

3R-434

**Quarterly
Groundwater
Monitoring Report**

**Date:
10/2008**

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

**CONOCOPHILLIPS
FAYE BURDETTE NO. 1
AZTEC, 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. 9690127.100

February 11, 2009

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QUARTERLY GROUNDWATER MONITORING REPORT CONOCOPHILLIPS FAYE BURDETTE NO. 1, AZTEC, NEW MEXICO

1.0 INTRODUCTION

This report presents the results of quarterly groundwater monitoring completed by Tetra Tech, Inc. (Tetra Tech) on October 22, 2008, at the ConocoPhillips, formerly Burlington Resources, Faye Burdette No. 1 Site in Aztec, 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 550 and Pioneer in Aztec, NM. The site can be reached by turning onto Pioneer from 550 and staying on Pioneer until reaching Long Lane. Once reaching Long Lane, turn left and proceed forward until reaching the site on the left. The site consists of a gas production well head and associated equipment and installations. The location and general features of the Faye Burdette No. 1 site are shown on **Figures 1** and **2**, respectively.

1.1 Site History

The history of the ConocoPhillips Faye Burdette No. 1 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 3 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 constituents 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 sampling at Faye Burdette No. 1 in order to provide sufficient data for site closure. 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

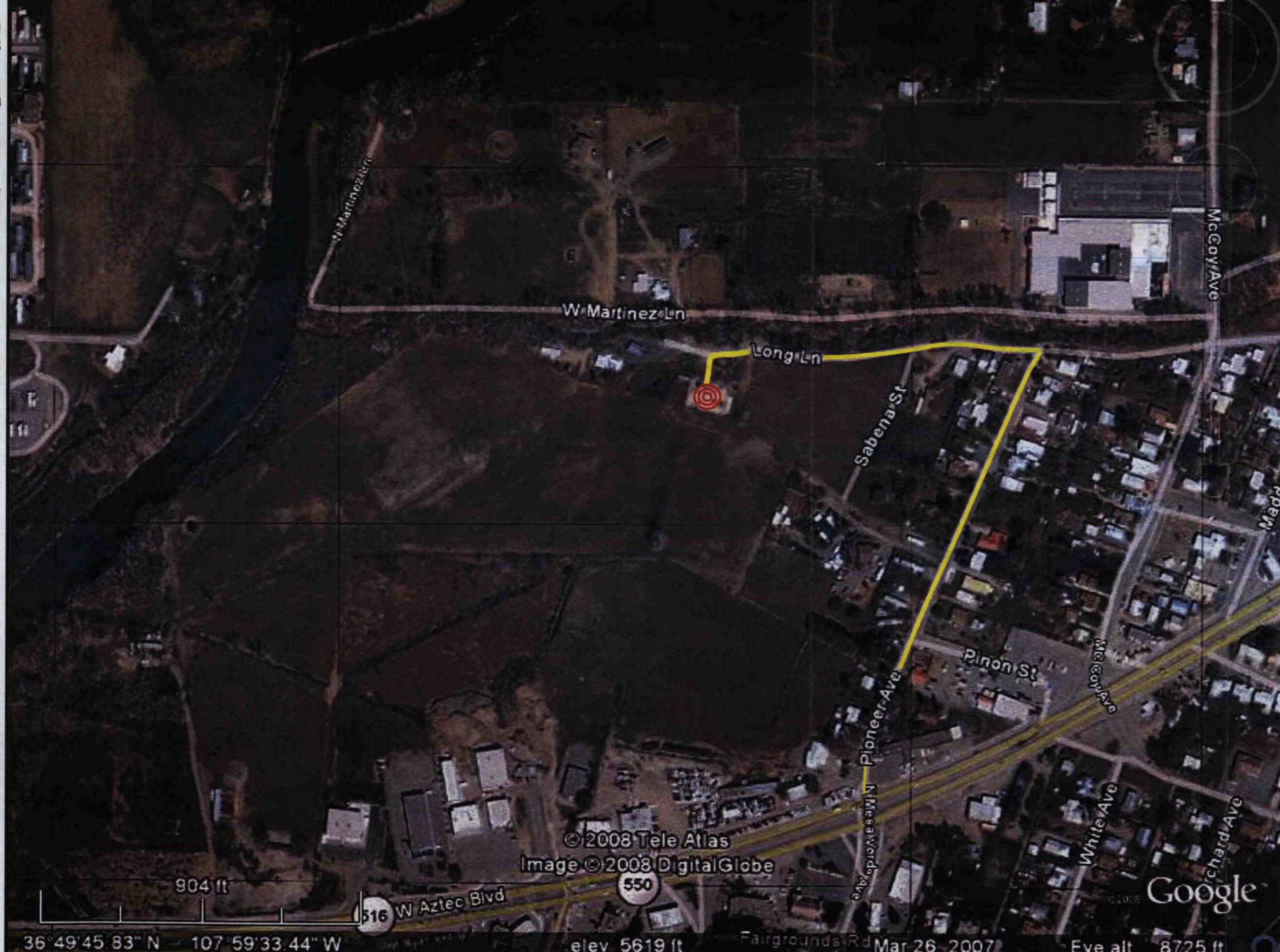
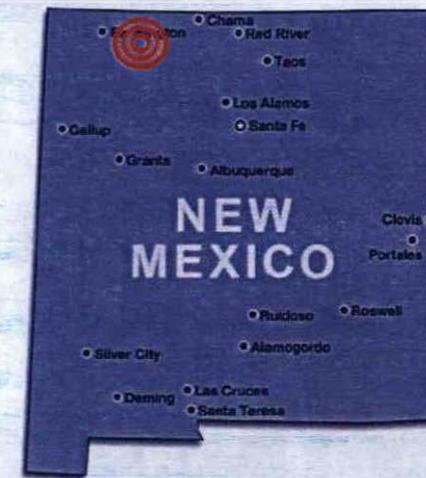
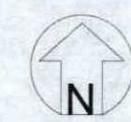


FIGURE 1.

Site Location Map
 ConocoPhillips
 Faye Burdette No. 1
 Aztec, NM



- Directions from HW 550 to ConocoPhillips Faye Burdette No.1 site location
- Approximate ConocoPhillips Faye Burdette No.1 Site location



TETRA TECH, INC.

