

**3R - 427**

**OCT 2008**  
**GWMR**

**03/04/2009**



**TETRA TECH, INC.**

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

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**

- I. Site Location Map
2. Site Layout Map





FIGURE 1.

Site Location Map  
ConocoPhillips  
El Paso 1A  
Blanco, NM



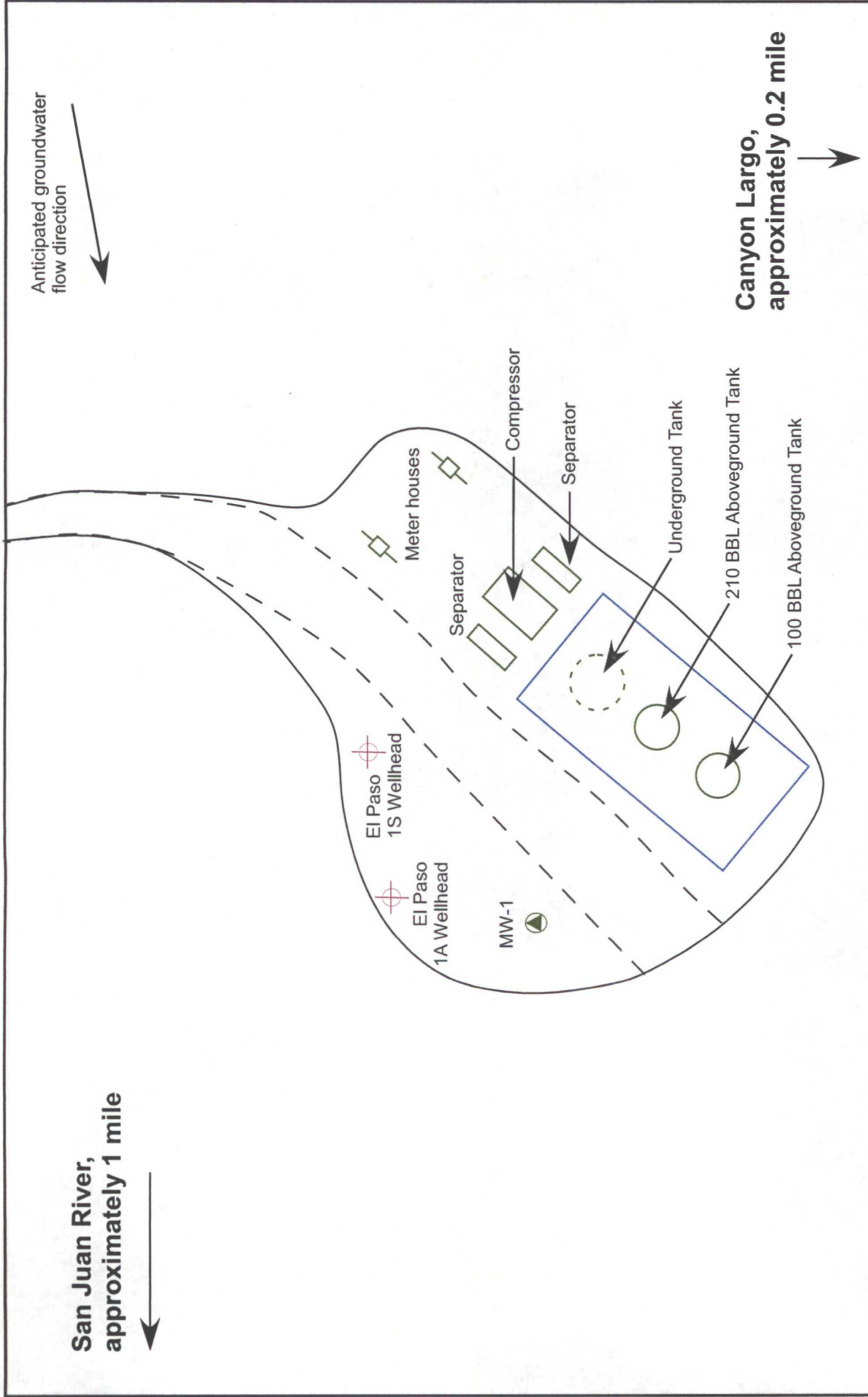
Directions from HW 64 to  
ConocoPhillips  
El Paso 1A site Location

Approximate ConocoPhillips  
El Paso 1A  
Site location



TETRA TECH, INC.





<p><b>FIGURE 2:</b>  <b>SITE FEATURES MAP</b>  <b>CONOCOPHILLIPS</b>  <b>EL PASO 1A</b>          Sec 29, Twp 29N, Rng 11W          Blanco, New Mexico</p>	<p><b>LEGEND</b></p> <div style="display: flex; justify-content: space-around;"> <div>  <b>WELLHEAD</b> </div> <div>  <b>MONITORING WELL</b> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div>  <b>BERM</b> </div> <div>  <b>EQUIPMENT</b> </div> </div> <div style="text-align: right; margin-top: 20px;">  </div>	<div style="text-align: center;">  </div>	<div style="text-align: center;">  <p><b>TETRA TECH, INC.</b></p> </div>
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## **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
			MW-1
Volatile Organic Compounds (ug/L)			
Benzene	10	5	<5
Toluene	750	-	<5
Ethylbenzene	750	700	<5
Xylenes	620	-	<5
Diesel Range Organics	-	-	0.27
General Chemistry (mg/L)			
Chloride	250	250	74.1
Sulfate	600	250 / 400	6400
Inorganic Contaminants (mg/L)			
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**





TETRA TECH, INC.

