Recovery, RPD, RPD Limit, Lower Limit, Upper Limit. Rows include various chemical compounds like Benzoic acid, Benzyl alcohol, 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

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Analysis: Semivolatile Organics by Method 8270C
Method: SW8270C

WorkOrder: 08101626
Lab Batch ID: 84949

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

RunID: H\_081106B-4755274 Units: ug/L
Analysis Date: 11/06/2008 11:26 Analyst: GY
Preparation Date: 10/30/2008 16:53 Prep By: LLL Method SW3510C

Table with 11 columns: Analyte, LCS Spike Added, LCS Result, LCS Percent Recovery, LCSD Spike Added, LCSD Result, LCSD Percent Recovery, RPD, RPD Limit, Lower Limit, Upper Limit. Rows include 3 & 4-Methylphenol, Surr: 2,4,6-Tribromophenol, Surr: 2-Fluorobiphenyl, Surr: 2-Fluorophenol, Surr: Nitrobenzene-d5, Surr: Phenol-d5, Surr: Terphenyl-d14.

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

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Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 08101626
Lab Batch ID: R255697

Method Blank

Samples in Analytical Batch:

RunID: L\_081031D-4746718 Units: ug/L
Analysis Date: 10/31/2008 12:00 Analyst: E\_G
Preparation Date: 10/31/2008 12:00 Prep By: Method

Lab Sample ID Client Sample ID
08101626-01A MW-1
08101626-02A Trip Blank

Table with 3 columns: Analyte, Result, Rep Limit. Lists various chemical compounds and their detection results (ND) and reporting limits (e.g., 5.0, 10, 20, 100).

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

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Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 08101626
Lab Batch ID: R255697

Method Blank

RunID: L\_081031D-4746718 Units: ug/L
Analysis Date: 10/31/2008 12:00 Analyst: E\_G
Preparation Date: 10/31/2008 12:00 Prep By: Method

Table with 3 columns: Analyte, Result, Rep Limit. Lists various chemical compounds and their detection results (ND) and reporting limits.

Laboratory Control Sample (LCS)

RunID: L\_081031D-4746717 Units: ug/L
Analysis Date: 10/31/2008 11:33 Analyst: E\_G
Preparation Date: 10/31/2008 11:33 Prep By: Method

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Shows recovery data for five different analytes.

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

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Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 08101626
Lab Batch ID: R255697

Laboratory Control Sample (LCS)

RunID: L\_081031D-4746717 Units: ug/L
Analysis Date: 10/31/2008 11:33 Analyst: E\_G
Preparation Date: 10/31/2008 11:33 Prep By: Method

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Lists various chemical compounds and their corresponding values.

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

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Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 08101626
Lab Batch ID: R255697

Laboratory Control Sample (LCS)

RunID: L\_081031D-4746717 Units: ug/L
Analysis Date: 10/31/2008 11:33 Analyst: E\_G
Preparation Date: 10/31/2008 11:33 Prep By: Method

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Rows include various chemical compounds like Chloroethane, Chloroform, Chloromethane, 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

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Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 08101626
Lab Batch ID: R255697

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

Sample Spiked: 08101667-01
RunID: L\_081031D-4746720 Units: ug/L
Analysis Date: 10/31/2008 16:04 Analyst: E\_G

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 list various chemical analytes and their corresponding results.

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

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Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 08101626
Lab Batch ID: R255697

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

Sample Spiked: 08101667-01
RunID: L\_081031D-4746720 Units: ug/L
Analysis Date: 10/31/2008 16:04 Analyst: E\_G

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 various chemical compounds like Benzene, Bromobenzene, 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

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Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 08101626
Lab Batch ID: R255697

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

Sample Spiked: 08101667-01
RunID: L\_081031D-4746720 Units: ug/L
Analysis Date: 10/31/2008 16:04 Analyst: E\_G

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 various chemical compounds like cis-1,2-Dichloroethene, m,p-Xylene, etc.

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: Nitrate Nitrogen (as N), Total
Method: E353.2

WorkOrder: 08101626
Lab Batch ID: R256285A

Method Blank

Samples in Analytical Batch:

RunID: WET\_081103ZD-4757587 Units: mg/L
Analysis Date: 11/03/2008 15:17 Analyst: TW

Lab Sample ID: 08101626-01F
Client Sample ID: MW-1

Table with 3 columns: Analyte, Result, Rep Limit. Row: Nitrogen,Nitrate (As N), ND, 0.50

Laboratory Control Sample (LCS)

RunID: WET\_081103ZD-4757590 Units: mg/L
Analysis Date: 11/03/2008 15:17 Analyst: TW

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Row: Nitrogen,Nitrate (As N), 5.000, 5.372, 107.4, 90, 110

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

Sample Spiked: 08101626-01
RunID: WET\_081103ZD-4757607 Units: mg/L
Analysis Date: 11/03/2008 15:17 Analyst: TW

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: Nitrogen,Nitrate (As N), ND, 5, 4.471, 89.43 \*, 5, 4.920, 98.39, 9.548, 20, 90, 110

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: 08101626
Lab Batch ID: R256813A

Method Blank

Samples in Analytical Batch:

RunID: IC1\_081110B-4766069 Units: mg/L
Analysis Date: 11/10/2008 16:35 Analyst: TW

Lab Sample ID Client Sample ID
08101626-01F MW-1

Table with 3 columns: Analyte, Result, Rep Limit. Rows for Chloride and Fluoride.