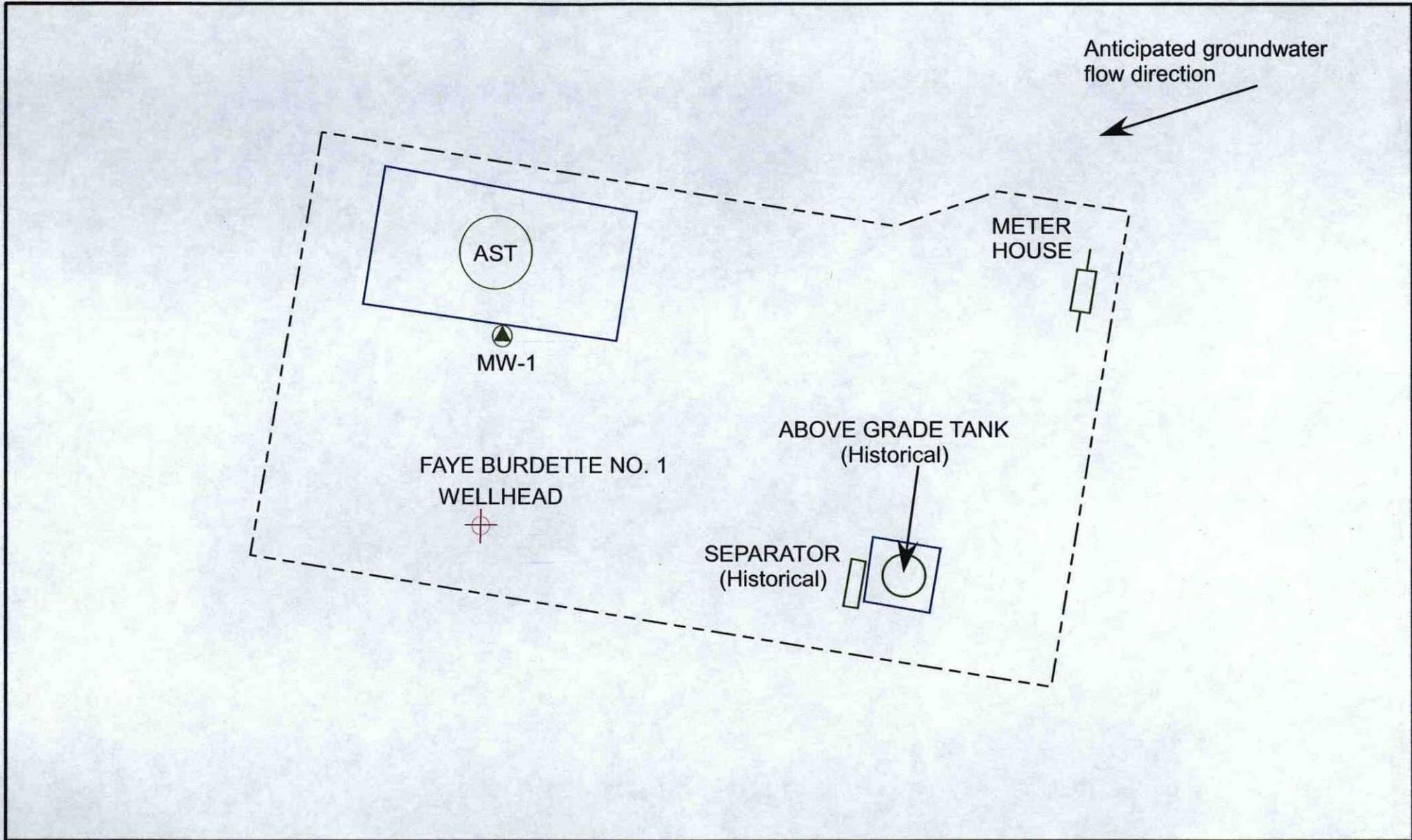
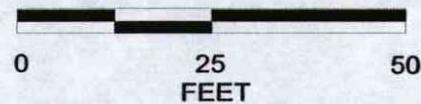


FIGURE 2.
SITE FEATURES
CONOCOPHILLIPS
FAYE BURDETTE NO.1 OIL AND GAS
PRODUCTION WELL
 Sec 9, T30N, R11W
 Aztec, New Mexico

LEGEND

-  TEMPORARY MONITORING WELL
-  MONITORING WELL LOCATION
-  BERM
-  FENCE LINE
-  EQUIPMENT



TETRA TECH, INC.

TABLES

I. Site History Timeline

2. Laboratory Analytical Data Summary (October 2008)

Table 1. Site History Timeline - ConocoPhillips Faye Burdette No. 1

DATE	ACTIVITY
Jul-07	Contaminated soil excavated from the Site. Two ground water samples were obtained at the time of this excavation, and one (1) of these samples was found to contain total xylenes above the State of New Mexico drinking water standard. Original source of contamination is unknown.
26-Sep-07	Ground water monitoring well installed to a depth of 15 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.
26-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. Depth to ground water recorded at 9.5 feet bgs.
Nov-07	Envirotech report recommends plugging and abandonment of the temporary ground water monitoring well and a no further action determination for the Site (Envirotech, 2007).
Apr-08	Oil Conservation Division of NM Energy, Minerals, and Resources Dept. indicates additional investigation and sampling is necessary for closure consideration during a meeting with Glenn Von Gonten
22-Oct-08	1st quarter sampling of MW-1 by Tetra Tech
Jan-09	Installed additional monitoring wells MW-2, MW-3 and MW-4
29-Jan-09	2nd quarter sampling of MW-1 by Tetra Tech

Table 2.

Analytical Data Faye Burdette No. 1 October 22, 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
General Chemistry (mg/L)			
Chloride	250	250	16.1
Nitrate	-	-	<1
Sulfate	600	250 / 400	203
Inorganic Contaminants (mg/L)			
Calcium	-	-	176
Iron	1	0.3	3.74
Magnesium	-	-	13.3
Sodium	-	-	54.8
Arsenic	0.1	0.05	0.00536
Lead	0.05	0.015	0.0103
Barium	1	2	0.0914
Manganese	0.2	0.05	2.09

Notes

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

APPENDIX A
GROUNDWATER SAMPLING FIELD FORM



WATER SAMPLING FIELD FORM

Project Name Fae Burdette #1

Page 1 of 1

Project No. _____

Site Location Aztec, NM

Site/Well No. MW-1

Coded/
Replicate No. _____

Date 10/22/08

Weather windy, sunny

Time Sampling
Began 1520

Time Sampling
Completed 1540

EVACUATION DATA

Description of Measuring Point (MP) Tox

Height of MP Above/Below Land Surface _____

MP Elevation _____

Total Sounded Depth of Well Below MP 14.42

Water-Level Elevation _____

Held _____ Depth to Water Below MP 10.91

Diameter of Casing 2"

Wet _____ Water Column in Well 3.51

Gallons Pumped/Bailed
Prior to Sampling 3 gallons

Gallons per Foot 0.16

Gallons in Well 0.54 x 3 =

Sampling Pump Intake Setting
(feet below land surface) _____

Purging Equipment bailer / purge pump 1.68

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (C°)	pH	Conductivity	TDS in g/L	ORP (mV)	DO
<u>1530</u>	<u>16.81</u>	<u>6.96</u>	<u>1.074</u>	<u>0.696</u>	<u>46.9</u>	<u>2.66</u>

Sampling Equipment Disposable polyethylene bailer

Constituents Sampled	Container Description	Preservative
<u>BTEX, VOCs, SVOCs</u>	<u>6 2-40 mL glass VOAs, 2 Ambers</u>	<u>HCL, HNO₃</u>
<u>Total metals, Gren Chem & Anions, TPH</u>	<u>2 plastics/6oz, 2 plastics 32oz</u>	

Remarks _____

Sampling Personnel Christine Mathews, Ana Moreno

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

APPENDIX B
LABORATORY ANALYTICAL REPORT



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

Conoco Phillips

Certificate of Analysis Number:

08101601

<u>Report To:</u> Tetra Tech EM, Inc. Kelly Blanchard 6121 Indian School Road, N.E. Suite 200 Albuquerque NM 87110- ph: (505) 881-3188 fax:	<u>Project Name:</u> COP Faye-Burdette <u>Site:</u> Aztec, NM <u>Site Address:</u> <u>PO Number:</u> <u>State:</u> New Mexico <u>State Cert. No.:</u> <u>Date Reported:</u> 11/17/2008
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This Report Contains A Total Of 45 Pages

Excluding This Page, Chain Of Custody

And

Any Attachments

11/17/2008

Date



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

**Case Narrative for:
 Conoco Phillips**

**Certificate of Analysis Number:
 08101601**

<p>Report To: Tetra Tech EM, Inc. Kelly Blanchard 6121 Indian School Road, N.E. Suite 200 Albuquerque NM 87110- ph: (505) 881-3188 fax:</p>	<p>Project Name: COP Faye-Burdette Site: Aztec, NM Site Address: PO Number: State: New Mexico State Cert. No.: Date Reported: 11/17/2008</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 analyzed with Batch ID:84920 for the Diesel Range Organics analysis by SW846 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.