## WATER SAMPLING FIELD FORM

Project Name El Paso 1APage 1 of 1

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

Site Location San Juan County, NMSite/Well No. MW-1Coded/  
Replicate No. \_\_\_\_\_Date 10/25/08Weather Sunny warmTime Sampling  
Began 1400Time 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 10.96Diameter of Casing 2"Wet \_\_\_\_\_ Water Column in Well 2.24Gallons Pumped/Bailed  
Prior to Sampling 4 gallonsGallons per Foot 0.16Gallons in Well 0.36Sampling Pump Intake Setting  
(feet below land surface) \_\_\_\_\_Purging Equipment bailer / purge pumpX3 = 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, Metals6 - 40 mL glass VOAs 2 AmbersHCL, HNO<sub>3</sub>Gen Chem, TPH2 plastics 16oz, 2 plastics 32oz

Remarks

Removed bailer from bottom of well.Sampling Personnel Christine Mathews, Ana Morenowater is gray & has odor.

## Well Casing Volumes

Gal./ft. 1 1/4" = 0.077  
1 1/2" = 0.102" = 0.16  
2 1/2" = 0.243" = 0.37  
3 1/2" = 0.504" = 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**

<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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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"/>

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	WLV	4749742
Surr: 1,4-Difluorobenzene	90.9		% 60-155	1	11/04/08 2:57	WLV	4749742
Surr: 4-Bromofluorobenzene	105		% 50-158	1	11/04/08 2:57	WLV	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  
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. #
-----------------	--------	------	-----------	-------------	---------------	---------	--------

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

**NITRATE NITROGEN (AS N), TOTAL**

**MCL**

**E353.2**

**Units: mg/L**

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

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>MCL - Result Over Maximum Contamination Limit(MCL)

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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  
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  
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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. #
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  
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>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

Analyte	Result	Rep Limit
Diesel Range Organics (C10-C28)	ND	0.10
Surr: n-Pentacosane	57.8	20-150

### 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

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Diesel Range Organics (C10-C28)	2.00	1.90	94.9	2.00	2.07	104	8.8	20	21	130
Surr: n-Pentacosane	0.0500	0.0443	88.6	0.0500	0.0478	95.6	7.6	30	20	150

**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 ElPaso1A

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: WLV  
Preparation Date: 11/03/2008 17:55 Prep By: Method SW5030B

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

Analyte	Result	Rep Limit
Gasoline Range Organics	ND	0.10
Surr: 1,4-Difluorobenzene	90.8	60-155
Surr: 4-Bromofluorobenzene	103.7	50-158

### Laboratory Control Sample (LCS)

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

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Gasoline Range Organics	1.00	1.05	105	42	136
Surr: 1,4-Difluorobenzene	0.100	0.0943	94.3	60	155
Surr: 4-Bromofluorobenzene	0.100	0.106	106	50	158

### 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: WLV

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Gasoline Range Organics	1.07	1	1.17	102 *	1	1.17	106 *	0.359	36	22	174
Surr: 1,4-Difluorobenzene	ND	0.1	0.0993	99.3	0.1	0.104	104	4.82	30	60	155
Surr: 4-Bromofluorobenzene	ND	0.1	0.112	112	0.1	0.112	112	0.268	30	50	158

**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

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# 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: 08101626  
Lab Batch ID: 85019

### Method Blank

### Samples in Analytical Batch:

RunID: TJA\_081104A-4752057 Units: mg/L  
Analysis Date: 11/04/2008 22:40 Analyst: S\_C  
Preparation Date: 10/31/2008 15:00 Prep By: BDG Method SW3010A

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

Analyte	Result	Rep Limit
Calcium	ND	0.1
Iron	ND	0.02
Magnesium	ND	0.1
Manganese	ND	0.005
Sodium	ND	0.5

### 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

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Calcium	1.000	1.052	105.2	80	120
Iron	1.000	1.005	100.5	80	120
Magnesium	1.000	1.005	100.5	80	120
Manganese	1.000	1.016	101.6	80	120
Sodium	1.000	1.079	107.9	80	120

### 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
Calcium	1026	1	1001	N/C	1	1055	N/C	N/C	20	75	125
Iron	0.5156	1	1.480	96.44	1	1.502	98.59	1.440	20	75	125
Magnesium	1406	1	1370	N/C	1	1442	N/C	N/C	20	75	125
Manganese	18.28	1	18.82	N/C	1	19.79	N/C	N/C	20	75	125

**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

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## 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: 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

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## 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: 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

Analyte	Result	Rep Limit
Arsenic	ND	0.005
Barium	ND	0.005
Cadmium	ND	0.005
Chromium	ND	0.005
Lead	ND	0.005
Selenium	ND	0.005
Silver	ND	0.005

#### 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

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Arsenic	0.1000	0.1014	101.4	80	120
Barium	0.1000	0.09790	97.90	80	120
Cadmium	0.1000	0.09410	94.10	80	120
Chromium	0.1000	0.09262	92.62	80	120
Lead	0.1000	0.09830	98.30	80	120
Selenium	0.1000	0.1038	103.8	80	120
Silver	0.1000	0.09411	94.11	80	120

#### 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

Analyte	Sample Result	PDS Spike Added	PDS Result	PDS % Recovery	PDSD Spike Added	PDSD Result	PDSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Arsenic	0.00857	0.1	0.08618	77.61	0.1	0.0854	76.83	0.9092	20	75	125
Cadmium	ND	0.1	0.06186	61.86 *	0.1	0.06181	61.81 *	0.08086	20	75	125