Laboratory Control Sample (LCS)

RunID: IC1\_081110B-4766017 Units: mg/L
Analysis Date: 11/10/2008 16:51 Analyst: TW

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Rows for Chloride and Fluoride.

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

Sample Spiked: 08101597-01
RunID: IC1\_081110B-4766020 Units: mg/L
Analysis Date: 11/10/2008 18:20 Analyst: TW

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 Chloride and Fluoride.

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: 08101626
Lab Batch ID: R256827

Method Blank

Samples in Analytical Batch:

RunID: IC1\_081111A-4766432 Units: mg/L
Analysis Date: 11/11/2008 10:53 Analyst: TW

Lab Sample ID: 08101626-01F
Client Sample ID: MW-1

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

Laboratory Control Sample (LCS)

RunID: IC1\_081111A-4766433 Units: mg/L
Analysis Date: 11/11/2008 11:10 Analyst: TW

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Row: Sulfate, 10.00, 9.448, 94.48, 85, 115

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

Sample Spiked: 08101597-01
RunID: IC1\_081111A-4766437 Units: mg/L
Analysis Date: 11/11/2008 12:16 Analyst: TW

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, 1482, 1000, 2451, 96.96, 1000, 2461, 97.94, 0.4013, 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: 08101626
Lab Batch ID: R257651A

Method Blank

Samples in Analytical Batch:

RunID: IC1\_081119A-4780752 Units: mg/L
Analysis Date: 11/19/2008 18:44 Analyst: TW

Lab Sample ID Client Sample ID
08101626-01F MW-1

Table with 3 columns: Analyte, Result, Rep Limit. Row: Ortho-phosphate (As P), ND, 0.50

Laboratory Control Sample (LCS)

RunID: IC1\_081119A-4780753 Units: mg/L
Analysis Date: 11/19/2008 19:01 Analyst: TW

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Row: Ortho-phosphate (As P), 10.00, 9.167, 91.67, 85, 115

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

Sample Spiked: 08101597-01
RunID: IC1\_081119A-4780767 Units: mg/L
Analysis Date: 11/20/2008 5:09 Analyst: TW

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: Ortho-phosphate (As P), ND, 100, 101.9, 101.9, 100, 100.9, 100.9, 0.9614, 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:	08101626	Received By:	RE
Date and Time Received:	10/28/2008 9:30:00 AM	Carrier name:	Fedex-Priority
Temperature:	4.5°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?<br>1. Received Nitrate and Ortho-phosphate collected on 10/25/08. | Yes <input type="checkbox"/>            | No <input checked="" 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 type="checkbox"/>            | No <input type="checkbox"/>            | VOA Vials Not Present <input checked="" type="checkbox"/> |
| 13. Water - Preservation checked upon receipt (except VOA*)?  | Yes <input type="checkbox"/>            | No <input type="checkbox"/>            | Not Applicable <input checked="" type="checkbox"/>        |

\*VOA Preservation Checked After Sample Analysis

SPL Representative:

Contact Date & Time:

Client Name Contacted:

Non Conformance Issues:

Client Instructions:



# Chain of Custody Record

Client: Iera Tech/ Conoco Phillips

Attention: Kelly Blanchard/Iera Tech

Project: 08101626

Address: 11111 Main Street, Suite 100

City: Houston, TX

State: TX

Zip: 77001

SPE Workorder Number: 08101626

Sample ID

Date

Time

Sample Type

Container

Volume

Notes

Signature

Date

Time

Requested Analysis

0200-5V02

Remarks: Anions: Cl, F, PO4, SO4

Gen Chem - Anions

Bottle Types:

Preservative Types:

1. HCl

2. HNO3

3. HCl

4. H2SO4

Intact? Y or N

Temperature

40 4.5c

1. Amber Glass

2. 11 Glass

3. 11 Plastic

4. 11 Amber Glass

5. 8oz Plastic

Signature: Christine Matthews

Date: 10-27-08

Time: 1500

Signature: Kelly Blanchard

Date: 10/28/08

Time: 1430

Signature: Kelly Blanchard

Date: 10/28/08

Time: 1430