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.

08101601 Page 1
 11/17/2008

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:

08101601

Report To: Tetra Tech EM, Inc.
 Kelly Blanchard
 6121 Indian School Road, N.E.
 Suite 200
 Albuquerque
 NM
 87110-
 ph: (505) 881-3188 fax: (505) 881-3283

Project Name: COP Faye-Burdette
Site: Aztec, NM
Site Address:

PO Number:
State: New Mexico
State Cert. No.:
Date Reported: 11/17/2008

Fax To:

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
MW-1	08101601-01	Water	10/22/2008 3:40:00 PM	10/28/2008 9:30:00 AM		<input type="checkbox"/>
Trip Blank	08101601-02	Water	10/27/2008	10/28/2008 9:30:00 AM		<input type="checkbox"/>

Erica Cardenas

11/17/2008

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: 10/22/2008 15:40 SPL Sample ID: 08101601-01

Site: Aztec, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS				MCL	SW8015B	Units: mg/L	
Diesel Range Organics (C10-C28)	ND		0.1	1	11/06/08 16:36	NW	4757252
Surr: n-Pentacosane	73.4		% 20-150	1	11/06/08 16:36	NW	4757252

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

GASOLINE RANGE ORGANICS				MCL	SW8015B	Units: mg/L	
Gasoline Range Organics	ND		0.1	1	11/02/08 6:39	WLV	4747582
Surr: 1,4-Difluorobenzene	89.0		% 60-155	1	11/02/08 6:39	WLV	4747582
Surr: 4-Bromofluorobenzene	90.2		% 50-158	1	11/02/08 6:39	WLV	4747582

ION CHROMATOGRAPHY				MCL	E300.0	Units: mg/L	
Chloride	16.1		2	4	11/10/08 19:42	TW	4766025
Fluoride	ND		1	2	10/28/08 21:13	TW	4743018
Ortho-phosphate (As P)	ND		1	2	10/28/08 21:13	TW	4743018
Sulfate	203		50	100	11/11/08 13:38	TW	4766442
Nitrogen, Nitrate (As N)	ND		1	2	10/28/08 21:13	TW	4743045

MERCURY, TOTAL				MCL	SW7470A	Units: mg/L	
Mercury	ND		0.0002	1	11/06/08 14:09	F_S	4755686

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

METALS BY METHOD 6010B, TOTAL				MCL	SW6010B	Units: mg/L	
Calcium	176		0.1	1	10/31/08 14:37	SC	4745454
Iron	3.74		0.02	1	10/31/08 14:37	SC	4745454
Magnesium	13.3		0.1	1	10/31/08 14:37	SC	4745454
Manganese	2.09		0.005	1	10/31/08 14:37	SC	4745454
Sodium	54.8		0.5	1	10/31/08 14:37	SC	4745454

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3010A	10/30/2008 15:30	BDG	1.00

METALS BY METHOD 6020A, TOTAL				MCL	SW6020A	Units: mg/L	
Arsenic	0.00536		0.005	1	10/31/08 16:47	AL_H	4746380
Barium	0.0914		0.005	1	10/31/08 16:47	AL_H	4746380
Cadmium	ND		0.005	1	10/31/08 16:47	AL_H	4746380
Chromium	ND		0.005	1	10/31/08 16:47	AL_H	4746380
Lead	0.0103		0.005	1	10/31/08 16:47	AL_H	4746380
Selenium	ND		0.005	1	10/31/08 16:47	AL_H	4746380
Silver	ND		0.005	1	10/31/08 16:47	AL_H	4746380

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: 10/22/2008 15:40 SPL Sample ID: 08101601-01

Site: Aztec, NM

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

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3010A	10/30/2008 15:30	BDG	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: 10/22/2008 15:40 SPL Sample ID: 08101601-01

Site: Aztec, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
SEMIVOLATILE ORGANICS BY METHOD 8270C				MCL	SW8270C	Units: ug/L	
1,2,4-Trichlorobenzene	ND		5	1	10/31/08 12:59	GQ	4745628
1,2-Dichlorobenzene	ND		5	1	10/31/08 12:59	GQ	4745628
1,2-Diphenylhydrazine	ND		10	1	10/31/08 12:59	GQ	4745628
1,3-Dichlorobenzene	ND		5	1	10/31/08 12:59	GQ	4745628
1,4-Dichlorobenzene	ND		5	1	10/31/08 12:59	GQ	4745628
2,4,5-Trichlorophenol	ND		10	1	10/31/08 12:59	GQ	4745628
2,4,6-Trichlorophenol	ND		5	1	10/31/08 12:59	GQ	4745628
2,4-Dichlorophenol	ND		5	1	10/31/08 12:59	GQ	4745628
2,4-Dimethylphenol	ND		5	1	10/31/08 12:59	GQ	4745628
2,4-Dinitrophenol	ND		25	1	10/31/08 12:59	GQ	4745628
2,4-Dinitrotoluene	ND		5	1	10/31/08 12:59	GQ	4745628
2,6-Dinitrotoluene	ND		5	1	10/31/08 12:59	GQ	4745628
2-Chloronaphthalene	ND		5	1	10/31/08 12:59	GQ	4745628
2-Chlorophenol	ND		5	1	10/31/08 12:59	GQ	4745628
2-Methylnaphthalene	ND		5	1	10/31/08 12:59	GQ	4745628
2-Nitroaniline	ND		25	1	10/31/08 12:59	GQ	4745628
2-Nitrophenol	ND		5	1	10/31/08 12:59	GQ	4745628
3,3'-Dichlorobenzidine	ND		10	1	10/31/08 12:59	GQ	4745628
3-Nitroaniline	ND		25	1	10/31/08 12:59	GQ	4745628
4,6-Dinitro-2-methylphenol	ND		25	1	10/31/08 12:59	GQ	4745628
4-Bromophenyl phenyl ether	ND		5	1	10/31/08 12:59	GQ	4745628
4-Chloro-3-methylphenol	ND		5	1	10/31/08 12:59	GQ	4745628
4-Chloroaniline	ND		5	1	10/31/08 12:59	GQ	4745628
4-Chlorophenyl phenyl ether	ND		5	1	10/31/08 12:59	GQ	4745628
4-Nitroaniline	ND		25	1	10/31/08 12:59	GQ	4745628
4-Nitrophenol	ND		25	1	10/31/08 12:59	GQ	4745628
Acenaphthene	ND		5	1	10/31/08 12:59	GQ	4745628
Acenaphthylene	ND		5	1	10/31/08 12:59	GQ	4745628
Aniline	ND		5	1	10/31/08 12:59	GQ	4745628
Anthracene	ND		5	1	10/31/08 12:59	GQ	4745628
Benz(a)anthracene	ND		5	1	10/31/08 12:59	GQ	4745628
Benzo(a)pyrene	ND		5	1	10/31/08 12:59	GQ	4745628
Benzo(b)fluoranthene	ND		5	1	10/31/08 12:59	GQ	4745628
Benzo(g,h,i)perylene	ND		5	1	10/31/08 12:59	GQ	4745628
Benzo(k)fluoranthene	ND		5	1	10/31/08 12:59	GQ	4745628
Benzoic acid	ND		25	1	10/31/08 12:59	GQ	4745628
Benzyl alcohol	ND		5	1	10/31/08 12:59	GQ	4745628
Bis(2-chloroethoxy)methane	ND		5	1	10/31/08 12:59	GQ	4745628
Bis(2-chloroethyl)ether	ND		5	1	10/31/08 12:59	GQ	4745628