**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

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# 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: 08101626  
Lab Batch ID: 85019d-I

Silver	ND	0.1	0.06299	62.99 *	0.1	0.06274	62.74 *	0.3977	20	75	125
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### 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

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Arsenic	0.008570	0.1	0.08153	72.96 *	0.1	0.08008	71.51 *	1.794	20	75	125
Barium	0.03462	0.1	0.1285	93.88	0.1	0.1218	87.18	5.354	20	75	125
Cadmium	ND	0.1	0.06051	60.51 *	0.1	0.05932	59.32 *	1.986	20	75	125
Chromium	ND	0.1	0.07857	78.57	0.1	0.07566	75.66	3.774	20	75	125
Lead	ND	0.1	0.1001	100.1	0.1	0.1008	100.8	0.6969	20	75	125
Selenium	0.02830	0.1	0.1066	78.30	0.1	0.1125	84.20	5.386	20	75	125
Silver	ND	0.1	0.06497	64.97 *	0.1	0.06439	64.39 *	0.8967	20	75	125

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  
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# Quality Control Report

HOUSTON LABORATORY  
8880 INTERCHANGE DRIVE  
HOUSTON, TX 77054  
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## Conoco Phillips COP EIPaso1A

Analysis: Mercury, Total  
Method: SW7470A

WorkOrder: 08101626  
Lab Batch ID: 85178

### Method Blank

### Samples in Analytical Batch:

RunID: HGLC\_081106A-4755670 Units: mg/L  
Analysis Date: 11/06/2008 13:32 Analyst: F\_S  
Preparation Date: 11/06/2008 13:18 Prep By: F\_S Method SW7470A

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

Analyte	Result	Rep Limit
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

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
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

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
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  
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

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## Quality Control Report

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

### Conoco Phillips COP EIPaso1A

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 08101626-01D  
Client Sample ID MW-1

Analyte	Result	Rep Limit
1,2,4-Trichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Diphenylhydrazine	ND	10
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
2,4,5-Trichlorophenol	ND	10
2,4,6-Trichlorophenol	ND	5.0
2,4-Dichlorophenol	ND	5.0
2,4-Dimethylphenol	ND	5.0
2,4-Dinitrophenol	ND	25
2,4-Dinitrotoluene	ND	5.0
2,6-Dinitrotoluene	ND	5.0
2-Chloronaphthalene	ND	5.0
2-Chlorophenol	ND	5.0
2-Methylnaphthalene	ND	5.0
2-Nitroaniline	ND	25
2-Nitrophenol	ND	5.0
3,3'-Dichlorobenzidine	ND	10
3-Nitroaniline	ND	25
4,6-Dinitro-2-methylphenol	ND	25
4-Bromophenyl phenyl ether	ND	5.0
4-Chloro-3-methylphenol	ND	5.0
4-Chloroaniline	ND	5.0
4-Chlorophenyl phenyl ether	ND	5.0
4-Nitroaniline	ND	25
4-Nitrophenol	ND	25
Acenaphthene	ND	5.0
Acenaphthylene	ND	5.0
Aniline	ND	5.0
Anthracene	ND	5.0
Benz(a)anthracene	ND	5.0
Benzo(a)pyrene	ND	5.0
Benzo(b)fluoranthene	ND	5.0
Benzo(g,h,i)perylene	ND	5.0
Benzo(k)fluoranthene	ND	5.0
Benzoic acid	ND	25
Benzyl alcohol	ND	5.0
Bis(2-chloroethoxy)methane	ND	5.0
Bis(2-chloroethyl)ether	ND	5.0
Bis(2-chloroisopropyl)ether	ND	5.0
Bis(2-ethylhexyl)phthalate	ND	5.0
Butyl benzyl phthalate	ND	5.0
Carbazole	ND	5.0
Chrysene	ND	5.0
Dibenz(a,h)anthracene	ND	5.0
Dibenzofuran	ND	5.0

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  
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## Quality Control Report

HOUSTON LABORATORY  
8880 INTERCHANGE DRIVE  
HOUSTON, TX 77054  
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### Conoco Phillips 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

Analyte	Result	Rep Limit
Diethyl phthalate	ND	5.0
Dimethyl phthalate	ND	5.0
Di-n-butyl phthalate	ND	5.0
Di-n-octyl phthalate	ND	5.0
Fluoranthene	ND	5.0
Fluorene	ND	5.0
Hexachlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Hexachlorocyclopentadiene	ND	5.0
Hexachloroethane	ND	5.0
Indeno(1,2,3-cd)pyrene	ND	5.0
Isophorone	ND	5.0
Naphthalene	ND	5.0
Nitrobenzene	ND	5.0
N-Nitrosodi-n-propylamine	ND	5.0
N-Nitrosodiphenylamine	ND	5.0
Pentachlorophenol	ND	25
Phenanthrene	ND	5.0
Phenol	ND	5.0
Pyrene	ND	5.0
Pyridine	ND	5.0
2-Methylphenol	ND	5.0
3 & 4-Methylphenol	ND	5.0
Surr: 2,4,6-Tribromophenol	76.0	10-123
Surr: 2-Fluorobiphenyl	82.0	23-116
Surr: 2-Fluorophenol	78.7	16-110
Surr: Nitrobenzene-d5	76.0	21-114
Surr: Phenol-d5	85.3	10-110
Surr: Terphenyl-d14	80.0	22-141

#### 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

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
1,2,4-Trichlorobenzene	25.0	19.0	76.0	25.0	20.0	80.0	5.1	39	21	120
1,2-Dichlorobenzene	25.0	20.0	80.0	25.0	20.0	80.0	0.0	50	20	150

**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

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# Quality Control Report

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

## Conoco Phillips COP EIPaso1A

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

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
1,2-Diphenylhydrazine	25.0	18.0	72.0	25.0	19.0	76.0	5.4	50	10	251
1,3-Dichlorobenzene	25.0	19.0	76.0	25.0	20.0	80.0	5.1	50	20	150
1,4-Dichlorobenzene	25.0	20.0	80.0	25.0	20.0	80.0	0.0	45	20	150
2,4,5-Trichlorophenol	25.0	20.0	80.0	25.0	23.0	92.0	14.0	50	30	150
2,4,6-Trichlorophenol	25.0	20.0	80.0	25.0	22.0	88.0	9.5	50	30	150
2,4-Dichlorophenol	25.0	20.0	80.0	25.0	21.0	84.0	4.9	50	30	150
2,4-Dimethylphenol	25.0	21.0	84.0	25.0	22.0	88.0	4.7	50	32	140
2,4-Dinitrophenol	25.0	14.0	56.0	25.0	15.0	60.0	6.9	50	10	160
2,4-Dinitrotoluene	25.0	22.0	88.0	25.0	24.0	96.0	8.7	50	30	150
2,6-Dinitrotoluene	25.0	20.0	80.0	25.0	23.0	92.0	14.0	50	30	150
2-Chloronaphthalene	25.0	22.0	88.0	25.0	24.0	96.0	8.7	50	30	150
2-Chlorophenol	25.0	21.0	84.0	25.0	22.0	88.0	4.7	40	23	134
2-Methylnaphthalene	25.0	22.0	88.0	25.0	23.0	92.0	4.4	50	20	170
2-Nitroaniline	25.0	22.0	88.0	25.0	24.0	96.0	8.7	50	20	160
2-Nitrophenol	25.0	19.0	76.0	25.0	22.0	88.0	14.6	50	29	182
3,3'-Dichlorobenzidine	25.0	19.0	76.0	25.0	20.0	80.0	5.1	50	30	200
3-Nitroaniline	25.0	19.0	76.0	25.0	22.0	88.0	14.6	50	20	160
4,6-Dinitro-2-methylphenol	25.0	17.0	68.0	25.0	18.0	72.0	5.7	50	10	160
4-Bromophenyl phenyl ether	25.0	22.0	88.0	25.0	22.0	88.0	0.0	50	30	150
4-Chloro-3-methylphenol	25.0	20.0	80.0	25.0	22.0	88.0	9.5	42	25	160
4-Chloroaniline	25.0	21.0	84.0	25.0	23.0	92.0	9.1	50	20	160
4-Chlorophenyl phenyl ether	25.0	23.0	92.0	25.0	24.0	96.0	4.3	50	25	158
4-Nitroaniline	25.0	20.0	80.0	25.0	24.0	96.0	18.2	50	20	160
4-Nitrophenol	25.0	18.0	72.0	25.0	20.0	80.0	10.5	50	10	132
Acenaphthene	25.0	21.0	84.0	25.0	22.0	88.0	4.7	31	30	150
Acenaphthylene	25.0	21.0	84.0	25.0	22.0	88.0	4.7	50	33	250
Aniline	50.0	41.0	82.0	50.0	44.0	88.0	7.1	50	10	135
Anthracene	25.0	21.0	84.0	25.0	22.0	88.0	4.7	50	27	133
Benz(a)anthracene	25.0	22.0	88.0	25.0	22.0	88.0	0.0	50	33	143
Benzo(a)pyrene	25.0	19.0	76.0	25.0	20.0	80.0	5.1	50	17	163
Benzo(b)fluoranthene	25.0	20.0	80.0	25.0	22.0	88.0	9.5	50	24	159
Benzo(g,h,i)perylene	25.0	22.0	88.0	25.0	23.0	92.0	4.4	50	30	160
Benzo(k)fluoranthene	25.0	23.0	92.0	25.0	22.0	88.0	4.4	50	11	162