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
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 TNTC - Too numerous to count

20



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

Client Sample ID: MW-1

Collected: 10/22/2008 15:40 SPL Sample ID: 08101601-01

Site: Aztec, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
Bis(2-chloroisopropyl)ether	ND		5	1	10/31/08 12:59	GQ	4745628
Bis(2-ethylhexyl)phthalate	ND		5	1	10/31/08 12:59	GQ	4745628
Butyl benzyl phthalate	ND		5	1	10/31/08 12:59	GQ	4745628
Carbazole	ND		5	1	10/31/08 12:59	GQ	4745628
Chrysene	ND		5	1	10/31/08 12:59	GQ	4745628
Dibenz(a,h)anthracene	ND		5	1	10/31/08 12:59	GQ	4745628
Dibenzofuran	ND		5	1	10/31/08 12:59	GQ	4745628
Diethyl phthalate	ND		5	1	10/31/08 12:59	GQ	4745628
Dimethyl phthalate	ND		5	1	10/31/08 12:59	GQ	4745628
Di-n-butyl phthalate	ND		5	1	10/31/08 12:59	GQ	4745628
Di-n-octyl phthalate	ND		5	1	10/31/08 12:59	GQ	4745628
Fluoranthene	ND		5	1	10/31/08 12:59	GQ	4745628
Fluorene	ND		5	1	10/31/08 12:59	GQ	4745628
Hexachlorobenzene	ND		5	1	10/31/08 12:59	GQ	4745628
Hexachlorobutadiene	ND		5	1	10/31/08 12:59	GQ	4745628
Hexachlorocyclopentadiene	ND		5	1	10/31/08 12:59	GQ	4745628
Hexachloroethane	ND		5	1	10/31/08 12:59	GQ	4745628
Indeno(1,2,3-cd)pyrene	ND		5	1	10/31/08 12:59	GQ	4745628
Isophorone	ND		5	1	10/31/08 12:59	GQ	4745628
Naphthalene	ND		5	1	10/31/08 12:59	GQ	4745628
Nitrobenzene	ND		5	1	10/31/08 12:59	GQ	4745628
N-Nitrosodi-n-propylamine	ND		5	1	10/31/08 12:59	GQ	4745628
N-Nitrosodiphenylamine	ND		5	1	10/31/08 12:59	GQ	4745628
Pentachlorophenol	ND		25	1	10/31/08 12:59	GQ	4745628
Phenanthrene	ND		5	1	10/31/08 12:59	GQ	4745628
Phenol	ND		5	1	10/31/08 12:59	GQ	4745628
Pyrene	ND		5	1	10/31/08 12:59	GQ	4745628
Pyridine	ND		5	1	10/31/08 12:59	GQ	4745628
2-Methylphenol	ND		5	1	10/31/08 12:59	GQ	4745628
3 & 4-Methylphenol	ND		5	1	10/31/08 12:59	GQ	4745628
Surr: 2,4,6-Tribromophenol	64.0		% 10-123	1	10/31/08 12:59	GQ	4745628
Surr: 2-Fluorobiphenyl	66.0		% 23-116	1	10/31/08 12:59	GQ	4745628
Surr: 2-Fluorophenol	42.7		% 16-110	1	10/31/08 12:59	GQ	4745628
Surr: Nitrobenzene-d5	60.0		% 21-114	1	10/31/08 12:59	GQ	4745628
Surr: Phenol-d5	33.3		% 10-110	1	10/31/08 12:59	GQ	4745628
Surr: Terphenyl-d14	64.0		% 22-141	1	10/31/08 12:59	GQ	4745628

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	10/28/2008 18:27	N_M	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: 10/22/2008 15:40

SPL Sample ID: 08101601-01

Site: Aztec, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B				MCL	SW8260B	Units: ug/L	
1,1,1,2-Tetrachloroethane	ND		5	1	11/04/08 18:31	LT	4752374
1,1,1-Trichloroethane	ND		5	1	11/04/08 18:31	LT	4752374
1,1,2,2-Tetrachloroethane	ND		5	1	11/04/08 18:31	LT	4752374
1,1,2-Trichloroethane	ND		5	1	11/04/08 18:31	LT	4752374
1,1-Dichloroethane	ND		5	1	11/04/08 18:31	LT	4752374
1,1-Dichloroethene	ND		5	1	11/04/08 18:31	LT	4752374
1,1-Dichloropropene	ND		5	1	11/04/08 18:31	LT	4752374
1,2,3-Trichlorobenzene	ND		5	1	11/04/08 18:31	LT	4752374
1,2,3-Trichloropropane	ND		5	1	11/04/08 18:31	LT	4752374
1,2,4-Trichlorobenzene	ND		5	1	11/04/08 18:31	LT	4752374
1,2,4-Trimethylbenzene	ND		5	1	11/04/08 18:31	LT	4752374
1,2-Dibromo-3-chloropropane	ND		5	1	11/04/08 18:31	LT	4752374
1,2-Dibromoethane	ND		5	1	11/04/08 18:31	LT	4752374
1,2-Dichlorobenzene	ND		5	1	11/04/08 18:31	LT	4752374
1,2-Dichloroethane	ND		5	1	11/04/08 18:31	LT	4752374
1,2-Dichloropropane	ND		5	1	11/04/08 18:31	LT	4752374
1,3,5-Trimethylbenzene	ND		5	1	11/04/08 18:31	LT	4752374
1,3-Dichlorobenzene	ND		5	1	11/04/08 18:31	LT	4752374
1,3-Dichloropropane	ND		5	1	11/04/08 18:31	LT	4752374
1,4-Dichlorobenzene	ND		5	1	11/04/08 18:31	LT	4752374
2,2-Dichloropropane	ND		5	1	11/04/08 18:31	LT	4752374
2-Butanone	ND		20	1	11/04/08 18:31	LT	4752374
2-Chloroethyl vinyl ether	ND		10	1	11/04/08 18:31	LT	4752374
2-Chlorotoluene	ND		5	1	11/04/08 18:31	LT	4752374
2-Hexanone	ND		10	1	11/04/08 18:31	LT	4752374
4-Chlorotoluene	ND		5	1	11/04/08 18:31	LT	4752374
4-Isopropyltoluene	ND		5	1	11/04/08 18:31	LT	4752374
4-Methyl-2-pentanone	ND		10	1	11/04/08 18:31	LT	4752374
Acetone	ND		100	1	11/04/08 18:31	LT	4752374
Acrylonitrile	ND		50	1	11/04/08 18:31	LT	4752374
Benzene	ND		5	1	11/04/08 18:31	LT	4752374
Bromobenzene	ND		5	1	11/04/08 18:31	LT	4752374
Bromochloromethane	ND		5	1	11/04/08 18:31	LT	4752374
Bromodichloromethane	ND		5	1	11/04/08 18:31	LT	4752374
Bromoform	ND		5	1	11/04/08 18:31	LT	4752374
Bromomethane	ND		10	1	11/04/08 18:31	LT	4752374
Carbon disulfide	ND		5	1	11/04/08 18:31	LT	4752374
Carbon tetrachloride	ND		5	1	11/04/08 18:31	LT	4752374
Chlorobenzene	ND		5	1	11/04/08 18:31	LT	4752374

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: 10/22/2008 15:40

SPL Sample ID: 08101601-01

Site: Aztec, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
Chloroethane	ND		10	1	11/04/08 18:31	LT	4752374
Chloroform	ND		5	1	11/04/08 18:31	LT	4752374
Chloromethane	ND		10	1	11/04/08 18:31	LT	4752374
Dibromochloromethane	ND		5	1	11/04/08 18:31	LT	4752374
Dibromomethane	ND		5	1	11/04/08 18:31	LT	4752374
Dichlorodifluoromethane	ND		10	1	11/04/08 18:31	LT	4752374
Ethylbenzene	ND		5	1	11/04/08 18:31	LT	4752374
Hexachlorobutadiene	ND		5	1	11/04/08 18:31	LT	4752374
Isopropylbenzene	ND		5	1	11/04/08 18:31	LT	4752374
Methyl tert-butyl ether	ND		5	1	11/04/08 18:31	LT	4752374
Methylene chloride	ND		5	1	11/04/08 18:31	LT	4752374
Naphthalene	ND		5	1	11/04/08 18:31	LT	4752374
n-Butylbenzene	ND		5	1	11/04/08 18:31	LT	4752374
n-Propylbenzene	ND		5	1	11/04/08 18:31	LT	4752374
sec-Butylbenzene	ND		5	1	11/04/08 18:31	LT	4752374
Styrene	ND		5	1	11/04/08 18:31	LT	4752374
tert-Butylbenzene	ND		5	1	11/04/08 18:31	LT	4752374
Tetrachloroethene	ND		5	1	11/04/08 18:31	LT	4752374
Toluene	ND		5	1	11/04/08 18:31	LT	4752374
Trichloroethene	ND		5	1	11/04/08 18:31	LT	4752374
Trichlorofluoromethane	ND		5	1	11/04/08 18:31	LT	4752374
Vinyl acetate	ND		10	1	11/04/08 18:31	LT	4752374
Vinyl chloride	ND		10	1	11/04/08 18:31	LT	4752374
cis-1,2-Dichloroethene	ND		5	1	11/04/08 18:31	LT	4752374
cis-1,3-Dichloropropene	ND		5	1	11/04/08 18:31	LT	4752374
m,p-Xylene	ND		5	1	11/04/08 18:31	LT	4752374
o-Xylene	ND		5	1	11/04/08 18:31	LT	4752374
trans-1,2-Dichloroethene	ND		5	1	11/04/08 18:31	LT	4752374
trans-1,3-Dichloropropene	ND		5	1	11/04/08 18:31	LT	4752374
1,2-Dichloroethene (total)	ND		5	1	11/04/08 18:31	LT	4752374
Xylenes, Total	ND		5	1	11/04/08 18:31	LT	4752374
Surr: 1,2-Dichloroethane-d4	106		% 62-130	1	11/04/08 18:31	LT	4752374
Surr: 4-Bromofluorobenzene	94.0		% 70-130	1	11/04/08 18:31	LT	4752374
Surr: Toluene-d8	108		% 74-122	1	11/04/08 18:31	LT	4752374

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 0:00

SPL Sample ID: 08101601-02

Site: Aztec, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B				MCL	SW8260B	Units: ug/L	
1,1,1,2-Tetrachloroethane	ND		5	1	11/05/08 23:46	LT	4754099
1,1,1-Trichloroethane	ND		5	1	11/05/08 23:46	LT	4754099
1,1,2,2-Tetrachloroethane	ND		5	1	11/05/08 23:46	LT	4754099
1,1,2-Trichloroethane	ND		5	1	11/05/08 23:46	LT	4754099
1,1-Dichloroethane	ND		5	1	11/05/08 23:46	LT	4754099
1,1-Dichloroethene	ND		5	1	11/05/08 23:46	LT	4754099
1,1-Dichloropropene	ND		5	1	11/05/08 23:46	LT	4754099
1,2,3-Trichlorobenzene	ND		5	1	11/05/08 23:46	LT	4754099
1,2,3-Trichloropropane	ND		5	1	11/05/08 23:46	LT	4754099
1,2,4-Trichlorobenzene	ND		5	1	11/05/08 23:46	LT	4754099
1,2,4-Trimethylbenzene	ND		5	1	11/05/08 23:46	LT	4754099
1,2-Dibromo-3-chloropropane	ND		5	1	11/05/08 23:46	LT	4754099
1,2-Dibromoethane	ND		5	1	11/05/08 23:46	LT	4754099
1,2-Dichlorobenzene	ND		5	1	11/05/08 23:46	LT	4754099
1,2-Dichloroethane	ND		5	1	11/05/08 23:46	LT	4754099
1,2-Dichloropropane	ND		5	1	11/05/08 23:46	LT	4754099
1,3,5-Trimethylbenzene	ND		5	1	11/05/08 23:46	LT	4754099
1,3-Dichlorobenzene	ND		5	1	11/05/08 23:46	LT	4754099
1,3-Dichloropropane	ND		5	1	11/05/08 23:46	LT	4754099
1,4-Dichlorobenzene	ND		5	1	11/05/08 23:46	LT	4754099
2,2-Dichloropropane	ND		5	1	11/05/08 23:46	LT	4754099
2-Butanone	ND		20	1	11/05/08 23:46	LT	4754099
2-Chloroethyl vinyl ether	ND		10	1	11/05/08 23:46	LT	4754099
2-Chlorotoluene	ND		5	1	11/05/08 23:46	LT	4754099
2-Hexanone	ND		10	1	11/05/08 23:46	LT	4754099
4-Chlorotoluene	ND		5	1	11/05/08 23:46	LT	4754099
4-Isopropyltoluene	ND		5	1	11/05/08 23:46	LT	4754099
4-Methyl-2-pentanone	ND		10	1	11/05/08 23:46	LT	4754099
Acetone	ND		100	1	11/05/08 23:46	LT	4754099
Acrylonitrile	ND		50	1	11/05/08 23:46	LT	4754099
Benzene	ND		5	1	11/05/08 23:46	LT	4754099
Bromobenzene	ND		5	1	11/05/08 23:46	LT	4754099
Bromochloromethane	ND		5	1	11/05/08 23:46	LT	4754099
Bromodichloromethane	ND		5	1	11/05/08 23:46	LT	4754099
Bromoform	ND		5	1	11/05/08 23:46	LT	4754099
Bromomethane	ND		10	1	11/05/08 23:46	LT	4754099
Carbon disulfide	ND		5	1	11/05/08 23:46	LT	4754099
Carbon tetrachloride	ND		5	1	11/05/08 23:46	LT	4754099
Chlorobenzene	ND		5	1	11/05/08 23:46	LT	4754099