**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

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# Quality Control Report

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

## Conoco Phillips COP ElPaso1A

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

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Benzoic acid	25.0	40.0	160	25.0	40.0	160	0.0	50	10	400
Benzyl alcohol	25.0	19.0	76.0	25.0	20.0	80.0	5.1	50	30	160
Bis(2-chloroethoxy)methane	25.0	33.0	132	25.0	36.0	144	8.7	50	33	184
Bis(2-chloroethyl)ether	25.0	22.0	88.0	25.0	22.0	88.0	0.0	50	12	158
Bis(2-chloroisopropyl)ether	25.0	23.0	92.0	25.0	24.0	96.0	4.3	50	20	160
Bis(2-ethylhexyl)phthalate	25.0	22.0	88.0	25.0	22.0	88.0	0.0	50	10	158
Butyl benzyl phthalate	25.0	22.0	88.0	25.0	23.0	92.0	4.4	50	30	160
Carbazole	25.0	21.0	84.0	25.0	22.0	88.0	4.7	50	30	150
Chrysene	25.0	22.0	88.0	25.0	22.0	88.0	0.0	50	17	168
Dibenz(a,h)anthracene	25.0	22.0	88.0	25.0	22.0	88.0	0.0	50	30	160
Dibenzofuran	25.0	21.0	84.0	25.0	22.0	88.0	4.7	50	30	150
Diethyl phthalate	25.0	21.0	84.0	25.0	23.0	92.0	9.1	50	30	160
Dimethyl phthalate	25.0	21.0	84.0	25.0	22.0	88.0	4.7	50	30	160
Di-n-butyl phthalate	25.0	21.0	84.0	25.0	22.0	88.0	4.7	50	30	160
Di-n-octyl phthalate	25.0	21.0	84.0	25.0	22.0	88.0	4.7	50	20	150
Fluoranthene	25.0	21.0	84.0	25.0	22.0	88.0	4.7	50	26	137
Fluorene	25.0	21.0	84.0	25.0	23.0	92.0	9.1	50	30	150
Hexachlorobenzene	25.0	20.0	80.0	25.0	21.0	84.0	4.9	50	20	150
Hexachlorobutadiene	25.0	19.0	76.0	25.0	20.0	80.0	5.1	50	20	140
Hexachlorocyclopentadiene	25.0	17.0	68.0	25.0	18.0	72.0	5.7	50	10	150
Hexachloroethane	25.0	19.0	76.0	25.0	20.0	80.0	5.1	50	14	120
Indeno(1,2,3-cd)pyrene	25.0	23.0	92.0	25.0	24.0	96.0	4.3	50	30	160
Isophorone	25.0	22.0	88.0	25.0	24.0	96.0	8.7	50	21	196
Naphthalene	25.0	20.0	80.0	25.0	21.0	84.0	4.9	50	21	133
Nitrobenzene	25.0	20.0	80.0	25.0	21.0	84.0	4.9	50	20	160
N-Nitrosodi-n-propylamine	25.0	22.0	88.0	25.0	23.0	92.0	4.4	38	30	160
N-Nitrosodiphenylamine	50.0	51.0	102	50.0	52.0	104	1.9	50	30	150
Pentachlorophenol	25.0	14.0	56.0	25.0	15.0	60.0	6.9	50	14	176
Phenanthrene	25.0	20.0	80.0	25.0	21.0	84.0	4.9	50	10	140
Phenol	25.0	21.0	84.0	25.0	23.0	92.0	9.1	42	40	132
Pyrene	25.0	22.0	88.0	25.0	22.0	88.0	0.0	38	30	150
Pyridine	50.0	35.0	70.0	50.0	34.0	68.0	2.9	50	10	150
2-Methylphenol	25.0	21.0	84.0	25.0	23.0	92.0	9.1	50	30	160

**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.  
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## Quality Control Report

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

### Conoco Phillips COP EIPaso1A

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

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
3 & 4-Methylphenol	25.0	19.0	76.0	25.0	21.0	84.0	10.0	50	10	160
Surr: 2,4,6-Tribromophenol	75.0	64.0	85.3	75.0	70.0	93.3	9.0	30	10	123
Surr: 2-Fluorobiphenyl	50.0	42.0	84.0	50.0	41.0	82.0	2.4	30	23	116
Surr: 2-Fluorophenol	75.0	62.0	82.7	75.0	65.0	86.7	4.7	30	16	110
Surr: Nitrobenzene-d5	50.0	40.0	80.0	50.0	42.0	84.0	4.9	30	21	114
Surr: Phenol-d5	75.0	65.0	86.7	75.0	69.0	92.0	6.0	30	10	110
Surr: Terphenyl-d14	50.0	42.0	84.0	50.0	42.0	84.0	0.0	30	22	141

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.  
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## 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: 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

Analyte	Result	Rep Limit
1,1,1,2-Tetrachloroethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
1,1-Dichloroethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloropropene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0
1,2,3-Trichloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
1,2-Dibromo-3-chloropropane	ND	5.0
1,2-Dibromoethane	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dichloroethane	ND	5.0
1,2-Dichloropropane	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,3-Dichloropropane	ND	5.0
1,4-Dichlorobenzene	ND	5.0
2,2-Dichloropropane	ND	5.0
2-Butanone	ND	20
2-Chloroethyl vinyl ether	ND	10
2-Chlorotoluene	ND	5.0
2-Hexanone	ND	10
4-Chlorotoluene	ND	5.0
4-Isopropyltoluene	ND	5.0
4-Methyl-2-pentanone	ND	10
Acetone	ND	100
Acrylonitrile	ND	5.0
Benzene	ND	5.0
Bromobenzene	ND	5.0
Bromochloromethane	ND	5.0
Bromodichloromethane	ND	5.0
Bromoform	ND	5.0
Bromomethane	ND	10
Carbon disulfide	ND	5.0
Carbon tetrachloride	ND	5.0
Chlorobenzene	ND	5.0
Chloroethane	ND	10
Chloroform	ND	5.0
Chloromethane	ND	10
Dibromochloromethane	ND	5.0
Dibromomethane	ND	5.0
Dichlorodifluoromethane	ND	10
Ethylbenzene	ND	5.0

**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

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## 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: 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

Analyte	Result	Rep Limit
Hexachlorobutadiene	ND	5.0
Isopropylbenzene	ND	5.0
Methyl tert-butyl ether	ND	5.0
Methylene chloride	ND	5.0
Naphthalene	ND	5.0
n-Butylbenzene	ND	5.0
n-Propylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
Styrene	ND	5.0
tert-Butylbenzene	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Trichloroethene	ND	5.0
Trichlorofluoromethane	ND	5.0
Vinyl acetate	ND	10
Vinyl chloride	ND	10
cis-1,2-Dichloroethene	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
m,p-Xylene	ND	5.0
o-Xylene	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,2-Dichloroethene (total)	ND	5.0
Xylenes, Total	ND	5.0
Surr: 1,2-Dichloroethane-d4	106.0	62-130
Surr: 4-Bromofluorobenzene	98.0	70-130
Surr: Toluene-d8	104.0	74-122

#### 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

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,1,1,2-Tetrachloroethane	20.0	22.0	110	71	136
1,1,1-Trichloroethane	20.0	19.0	95.0	66	132
1,1,2,2-Tetrachloroethane	20.0	27.0	135	55	139
1,1,2-Trichloroethane	20.0	25.0	125	70	130
1,1-Dichloroethane	20.0	22.0	110	67	131

**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  
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## 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: 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

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,1-Dichloroethene	20.0	22.0	110	71	146
1,1-Dichloropropene	20.0	22.0	110	59	138
1,2,3-Trichlorobenzene	20.0	25.0	125	37	155
1,2,3-Trichloropropane	20.0	27.0	135	70	145
1,2,4-Trichlorobenzene	20.0	24.0	120	39	133
1,2,4-Trimethylbenzene	20.0	21.0	105	53	147
1,2-Dibromo-3-chloropropane	20.0	27.0	135	43	137
1,2-Dibromoethane	20.0	24.0	120	63	126
1,2-Dichlorobenzene	20.0	23.0	115	70	130
1,2-Dichloroethane	20.0	22.0	110	64	150
1,2-Dichloropropane	20.0	23.0	115	76	124
1,3,5-Trimethylbenzene	20.0	21.0	105	57	146
1,3-Dichlorobenzene	20.0	22.0	110	72	134
1,3-Dichloropropane	20.0	24.0	120	78	130
1,4-Dichlorobenzene	20.0	23.0	115	70	130
2,2-Dichloropropane	20.0	17.0	85.0	45	156
2-Butanone	120	230	192	20	235
2-Chloroethyl vinyl ether	20.0	22.0	110	13	179
2-Chlorotoluene	20.0	22.0	110	64	122
2-Hexanone	20.0	34.0	170	34	182
4-Chlorotoluene	20.0	22.0	110	64	142
4-Isopropyltoluene	20.0	22.0	110	60	134
4-Methyl-2-pentanone	20.0	25.0	125	11	145
Acetone	200	500	250	13	386
Acrylonitrile	100	130	130	43	194
Benzene	20.0	23.0	115	76	126
Bromobenzene	20.0	23.0	115	70	130
Bromochloromethane	20.0	23.0	115	63	131
Bromodichloromethane	20.0	23.0	115	77	138
Bromoform	20.0	19.0	95.0	55	129
Bromomethane	20.0	22.0	110	58	148
Carbon disulfide	20.0	19.0	95.0	46	146
Carbon tetrachloride	20.0	19.0	95.0	66	137
Chlorobenzene	20.0	23.0	115	67	136

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference  
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## 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: 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

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Chloroethane	20.0	20.0	100	50	137
Chloroform	20.0	22.0	110	70	135
Chloromethane	20.0	18.0	90.0	51	140
Dibromochloromethane	20.0	21.0	105	69	127
Dibromomethane	20.0	25.0	125	74	130
Dichlorodifluoromethane	20.0	19.0	95.0	32	161
Ethylbenzene	20.0	24.0	120	67	122
Hexachlorobutadiene	20.0	23.0	115	43	144
Isopropylbenzene	20.0	20.0	100	60	135
Methyl tert-butyl ether	40.0	43.0	108	48	160
Methylene chloride	20.0	21.0	105	52	143
Naphthalene	20.0	25.0	125	24	150
n-Butylbenzene	20.0	22.0	110	50	140
n-Propylbenzene	20.0	22.0	110	62	137
sec-Butylbenzene	20.0	22.0	110	66	126
Styrene	20.0	22.0	110	60	139
tert-Butylbenzene	20.0	21.0	105	67	140
Tetrachloroethene	20.0	23.0	115	26	200
Toluene	20.0	23.0	115	70	131
Trichloroethene	20.0	22.0	110	64	137
Trichlorofluoromethane	20.0	18.0	90.0	46	167
Vinyl acetate	20.0	24.0	120	10	193
Vinyl chloride	20.0	25.0	125	31	147
cis-1,2-Dichloroethene	20.0	22.0	110	70	142
cis-1,3-Dichloropropene	20.0	22.0	110	61	134
m,p-Xylene	40.0	50.0	125	72	150
o-Xylene	20.0	23.0	115	78	141
trans-1,2-Dichloroethene	20.0	22.0	110	67	141
trans-1,3-Dichloropropene	20.0	21.0	105	56	136
1,2-Dichloroethene (total)	40	44	110	73	139
Xylenes, Total	60	73	120	72	150
Surr: 1,2-Dichloroethane-d4	50.0	54	108	62	130
Surr: 4-Bromofluorobenzene	50.0	52	104	70	130
Surr: Toluene-d8	50.0	52	104	74	122

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.  
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# 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: 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