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 0:00

SPL Sample ID: 08101601-02

Site: Aztec, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
Chloroethane	ND		10	1	11/05/08 23:46	LT	4754099
Chloroform	ND		5	1	11/05/08 23:46	LT	4754099
Chloromethane	ND		10	1	11/05/08 23:46	LT	4754099
Dibromochloromethane	ND		5	1	11/05/08 23:46	LT	4754099
Dibromomethane	ND		5	1	11/05/08 23:46	LT	4754099
Dichlorodifluoromethane	ND		10	1	11/05/08 23:46	LT	4754099
Ethylbenzene	ND		5	1	11/05/08 23:46	LT	4754099
Hexachlorobutadiene	ND		5	1	11/05/08 23:46	LT	4754099
Isopropylbenzene	ND		5	1	11/05/08 23:46	LT	4754099
Methyl tert-butyl ether	ND		5	1	11/05/08 23:46	LT	4754099
Methylene chloride	ND		5	1	11/05/08 23:46	LT	4754099
Naphthalene	ND		5	1	11/05/08 23:46	LT	4754099
n-Butylbenzene	ND		5	1	11/05/08 23:46	LT	4754099
n-Propylbenzene	ND		5	1	11/05/08 23:46	LT	4754099
sec-Butylbenzene	ND		5	1	11/05/08 23:46	LT	4754099
Styrene	ND		5	1	11/05/08 23:46	LT	4754099
tert-Butylbenzene	ND		5	1	11/05/08 23:46	LT	4754099
Tetrachloroethene	ND		5	1	11/05/08 23:46	LT	4754099
Toluene	ND		5	1	11/05/08 23:46	LT	4754099
Trichloroethene	ND		5	1	11/05/08 23:46	LT	4754099
Trichlorofluoromethane	ND		5	1	11/05/08 23:46	LT	4754099
Vinyl acetate	ND		10	1	11/05/08 23:46	LT	4754099
Vinyl chloride	ND		10	1	11/05/08 23:46	LT	4754099
cis-1,2-Dichloroethene	ND		5	1	11/05/08 23:46	LT	4754099
cis-1,3-Dichloropropene	ND		5	1	11/05/08 23:46	LT	4754099
m,p-Xylene	ND		5	1	11/05/08 23:46	LT	4754099
o-Xylene	ND		5	1	11/05/08 23:46	LT	4754099
trans-1,2-Dichloroethene	ND		5	1	11/05/08 23:46	LT	4754099
trans-1,3-Dichloropropene	ND		5	1	11/05/08 23:46	LT	4754099
1,2-Dichloroethene (total)	ND		5	1	11/05/08 23:46	LT	4754099
Xylenes, Total	ND		5	1	11/05/08 23:46	LT	4754099
Surr: 1,2-Dichloroethane-d4	100		% 62-130	1	11/05/08 23:46	LT	4754099
Surr: 4-Bromofluorobenzene	94.0		% 70-130	1	11/05/08 23:46	LT	4754099
Surr: Toluene-d8	108		% 74-122	1	11/05/08 23:46	LT	4754099

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 Faye-Burdette

Analysis: Diesel Range Organics
Method: SW8015B

WorkOrder: 08101601
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: 08101601-01D
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



Quality Control Report

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

Conoco Phillips
COP Faye-Burdette

Analysis: Gasoline Range Organics
Method: SW8015B

WorkOrder: 08101601
Lab Batch ID: R255738

Method Blank

Samples in Analytical Batch:

RunID: HP_P_081102A-4747577 Units: mg/L
Analysis Date: 11/02/2008 4:16 Analyst: WLW
Preparation Date: 11/02/2008 4:16 Prep By: Method: SW5030B

Lab Sample ID 08101601-01B
Client Sample ID MW-1

Table with 3 columns: Analyte, Result, Rep Limit. Rows include Gasoline Range Organics (ND, 0.10), Surr: 1,4-Difluorobenzene (89.3, 60-155), and Surr: 4-Bromofluorobenzene (90.4, 50-158).

Laboratory Control Sample (LCS)

RunID: HP_P_081102A-4747576 Units: mg/L
Analysis Date: 11/02/2008 3:19 Analyst: WLW
Preparation Date: 11/02/2008 3:19 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: 08101530-01
RunID: HP_P_081102A-4747588 Units: mg/L
Analysis Date: 11/02/2008 9:29 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 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 Faye-Burdette

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

WorkOrder: 08101601
Lab Batch ID: 84958

Method Blank

Samples in Analytical Batch:

RunID: TJA_081031A-4745434 Units: mg/L
Analysis Date: 10/31/2008 12:49 Analyst: SC
Preparation Date: 10/30/2008 15:30 Prep By: BDG Method: SW3010A

Lab Sample ID 08101601-01C
Client Sample ID MW-1

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

Laboratory Control Sample (LCS)

RunID: TJA_081031A-4745435 Units: mg/L
Analysis Date: 10/31/2008 12:54 Analyst: SC
Preparation Date: 10/30/2008 15:30 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.

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

Sample Spiked: 08101602-02
RunID: TJA_081031A-4745440 Units: mg/L
Analysis Date: 10/31/2008 13:17 Analyst: SC

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. Row for Iron.

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

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 Faye-Burdette

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

WorkOrder: 08101601
Lab Batch ID: 84958

Sample Spiked: 08101602-02
RunID: TJA_081031A-4745437 Units: mg/L
Analysis Date: 10/31/2008 13:03 Analyst: SC
Preparation Date: 10/30/2008 15:30 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, and Sodium.

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

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

WorkOrder: 08101601
Lab Batch ID: 84958-I

Method Blank

Samples in Analytical Batch:

RunID: ICPMS2_081031A-4745588 Units: mg/L
Analysis Date: 10/31/2008 14:46 Analyst: AL_H
Preparation Date: 10/30/2008 15:30 Prep By: BDG Method: SW3010A

Lab Sample ID 08101601-01C
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: ICPMS2_081031A-4745595 Units: mg/L
Analysis Date: 10/31/2008 15:06 Analyst: AL_H
Preparation Date: 10/30/2008 15:30 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.

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

Sample Spiked: 08101602-02
RunID: ICPMS2_081031A-4745597 Units: mg/L
Analysis Date: 10/31/2008 15:12 Analyst: AL_H
Preparation Date: 10/30/2008 15:30 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. Row for Arsenic.

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: 08101601
Lab Batch ID: 84958-I

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

Sample Spiked: 08101602-02
RunID: ICPMS2_081031A-4745597 Units: mg/L
Analysis Date: 10/31/2008 15:12 Analyst: AL_H
Preparation Date: 10/30/2008 15:30 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 Barium, Cadmium, Chromium, Lead, Selenium, and 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: 08101601
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 08101601-01C
Client Sample ID MW-1

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: 08101601
Lab Batch ID: 84874

Method Blank

Samples in Analytical Batch:

RunID: P_081030A-4744708 Units: ug/L
Analysis Date: 10/30/2008 18:16 Analyst: GQ
Preparation Date: 10/28/2008 18:27 Prep By: N_M Method: SW3510C

Lab Sample ID Client Sample ID
08101601-01F MW-1

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

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 Faye-Burdette

Analysis: Semivolatile Organics by Method 8270C
Method: SW8270C

WorkOrder: 08101601
Lab Batch ID: 84874

Method Blank

RunID: P_081030A-4744708 Units: ug/L
Analysis Date: 10/30/2008 18:16 Analyst: GQ
Preparation Date: 10/28/2008 18:27 Prep By: N_M 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 (LCS)

RunID: P_081030A-4744709 Units: ug/L
Analysis Date: 10/30/2008 18:50 Analyst: GQ
Preparation Date: 10/28/2008 18:27 Prep By: N_M Method: SW3510C

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Shows recovery data for Trichlorobenzene, Dichlorobenzene, and Diphenylhydrazine.