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
1,1,1,2-Tetrachloroethane	ND	20	17.0	85.0	20	17.0	85.0	0	20	35	175
1,1,1-Trichloroethane	ND	20	15.0	75.0	20	16.0	80.0	6.45	20	35	175
1,1,2,2-Tetrachloroethane	ND	20	17.0	85.0	20	17.0	85.0	0	20	35	175
1,1,2-Trichloroethane	ND	20	20.0	100	20	20.0	100	0	20	35	175
1,1-Dichloroethane	ND	20	19.0	95.0	20	19.0	95.0	0	20	35	175
1,1-Dichloroethene	ND	20	18.0	90.0	20	19.0	95.0	5.41	22	61	145
1,1-Dichloropropene	ND	20	18.0	90.0	20	19.0	95.0	5.41	20	35	175
1,2,3-Trichlorobenzene	ND	20	17.0	85.0	20	16.0	80.0	6.06	20	27	187
1,2,3-Trichloropropane	ND	20	18.0	90.0	20	19.0	95.0	5.41	20	35	175
1,2,4-Trichlorobenzene	ND	20	18.0	90.0	20	18.0	90.0	0	20	34	150
1,2,4-Trimethylbenzene	ND	20	18.0	90.0	20	18.0	90.0	0	20	35	175
1,2-Dibromo-3-chloropropane	ND	20	18.0	90.0	20	20.0	100	10.5	20	15	175
1,2-Dibromoethane	ND	20	19.0	95.0	20	19.0	95.0	0	20	35	175
1,2-Dichlorobenzene	ND	20	19.0	95.0	20	18.0	90.0	5.41	20	35	175
1,2-Dichloroethane	ND	20	18.0	90.0	20	18.0	90.0	0	20	35	175
1,2-Dichloropropane	ND	20	19.0	95.0	20	20.0	100	5.13	20	35	175
1,3,5-Trimethylbenzene	ND	20	18.0	90.0	20	18.0	90.0	0	20	35	175
1,3-Dichlorobenzene	ND	20	18.0	90.0	20	18.0	90.0	0	20	35	175
1,3-Dichloropropane	ND	20	20.0	100	20	20.0	100	0	20	35	175
1,4-Dichlorobenzene	ND	20	18.0	90.0	20	18.0	90.0	0	20	35	175
2,2-Dichloropropane	ND	20	13.0	65.0	20	14.0	70.0	7.41	20	35	175
2-Butanone	ND	20	18.0	90.0	20	21.0	105	15.4	20	10	230
2-Chloroethyl vinyl ether	ND	20	0	0 *	20	0	0 *	0	20	10	250
2-Chlorotoluene	ND	20	18.0	90.0	20	18.0	90.0	0	20	31	175
2-Hexanone	ND	20	15.0	75.0	20	17.0	85.0	12.5	20	10	250
4-Chlorotoluene	ND	20	18.0	90.0	20	19.0	95.0	5.41	20	31	175
4-Isopropyltoluene	ND	20	17.0	85.0	20	17.0	85.0	0	20	35	175
4-Methyl-2-pentanone	ND	20	17.0	85.0	20	18.0	90.0	5.71	20	10	175
Acetone	ND	100	92.0	92.0	100	96.0	96.0	4.26	20	10	400
Acrylonitrile	ND	200	200	100	200	210	105	4.88	20	15	250

**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: 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

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Benzene	ND	20	19.0	95.0	20	19.0	95.0	0	22	76	127
Bromobenzene	ND	20	19.0	95.0	20	19.0	95.0	0	20	35	175
Bromochloromethane	ND	20	20.0	100	20	21.0	105	4.88	20	35	175
Bromodichloromethane	ND	20	17.0	85.0	20	18.0	90.0	5.71	20	35	175
Bromoform	ND	20	15.0	75.0	20	15.0	75.0	0	20	35	175
Bromomethane	ND	20	18.0	90.0	20	19.0	95.0	5.41	20	35	175
Carbon disulfide	ND	20	16.0	80.0	20	17.0	85.0	6.06	20	30	225
Carbon tetrachloride	ND	20	15.0	75.0	20	15.0	75.0	0	20	35	175
Chlorobenzene	ND	20	18.0	90.0	20	18.0	90.0	0	21	70	130
Chloroethane	ND	20	20.0	100	20	21.0	105	4.88	20	35	175
Chloroform	ND	20	19.0	95.0	20	20.0	100	5.13	20	35	175
Chloromethane	ND	20	16.0	80.0	20	17.0	85.0	6.06	20	35	175
Dibromochloromethane	ND	20	16.0	80.0	20	16.0	80.0	0	20	35	175
Dibromomethane	ND	20	20.0	100	20	19.0	95.0	5.13	20	35	175
Dichlorodifluoromethane	ND	20	14.0	70.0	20	14.0	70.0	0	20	35	175
Ethylbenzene	ND	20	18.0	90.0	20	18.0	90.0	0	20	35	175
Hexachlorobutadiene	ND	20	18.0	90.0	20	17.0	85.0	5.71	20	43	144
Isopropylbenzene	ND	20	18.0	90.0	20	18.0	90.0	0	20	35	175
Methyl tert-butyl ether	ND	20	18.0	90.0	20	19.0	95.0	5.41	20	35	175
Methylene chloride	ND	20	18.0	90.0	20	19.0	95.0	5.41	20	35	175
Naphthalene	ND	20	20.0	100	20	19.0	95.0	5.13	20	20	210
n-Butylbenzene	ND	20	18.0	90.0	20	18.0	90.0	0	20	35	175
n-Propylbenzene	ND	20	18.0	90.0	20	19.0	95.0	5.41	20	35	175
sec-Butylbenzene	ND	20	18.0	90.0	20	18.0	90.0	0	20	35	175
Styrene	ND	20	18.0	90.0	20	18.0	90.0	0	20	35	175
tert-Butylbenzene	ND	20	17.0	85.0	20	18.0	90.0	5.71	20	35	175
Tetrachloroethene	ND	20	18.0	90.0	20	18.0	90.0	0	20	30	250
Toluene	ND	20	18.0	90.0	20	18.0	90.0	0	24	70	131
Trichloroethene	ND	20	18.0	90.0	20	18.0	90.0	0	21	60	140
Trichlorofluoromethane	ND	20	16.0	80.0	20	16.0	80.0	0	20	17	250
Vinyl acetate	ND	20	18.0	90.0	20	19.0	95.0	5.41	20	10	250
Vinyl chloride	ND	20	25.0	110	20	27.0	120	7.69	20	35	175

**Qualifiers:** ND/U - Not Detected at the Reporting Limit MI - Matrix Interference  
B/V - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution  
J - Estimated value between MDL and PQL \* - Recovery Outside Advisable QC Limits  
E - Estimated Value exceeds calibration curve  
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.  
TNTC - Too numerous to count

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

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## Quality Control Report

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

### Conoco Phillips COP ElPaso1A

Analysis: Volatile Organics by Method 8260B  
Method: SW8260B

WorkOrder: 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

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
cis-1,2-Dichloroethene	ND	20	20.0	95.0	20	20.0	95.0	0	20	35	175
cis-1,3-Dichloropropene	ND	20	18.0	90.0	20	18.0	90.0	0	20	35	175
m,p-Xylene	ND	40	37.0	92.5	40	36.0	90.0	2.74	20	35	175
o-Xylene	ND	20	18.0	90.0	20	18.0	90.0	0	20	35	175
trans-1,2-Dichloroethene	ND	20	18.0	90.0	20	19.0	95.0	5.41	20	35	175
trans-1,3-Dichloropropene	ND	20	16.0	80.0	20	16.0	80.0	0	20	35	175
1,2-Dichloroethene (total)	ND	40	38	92	40	39	95	2.6	20	35	175
Xylenes, Total	ND	60	55	92	60	54	90	1.8	20	35	175
Surr: 1,2-Dichloroethane-d4	ND	50	51	102	50	52.0	104	1.94	30	62	130
Surr: 4-Bromofluorobenzene	ND	50	51	102	50	50.0	100	1.98	30	70	130
Surr: Toluene-d8	ND	50	51	102	50	51.0	102	0	30	74	122

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.

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## Quality Control Report

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

### Conoco Phillips COP ElPaso1A

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

#### Lab Sample ID

#### Client Sample ID

Analysis Date: 11/03/2008 15:17 Analyst: TW

08101626-01F

MW-1

Analyte	Result	Rep Limit
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

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
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

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
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  
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.

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## 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

#### Lab Sample ID

#### Client Sample ID

Analysis Date: 11/10/2008 16:35 Analyst: TW

08101626-01F

MW-1

Analyte	Result	Rep Limit
Chloride	ND	0.50
Fluoride	ND	0.50

#### Laboratory Control Sample (LCS)

RunID: IC1\_081110B-4766017 Units: mg/L

Analysis Date: 11/10/2008 16:51 Analyst: TW

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Chloride	10.00	9.409	94.09	85	115
Fluoride	10.00	10.03	100.3	85	115

#### 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

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Chloride	18.90	40	58.79	99.73	40	56.56	94.14	3.874	20	80	120
Fluoride	ND	40	40.16	98.60	40	38.85	95.32	3.324	20	80	120

**Qualifiers:** ND/U - Not Detected at the Reporting Limit  
B/V - Analyte detected in the associated Method Blank  
J - Estimated value between MDL and PQL  
E - Estimated Value exceeds calibration curve  
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.  
TNTC - Too numerous to count  
MI - Matrix Interference  
D - Recovery Unreportable due to Dilution  
\* - Recovery Outside Advisable QC Limits

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

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# 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 Client Sample ID  
08101626-01F MW-1

Analyte	Result	Rep Limit
Sulfate	ND	0.50

### Laboratory Control Sample (LCS)

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

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
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

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Sulfate	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.

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## 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

#### Lab Sample ID

#### Client Sample ID

Analysis Date: 11/19/2008 18:44 Analyst: TW

08101626-01F

MW-1

Analyte	Result	Rep Limit
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

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
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

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
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

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*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: Elder, Allen

Contact Date & Time: 10/29/2008 3:00:00 PM

Client Name Contacted: Kelley Blanchard

Non Conformance Issues: 1. Continue with analysis per historicals.

Client Instructions: Notified client of expirations via email and that we will proceed with analysis.



# Chain of Custody Record

Client: Tetra Tech/ Conoco Phillips

Attention: Kelly Blanchard/Tetra Tech

Project: 08101626

Address: 10000 Highway 100, Suite 100

City: Houston, TX 77055

Phone: 281-410-1100

Fax: 281-410-1101

E-mail: kblanchard@tetra-tech.com

Sample ID: MW-1

Sample ID: MW-1

Sample ID: MW-1

Sample ID: MW-1

Sample ID: MW-1

Sample ID: MW-1

Sample ID: Trip Blank

Sample ID: MW-1

Sample ID: MW-1

Sample ID: MW-1

Sample ID: MW-1

Sample ID: MW-1

Sample ID: MW-1

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Requested Analysis

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