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: 08101601
Lab Batch ID: 84874

Laboratory Control Sample (LCS)

RunID: P_081030A-4744709 Units: ug/L
Analysis Date: 10/30/2008 18:50 Analyst: GQ
Preparation Date: 10/28/2008 18:27 Prep By: N_M Method: SW3510C

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: Semivolatile Organics by Method 8270C
Method: SW8270C

WorkOrder: 08101601
Lab Batch ID: 84874

Laboratory Control Sample (LCS)

RunID: P_081030A-4744709 Units: ug/L
Analysis Date: 10/30/2008 18:50 Analyst: GQ
Preparation Date: 10/28/2008 18:27 Prep By: N_M Method: SW3510C

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Rows include various chemical compounds like Bis(2-chloroethoxy)methane, Carbazole, Chrysene, 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: 08101601
Lab Batch ID: 84874

Laboratory Control Sample (LCS)

RunID: P_081030A-4744709 Units: ug/L
Analysis Date: 10/30/2008 18:50 Analyst: GQ
Preparation Date: 10/28/2008 18:27 Prep By: N_M Method: SW3510C

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Rows include Surr: 2-Fluorophenol, Surr: Nitrobenzene-d5, Surr: Phenol-d5, Surr: Terphenyl-d14.

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

Sample Spiked: 08101398-04
RunID: P_081030A-4744711 Units: ug/L
Analysis Date: 10/30/2008 20:11 Analyst: GQ
Preparation Date: 10/28/2008 18:27 Prep By: N_M Method: SW3510C

Large 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. Lists various analytes like 1,2,4-Trichlorobenzene, 1,2-Dichlorobenzene, 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: 08101601
Lab Batch ID: 84874

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

Sample Spiked: 08101398-04
RunID: P_081030A-4744711 Units: ug/L
Analysis Date: 10/30/2008 20:11 Analyst: GQ
Preparation Date: 10/28/2008 18:27 Prep By: N_M Method: SW3510C

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 3-Nitroaniline, 4,6-Dinitro-2-methylphenol, 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: 08101601
Lab Batch ID: 84874

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

Sample Spiked: 08101398-04
RunID: P_081030A-4744711 Units: ug/L
Analysis Date: 10/30/2008 20:11 Analyst: GQ
Preparation Date: 10/28/2008 18:27 Prep By: N_M Method: SW3510C

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 Fluoranthene, Fluorene, Hexachlorobenzene, 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: 08101601
Lab Batch ID: R256001

Method Blank

Samples in Analytical Batch:

RunID: N_081104A-4752370 Units: ug/L
Analysis Date: 11/04/2008 16:12 Analyst: LT
Preparation Date: 11/04/2008 16:12 Prep By: Method:

Lab Sample ID Client Sample ID
08101601-01A 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, 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: 08101601
Lab Batch ID: R256001

Method Blank

RunID: N_081104A-4752370 Units: ug/L
Analysis Date: 11/04/2008 16:12 Analyst: LT
Preparation Date: 11/04/2008 16:12 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: N_081104A-4752369 Units: ug/L
Analysis Date: 11/04/2008 15:32 Analyst: LT
Preparation Date: 11/04/2008 15:32 Prep By: Method:

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Shows recovery data for various chlorinated hydrocarbons.

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: 08101601
Lab Batch ID: R256001

Laboratory Control Sample (LCS)

RunID: N_081104A-4752369 Units: ug/L
Analysis Date: 11/04/2008 15:32 Analyst: LT
Preparation Date: 11/04/2008 15:32 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: 08101601
Lab Batch ID: R256001

Laboratory Control Sample (LCS)

RunID: N_081104A-4752369 Units: ug/L
Analysis Date: 11/04/2008 15:32 Analyst: LT
Preparation Date: 11/04/2008 15:32 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: 08101601
Lab Batch ID: R256001

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

Sample Spiked: 08101658-01
RunID: N_081104A-4752372 Units: ug/L
Analysis Date: 11/04/2008 17:07 Analyst: LT

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 compounds and their corresponding test 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: 08101601
Lab Batch ID: R256001

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

Sample Spiked: 08101658-01
RunID: N_081104A-4752372 Units: ug/L
Analysis Date: 11/04/2008 17:07 Analyst: LT

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
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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Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 08101601
Lab Batch ID: R256001

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

Sample Spiked: 08101658-01
RunID: N_081104A-4752372 Units: ug/L
Analysis Date: 11/04/2008 17:07 Analyst: LT

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 analytes like cis-1,2-Dichloroethene, m,p-Xylene, and Surr: 1,2-Dichloroethane-d4.

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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Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 08101601
Lab Batch ID: R256099

Method Blank

Samples in Analytical Batch:

RunID: N_081105B-4754087 Units: ug/L
Analysis Date: 11/05/2008 17:43 Analyst: LT
Preparation Date: 11/05/2008 17:43 Prep By: Method:

Lab Sample ID Client Sample ID
08101601-02A 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, 50, 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

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

Conoco Phillips
COP Faye-Burdette

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 08101601
Lab Batch ID: R256099

Method Blank

RunID: N_081105B-4754087 Units: ug/L
Analysis Date: 11/05/2008 17:43 Analyst: LT
Preparation Date: 11/05/2008 17:43 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: N_081105B-4754086 Units: ug/L
Analysis Date: 11/05/2008 17:15 Analyst: LT
Preparation Date: 11/05/2008 17:15 Prep By: Method:

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Shows data for various chlorinated hydrocarbons.

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 Faye-Burdette

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 08101601
Lab Batch ID: R256099

Laboratory Control Sample (LCS)

RunID: N_081105B-4754086 Units: ug/L
Analysis Date: 11/05/2008 17:15 Analyst: LT
Preparation Date: 11/05/2008 17:15 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.
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Handwritten number 52



Quality Control Report

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

Conoco Phillips
COP Faye-Burdette

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 08101601
Lab Batch ID: R256099

Laboratory Control Sample (LCS)

RunID: N_081105B-4754086 Units: ug/L
Analysis Date: 11/05/2008 17:15 Analyst: LT
Preparation Date: 11/05/2008 17:15 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, 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

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Quality Control Report

HOUSTON LABORATORY
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 HOUSTON, TX 77054
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Conoco Phillips
 COP Faye-Burdette

Analysis: Volatile Organics by Method 8260B
 Method: SW8260B

WorkOrder: 08101601
 Lab Batch ID: R256099

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

Sample Spiked: 08101839-02
 RunID: N_081105B-4754097 Units: ug/L
 Analysis Date: 11/05/2008 22:50 Analyst: LT

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	18.0	90.0	20	18.0	90.0	0	20	35	175
1,1,1-Trichloroethane	ND	20	21.0	105	20	20.0	100	4.88	20	35	175
1,1,1,2,2-Tetrachloroethane	ND	20	20.0	100	20	19.0	95.0	5.13	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	21.0	105	20	21.0	105	0	20	35	175
1,1-Dichloroethene	ND	20	19.0	95.0	20	19.0	95.0	0	22	61	145
1,1-Dichloropropene	ND	20	20.0	100	20	20.0	100	0	20	35	175
1,2,3-Trichlorobenzene	ND	20	14.0	70.0	20	15.0	75.0	6.90	20	27	187
1,2,3-Trichloropropane	ND	20	20.0	100	20	20.0	100	0	20	35	175
1,2,4-Trichlorobenzene	ND	20	14.0	70.0	20	14.0	70.0	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	18.0	90.0	0	20	15	175
1,2-Dibromoethane	ND	20	19.0	95.0	20	20.0	100	5.13	20	35	175
1,2-Dichlorobenzene	ND	20	18.0	90.0	20	19.0	95.0	5.41	20	35	175
1,2-Dichloroethane	ND	20	20.0	100	20	20.0	100	0	20	35	175
1,2-Dichloropropane	ND	20	20.0	100	20	19.0	95.0	5.13	20	35	175
1,3,5-Trimethylbenzene	ND	20	18.0	90.0	20	17.0	85.0	5.71	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	19.0	95.0	20	20.0	100	5.13	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	19.0	95.0	20	19.0	95.0	0	20	35	175
2-Butanone	ND	20	28.0	140	20	22.0	110	24.0 *	20	10	230
2-Chloroethyl vinyl ether	ND	20	19.0	95.0	20	20.0	100	5.13	20	10	250
2-Chlorotoluene	ND	20	18.0	90.0	20	18.0	90.0	0	20	31	175
2-Hexanone	ND	20	19.0	95.0	20	22.0	110	14.6	20	10	250
4-Chlorotoluene	ND	20	69.0	345 *	20	40.0	200 *	53.2 *	20	31	175
4-Isopropyltoluene	ND	20	17.0	85.0	20	16.0	80.0	6.06	20	35	175
4-Methyl-2-pentanone	ND	20	16.0	80.0	20	18.0	90.0	11.8	20	10	175
Acetone	ND	100	160	160	100	130	130	20.7 *	20	10	400
Acrylonitrile	ND	200	170	85.0	200	190	95.0	11.1	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

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Quality Control Report

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

Conoco Phillips
COP Faye-Burdette

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 08101601
Lab Batch ID: R256099

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

Sample Spiked: 08101839-02
RunID: N_081105B-4754097 Units: ug/L
Analysis Date: 11/05/2008 22:50 Analyst: LT

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
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Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 08101601
Lab Batch ID: R256099

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

Sample Spiked: 08101839-02
RunID: N_081105B-4754097 Units: ug/L
Analysis Date: 11/05/2008 22:50 Analyst: LT

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, and Surr: 1,2-Dichloroethane-d4.

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
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Quality Control Report

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

Conoco Phillips
COP Faye-Burdette

Analysis: Ion Chromatography
Method: E300.0

WorkOrder: 08101601
Lab Batch ID: R255465B

Method Blank

Samples in Analytical Batch:

RunID: IC1_081028A-4743014 Units: mg/L
Analysis Date: 10/28/2008 18:12 Analyst: TW

Lab Sample ID Client Sample ID
08101601-01E MW-1

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

Laboratory Control Sample (LCS)

RunID: IC1_081028A-4743015 Units: mg/L
Analysis Date: 10/28/2008 18:29 Analyst: TW

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Rows: Fluoride, Ortho-phosphate (As P)

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

Sample Spiked: 08101600-01
RunID: IC1_081028A-4743111 Units: mg/L
Analysis Date: 10/28/2008 19:02 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: Fluoride, Ortho-phosphate (As P)

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

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

Conoco Phillips
COP Faye-Burdette

Analysis: Ion Chromatography
Method: E300.0

WorkOrder: 08101601
Lab Batch ID: R255466C

Method Blank

Samples in Analytical Batch:

RunID: IC1_081028B-4743034 Units: mg/L
Analysis Date: 10/28/2008 18:12 Analyst: TW

Lab Sample ID Client Sample ID
08101601-01E MW-1

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

Laboratory Control Sample (LCS)

RunID: IC1_081028B-4743035 Units: mg/L
Analysis Date: 10/28/2008 18:29 Analyst: TW

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Row: Nitrogen,Nitrate (As N), 10.00, 9.975, 99.75, 85, 115

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

Sample Spiked: 08101600-01
RunID: IC1_081028B-4743037 Units: mg/L
Analysis Date: 10/28/2008 19:02 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), 5.471, 10, 14.76, 92.89, 10, 15.25, 97.78, 3.259, 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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Quality Control Report

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

Conoco Phillips
COP Faye-Burdette

Analysis: Ion Chromatography
Method: E300.0

WorkOrder: 08101601
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
08101601-01E MW-1

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

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. Row: Chloride, 10.00, 9.409, 94.09, 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

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: Chloride, 18.90, 40, 58.79, 99.73, 40, 56.56, 94.14, 3.874, 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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Quality Control Report

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Conoco Phillips
COP Faye-Burdette

Analysis: Ion Chromatography
Method: E300.0

WorkOrder: 08101601
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
08101601-01E 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.
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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Sample Receipt Checklist

Workorder:	08101601	Received By:	RE
Date and Time Received:	10/28/2008 9:30:00 AM	Carrier name:	Fedex-Priority
Temperature:	4.0°C	Chilled by:	Water Ice

1. Shipping container/cooler in good condition? Yes No Not Present
2. Custody seals intact on shipping container/cooler? Yes No Not Present
3. Custody seals intact on sample bottles? Yes No Not Present
4. Chain of custody present? Yes No
5. Chain of custody signed when relinquished and received? Yes No
6. Chain of custody agrees with sample labels? Yes No
7. Samples in proper container/bottle? Yes No
8. Sample containers intact? Yes No
9. Sufficient sample volume for indicated test? Yes No
10. All samples received within holding time?
1. Received all Nitrates and Ortho-PO4 expired collected on 10/22/08. Yes No
11. Container/Temp Blank temperature in compliance? Yes No
12. Water - VOA vials have zero headspace? Yes No VOA Vials Not Present
13. Water - Preservation checked upon receipt (except VOA*)? Yes No Not Applicable

*VOA Preservation Checked After Sample Analysis

SPL Representative: Elder, Allen

Contact Date & Time: 10/28/2008 3:00:00 PM

Client Name Contacted: Kelly Blanchard

Non Conformance Issues: Continue with Nitrate and Ortho-PO4 per historicals.

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



Chain of Custody Record

Client: Tetra Tech/ Conoco Phillips
Attention: Kelly Blanchard/Tetra Tech
 Phone: 505-237-8440 | email: kelly.blanchard@tetrattech.c
 Address: 6121 Indian School Road, NE Ste. 200
 City: Albuquerque | State: NM | Zip Code: 87110
 Project Name: Faye Burdette
 P.O. Number:

SPL Workorder Number: **08101601**

Sampled By:
 Signature: *Christine Matthews* | print: **Christine Matthews**

Requested Analysis

Sample ID	Collected		Sample Type			Matrix	Bottle Type	Preservative Type	# of Containers	Requested Analysis							
	Date	Time	Comp	Grab	Water					Soil	8260-BTEX	8015-GPO	8015-DRO	8260-VOC	8270-SVOC	Tot.Metals&Hg-6010/7470	Tot.Metals-6020/7471
MW-1	10/22	1540		X	X		1	3	3	X							
"	↓	↓		X	X		1	3	3		X						
"	↓	↓		X	X		6	2	2					X	X		
"	↓	↓		X	X		4	3	1			X					
"	↓	↓		X	X		3	1	2								X
"	↓	↓		X	X		4	1	1				X				
Trip Blank	10/27	1430			X		1	3	2	X							

Turnaround Time Requirements:
 24 hr () 48 hr ()
 72 hr () 5 wday ()
 10 wday - Standard ()

Remarks: Anions=Fl, Cl, N, PO4, SO4, NO3

Intact? Y or N
 Temperature: _____

Bottle Types: 1: 3/40ml Vials 2: 1L Glass 3: 1L Plastic 4: 1L Amber Glass 5: 8oz Plastic 6: 16oz Plastic
Preservative Types: 1: NONE 2: HNO3 3: HCL 4: H2SO4

Relinquished by Sampler:
Christine Matthews

Date: 10/27/08 Time: 1500

Received by:
[Signature]

Relinquished by:

Date: 10/28/08 Time: 0930

Received by SPL, Inc.:
[Signature]

Relinquished by: