3R - 069

2008 AGWMR

08/06/2009

3R069

2008 ANNUAL GROUNDWATER MONITORING REPORT

CONOCOPHILLIPS COMPANY
HAMPTON #4M
AZTEC, NEW MEXICO

OCD # 3R069

RECEIVED OCD
2009 AUG 11 P 3:23

Prepared for:

ConocoPhillips

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. 1158690062

August 6, 2009

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

ANNUAL GROUNDWATER MONITORING REPORT HAMPTON #4M, AZTEC, NEW MEXICO

1.0 INTRODUCTION

This report presents the results of quarterly groundwater monitoring events of 2008 conducted by Tetra Tech, Inc. (Tetra Tech), at the ConocoPhillips Hampton #4M site near Aztec, New Mexico.

The site is located approximately ¼ mile south of Hampton Arroyo and 2 miles southeast of Aztec, New Mexico. The site consists of a gas production well and associated equipment and installations. The location and general features of the Hampton #4M site are shown on Figures 1 and 2, respectively.

1.1 Site Background

The Hampton #4M gas well was spudded on November 22, 1983, by Southland Royalty Company (Southland). Southland was acquired by Burlington Resources, Inc. (Burlington) in January of 1996 and Burlington was subsequently acquired by ConocoPhillips Company in March of 2006.

Environmental assessment and remediation activities at this site date back to April of 1996, when Public Service Company of New Mexico (PNM), the operator of some tanks, a dehydration unit and an unlined earthen pit on the north end of the Hampton #4M well pad, initiated pit closure work. Since that time there has been a great deal of soil and groundwater assessment, excavation of hydrocarbon-impacted soil, and groundwater monitoring. The existing monitor well network consists of 9 wells: MW-1, MW-5, MW-7, MW-9, MW-11, MW-12, MW-15, MW-16, and TMW-1. A nearby groundwater seep is also part of the current program to monitor the progression of natural remediation at the site.

2.0 MONITORING SUMMARY AND SAMPLING METHODOLOGY / RESULTS

2.1 Monitoring Summary

Quarterly groundwater sampling was conducted in March, July, and November 2008 and in January 2009. Groundwater samples were collected from monitoring wells MW-1, MW-5, MW-7, MW-9, MW-11, MW-12, MW-15, MW-16, TMW-1, and a seep on location. During each sampling event, water levels were measured by Tetra Tech in each monitoring well. Calculated groundwater elevations are presented on Table 1. Groundwater elevation contour maps were generated using quarterly water level data and are presented in Figures 3-6. A geologic cross section is presented as Figure 7.

2.2 Groundwater Sampling Methodology

Monitoring wells MW-1, MW-5, MW-7, MW-9, MW-11, MW-12, MW-15, MW-16, and TMW-1 were purged of three volumes of water and sampled. A 1.5-inch clear, poly-vinyl, disposable bailer was used to purge each well and to collect the groundwater sample. The purge water generated during the event was

disposed of in the waste water tank located on site (Figure 2). The groundwater samples were placed in laboratory prepared bottles, packed on ice, and shipped with chain-of-custody documentation to Southern Petroleum Laboratories in Houston, Texas. All samples collected were analyzed for the presence of benzene, toluene, ethylbenezene, and xylenes (BTEX) by Environmental Protection Agency (EPA) Method 8260B.

2.3 Groundwater Sampling Analytical Results

Samples collected during the 2008 monitoring period indicate the following results:

- Groundwater concentrations for BTEX were below laboratory method detection limits (MDL) / practical quantitation limits (PQL) in monitor wells MW-1, MW-9, MW-11, MW-15, and the onsite seep.
- Groundwater concentrations exceeded the New Mexico Water Quality Control Commission (NMWQCC) standard for:
    - benzene (10 micrograms per liter [µg/L]), toluene (750 µg/L), and total xylenes (620 µg/L) in monitoring wells MW-5 and MW-16 for the entire monitoring period;
    - benzene in monitoring well MW-12 for the entire monitoring period;
    - benzene in monitoring well MW-7 during the second and third quarters of the monitoring period;
    - benzene in monitoring well TMW-1 during the second and fourth quarters of the monitoring period.
- The highest BTEX concentrations were detected in monitoring well MW-16 at 5500, 9600, 510, and 6900 µg/L, respectively in the March 2008 sampling.

Table 2 summarizes the laboratory analytical results for each quarterly groundwater sampling event. The corresponding laboratory analysis reports including quality control summaries are included in Appendix A.

3.0 CONCLUSIONS

Tetra Tech will continue to conduct quarterly groundwater monitoring of the existing well network at the Hampton #4M site during March, June, September and December 2009. Please contact Kelly Blanchard at 505-237-8440 or kelly.blanchard@tetratech.com if you have any questions or require additional information.

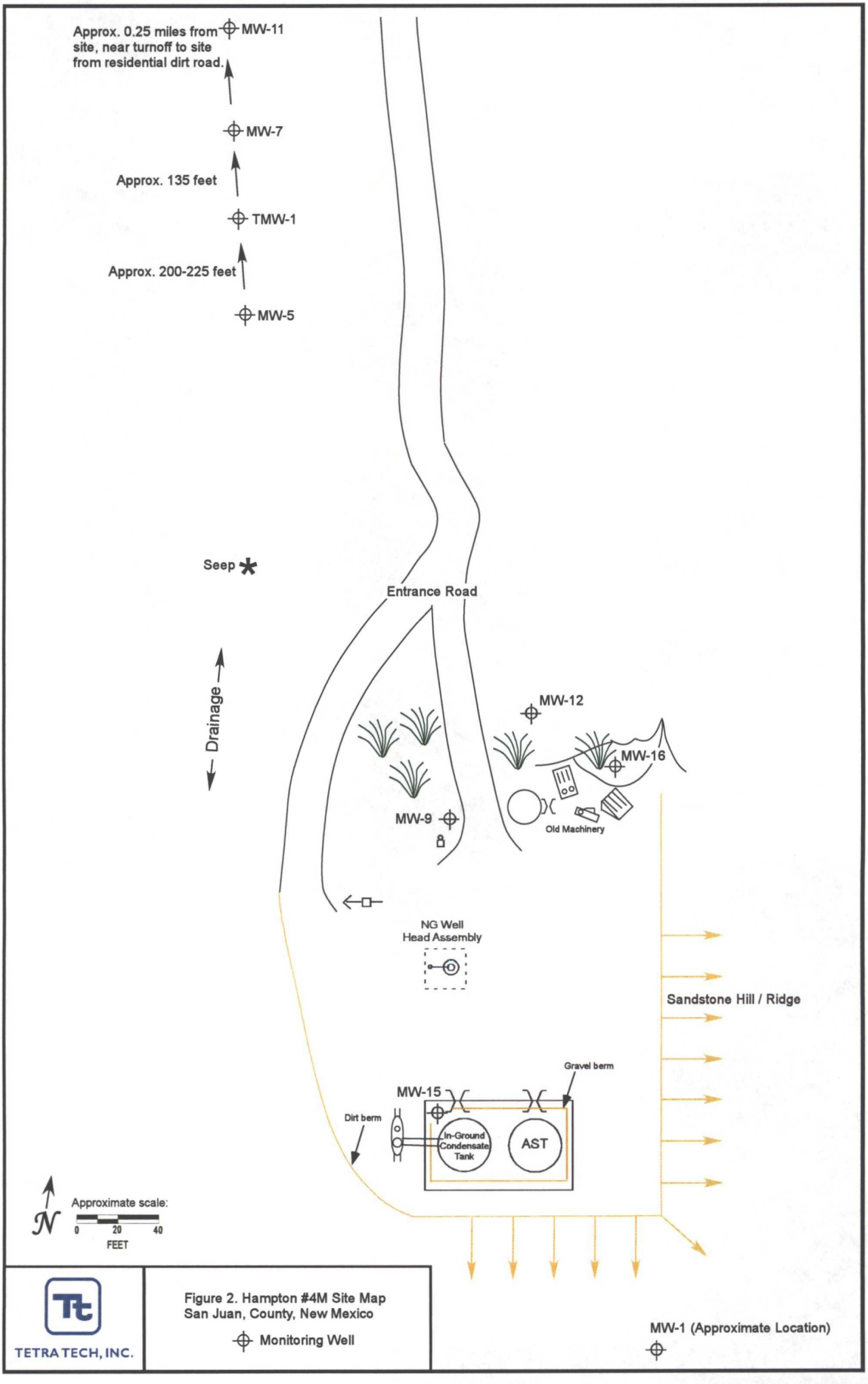
Approximate Scale:

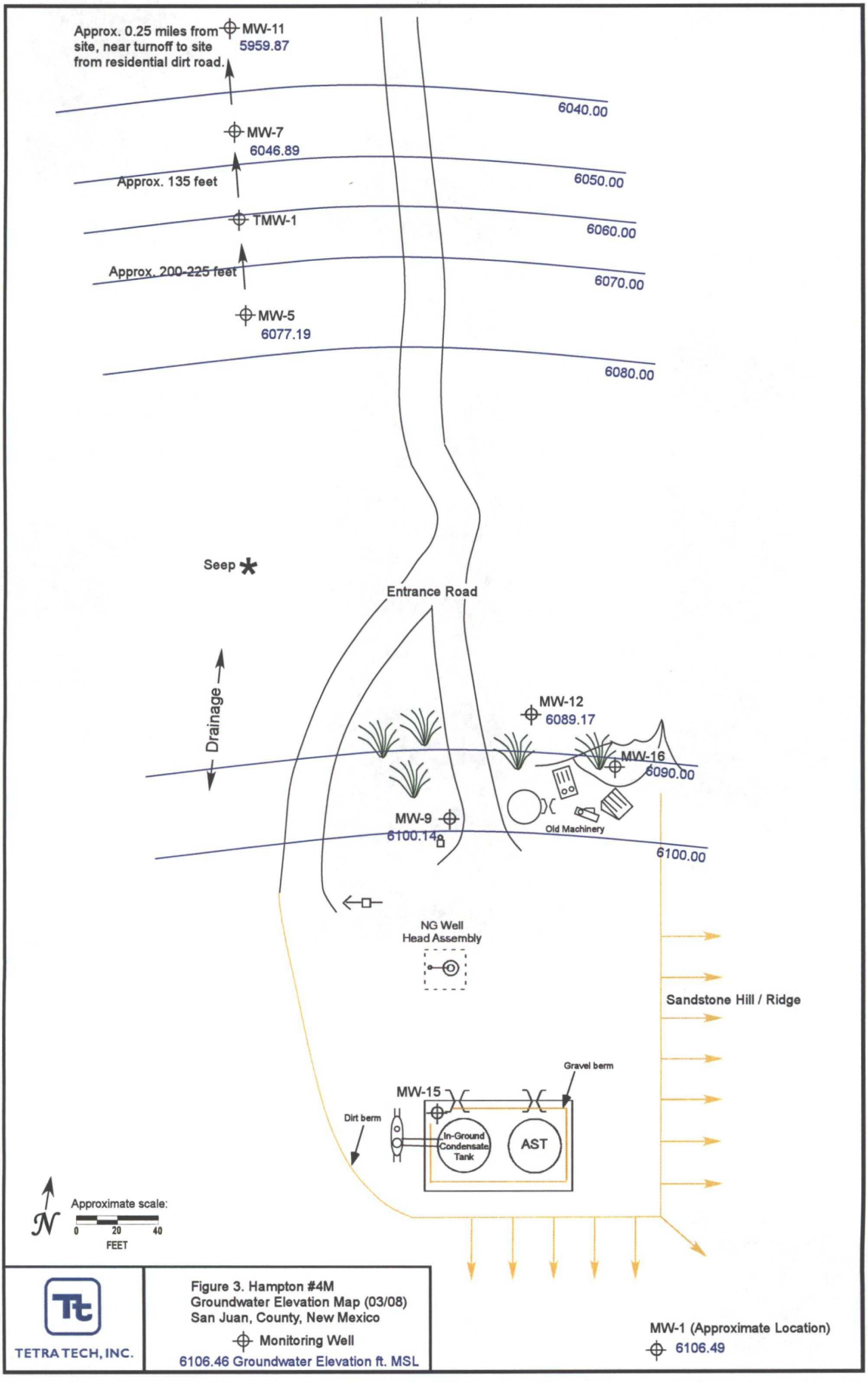
0 0.5 1.0

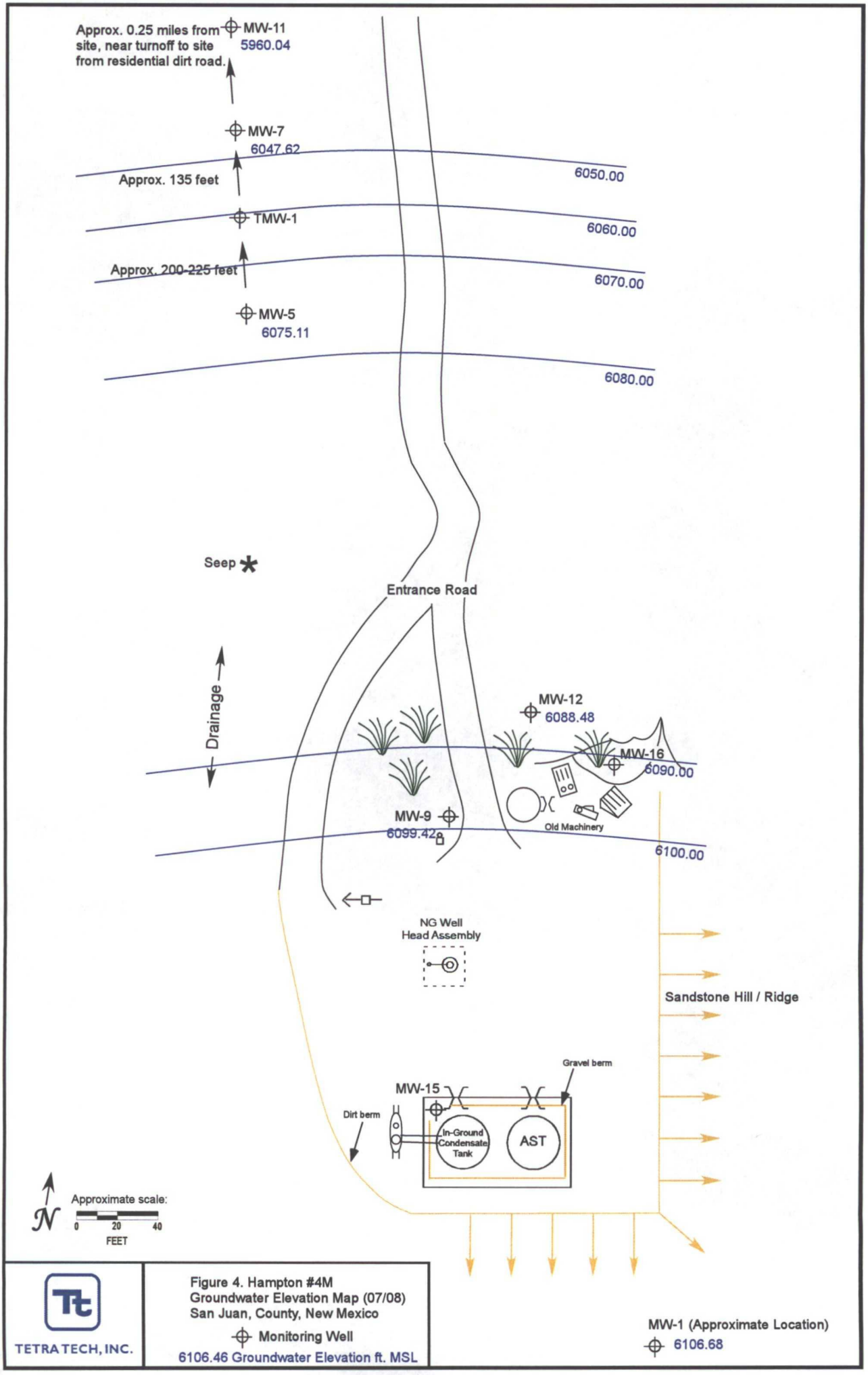
Miles

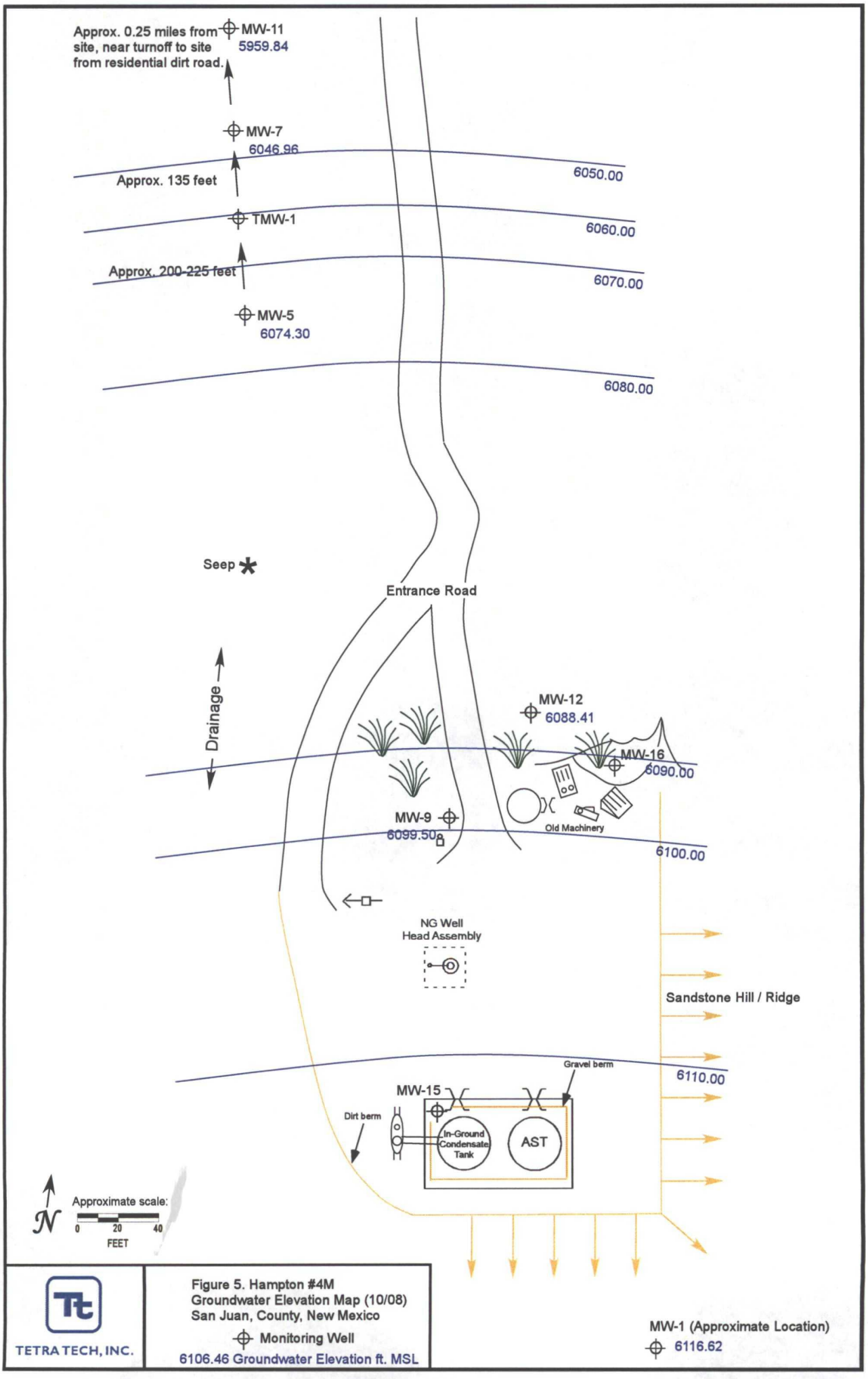
TETRA TECH, INC.

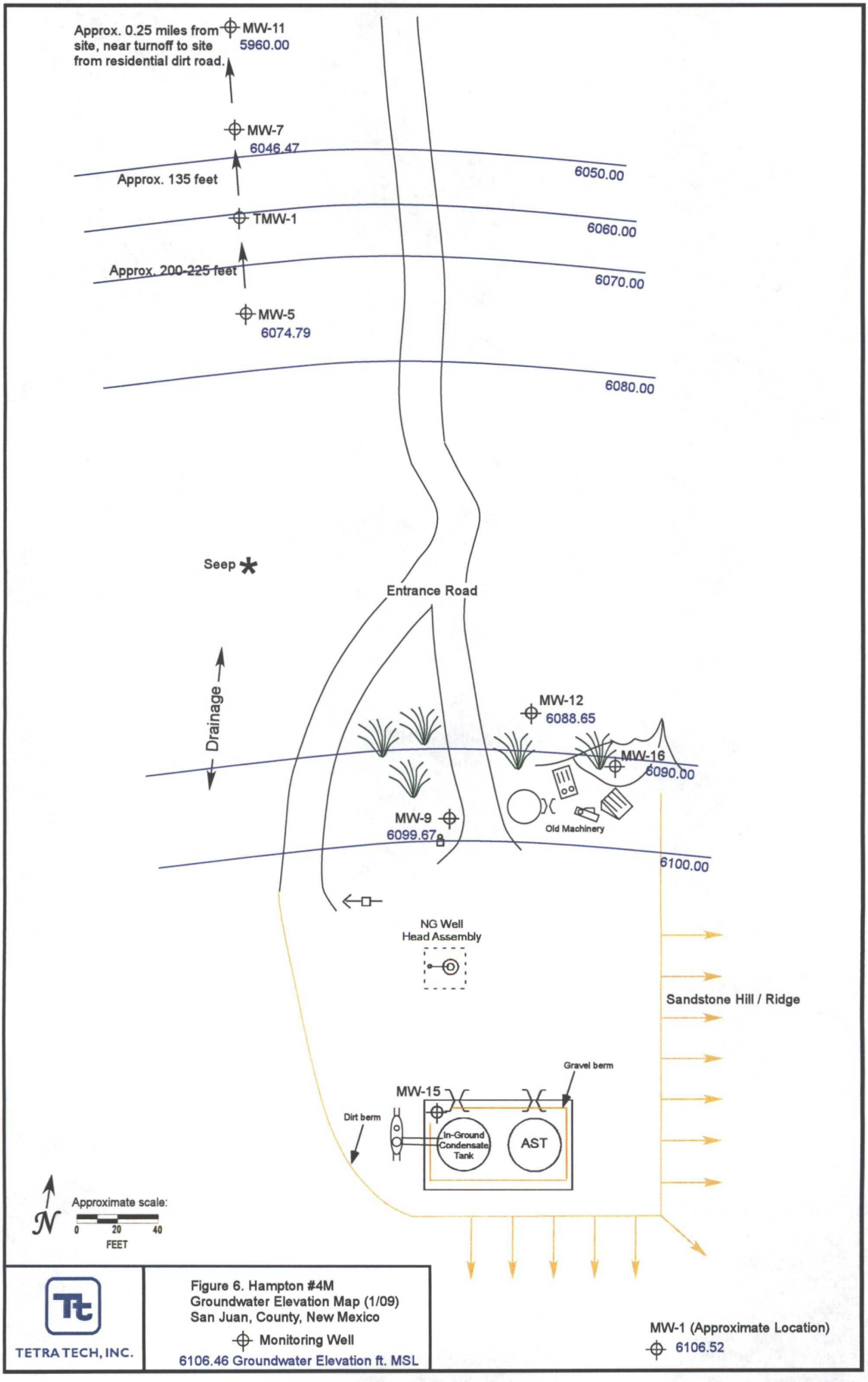
Figure 1. Site Location Map
ConocoPhillips Hampton #4M Site
Aztec, New Mexico

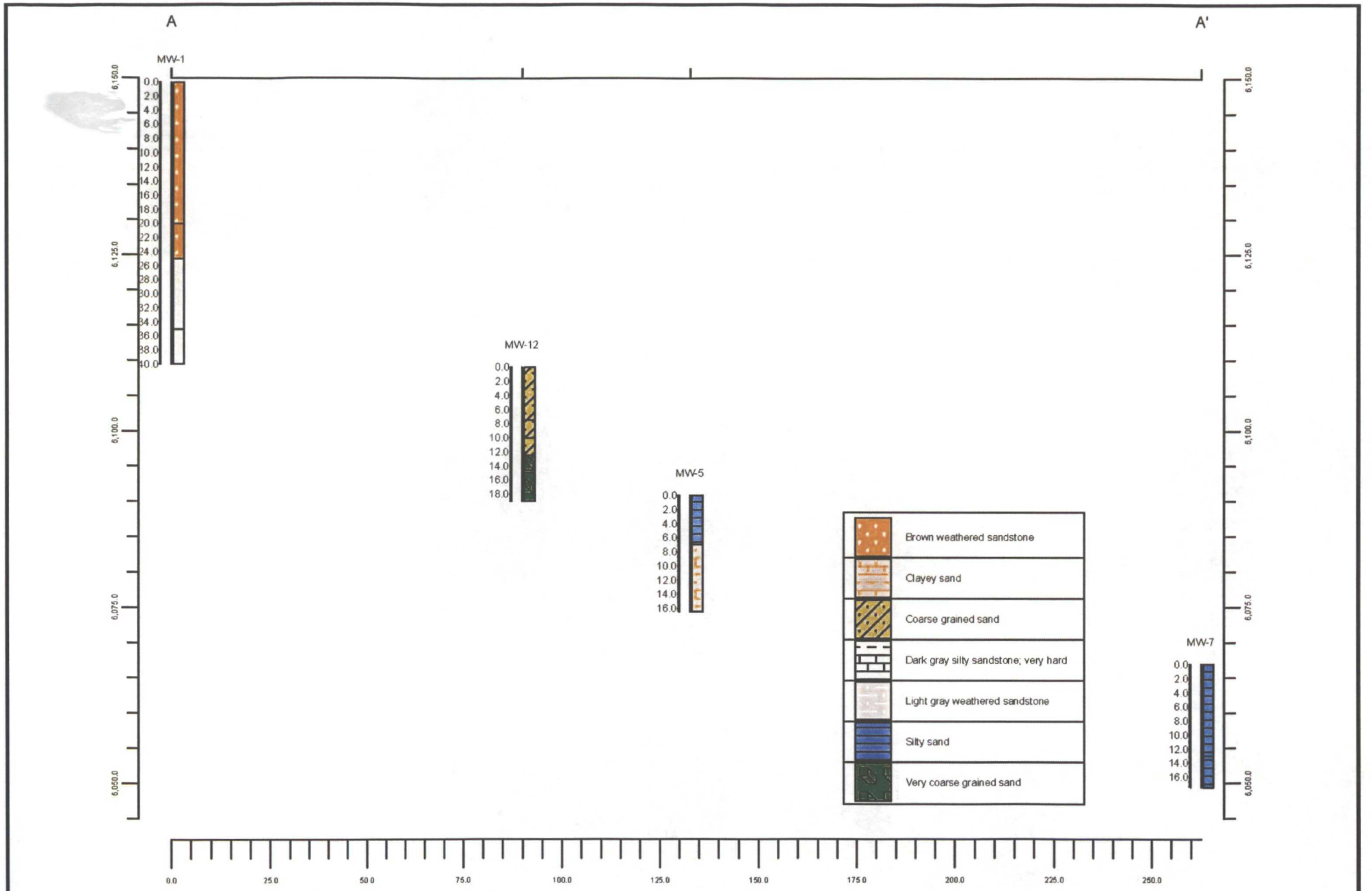

Approx. 0.25 miles from site, near turnoff to site from residential dirt road.
MW-11
MW-7
Approx. 135 feet
TMW-1
Approx. 200-225 feet
MW-5
Seep
Entrance Road
Drainage
MW-12
MW-16
MW-9
Old Machinery
NG Well Head Assembly
Sandstone Hill / Ridge
Gravel berm
MW-15
Dirt berm
In-Ground Condensate Tank
AST
N
Approximate scale:
0 20 40
FEET
TETRA TECH, INC.
Figure 2. Hampton #4M Site Map
San Juan, County, New Mexico
Monitoring Well
MW-1 (Approximate Location)


Approx. 0.25 miles from site, near turnoff to site from residential dirt road.
MW-11
5959.87
6040.00
MW-7
6046.89
Approx. 135 feet
6050.00
TMW-1
6060.00
Approx. 200-225 feet
6070.00
MW-5
6077.19
6080.00
Seep
Entrance Road
Drainage
MW-12
6089.17
MW-16
6090.00
MW-9
6100.14
Old Machinery
6100.00
NG Well
Head Assembly
Sandstone Hill / Ridge
Gravel berm
MW-15
Dirt berm
In-Ground Condensate Tank
AST
N
Approximate scale:
0
20
40
FEET
TETRA TECH, INC.
Figure 3. Hampton #4M
Groundwater Elevation Map (03/08)
San Juan, County, New Mexico
Monitoring Well
6106.46 Groundwater Elevation ft. MSL
MW-1 (Approximate Location)
6106.49


Approx. 0.25 miles from site, near turnoff to site from residential dirt road.
MW-11
5960.04
MW-7
6047.62
Approx. 135 feet
6050.00
TMW-1
6060.00
Approx. 200-225 feet
6070.00
MW-5
6075.11
6080.00
Seep
Entrance Road
Drainage
MW-12
6088.48
MW-16
6090.00
MW-9
6099.42
Old Machinery
6100.00
NG Well
Head Assembly
Sandstone Hill / Ridge
Gravel berm
MW-15
Dirt berm
In-Ground Condensate Tank
AST
N
Approximate scale:
0
20
40
FEET
TETRA TECH, INC.
Figure 4. Hampton #4M
Groundwater Elevation Map (07/08)
San Juan, County, New Mexico
Monitoring Well
6106.46 Groundwater Elevation ft. MSL
MW-1 (Approximate Location)
6106.68


Approx. 0.25 miles from site, near turnoff to site from residential dirt road.
MW-11
5959.84
MW-7
6046.96
Approx. 135 feet
TMW-1
Approx. 200-225 feet
MW-5
6074.30
6050.00
6060.00
6070.00
6080.00
Seep
Entrance Road
Drainage
MW-12
6088.41
MW-16
6090.00
MW-9
6099.50
Old Machinery
6100.00
NG Well Head Assembly
Sandstone Hill / Ridge
Gravel berm
6110.00
MW-15
Dirt berm
In-Ground Condensate Tank
AST
N
Approximate scale:
0
20
40
FEET
TETRA TECH, INC.
Figure 5. Hampton #4M
Groundwater Elevation Map (10/08)
San Juan, County, New Mexico
Monitoring Well
6106.46 Groundwater Elevation ft. MSL
MW-1 (Approximate Location)
6116.62


Approx. 0.25 miles from site, near turnoff to site from residential dirt road.
MW-11
5960.00
MW-7
6046.47
Approx. 135 feet
6050.00
TMW-1
6060.00
Approx. 200-225 feet
6070.00
MW-5
6074.79
6080.00
Seep
Entrance Road
Drainage
MW-12
6088.65
MW-16
6090.00
MW-9
6099.67
Old Machinery
6100.00
NG Well
Head Assembly
Sandstone Hill / Ridge
Gravel berm
MW-15
Dirt berm
In-Ground Condensate Tank
AST
N
Approximate scale:
0
20
40
FEET
TETRA TECH, INC.
Figure 6. Hampton #4M
Groundwater Elevation Map (1/09)
San Juan, County, New Mexico
Monitoring Well
6106.46 Groundwater Elevation ft. MSL
MW-1 (Approximate Location)
6106.52



TETRA TECH, INC.

Figure 7. Hampton #4M Cross Section
San Juan, County, New Mexico

Table 1. ConocoPhillps Hampton #4M - Groundwater Elevation Summary

Monitor Well	TOC Elevation (ft AMSL)	Sample Date	Depth to Water (ft)	GW Elevation (ft AMSL)
MW-1	6149.42	11/8/2007	42.81	6106.61
		1/17/2008	42.96	6106.46
		3/19/2008	42.93	6106.49
		7/22/2008	42.74	6106.68
		10/23/2008	32.80	6116.62
		1/21/2008	42.90	6106.52
MW-5	6090.83	11/8/2007	16.52	6074.31
		1/17/2008	15.65	6075.18
		3/19/2008	13.64	6077.19
		7/22/2008	15.72	6075.11
		10/23/2008	16.53	6074.30
		1/21/2008	16.04	6074.79
TMW-1	No survey - DTW only	11/8/2007	19.06	NA
		1/17/2008	19.37	NA
		3/19/2008	18.55	NA
		7/22/2008	18.10	NA
		10/23/2008	19.19	NA
		1/21/2008	19.25	NA
MW-7	6066.91	11/8/2007	20.22	6046.69
		1/17/2008	20.50	6046.41
		3/19/2008	20.02	6046.89
		7/22/2008	19.29	6047.62
		10/23/2008	19.95	6046.96
		1/21/2008	20.44	6046.47
MW-9	6122.52	11/8/2007	22.91	6099.61
		1/17/2008	22.76	6099.76
		3/19/2008	22.38	6100.14
		7/22/2008	23.10	6099.42
		10/23/2008	23.02	6099.50
		1/21/2008	22.85	6099.67
MW-11	6015.75	11/8/2007	56.00	5959.75
		1/17/2008	55.86	5959.89
		3/19/2008	55.88	5959.87
		7/22/2008	55.71	5960.04
		10/23/2008	55.91	5959.84
		1/21/2008	55.75	5960.00
MW-12	6109.02	11/8/2007	20.46	6088.56
		1/17/2008	20.24	6088.78
		3/19/2008	19.85	6089.17
		7/22/2008	20.54	6088.48
		10/23/2008	20.61	6088.41
		1/21/2008	20.37	6088.65
MW-15	No survey - DTW only	11/8/2007	18.03	NA
		1/17/2008	18.20	NA
		3/19/2008	17.60	NA
		7/22/2008	17.79	NA
		10/23/2008	18.01	NA
		1/21/2008	18.20	NA
MW-16	No survey - DTW only	11/8/2007	25.03	NA
		1/17/2008	24.88	NA
		3/19/2008	24.37	NA
		7/22/2008	25.00	NA
		10/23/2008	25.57	NA
		1/21/2008	24.97	NA

Explanation

AMSL = Above mean sea level
DTW = Depth to water
NA = Not available

Table 2. ConocoPhillips Hampton #4M - Groundwater Laboratory Analytical Results Summary

Well ID	Sample Date	Benzene	Toluene	Ethylbenzene	Total Xylenes
		(µg/L)			
MW-1	3/26/2007	<0.3 U	0.3 J	0.2 J	0.4 J
	6/26/2007	<0.3 U	<0.2 U	<0.2 U	<0.6 U
	11/8/2007	<0.5 U	<0.7 U	<0.8 U	<0.8 U
	1/15/2008	<0.5 U	<0.7 U	<0.8 U	<0.8 U
	3/19/2008	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	7/22/2008	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	10/23/2008	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	1/21/2009	<5.0 U	<5.0 U	<5.0 U	<5.0 U
MW-5	3/26/2007	**660**	**6470**	530	**5450**
	6/26/2007	**740**	**8070**	640	**7320**
	11/8/2007	**410**	**4800**	390	**5000**
	1/17/2008	**440**	**6400**	510	**6100**
	3/19/2008	**370**	**2900**	240	**2570**
	7/22/2008	**340**	**6100**	550	**6400**
	10/23/2008	**270**	**6200**	440	**6300**
	1/21/2009	**250**	**3800**	510	**5200**
MW-7	3/26/2007	**11.5**	1.0	0.6 J	0.8 J
	6/26/2007	**56**	0.4 J	17.7	1.3
	11/8/2007	**44**	<0.7 U	2.0	<0.8 U
	1/17/2008	**17**	<0.7 U	3.0	<0.8 U
	3/19/2008	5	<5.0 U	<5.0 U	<5.0 U
	7/22/2008	**32**	<5.0 U	12.0	7
	10/23/2008	**17**	<5.0 U	<5.0 U	<5.0 U
	1/21/2009	<5.0 U	<5.0 U	<5.0 U	<5.0 U
MW-9	3/26/2007	<0.3 U	<0.2 U	<0.2 U	<0.6 U
	6/26/2007	<0.3 U	<0.2 U	<0.2 U	<0.6 U
	11/8/2007	<0.5 U	<0.7 U	<0.8 U	<0.8 U
	1/17/2008	<0.5 U	<0.7 U	<0.8 U	<0.8 U
	3/19/2008	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	7/22/2008	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	10/23/2008	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	1/21/2009	<5.0 U	<5.0 U	<5.0 U	<5.0 U
MW-11	3/26/2007	<0.3 U	<0.2 U	<0.2 U	<0.6 U
	6/26/2007	<0.3 U	<0.2 U	<0.2 U	<0.6 U
	11/8/2007	<0.5 U	<0.7 U	<0.8 U	<0.8 U
	1/17/2008	<0.5 U	<0.7 U	<0.8 U	<0.8 U
	3/19/2008	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	7/22/2008	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	10/23/2008	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	1/21/2009	<5.0 U	<5.0 U	<5.0 U	<5.0 U
MW-12	3/26/2007	**4130**	**1680**	340	**1180**
	6/26/2007	**1520**	432	118	340
	11/8/2007	**780**	310	43	170
	1/17/2008	**2000**	**1400**	180	**790**
	3/19/2008	**1600**	560	160	530
	7/22/2008	**730**	22	14	21
	10/23/2008	**500**	30	22	40
	1/21/2009	**1100**	430	110	410

MW-15	3/26/2007	<0.3 U	<0.2 U	<0.2 U	<0.6 U
	6/26/2007	<0.3 U	0.5 J	<0.2 U	<0.6 U
	11/8/2007	<0.5 U	<0.7 U	<0.8 U	<0.8 U
	1/17/2008	<0.5 U	<0.7 U	<0.8 U	<0.8 U
	3/19/2008	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	7/22/2008	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	10/23/2008	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	1/21/2009	<5.0 U	<5.0 U	<5.0 U	<5.0 U
MW-16	3/26/2007	**2970**	**2820**	260	**5220**
	6/26/2007	**5230**	**9110**	**770**	**7760**
	11/8/2007	**5500**	**12000**	570	**6200**
	1/17/2008	**4600**	**9100**	550	**5600**
	3/19/2008	**5500**	**9600**	510	**6900**
	7/22/2008	**3600**	**6100**	430	**4500**
	10/23/2008	**4700**	**9100**	480	**6600**
	1/21/2009	**4200**	**7500**	480 J	**6900**
TMW-1	3/26/2007	NA	NA	NA	NA
	6/26/2007	**269**	2.6	4.9	15.7
	11/8/2007	**300**	12	6	38
	1/17/2008	0.8	<0.7 U	<0.8 U	1
	3/19/2008	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	7/22/2008	**130**	29	11	22
	10/23/2008	NA	NA	NA	NA
	1/21/2009	**13**	<5.0 U	<5.0 U	<5.0 U
Seep	3/26/2007	<0.3 U	0.3 J	<0.2 U	<0.6 UJ
	6/26/2007	<0.3 U	<0.2 U	<0.2 U	<0.6 U
	11/8/2007	<0.5 U	<0.7 U	<0.8 U	<0.8 U
	1/17/2008	NA	NA	NA	NA
	3/19/2008	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	7/22/2008	NA	NA	NA	NA
	10/23/2008	<5.0 U	<5.0 U	<5.0 U	<5.0 U
	1/21/2009	<5.0 U	<5.0 U	<5.0 U	<5.0 U
NMWQCC Standards		**10 (µg/L)**	**750 (µg/L)**	**750 (µg/L)**	**620 (µg/L)**

Explanation

J = Analyte concetration detected at a value between MDL and PQL
MDL = Method Detection Limit
NA = Not Analyzed
NMWQCC = New Mexico Water Quality Control Commission
PQL = Practical Quantitation Limit
U = Analyte was analyzed for but not detected at the indicated MDL
µg/L = micrograms per liter (parts per billion)

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

Conoco, Inc.

Certificate of Analysis Number:

08031211

Report To:		Project Name:	COP Hampton 4M/4929
Tetra Tech EM, Inc. Kelly Blanchard 6121 Indian School Road, N.E. Suite 200 Albuquerque NM 87110- ph: (505) 881-3188 fax:		Site:	Aztec,NM
		Site Address:	
		PO Number:	4509525243
		State:	New Mexico
		State Cert. No.:	
		Date Reported:	3/31/2008

This Report Contains A Total Of 21 Pages

Excluding This Page, Chain Of Custody

And

Any Attachments

4/4/2008

Date

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

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

Case Narrative for:

Conoco, Inc.

Certificate of Analysis Number:

08031211

Report To:		Project Name:	COP Hampton 4M/4929
Tetra Tech EM, Inc.		Site:	Aztec,NM
Kelly Blanchard		Site Address:	
6121 Indian School Road, N.E.			
Suite 200		PO Number:	4509525243
Albuquerque		State:	New Mexico
NM		State Cert. No.:	
87110-		Date Reported:	3/31/2008
ph: (505) 881-3188	fax:		

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.

The pH of sample ID "MW-16" (SPL ID: 08031211-04) was checked at the time of the Volatile Organics analysis and the pH was greater than 2. Although the sample was collected in a VOA vial preserved with HCl, the sample was not properly preserved to a pH less than 2, which may be due to the matrix of the sample. The analysis of the sample (WAS/WAS NOT) completed within seven days of the collection date.

Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

Some of the percent recoveries and RPD's on the QC report for the MS/MSD may be different than the calculated recoveries and RPD's using the sample result and the MS/MSD results that appear on the report because, the actual raw result is used to perform the calculations for percent recovery and RPD.

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

Bethany Agarwal

Bethany A. Agarwal
Senior Project Manager

Date

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

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

Conoco, Inc.

Certificate of Analysis Number:

08031211

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

Fax To:

Project Name: COP Hampton 4M/4929
Site: Aztec,NM
Site Address:
PO Number: 4509525243
State: New Mexico
State Cert. No.:
Date Reported: 3/31/2008

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
MW-1	08031211-01	Water	3/19/2008 1:35:00 PM	3/21/2008 10:00:00 AM	297487	☐
MW-15	08031211-02	Water	3/19/2008 2:25:00 PM	3/21/2008 10:00:00 AM	297487	☐
MW-9	08031211-03	Water	3/19/2008 3:00:00 PM	3/21/2008 10:00:00 AM	297487	☐
MW-16	08031211-04	Water	3/19/2008 3:10:00 PM	3/21/2008 10:00:00 AM	297487	☐
MW-12	08031211-05	Water	3/19/2008 3:50:00 PM	3/21/2008 10:00:00 AM	297487	☐
Duplicate	08031211-06	Water	3/19/2008 3:40:00 PM	3/21/2008 10:00:00 AM	297487	☐
Seep	08031211-07	Water	3/19/2008 4:20:00 PM	3/21/2008 10:00:00 AM	297487	☐
MW-5	08031211-08	Water	3/19/2008 4:30:00 PM	3/21/2008 10:00:00 AM	297487	☐
TMW-1	08031211-09	Water	3/19/2008 4:55:00 PM	3/21/2008 10:00:00 AM	297487	☐
MW-7	08031211-10	Water	3/19/2008 5:20:00 PM	3/21/2008 10:00:00 AM	297487	☐
Trip Blank	08031211-11	Water	3/19/2008 5:35:00 PM	3/21/2008 10:00:00 AM	278996	☐
MW-11	08031211-12	Water	3/19/2008 5:55:00 PM	3/21/2008 10:00:00 AM	278996	☐

Bethany Agarwal

4/4/2008

Bethany A. Agarwal
Senior 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:** 03/19/2008 13:35 **SPL Sample ID:** 08031211-01

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**		
Benzene	ND		5	1	03/25/08 23:01	LU_L	4346041
Ethylbenzene	ND		5	1	03/25/08 23:01	LU_L	4346041
Toluene	ND		5	1	03/25/08 23:01	LU_L	4346041
m,p-Xylene	ND		5	1	03/25/08 23:01	LU_L	4346041
o-Xylene	ND		5	1	03/25/08 23:01	LU_L	4346041
Xylenes,Total	ND		5	1	03/25/08 23:01	LU_L	4346041
Surr: 1,2-Dichloroethane-d4	94.0		% 62-130	1	03/25/08 23:01	LU_L	4346041
Surr: 4-Bromofluorobenzene	98.0		% 70-130	1	03/25/08 23:01	LU_L	4346041
Surr: Toluene-d8	90.0		% 74-122	1	03/25/08 23:01	LU_L	4346041

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-15 **Collected:** 03/19/2008 14:25 **SPL Sample ID:** 08031211-02

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**		
Benzene	ND		5	1	03/26/08 0:24	LU_L	4346044
Ethylbenzene	ND		5	1	03/26/08 0:24	LU_L	4346044
Toluene	ND		5	1	03/26/08 0:24	LU_L	4346044
m,p-Xylene	ND		5	1	03/26/08 0:24	LU_L	4346044
o-Xylene	ND		5	1	03/26/08 0:24	LU_L	4346044
Xylenes,Total	ND		5	1	03/26/08 0:24	LU_L	4346044
Surr: 1,2-Dichloroethane-d4	90.0		% 62-130	1	03/26/08 0:24	LU_L	4346044
Surr: 4-Bromofluorobenzene	96.0		% 70-130	1	03/26/08 0:24	LU_L	4346044
Surr: Toluene-d8	90.0		% 74-122	1	03/26/08 0:24	LU_L	4346044

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-9 **Collected:** 03/19/2008 15:00 **SPL Sample ID:** 08031211-03

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**		
Benzene	ND			5	1	03/26/08 0:52	LU_L	4346045
Ethylbenzene	ND			5	1	03/26/08 0:52	LU_L	4346045
Toluene	ND			5	1	03/26/08 0:52	LU_L	4346045
m,p-Xylene	ND			5	1	03/26/08 0:52	LU_L	4346045
o-Xylene	ND			5	1	03/26/08 0:52	LU_L	4346045
Xylenes,Total	ND			5	1	03/26/08 0:52	LU_L	4346045
Surr: 1,2-Dichloroethane-d4	90.0		%	62-130	1	03/26/08 0:52	LU_L	4346045
Surr: 4-Bromofluorobenzene	94.0		%	70-130	1	03/26/08 0:52	LU_L	4346045
Surr: Toluene-d8	88.0		%	74-122	1	03/26/08 0:52	LU_L	4346045

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-16 **Collected:** 03/19/2008 15:10 **SPL Sample ID:** 08031211-04

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**		
Benzene	5500		500		100	03/26/08 19:39	LU_L	4346955
Ethylbenzene	510		500		100	03/26/08 19:39	LU_L	4346955
Toluene	9600		500		100	03/26/08 19:39	LU_L	4346955
m,p-Xylene	5100		500		100	03/26/08 19:39	LU_L	4346955
o-Xylene	1800		500		100	03/26/08 19:39	LU_L	4346955
Xylenes,Total	6900		500		100	03/26/08 19:39	LU_L	4346955
Surr: 1,2-Dichloroethane-d4	92.0		%	62-130	100	03/26/08 19:39	LU_L	4346955
Surr: 4-Bromofluorobenzene	98.0		%	70-130	100	03/26/08 19:39	LU_L	4346955
Surr: Toluene-d8	88.0		%	74-122	100	03/26/08 19:39	LU_L	4346955

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-12 **Collected:** 03/19/2008 15:50 **SPL Sample ID:** 08031211-05

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**		
Benzene	1600		100	20	03/26/08 17:17	LU_L	4346950
Ethylbenzene	160		5	1	03/26/08 1:20	LU_L	4346046
Toluene	560		100	20	03/26/08 17:17	LU_L	4346950
m,p-Xylene	390		100	20	03/26/08 17:17	LU_L	4346950
o-Xylene	140		5	1	03/26/08 1:20	LU_L	4346046
Xylenes,Total	530		5	1	03/26/08 1:20	LU_L	4346046
Surr: 1,2-Dichloroethane-d4	89.0		% 62-130	20	03/26/08 17:17	LU_L	4346950
Surr: 1,2-Dichloroethane-d4	90.0		% 62-130	1	03/26/08 1:20	LU_L	4346046
Surr: 4-Bromofluorobenzene	100		% 70-130	20	03/26/08 17:17	LU_L	4346950
Surr: 4-Bromofluorobenzene	96.0		% 70-130	1	03/26/08 1:20	LU_L	4346046
Surr: Toluene-d8	90.0		% 74-122	20	03/26/08 17:17	LU_L	4346950
Surr: Toluene-d8	86.0		% 74-122	1	03/26/08 1:20	LU_L	4346046

Qualifiers:

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

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

Client Sample ID: Duplicate **Collected:** 03/19/2008 15:40 **SPL Sample ID:** 08031211-06

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**		
Benzene	1700		100	20	03/26/08 17:45	LU_L	4346951
Ethylbenzene	160		5	1	03/25/08 22:34	LU_L	4346040
Toluene	590		100	20	03/26/08 17:45	LU_L	4346951
m,p-Xylene	440		100	20	03/26/08 17:45	LU_L	4346951
o-Xylene	140		5	1	03/25/08 22:34	LU_L	4346040
Xylenes,Total	580		5	1	03/25/08 22:34	LU_L	4346040
Surr: 1,2-Dichloroethane-d4	88.0		% 62-130	20	03/26/08 17:45	LU_L	4346951
Surr: 1,2-Dichloroethane-d4	92.0		% 62-130	1	03/25/08 22:34	LU_L	4346040
Surr: 4-Bromofluorobenzene	98.0		% 70-130	20	03/26/08 17:45	LU_L	4346951
Surr: 4-Bromofluorobenzene	102		% 70-130	1	03/25/08 22:34	LU_L	4346040
Surr: Toluene-d8	89.0		% 74-122	20	03/26/08 17:45	LU_L	4346951
Surr: Toluene-d8	90.0		% 74-122	1	03/25/08 22:34	LU_L	4346040

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: Seep **Collected:** 03/19/2008 16:20 **SPL Sample ID:** 08031211-07

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**		
Benzene	ND		5		1	03/26/08 1:47	LU_L	4346047
Ethylbenzene	ND		5		1	03/26/08 1:47	LU_L	4346047
Toluene	ND		5		1	03/26/08 1:47	LU_L	4346047
m,p-Xylene	ND		5		1	03/26/08 1:47	LU_L	4346047
o-Xylene	ND		5		1	03/26/08 1:47	LU_L	4346047
Xylenes,Total	ND		5		1	03/26/08 1:47	LU_L	4346047
Surr: 1,2-Dichloroethane-d4	94.0		%	62-130	1	03/26/08 1:47	LU_L	4346047
Surr: 4-Bromofluorobenzene	96.0		%	70-130	1	03/26/08 1:47	LU_L	4346047
Surr: Toluene-d8	88.0		%	74-122	1	03/26/08 1:47	LU_L	4346047

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-5 **Collected:** 03/19/2008 16:30 **SPL Sample ID:** 08031211-08

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**		
Benzene	370		100	20	03/26/08 16:21	LU_L	4346949
Ethylbenzene	240		100	20	03/26/08 16:21	LU_L	4346949
Toluene	2900		100	20	03/26/08 16:21	LU_L	4346949
m,p-Xylene	2000		100	20	03/26/08 16:21	LU_L	4346949
o-Xylene	570		100	20	03/26/08 16:21	LU_L	4346949
Xylenes,Total	2570		100	20	03/26/08 16:21	LU_L	4346949
Surr: 1,2-Dichloroethane-d4	90.0		% 62-130	20	03/26/08 16:21	LU_L	4346949
Surr: 4-Bromofluorobenzene	99.0		% 70-130	20	03/26/08 16:21	LU_L	4346949
Surr: Toluene-d8	90.0		% 74-122	20	03/26/08 16:21	LU_L	4346949

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: TMW-1 **Collected:** 03/19/2008 16:55 **SPL Sample ID:** 08031211-09

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**		
Benzene	ND		5	1	03/26/08 19:10	LU_L	4346954
Ethylbenzene	ND		5	1	03/26/08 19:10	LU_L	4346954
Toluene	ND		5	1	03/26/08 19:10	LU_L	4346954
m,p-Xylene	ND		5	1	03/26/08 19:10	LU_L	4346954
o-Xylene	ND		5	1	03/26/08 19:10	LU_L	4346954
Xylenes,Total	ND		5	1	03/26/08 19:10	LU_L	4346954
Surr: 1,2-Dichloroethane-d4	90.0		% 62-130	1	03/26/08 19:10	LU_L	4346954
Surr: 4-Bromofluorobenzene	96.0		% 70-130	1	03/26/08 19:10	LU_L	4346954
Surr: Toluene-d8	88.0		% 74-122	1	03/26/08 19:10	LU_L	4346954

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-7 **Collected:** 03/19/2008 17:20 **SPL Sample ID:** 08031211-10

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**		
Benzene	5		5	1	03/26/08 14:59	LU_L	4346946
Ethylbenzene	ND		5	1	03/26/08 14:59	LU_L	4346946
Toluene	ND		5	1	03/26/08 14:59	LU_L	4346946
m,p-Xylene	ND		5	1	03/26/08 14:59	LU_L	4346946
o-Xylene	ND		5	1	03/26/08 14:59	LU_L	4346946
Xylenes,Total	ND		5	1	03/26/08 14:59	LU_L	4346946
Surr: 1,2-Dichloroethane-d4	90.0		% 62-130	1	03/26/08 14:59	LU_L	4346946
Surr: 4-Bromofluorobenzene	98.0		% 70-130	1	03/26/08 14:59	LU_L	4346946
Surr: Toluene-d8	86.0		% 74-122	1	03/26/08 14:59	LU_L	4346946

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:** 03/19/2008 17:35 **SPL Sample ID:** 08031211-11

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**		
Benzene	ND		5	1	03/26/08 13:36	LU_L	4346944
Ethylbenzene	ND		5	1	03/26/08 13:36	LU_L	4346944
Toluene	ND		5	1	03/26/08 13:36	LU_L	4346944
m,p-Xylene	ND		5	1	03/26/08 13:36	LU_L	4346944
o-Xylene	ND		5	1	03/26/08 13:36	LU_L	4346944
Xylenes,Total	ND		5	1	03/26/08 13:36	LU_L	4346944
Surr: 1,2-Dichloroethane-d4	92.0		% 62-130	1	03/26/08 13:36	LU_L	4346944
Surr: 4-Bromofluorobenzene	96.0		% 70-130	1	03/26/08 13:36	LU_L	4346944
Surr: Toluene-d8	88.0		% 74-122	1	03/26/08 13:36	LU_L	4346944

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-11 **Collected:** 03/19/2008 17:55 **SPL Sample ID:** 08031211-12

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**		
Benzene	ND			5	1	03/26/08 15:26	LU_L	4346947
Ethylbenzene	ND			5	1	03/26/08 15:26	LU_L	4346947
Toluene	ND			5	1	03/26/08 15:26	LU_L	4346947
m,p-Xylene	ND			5	1	03/26/08 15:26	LU_L	4346947
o-Xylene	ND			5	1	03/26/08 15:26	LU_L	4346947
Xylenes,Total	ND			5	1	03/26/08 15:26	LU_L	4346947
Surr: 1,2-Dichloroethane-d4	88.0		%	62-130	1	03/26/08 15:26	LU_L	4346947
Surr: 4-Bromofluorobenzene	96.0		%	70-130	1	03/26/08 15:26	LU_L	4346947
Surr: Toluene-d8	88.0		%	74-122	1	03/26/08 15:26	LU_L	4346947

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

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

Quality Control Report

Conoco, Inc.

COP Hampton 4M/4929

Analysis: Volatile Organics by Method 8260B **WorkOrder:** 08031211
Method: SW8260B **Lab Batch ID:** R232038

Method Blank

RunID: K_080325D-4346039 Units: ug/L
Analysis Date: 03/25/2008 20:15 Analyst: LU_L
Preparation Date: 03/25/2008 20:15 Prep By: Method

Analyte	Result	Rep Limit
Benzene	ND	5.0
Ethylbenzene	ND	5.0
Toluene	ND	5.0
m,p-Xylene	ND	5.0
o-Xylene	ND	5.0
Xylenes,Total	ND	5.0
Surr: 1,2-Dichloroethane-d4	92.0	62-130
Surr: 4-Bromofluorobenzene	96.0	70-130
Surr: Toluene-d8	88.0	74-122

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
08031211-01A	MW-1
08031211-02A	MW-15
08031211-03A	MW-9
08031211-05A	MW-12
08031211-06A	Duplicate
08031211-07A	Seep

Laboratory Control Sample (LCS)

RunID: K_080325D-4346038 Units: ug/L
Analysis Date: 03/25/2008 19:20 Analyst: LU_L
Preparation Date: 03/25/2008 19:20 Prep By: Method

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	20.0	22.0	110	76	126
Ethylbenzene	20.0	21.0	105	67	122
Toluene	20.0	22.0	110	70	131
m,p-Xylene	40.0	43.0	108	72	150
o-Xylene	20.0	22.0	110	78	141
Xylenes,Total	60	65	110	72	150
Surr: 1,2-Dichloroethane-d4	50.0	46	92.0	62	130
Surr: 4-Bromofluorobenzene	50.0	51	102	70	130
Surr: Toluene-d8	50.0	46	92.0	74	122

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

Sample Spiked: 08031211-01
RunID: K_080325D-4346042 Units: ug/L
Analysis Date: 03/25/2008 23:29 Analyst: LU_L

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco, Inc.

COP Hampton 4M/4929

Analysis: Volatile Organics by Method 8260B **WorkOrder:** 08031211
Method: SW8260B **Lab Batch ID:** R232038

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	22.0	110	20	22.0	110	0	22	76	127
Ethylbenzene	ND	20	20.0	100	20	21.0	105	4.88	20	35	175
Toluene	ND	20	20.0	100	20	21.0	105	4.88	24	70	131
m,p-Xylene	ND	40	41.0	102	40	42.0	105	2.41	20	35	175
o-Xylene	ND	20	20.0	100	20	21.0	105	4.88	20	35	175
Xylenes,Total	ND	60	61	100	60	63	100	3.2	20	35	175
Surr: 1,2-Dichloroethane-d4	ND	50	43	86.0	50	45.0	90.0	4.55	30	62	130
Surr: 4-Bromofluorobenzene	ND	50	50	100	50	51.0	102	1.98	30	70	130
Surr: Toluene-d8	ND	50	45	90.0	50	45.0	90.0	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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco, Inc.

COP Hampton 4M/4929

Analysis: Volatile Organics by Method 8260B **WorkOrder:** 08031211
Method: SW8260B **Lab Batch ID:** R232123

Method Blank

RunID: K_080326C-4346943 Units: ug/L
Analysis Date: 03/26/2008 12:40 Analyst: LU_L
Preparation Date: 03/26/2008 12:40 Prep By: Method

Analyte	Result	Rep Limit
Benzene	ND	5.0
Ethylbenzene	ND	5.0
Toluene	ND	5.0
m,p-Xylene	ND	5.0
o-Xylene	ND	5.0
Xylenes,Total	ND	5.0
Surr: 1,2-Dichloroethane-d4	92.0	62-130
Surr: 4-Bromofluorobenzene	98.0	70-130
Surr: Toluene-d8	90.0	74-122

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
08031211-04A	MW-16
08031211-05A	MW-12
08031211-06A	Duplicate
08031211-08A	MW-5
08031211-09A	TMW-1
08031211-10A	MW-7
08031211-11A	Trip Blank
08031211-12A	MW-11

Laboratory Control Sample (LCS)

RunID: K_080326C-4346942 Units: ug/L
Analysis Date: 03/26/2008 11:33 Analyst: LU_L
Preparation Date: 03/26/2008 11:33 Prep By: Method

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	20.0	21.0	105	76	126
Ethylbenzene	20.0	20.0	100	67	122
Toluene	20.0	20.0	100	70	131
m,p-Xylene	40.0	41.0	102	72	150
o-Xylene	20.0	21.0	105	78	141
Xylenes,Total	60	62	100	72	150
Surr: 1,2-Dichloroethane-d4	50.0	45	90.0	62	130
Surr: 4-Bromofluorobenzene	50.0	49	98.0	70	130
Surr: Toluene-d8	50.0	45	90.0	74	122

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

Sample Spiked: 08031211-06
RunID: K_080326C-4346952 Units: ug/L
Analysis Date: 03/26/2008 18:13 Analyst: LU_L

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco, Inc.

COP Hampton 4M/4929

Analysis: Volatile Organics by Method 8260B **WorkOrder:** 08031211
Method: SW8260B **Lab Batch ID:** R232123

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	1700	400	2300	N/C	400	2300	N/C	N/C	22	76	127
Ethylbenzene	160	400	610	112	400	590	108	3.33	20	35	175
Toluene	590	400	1000	102	400	1000	102	0	24	70	131
m,p-Xylene	440	800	1300	108	800	1300	108	0	20	35	175
o-Xylene	140	400	590	112	400	610	118	3.33	20	35	175
Xylenes,Total	580	1200	1890	109	1200	1910	111	1.05	20	35	175
Surr: 1,2-Dichloroethane-d4	ND	1000	880	88.0	1000	910	91.0	3.35	30	62	130
Surr: 4-Bromofluorobenzene	ND	1000	980	98.0	1000	990	99.0	1.02	30	70	130
Surr: Toluene-d8	ND	1000	910	91.0	1000	890	89.0	2.22	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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

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

Sample Receipt Checklist

And

Chain of Custody

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

Sample Receipt Checklist

Workorder:	08031211	Received By:	RE
Date and Time Received:	3/21/2008 10:00:00 AM	Carrier name:	Fedex-Standard Overnight
Temperature:	3.0°C	Chilled by:	Blue Ice Pack

1.	Shipping container/cooler in good condition?	Yes	☑	No	☐	Not Present ☐
2.	Custody seals intact on shippping 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?	Yes	☑	No	☐	
11.	Container/Temp Blank temperature in compliance?	Yes	☑	No	☐	
12.	Water - VOA vials have zero headspace?	Yes	☑	No	☐	VOA Vials Not Present ☐
13.	Water - Preservation checked upon receipt (except VOA*)?	Yes	☐	No	☐	Not Applicable ☑

*VOA Preservation Checked After Sample Analysis

SPL Representative: _____ Contact Date & Time: _____

Client Name Contacted: _____

Non Conformance Issues: _____

Client Instructions: _____

SPL, Inc.

Analysis Request & Chain of Custody Record

SPL Workorder No. 297487

0803121 1

page ____ of ____

Client Name: Tetra Tech

Address: 6121 Indian School Rd. Ste 200

Phone/Fax: 505-237-8440

Client Contact: Kelly Blanchard Email:

Project Name/No.: 4929

Site Name: Hampton #4M

Site Location: Aztec, New Mexico

Invoice To: Ph:

SAMPLE ID	DATE	TIME	comp	grab	matrix (W=water S=soil O=oil SL=sludge X=other)	bottle (P=plastic A=amber glass G=glass V=vial X=other)	size (1=1 liter 4=4oz 40=vial 8=8oz 16=16oz X=other)	pres. (1=HCl 2=HNO3 3=H2SO4 X=other)	Number of Containers	Requested Analysis: 8260B-C2	Requested Analysis	Requested Analysis	Requested Analysis	Requested Analysis	Requested Analysis	Requested Analysis	Requested Analysis	Requested Analysis
MW-1	3/19/08	13:35		X	W	V	40	1	3	X								
MW-15	3/19/08	14:25		X	W	V	40	1	3	X								
MW-9	3/19/08	15:00		X	W	V	40	1	3	X								
MW-16	3/19/08	15:10		X	W	V	40	1	3	X	ph=6 for MW-16					BA	4/4/08	
MW-12	3/19/08	15:50		X	W	V	40	1	3	X								
Duplicate	3/19/08	15:40		X	W	V	40	1	3	X								
Seep	3/19/08	16:20		X	W	V	40	1	3	X								
MW-5	3/19/08	16:30		X	W	V	40	1	3	X								
TMW-1	3/19/08	16:55		X	W	V	40	1	3	X								
MW-7	3/19/08	17:20		X	W	V	40	1	3	X								

Client/Consultant Remarks: 1 of 2

Laboratory remarks:

Intact? ☐ Y ☐ N

Ice? ☐ Y ☐ N

Temp: 3.0c

Requested TAT

Contract ☐ 72hr ☐

24hr ☐ Standard ☒

48hr ☐

Other ☐ _____

Special Reporting Requirements Results: Fax ☐ Email ☐ PDF ☐

Standard QC ☒ Level 3 QC ☐ Level 4 QC ☐ TX TRRP ☐ LA RECAP ☐

Special Detection Limits (specify):

PM review (initial): BA

	date	time	
1. Relinquished by Sampler:	3/20/08	10:30	2. Received by:
3. Relinquished by:	date	time	4. Received by:
5. Relinquished by:	date 3/21/08	time 1000	6. Received by Laboratory:

☐ 8880 Interchange Drive
Houston, TX 77054 (713) 660-0901

☐ 500 Ambassador Caffery Parkway
Scott, LA 70583 (337) 237-4775

☐ 459 Hughes Drive
Traverse City, MI 49686 (231) 947-5777

SPL, Inc.

Analysis Request & Chain of Custody Record

SPL Workorder No. 278996

08031211

page ____ of ____

Client Name: Tetra Tech
Address: 6121 Indian School Rd. Ste. 200
Phone/Fax: 505-237-8440
Client Contact: Kelly Blanchard Email:
Project Name/No.: 4929
Site Name: Hampton #4M
Site Location: Aztec, New Mexico
Invoice To: Ph:

SAMPLE ID	DATE	TIME	comp	grab	matrix (W=water S=soil O=oil SL=sludge X=other)	bottle (P=plastic A=amber glass G=glass V=vial X=other)	size (1=1 liter 4=4oz 40=vial 8=8oz 16=16oz X=other)	pres. (1=HCl 2=HNO3 3=H2SO4 X=other)	Number of Containers	BTEX (8260B)	Requested Analysis
Trip Blank	3/19/08	17:35		X	W	GV	40	1	2	X	
MW-11	3/19/08	17:55		X	W	GV	40	1	3	X	

Client/Consultant Remarks: 2 of 2

Laboratory remarks:

Intact? ☐ Y ☐ N
Ice? ☐ Y ☐ N
Temp: 3.0c

Requested TAT

Contract ☐ 72hr ☐
24hr ☐ Standard ☒
48hr ☐
Other ☐ _____

Special Reporting Requirements Results: Fax ☐ Email ☐ PDF ☐
Standard QC ☒ Level 3 QC ☐ Level 4 QC ☐ TX TRRP ☐ LA RECAP ☐

Special Detection Limits (specify):

PM review (initial): DA

	date	time	
1. Relinquished by Sampler:	3/20/08	10:30	2. Received by:
3. Relinquished by:	date	time	4. Received by:
5. Relinquished by:	3/21/08	1000	6. Received by Laboratory:

☐ 8880 Interchange Drive
Houston, TX 77054 (713) 660-0901

☐ 500 Ambassador Caffery Parkway
Scott, LA 70583 (337) 237-4775

☐ 459 Hughes Drive
Traverse City, MI 49686 (231) 947-5777

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

Conoco Phillips

Certificate of Analysis Number:

08071477

Report To:		Project Name:	COP Hampton 4M
Tetra Tech, Inc.		Site:	Aztec, NM
Kelly Blanchard		Site Address:	
6121 Indian School Road, N.E.			
Suite 200		PO Number:	4510016693
Albuquerque		State:	New Mexico
NM		State Cert. No.:	
87110-		Date Reported:	12/10/2008
ph: (505) 237-8440	fax:		

This Report Contains A Total Of 22 Pages

Excluding This Page, Chain Of Custody

And

Any Attachments

12/11/2008

Date

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

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

Case Narrative for:
Conoco Phillips

Certificate of Analysis Number:
08071477

Report To:		Project Name:	COP Hampton 4M
Tetra Tech, Inc.		Site:	Aztec, NM
Kelly Blanchard		Site Address:	
6121 Indian School Road, N.E.			
Suite 200		PO Number:	4510016693
Albuquerque		State:	New Mexico
NM		State Cert. No.:	
87110-		Date Reported:	12/10/2008
ph: (505) 237-8440	fax:		

This report was revised on December 10, 2008 to edit the sample ID for SPL ID 08071477-08.

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.

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.

Bethany Agarwal

Bethany A. Agarwal
Senior Project Manager

Date

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

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

Conoco Phillips

Certificate of Analysis Number:

08071477

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

Fax To:

Project Name: COP Hampton 4M
Site: Aztec, NM
Site Address:

PO Number: 4510016693
State: New Mexico
State Cert. No.:
Date Reported: 12/10/2008

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
MW-1	08071477-01	Water	7/22/2008 11:00:00 AM	7/24/2008 9:30:00 AM		☐
MW-15	08071477-02	Water	7/22/2008 11:30:00 AM	7/24/2008 9:30:00 AM		☐
Duplicate	08071477-03	Water	7/22/2008 11:35:00 AM	7/24/2008 9:30:00 AM		☐
MW-9	08071477-04	Water	7/22/2008 11:45:00 AM	7/24/2008 9:30:00 AM		☐
MW-16	08071477-05	Water	7/22/2008 11:55:00 AM	7/24/2008 9:30:00 AM		☐
MW-12	08071477-06	Water	7/22/2008 12:20:00 PM	7/24/2008 9:30:00 AM		☐
MW-5	08071477-07	Water	7/22/2008 1:30:00 PM	7/24/2008 9:30:00 AM		☐
TMW-1	08071477-08	Water	7/22/2008 1:45:00 PM	7/24/2008 9:30:00 AM		☐
MW-7	08071477-09	Water	7/22/2008 2:00:00 PM	7/24/2008 9:30:00 AM		☐
MW-11	08071477-10	Water	7/22/2008 2:30:00 PM	7/24/2008 9:30:00 AM		☐
Trip Blank	08071477-11	Water	7/22/2008 2:35:00 PM	7/24/2008 9:30:00 AM		☐

Bethany Agarwal

12/11/2008

Bethany A. Agarwal
Senior 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:** 07/22/2008 11:00 **SPL Sample ID:** 08071477-01

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**		
Benzene	ND			5	1	07/29/08 0:59	LU_L	4600905
Ethylbenzene	ND			5	1	07/29/08 0:59	LU_L	4600905
Toluene	ND			5	1	07/29/08 0:59	LU_L	4600905
m,p-Xylene	ND			5	1	07/29/08 0:59	LU_L	4600905
o-Xylene	ND			5	1	07/29/08 0:59	LU_L	4600905
Xylenes,Total	ND			5	1	07/29/08 0:59	LU_L	4600905
Surr: 1,2-Dichloroethane-d4	92.0		%	62-130	1	07/29/08 0:59	LU_L	4600905
Surr: 4-Bromofluorobenzene	96.0		%	70-130	1	07/29/08 0:59	LU_L	4600905
Surr: Toluene-d8	98.0		%	74-122	1	07/29/08 0:59	LU_L	4600905

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-15 **Collected:** 07/22/2008 11:30 **SPL Sample ID:** 08071477-02

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**		
Benzene	ND			5	1	07/29/08 2:25	LU_L	4600908
Ethylbenzene	ND			5	1	07/29/08 2:25	LU_L	4600908
Toluene	ND			5	1	07/29/08 2:25	LU_L	4600908
m,p-Xylene	ND			5	1	07/29/08 2:25	LU_L	4600908
o-Xylene	ND			5	1	07/29/08 2:25	LU_L	4600908
Xylenes,Total	ND			5	1	07/29/08 2:25	LU_L	4600908
Surr: 1,2-Dichloroethane-d4	96.0		%	62-130	1	07/29/08 2:25	LU_L	4600908
Surr: 4-Bromofluorobenzene	96.0		%	70-130	1	07/29/08 2:25	LU_L	4600908
Surr: Toluene-d8	100		%	74-122	1	07/29/08 2:25	LU_L	4600908

Qualifiers:

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

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

Client Sample ID: Duplicate **Collected:** 07/22/2008 11:35 **SPL Sample ID:** 08071477-03

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**		
Benzene	ND			5	1	07/29/08 2:54	LU_L	4600909
Ethylbenzene	ND			5	1	07/29/08 2:54	LU_L	4600909
Toluene	ND			5	1	07/29/08 2:54	LU_L	4600909
m,p-Xylene	ND			5	1	07/29/08 2:54	LU_L	4600909
o-Xylene	ND			5	1	07/29/08 2:54	LU_L	4600909
Xylenes,Total	ND			5	1	07/29/08 2:54	LU_L	4600909
Surr: 1,2-Dichloroethane-d4	94.0		%	62-130	1	07/29/08 2:54	LU_L	4600909
Surr: 4-Bromofluorobenzene	96.0		%	70-130	1	07/29/08 2:54	LU_L	4600909
Surr: Toluene-d8	98.0		%	74-122	1	07/29/08 2:54	LU_L	4600909

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-9 **Collected:** 07/22/2008 11:45 **SPL Sample ID:** 08071477-04

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**		
Benzene	ND		5	1	07/29/08 3:23	LU_L	4600910
Ethylbenzene	ND		5	1	07/29/08 3:23	LU_L	4600910
Toluene	ND		5	1	07/29/08 3:23	LU_L	4600910
m,p-Xylene	ND		5	1	07/29/08 3:23	LU_L	4600910
o-Xylene	ND		5	1	07/29/08 3:23	LU_L	4600910
Xylenes,Total	ND		5	1	07/29/08 3:23	LU_L	4600910
Surr: 1,2-Dichloroethane-d4	92.0		% 62-130	1	07/29/08 3:23	LU_L	4600910
Surr: 4-Bromofluorobenzene	92.0		% 70-130	1	07/29/08 3:23	LU_L	4600910
Surr: Toluene-d8	96.0		% 74-122	1	07/29/08 3:23	LU_L	4600910

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-16 **Collected:** 07/22/2008 11:55 **SPL Sample ID:** 08071477-05

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**		
Benzene	3600		250	50	07/30/08 20:46	LU_L	4604395
Ethylbenzene	430		250	50	07/30/08 20:46	LU_L	4604395
Toluene	6100		250	50	07/30/08 20:46	LU_L	4604395
m,p-Xylene	3300		250	50	07/30/08 20:46	LU_L	4604395
o-Xylene	1200		250	50	07/30/08 20:46	LU_L	4604395
Xylenes,Total	4500		250	50	07/30/08 20:46	LU_L	4604395
Surr: 1,2-Dichloroethane-d4	92.0		% 62-130	50	07/30/08 20:46	LU_L	4604395
Surr: 4-Bromofluorobenzene	96.0		% 70-130	50	07/30/08 20:46	LU_L	4604395
Surr: Toluene-d8	96.0		% 74-122	50	07/30/08 20:46	LU_L	4604395

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-12 **Collected:** 07/22/2008 12:20 **SPL Sample ID:** 08071477-06

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**		
Benzene	730			50	10	07/30/08 19:47	LU_L	4604393
Ethylbenzene	14			5	1	07/30/08 5:50	LU_L	4604356
Toluene	22			5	1	07/30/08 5:50	LU_L	4604356
m,p-Xylene	16			5	1	07/30/08 5:50	LU_L	4604356
o-Xylene	5			5	1	07/30/08 5:50	LU_L	4604356
Xylenes,Total	21			5	1	07/30/08 5:50	LU_L	4604356
Surr: 1,2-Dichloroethane-d4	94.0		%	62-130	10	07/30/08 19:47	LU_L	4604393
Surr: 1,2-Dichloroethane-d4	92.0		%	62-130	1	07/30/08 5:50	LU_L	4604356
Surr: 4-Bromofluorobenzene	96.0		%	70-130	10	07/30/08 19:47	LU_L	4604393
Surr: 4-Bromofluorobenzene	96.0		%	70-130	1	07/30/08 5:50	LU_L	4604356
Surr: Toluene-d8	96.0		%	74-122	10	07/30/08 19:47	LU_L	4604393
Surr: Toluene-d8	96.0		%	74-122	1	07/30/08 5:50	LU_L	4604356

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-5 **Collected:** 07/22/2008 13:30 **SPL Sample ID:** 08071477-07

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**		
Benzene	340		250	50	07/30/08 20:16	LU_L	4604394
Ethylbenzene	550		250	50	07/30/08 20:16	LU_L	4604394
Toluene	6100		250	50	07/30/08 20:16	LU_L	4604394
m,p-Xylene	5000		250	50	07/30/08 20:16	LU_L	4604394
o-Xylene	1400		250	50	07/30/08 20:16	LU_L	4604394
Xylenes,Total	6400		250	50	07/30/08 20:16	LU_L	4604394
Surr: 1,2-Dichloroethane-d4	88.0		% 62-130	50	07/30/08 20:16	LU_L	4604394
Surr: 4-Bromofluorobenzene	96.0		% 70-130	50	07/30/08 20:16	LU_L	4604394
Surr: Toluene-d8	96.0		% 74-122	50	07/30/08 20:16	LU_L	4604394

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: TMW-1 **Collected:** 07/22/2008 13:45 **SPL Sample ID:** 08071477-08

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**		
Benzene	130		5	1	07/30/08 7:44	LU_L	4604359
Ethylbenzene	11		5	1	07/30/08 7:44	LU_L	4604359
Toluene	29		5	1	07/30/08 7:44	LU_L	4604359
m,p-Xylene	22		5	1	07/30/08 7:44	LU_L	4604359
o-Xylene	ND		5	1	07/30/08 7:44	LU_L	4604359
Xylenes,Total	22		5	1	07/30/08 7:44	LU_L	4604359
Surr: 1,2-Dichloroethane-d4	88.0		% 62-130	1	07/30/08 7:44	LU_L	4604359
Surr: 4-Bromofluorobenzene	98.0		% 70-130	1	07/30/08 7:44	LU_L	4604359
Surr: Toluene-d8	100		% 74-122	1	07/30/08 7:44	LU_L	4604359

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-7 **Collected:** 07/22/2008 14:00 **SPL Sample ID:** 08071477-09

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**		
Benzene	32		5	1	07/30/08 19:19	LU_L	4604392
Ethylbenzene	12		5	1	07/30/08 19:19	LU_L	4604392
Toluene	ND		5	1	07/30/08 19:19	LU_L	4604392
m,p-Xylene	7		5	1	07/30/08 19:19	LU_L	4604392
o-Xylene	ND		5	1	07/30/08 19:19	LU_L	4604392
Xylenes,Total	7		5	1	07/30/08 19:19	LU_L	4604392
Surr: 1,2-Dichloroethane-d4	92.0		% 62-130	1	07/30/08 19:19	LU_L	4604392
Surr: 4-Bromofluorobenzene	98.0		% 70-130	1	07/30/08 19:19	LU_L	4604392
Surr: Toluene-d8	94.0		% 74-122	1	07/30/08 19:19	LU_L	4604392

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-11 **Collected:** 07/22/2008 14:30 **SPL Sample ID:** 08071477-10

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**		
Benzene	ND			5	1	07/30/08 7:16	LU_L	4604358
Ethylbenzene	ND			5	1	07/30/08 7:16	LU_L	4604358
Toluene	ND			5	1	07/30/08 7:16	LU_L	4604358
m,p-Xylene	ND			5	1	07/30/08 7:16	LU_L	4604358
o-Xylene	ND			5	1	07/30/08 7:16	LU_L	4604358
Xylenes,Total	ND			5	1	07/30/08 7:16	LU_L	4604358
Surr: 1,2-Dichloroethane-d4	94.0		%	62-130	1	07/30/08 7:16	LU_L	4604358
Surr: 4-Bromofluorobenzene	92.0		%	70-130	1	07/30/08 7:16	LU_L	4604358
Surr: Toluene-d8	96.0		%	74-122	1	07/30/08 7:16	LU_L	4604358

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:** 07/22/2008 14:35 **SPL Sample ID:** 08071477-11

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**		
Benzene	ND		5	1	07/30/08 5:21	LU_L	4604355
Ethylbenzene	ND		5	1	07/30/08 5:21	LU_L	4604355
Toluene	ND		5	1	07/30/08 5:21	LU_L	4604355
m,p-Xylene	ND		5	1	07/30/08 5:21	LU_L	4604355
o-Xylene	ND		5	1	07/30/08 5:21	LU_L	4604355
Xylenes,Total	ND		5	1	07/30/08 5:21	LU_L	4604355
Surr: 1,2-Dichloroethane-d4	92.0		% 62-130	1	07/30/08 5:21	LU_L	4604355
Surr: 4-Bromofluorobenzene	98.0		% 70-130	1	07/30/08 5:21	LU_L	4604355
Surr: Toluene-d8	100		% 74-122	1	07/30/08 5:21	LU_L	4604355

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

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

Quality Control Report

Conoco Phillips

COP Hampton 4M

Analysis: Volatile Organics by Method 8260B **WorkOrder:** 08071477
Method: SW8260B **Lab Batch ID:** R246784

Method Blank

RunID: K_080728C-4600904 Units: ug/L
Analysis Date: 07/28/2008 17:45 Analyst: LU_L
Preparation Date: 07/28/2008 17:45 Prep By: Method

Analyte	Result	Rep Limit
Benzene	ND	5.0
Ethylbenzene	ND	5.0
Toluene	ND	5.0
m,p-Xylene	ND	5.0
o-Xylene	ND	5.0
Xylenes,Total	ND	5.0
Surr: 1,2-Dichloroethane-d4	94.0	62-130
Surr: 4-Bromofluorobenzene	94.0	70-130
Surr: Toluene-d8	98.0	74-122

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
08071477-01A	MW-1
08071477-02A	MW-15
08071477-03A	Duplicate
08071477-04A	MW-9

Laboratory Control Sample (LCS)

RunID: K_080728C-4600903 Units: ug/L
Analysis Date: 07/28/2008 16:57 Analyst: LU_L
Preparation Date: 07/28/2008 16:57 Prep By: Method

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	20.0	19.0	95.0	76	126
Ethylbenzene	20.0	21.0	105	67	122
Toluene	20.0	19.0	95.0	70	131
m,p-Xylene	40.0	40.0	100	72	150
o-Xylene	20.0	21.0	105	78	141
Xylenes,Total	60	61	100	72	150
Surr: 1,2-Dichloroethane-d4	50.0	46	92.0	62	130
Surr: 4-Bromofluorobenzene	50.0	49	98.0	70	130
Surr: Toluene-d8	50.0	50	100	74	122

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

Sample Spiked: 08071477-01
RunID: K_080728C-4600906 Units: ug/L
Analysis Date: 07/29/2008 1:28 Analyst: LU_L

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

COP Hampton 4M

Analysis: Volatile Organics by Method 8260B **WorkOrder:** 08071477
Method: SW8260B **Lab Batch ID:** R246784

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	18.0	90.0	20	19.0	95.0	5.41	22	76	127
Ethylbenzene	ND	20	19.0	95.0	20	19.0	95.0	0	20	35	175
Toluene	ND	20	18.0	90.0	20	18.0	90.0	0	24	70	131
m,p-Xylene	ND	40	38.0	95.0	40	36.0	90.0	5.41	20	35	175
o-Xylene	ND	20	20.0	100	20	20.0	100	0	20	35	175
Xylenes,Total	ND	60	58	97	60	56	93	3.5	20	35	175
Surr: 1,2-Dichloroethane-d4	ND	50	47	94.0	50	47.0	94.0	0	30	62	130
Surr: 4-Bromofluorobenzene	ND	50	48	96.0	50	48.0	96.0	0	30	70	130
Surr: Toluene-d8	ND	50	50	100	50	49.0	98.0	2.02	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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

COP Hampton 4M

Analysis: Volatile Organics by Method 8260B **WorkOrder:** 08071477
Method: SW8260B **Lab Batch ID:** R246995

Method Blank

RunID: K_080729I-4604354 Units: ug/L
Analysis Date: 07/30/2008 4:23 Analyst: LU_L
Preparation Date: 07/30/2008 4:23 Prep By: Method

Analyte	Result	Rep Limit
Benzene	ND	5.0
Ethylbenzene	ND	5.0
Toluene	ND	5.0
m,p-Xylene	ND	5.0
o-Xylene	ND	5.0
Xylenes,Total	ND	5.0
Surr: 1,2-Dichloroethane-d4	92.0	62-130
Surr: 4-Bromofluorobenzene	94.0	70-130
Surr: Toluene-d8	98.0	74-122

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
08071477-06A	MW-12
08071477-08A	TMW-1
08071477-10A	MW-11
08071477-11A	Trip Blank

Laboratory Control Sample (LCS)

RunID: K_080729I-4604353 Units: ug/L
Analysis Date: 07/30/2008 3:54 Analyst: LU_L
Preparation Date: 07/30/2008 3:54 Prep By: Method

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	20.0	18.0	90.0	76	126
Ethylbenzene	20.0	18.0	90.0	67	122
Toluene	20.0	18.0	90.0	70	131
m,p-Xylene	40.0	35.0	87.5	72	150
o-Xylene	20.0	19.0	95.0	78	141
Xylenes,Total	60	54	90	72	150
Surr: 1,2-Dichloroethane-d4	50.0	46	92.0	62	130
Surr: 4-Bromofluorobenzene	50.0	49	98.0	70	130
Surr: Toluene-d8	50.0	49	98.0	74	122

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

Sample Spiked: 08071558-02
RunID: K_080729I-4604361 Units: ug/L
Analysis Date: 07/30/2008 11:06 Analyst: LU_L

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

COP Hampton 4M

Analysis: Volatile Organics by Method 8260B **WorkOrder:** 08071477
Method: SW8260B **Lab Batch ID:** R246995

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	20.0	100	20	20.0	100	0	22	76	127
Ethylbenzene	ND	20	20.0	100	20	19.0	95.0	5.13	20	35	175
Toluene	ND	20	20.0	100	20	19.0	95.0	5.13	24	70	131
m,p-Xylene	ND	40	40.0	100	40	38.0	95.0	5.13	20	35	175
o-Xylene	ND	20	21.0	105	20	20.0	100	4.88	20	35	175
Xylenes,Total	ND	60	61	100	60	58	97	5.0	20	35	175
Surr: 1,2-Dichloroethane-d4	ND	50	47	94.0	50	47.0	94.0	0	30	62	130
Surr: 4-Bromofluorobenzene	ND	50	49	98.0	50	48.0	96.0	2.06	30	70	130
Surr: Toluene-d8	ND	50	49	98.0	50	49.0	98.0	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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

COP Hampton 4M

Analysis: Volatile Organics by Method 8260B
Method: SW8260B
WorkOrder: 08071477
Lab Batch ID: R246996

Method Blank

RunID: K_080730C-4604391 Units: ug/L
Analysis Date: 07/30/2008 17:21 Analyst: LU_L
Preparation Date: 07/30/2008 17:21 Prep By: Method

Analyte	Result	Rep Limit
Benzene	ND	5.0
Ethylbenzene	ND	5.0
Toluene	ND	5.0
m,p-Xylene	ND	5.0
o-Xylene	ND	5.0
Xylenes,Total	ND	5.0
Surr: 1,2-Dichloroethane-d4	88.0	62-130
Surr: 4-Bromofluorobenzene	94.0	70-130
Surr: Toluene-d8	96.0	74-122

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
08071477-05A	MW-16
08071477-06A	MW-12
08071477-07A	MW-5
08071477-09A	MW-7

Laboratory Control Sample (LCS)

RunID: K_080730C-4604390 Units: ug/L
Analysis Date: 07/30/2008 16:12 Analyst: LU_L
Preparation Date: 07/30/2008 16:12 Prep By: Method

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	20.0	19.0	95.0	76	126
Ethylbenzene	20.0	20.0	100	67	122
Toluene	20.0	18.0	90.0	70	131
m,p-Xylene	40.0	38.0	95.0	72	150
o-Xylene	20.0	20.0	100	78	141
Xylenes,Total	60	58	97	72	150
Surr: 1,2-Dichloroethane-d4	50.0	49	98.0	62	130
Surr: 4-Bromofluorobenzene	50.0	48	96.0	70	130
Surr: Toluene-d8	50.0	49	98.0	74	122

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

Sample Spiked: 08071540-02
RunID: K_080730C-4604398 Units: ug/L
Analysis Date: 07/31/2008 0:39 Analyst: LU_L

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

COP Hampton 4M

Analysis: Volatile Organics by Method 8260B **WorkOrder:** 08071477
Method: SW8260B **Lab Batch ID:** R246996

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	21.0	105	20	21.0	105	0	22	76	127
Ethylbenzene	ND	20	20.0	100	20	21.0	105	4.88	20	35	175
Toluene	ND	20	20.0	100	20	20.0	100	0	24	70	131
m,p-Xylene	ND	40	41.0	102	40	40.0	100	2.47	20	35	175
o-Xylene	ND	20	21.0	105	20	21.0	105	0	20	35	175
Xylenes,Total	ND	60	62	100	60	61	100	1.6	20	35	175
Surr: 1,2-Dichloroethane-d4	ND	50	46	92.0	50	46.0	92.0	0	30	62	130
Surr: 4-Bromofluorobenzene	ND	50	50	100	50	49.0	98.0	2.02	30	70	130
Surr: Toluene-d8	ND	50	50	100	50	49.0	98.0	2.02	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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

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

Sample Receipt Checklist

And

Chain of Custody

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

Sample Receipt Checklist

Workorder:	08071477	Received By:	ERH
Date and Time Received:	7/24/2008 9:30:00 AM	Carrier name:	Fedex-Priority
Temperature:	3.5°C	Chilled by:	Water Ice

1.	Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2.	Custody seals intact on shippping 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?	Yes ☑	No ☐	
11.	Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
12.	Water - VOA vials have zero headspace?	Yes ☑	No ☐	VOA Vials Not Present ☐
13.	Water - Preservation checked upon receipt (except VOA*)?	Yes ☐	No ☐	Not Applicable ☑

*VOA Preservation Checked After Sample Analysis

SPL Representative: _____ Contact Date & Time: _____

Client Name Contacted: _____

Non Conformance Issues: _____

Client Instructions: _____

Chain of Custody Record

Client: Tetra Tech/ Conoco Phillips

Attention: Kelly Blanchard/Tetra Tech

STL Workorder Number: 08071477

#4929

Christine Mathews

Kelly E. Blanchard

Requested Analyses

Sample ID	Collected Date	Collected Time	Sample Type Comp	Grab	Matrix Water	Soil	Bottle #	Preservative Type	# of Containers	BTEX
MW-1	7/22	11:00		X	X		1	3	3	X
MW-15	7/22	11:30		X	X		1	3	3	X
~~MW-9~~ duplicate	7/22	11:35		X	X		1	3	3	X
MW-9	7/22	11:45		X	X		1	3	3	X
MW-16	7/22	11:55		X	X		1	3	3	X
MW-12	7/22	12:20		X	X		1	3	3	X
~~Seep~~	~~7/22~~	~~13:00~~		X	X		1	3	3	X
MW-5	7/22	13:30		X	X		1	3	3	X
~~TMW~~-1	7/22	13:45		X	X		1	3	2	X
MW-7	7/22	14:00		X	X		1	3	3	X

Remarks: Could only collect 2 vials for TMW-1

Intact: Y N

Temperature: 3.5°C

Bottle Types: 1. 3/4" Clear Vials 2. 1L Glass 3. 1L Plastic 4. 1L Amber Glass 5. 8oz Plastic

Preservative Types: 1. NONE 2. HNO3 3. HCl 4. H2SO4

Relinquished by: Kelly E Blanchard — Date: 7-23-08 — Time: 17:00

Relinquished by: — Date: 7-24-08 — Time: 9:30 — Received by: Sinclair Hills

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

Conoco Phillips

Certificate of Analysis Number:

08101633

Report To:		Project Name:	COP Hampton 4M
Tetra Tech EM, Inc.		Site:	Aztec, NM
Kelly Blanchard		Site Address:	
6121 Indian School Road, N.E.			
Suite 200		PO Number:	4510016693
Albuquerque		State:	New Mexico
NM		State Cert. No.:	
87110-		Date Reported:	11/10/2008
ph: (505) 881-3188	fax:		

This Report Contains A Total Of 22 Pages

Excluding This Page, Chain Of Custody

And

Any Attachments

11/10/2008

Date

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

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

Case Narrative for:
Conoco Phillips

Certificate of Analysis Number:
08101633

Report To:		Project Name:	COP Hampton 4M
Tetra Tech EM, Inc.		Site:	Aztec, NM
Kelly Blanchard		Site Address:	
6121 Indian School Road, N.E.			
Suite 200		PO Number:	4510016693
Albuquerque		State:	New Mexico
NM		State Cert. No.:	
87110-		Date Reported:	11/10/2008
ph: (505) 881-3188	fax:		

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.

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.

Erica Cardenas
Project Manager

Date

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

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

Conoco Phillips

Certificate of Analysis Number:

08101633

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

Fax To:

Project Name: COP Hampton 4M
Site: Aztec, NM
Site Address:
PO Number: 4510016693
State: New Mexico
State Cert. No.:
Date Reported: 11/10/2008

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
MW-15	08101633-01	Water	10/23/2008 11:30:00 AM	10/28/2008 9:30:00 AM		☐
MW-1	08101633-02	Water	10/23/2008 11:45:00 AM	10/28/2008 9:30:00 AM		☐
MW-9	08101633-03	Water	10/23/2008 12:20:00 PM	10/28/2008 9:30:00 AM		☐
MW-16	08101633-04	Water	10/23/2008 12:40:00 PM	10/28/2008 9:30:00 AM		☐
SEEP	08101633-05	Water	10/23/2008 1:00:00 PM	10/28/2008 9:30:00 AM		☐
MW-5	08101633-06	Water	10/23/2008 1:50:00 PM	10/28/2008 9:30:00 AM		☐
MW-12	08101633-07	Water	10/23/2008 1:45:00 PM	10/28/2008 9:30:00 AM		☐
DUPLICATE	08101633-08	Water	10/23/2008 1:50:00 PM	10/28/2008 9:30:00 AM		☐
MW-7	08101633-09	Water	10/23/2008 2:10:00 PM	10/28/2008 9:30:00 AM		☐
MW-11	08101633-10	Water	10/23/2008 2:45:00 PM	10/28/2008 9:30:00 AM		☐
Trip Blank	08101633-11	Water	10/27/2008 2:30:00 PM	10/28/2008 9:30:00 AM	313361	☐

Erica Cardenas
Project Manager

11/10/2008
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-15 **Collected:** 10/23/2008 11:30 **SPL Sample ID:** 08101633-01

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**		
Benzene	ND		5	1	11/05/08 13:09	LT	4753595
Ethylbenzene	ND		5	1	11/05/08 13:09	LT	4753595
Toluene	ND		5	1	11/05/08 13:09	LT	4753595
m,p-Xylene	ND		5	1	11/05/08 13:09	LT	4753595
o-Xylene	ND		5	1	11/05/08 13:09	LT	4753595
Xylenes,Total	ND		5	1	11/05/08 13:09	LT	4753595
Surr: 1,2-Dichloroethane-d4	102		% 62-130	1	11/05/08 13:09	LT	4753595
Surr: 4-Bromofluorobenzene	96.0		% 70-130	1	11/05/08 13:09	LT	4753595
Surr: Toluene-d8	106		% 74-122	1	11/05/08 13:09	LT	4753595

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:** 10/23/2008 11:45 **SPL Sample ID:** 08101633-02

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**		
Benzene	ND			5	1	11/05/08 13:37	LT	4753596
Ethylbenzene	ND			5	1	11/05/08 13:37	LT	4753596
Toluene	ND			5	1	11/05/08 13:37	LT	4753596
m,p-Xylene	ND			5	1	11/05/08 13:37	LT	4753596
o-Xylene	ND			5	1	11/05/08 13:37	LT	4753596
Xylenes,Total	ND			5	1	11/05/08 13:37	LT	4753596
Surr: 1,2-Dichloroethane-d4	108		%	62-130	1	11/05/08 13:37	LT	4753596
Surr: 4-Bromofluorobenzene	94.0		%	70-130	1	11/05/08 13:37	LT	4753596
Surr: Toluene-d8	106		%	74-122	1	11/05/08 13:37	LT	4753596

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-9 **Collected:** 10/23/2008 12:20 **SPL Sample ID:** 08101633-03

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**		
Benzene	ND		5		1	11/05/08 14:05	LT	4753597
Ethylbenzene	ND		5		1	11/05/08 14:05	LT	4753597
Toluene	ND		5		1	11/05/08 14:05	LT	4753597
m,p-Xylene	ND		5		1	11/05/08 14:05	LT	4753597
o-Xylene	ND		5		1	11/05/08 14:05	LT	4753597
Xylenes,Total	ND		5		1	11/05/08 14:05	LT	4753597
Surr: 1,2-Dichloroethane-d4	108		% 62-130		1	11/05/08 14:05	LT	4753597
Surr: 4-Bromofluorobenzene	92.0		% 70-130		1	11/05/08 14:05	LT	4753597
Surr: Toluene-d8	104		% 74-122		1	11/05/08 14:05	LT	4753597

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-16 **Collected:** 10/23/2008 12:40 **SPL Sample ID:** 08101633-04

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**		
Benzene	4700		250	50	11/06/08 7:11	LT	4754365
Ethylbenzene	480		250	50	11/06/08 7:11	LT	4754365
Toluene	9100		250	50	11/06/08 7:11	LT	4754365
m,p-Xylene	4900		250	50	11/06/08 7:11	LT	4754365
o-Xylene	1700		250	50	11/06/08 7:11	LT	4754365
Xylenes,Total	6600		250	50	11/06/08 7:11	LT	4754365
Surr: 1,2-Dichloroethane-d4	100		% 62-130	50	11/06/08 7:11	LT	4754365
Surr: 4-Bromofluorobenzene	104		% 70-130	50	11/06/08 7:11	LT	4754365
Surr: Toluene-d8	108		% 74-122	50	11/06/08 7:11	LT	4754365

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: SEEP **Collected:** 10/23/2008 13:00 **SPL Sample ID:** 08101633-05

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**		
Benzene	ND		5	1	11/05/08 18:39	LT	4754089
Ethylbenzene	ND		5	1	11/05/08 18:39	LT	4754089
Toluene	ND		5	1	11/05/08 18:39	LT	4754089
m,p-Xylene	ND		5	1	11/05/08 18:39	LT	4754089
o-Xylene	ND		5	1	11/05/08 18:39	LT	4754089
Xylenes,Total	ND		5	1	11/05/08 18:39	LT	4754089
Surr: 1,2-Dichloroethane-d4	110		% 62-130	1	11/05/08 18:39	LT	4754089
Surr: 4-Bromofluorobenzene	90.0		% 70-130	1	11/05/08 18:39	LT	4754089
Surr: Toluene-d8	104		% 74-122	1	11/05/08 18:39	LT	4754089

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-5 **Collected:** 10/23/2008 13:50 **SPL Sample ID:** 08101633-06

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**		
Benzene	270		250	50	11/06/08 7:39	LT	4754366
Ethylbenzene	440		250	50	11/06/08 7:39	LT	4754366
Toluene	6200		250	50	11/06/08 7:39	LT	4754366
m,p-Xylene	5000		250	50	11/06/08 7:39	LT	4754366
o-Xylene	1300		250	50	11/06/08 7:39	LT	4754366
Xylenes,Total	6300		250	50	11/06/08 7:39	LT	4754366
Surr: 1,2-Dichloroethane-d4	108		% 62-130	50	11/06/08 7:39	LT	4754366
Surr: 4-Bromofluorobenzene	104		% 70-130	50	11/06/08 7:39	LT	4754366
Surr: Toluene-d8	108		% 74-122	50	11/06/08 7:39	LT	4754366

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-12 **Collected:** 10/23/2008 13:45 **SPL Sample ID:** 08101633-07

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**		
Benzene	500			25	5	11/06/08 10:28	LT	4754370
Ethylbenzene	22			5	1	11/06/08 3:29	LT	4754102
Toluene	30			5	1	11/06/08 3:29	LT	4754102
m,p-Xylene	32			5	1	11/06/08 3:29	LT	4754102
o-Xylene	8			5	1	11/06/08 3:29	LT	4754102
Xylenes,Total	40			5	1	11/06/08 3:29	LT	4754102
Surr: 1,2-Dichloroethane-d4	108		%	62-130	5	11/06/08 10:28	LT	4754370
Surr: 1,2-Dichloroethane-d4	100		%	62-130	1	11/06/08 3:29	LT	4754102
Surr: 4-Bromofluorobenzene	100		%	70-130	5	11/06/08 10:28	LT	4754370
Surr: 4-Bromofluorobenzene	102		%	70-130	1	11/06/08 3:29	LT	4754102
Surr: Toluene-d8	104		%	74-122	5	11/06/08 10:28	LT	4754370
Surr: Toluene-d8	104		%	74-122	1	11/06/08 3:29	LT	4754102

Qualifiers:

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

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

Client Sample ID: DUPLICATE **Collected:** 10/23/2008 13:50 **SPL Sample ID:** 08101633-08

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**		
Benzene	660		25	5	11/05/08 19:07	LT	4754090
Ethylbenzene	29		5	1	11/05/08 9:53	LT	4753591
Toluene	30		5	1	11/05/08 9:53	LT	4753591
m,p-Xylene	39		5	1	11/05/08 9:53	LT	4753591
o-Xylene	9		5	1	11/05/08 9:53	LT	4753591
Xylenes,Total	48		5	1	11/05/08 9:53	LT	4753591
Surr: 1,2-Dichloroethane-d4	108		% 62-130	5	11/05/08 19:07	LT	4754090
Surr: 1,2-Dichloroethane-d4	100		% 62-130	1	11/05/08 9:53	LT	4753591
Surr: 4-Bromofluorobenzene	100		% 70-130	5	11/05/08 19:07	LT	4754090
Surr: 4-Bromofluorobenzene	102		% 70-130	1	11/05/08 9:53	LT	4753591
Surr: Toluene-d8	104		% 74-122	5	11/05/08 19:07	LT	4754090
Surr: Toluene-d8	104		% 74-122	1	11/05/08 9:53	LT	4753591

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-7 **Collected:** 10/23/2008 14:10 **SPL Sample ID:** 08101633-09

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**		
Benzene	17		5	1	11/06/08 2:34	LT	4754100
Ethylbenzene	ND		5	1	11/06/08 2:34	LT	4754100
Toluene	ND		5	1	11/06/08 2:34	LT	4754100
m,p-Xylene	ND		5	1	11/06/08 2:34	LT	4754100
o-Xylene	ND		5	1	11/06/08 2:34	LT	4754100
Xylenes,Total	ND		5	1	11/06/08 2:34	LT	4754100
Surr: 1,2-Dichloroethane-d4	98.0		% 62-130	1	11/06/08 2:34	LT	4754100
Surr: 4-Bromofluorobenzene	100		% 70-130	1	11/06/08 2:34	LT	4754100
Surr: Toluene-d8	104		% 74-122	1	11/06/08 2:34	LT	4754100

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-11 **Collected:** 10/23/2008 14:45 **SPL Sample ID:** 08101633-10

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**		
Benzene	ND			5	1	11/06/08 3:02	LT	4754101
Ethylbenzene	ND			5	1	11/06/08 3:02	LT	4754101
Toluene	ND			5	1	11/06/08 3:02	LT	4754101
m,p-Xylene	ND			5	1	11/06/08 3:02	LT	4754101
o-Xylene	ND			5	1	11/06/08 3:02	LT	4754101
Xylenes,Total	ND			5	1	11/06/08 3:02	LT	4754101
Surr: 1,2-Dichloroethane-d4	108		%	62-130	1	11/06/08 3:02	LT	4754101
Surr: 4-Bromofluorobenzene	96.0		%	70-130	1	11/06/08 3:02	LT	4754101
Surr: Toluene-d8	104		%	74-122	1	11/06/08 3:02	LT	4754101

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:** 08101633-11

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**		
Benzene	ND		5	1	11/05/08 9:26	LT	4753590
Ethylbenzene	ND		5	1	11/05/08 9:26	LT	4753590
Toluene	ND		5	1	11/05/08 9:26	LT	4753590
m,p-Xylene	ND		5	1	11/05/08 9:26	LT	4753590
o-Xylene	ND		5	1	11/05/08 9:26	LT	4753590
Xylenes,Total	ND		5	1	11/05/08 9:26	LT	4753590
Surr: 1,2-Dichloroethane-d4	104		% 62-130	1	11/05/08 9:26	LT	4753590
Surr: 4-Bromofluorobenzene	92.0		% 70-130	1	11/05/08 9:26	LT	4753590
Surr: Toluene-d8	106		% 74-122	1	11/05/08 9:26	LT	4753590

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

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

Quality Control Report

Conoco Phillips

COP Hampton 4M

Analysis: Volatile Organics by Method 8260B **WorkOrder:** 08101633
Method: SW8260B **Lab Batch ID:** R256071

Method Blank

RunID: N_081104E-4753589 Units: ug/L
Analysis Date: 11/05/2008 6:36 Analyst: LT
Preparation Date: 11/05/2008 6:36 Prep By: Method

Analyte	Result	Rep Limit
Benzene	ND	5.0
Ethylbenzene	ND	5.0
Toluene	ND	5.0
m,p-Xylene	ND	5.0
o-Xylene	ND	5.0
Xylenes,Total	ND	5.0
Surr: 1,2-Dichloroethane-d4	112.0	62-130
Surr: 4-Bromofluorobenzene	92.0	70-130
Surr: Toluene-d8	108.0	74-122

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
08101633-01A	MW-15
08101633-02A	MW-1
08101633-03A	MW-9
08101633-08A	DUPLICATE
08101633-11A	Trip Blank

Laboratory Control Sample (LCS)

RunID: N_081104E-4753588 Units: ug/L
Analysis Date: 11/05/2008 5:11 Analyst: LT
Preparation Date: 11/05/2008 5:11 Prep By: Method

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	20.0	21.0	105	76	126
Ethylbenzene	20.0	19.0	95.0	67	122
Toluene	20.0	20.0	100	70	131
m,p-Xylene	40.0	37.0	92.5	72	150
o-Xylene	20.0	19.0	95.0	78	141
Xylenes,Total	60	56	93	72	150
Surr: 1,2-Dichloroethane-d4	50.0	52	104	62	130
Surr: 4-Bromofluorobenzene	50.0	52	104	70	130
Surr: Toluene-d8	50.0	53	106	74	122

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

Sample Spiked: 08101633-08
RunID: N_081104E-4753592 Units: ug/L
Analysis Date: 11/05/2008 10:22 Analyst: LT

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

COP Hampton 4M

Analysis: Volatile Organics by Method 8260B **WorkOrder:** 08101633
Method: SW8260B **Lab Batch ID:** R256071

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	650	20	610	N/C	20	610	N/C	N/C	22	76	127
Ethylbenzene	29.0	20	44.0	75.0	20	44.0	75.0	0	20	35	175
Toluene	30.0	20	47.0	85.0	20	48.0	90.0	2.11	24	70	131
m,p-Xylene	39.0	40	70.0	77.5	40	71.0	80.0	1.42	20	35	175
o-Xylene	9.00	20	27.0	90.0	20	28.0	95.0	3.64	20	35	175
Xylenes,Total	48	60	97	82	60	99	85	2.0	20	35	175
Surr: 1,2-Dichloroethane-d4	ND	50	49	98.0	50	54.0	108	9.71	30	62	130
Surr: 4-Bromofluorobenzene	ND	50	51	102	50	53.0	106	3.85	30	70	130
Surr: Toluene-d8	ND	50	52	104	50	53.0	106	1.90	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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

COP Hampton 4M

Analysis: Volatile Organics by Method 8260B **WorkOrder:** 08101633
Method: SW8260B **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

Analyte	Result	Rep Limit
Benzene	ND	5.0
Ethylbenzene	ND	5.0
Toluene	ND	5.0
m,p-Xylene	ND	5.0
o-Xylene	ND	5.0
Xylenes,Total	ND	5.0
Surr: 1,2-Dichloroethane-d4	104.0	62-130
Surr: 4-Bromofluorobenzene	92.0	70-130
Surr: Toluene-d8	104.0	74-122

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
08101633-05A	SEEP
08101633-07A	MW-12
08101633-08A	DUPLICATE
08101633-09A	MW-7
08101633-10A	MW-11

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

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	20.0	21.0	105	76	126
Ethylbenzene	20.0	19.0	95.0	67	122
Toluene	20.0	22.0	110	70	131
m,p-Xylene	40.0	40.0	100	72	150
o-Xylene	20.0	20.0	100	78	141
Xylenes,Total	60	60	100	72	150
Surr: 1,2-Dichloroethane-d4	50.0	52	104	62	130
Surr: 4-Bromofluorobenzene	50.0	52	104	70	130
Surr: Toluene-d8	50.0	53	106	74	122

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

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

COP Hampton 4M

Analysis: Volatile Organics by Method 8260B **WorkOrder:** 08101633
Method: SW8260B **Lab Batch ID:** R256099

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	20.0	100	20	19.0	95.0	5.13	22	76	127
Ethylbenzene	ND	20	19.0	95.0	20	18.0	90.0	5.41	20	35	175
Toluene	ND	20	20.0	100	20	20.0	100	0	24	70	131
m,p-Xylene	ND	40	38.0	95.0	40	37.0	92.5	2.67	20	35	175
o-Xylene	ND	20	20.0	100	20	18.0	90.0	10.5	20	35	175
Xylenes,Total	ND	60	58	97	60	55	92	5.3	20	35	175
Surr: 1,2-Dichloroethane-d4	ND	50	48	96.0	50	49.0	98.0	2.06	30	62	130
Surr: 4-Bromofluorobenzene	ND	50	52	104	50	52.0	104	0	30	70	130
Surr: Toluene-d8	ND	50	54	108	50	54.0	108	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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

COP Hampton 4M

Analysis: Volatile Organics by Method 8260B **WorkOrder:** 08101633
Method: SW8260B **Lab Batch ID:** R256114

Method Blank

RunID: N_081106C-4754364 Units: ug/L
Analysis Date: 11/06/2008 6:15 Analyst: LT
Preparation Date: 11/06/2008 6:15 Prep By: Method

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
08101633-04A	MW-16
08101633-06A	MW-5
08101633-07A	MW-12

Analyte	Result	Rep Limit
Benzene	ND	5.0
Ethylbenzene	ND	5.0
Toluene	ND	5.0
m,p-Xylene	ND	5.0
o-Xylene	ND	5.0
Xylenes,Total	ND	5.0
Surr: 1,2-Dichloroethane-d4	104.0	62-130
Surr: 4-Bromofluorobenzene	98.0	70-130
Surr: Toluene-d8	106.0	74-122

Laboratory Control Sample (LCS)

RunID: N_081106C-4754363 Units: ug/L
Analysis Date: 11/06/2008 5:47 Analyst: LT
Preparation Date: 11/06/2008 5:47 Prep By: Method

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	20.0	21.0	105	76	126
Ethylbenzene	20.0	19.0	95.0	67	122
Toluene	20.0	21.0	105	70	131
m,p-Xylene	40.0	39.0	97.5	72	150
o-Xylene	20.0	20.0	100	78	141
Xylenes,Total	60	59	98	72	150
Surr: 1,2-Dichloroethane-d4	50.0	49	98.0	62	130
Surr: 4-Bromofluorobenzene	50.0	53	106	70	130
Surr: Toluene-d8	50.0	54	108	74	122

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

Sample Spiked: 08101917-01
RunID: N_081106C-4754368 Units: ug/L
Analysis Date: 11/06/2008 8:36 Analyst: LT

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

COP Hampton 4M

Analysis: Volatile Organics by Method 8260B **WorkOrder:** 08101633
Method: SW8260B **Lab Batch ID:** R256114

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	21.0	105	20	21.0	105	0	22	76	127
Ethylbenzene	ND	20	20.0	100	20	19.0	95.0	5.13	20	35	175
Toluene	ND	20	22.0	110	20	22.0	110	0	24	70	131
m,p-Xylene	ND	40	41.0	102	40	39.0	97.5	5.00	20	35	175
o-Xylene	ND	20	21.0	105	20	21.0	105	0	20	35	175
Xylenes,Total	ND	60	62	100	60	60	100	3.3	20	35	175
Surr: 1,2-Dichloroethane-d4	ND	50	48	96.0	50	50.0	100	4.08	30	62	130
Surr: 4-Bromofluorobenzene	ND	50	53	106	50	52.0	104	1.90	30	70	130
Surr: Toluene-d8	ND	50	54	108	50	56.0	112	3.64	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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

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

Sample Receipt Checklist

And

Chain of Custody

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

Sample Receipt Checklist

Workorder:	08101633	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 shippping 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?	Yes ☑	No ☐	
11.	Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
12.	Water - VOA vials have zero headspace?	Yes ☑	No ☐	VOA Vials Not Present ☐
13.	Water - Preservation checked upon receipt (except VOA*)?	Yes ☐	No ☐	Not Applicable ☑

*VOA Preservation Checked After Sample Analysis

SPL Representative: _____ Contact Date & Time: _____

Client Name Contacted: _____

Non Conformance Issues: _____

Client Instructions: _____

Chain of Custody Record

Client: Tetra Tech/ Conoco Phillips | **SPL Workorder Number:** 0810 1633

Attention: Kelly Blanchard/Tetra Tech

Phone: 505-237-8440 | email: kelly.blanchard@tetratech.c

Address: 6121 Indian School Road, NE Ste. 200

City: Albuquerque | State: NM | Zip Code: 87110

Project Name: Hampton #4M

P.O. Number:

Sampled By: signature: [signature] print: Christine Matthews

Sample ID	Collected Date	Collected Time	Sample Type: Comp	Sample Type: Grab	Matrix: Water	Matrix: Soil	Bottle Type	Preservative Type	# of Containers	~~8260-Voc TCL~~	8260-BTEX ONLY	~~8270-SVOC TCL~~	~~TDS,pH,Alk~~	~~Chl,SO4,Nitrate~~	~~Coliform~~	~~COD~~	~~BOD~~	~~RCRA 8-6020/Hg 7470~~
MW-15	10/23	11:30		X	X		1	3	3		X							
MW-1	10/23	11:45		X	X		1	3	3		X							
MW-9	10/23	1220		X	X		1	3	3		X							
MW-16	10/23	1240		X	X		1	3	3		X							
~~MW~~ Seep	10/23	1300		X	X		1	3	3		X							
MW-5	10/23	1350		X	X		1	3	3		X							
MW-12	10/23	1345		X	X		1	3	3		X							
Duplicate	10/23	1350		X	X		1	3	3		X							
MW-7	10/23	1410		X	X		1	3	3		X							
MW-11	10/23	1445		X	X		1	3	3		X							

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

Remarks:

Intact? Y or N
Temperature: 4.0 c

Bottle Types: 1: 3/40ml Vials 2. 1L Glass 3. 1L Plastic 4. 1L Amber Glass 5. 8oz Plastic

Preservative Types: 1: NONE 2. HNO3 3. HCL 4. H2SO4

Relinquished by	Date	Time	Received by
Relinquished by Sampler: [signature]	10/27/08	1500	Received by: [signature]
Relinquished by:	Date	Time	Received by:
Relinquished by:	10/28/08	0930	Received by SPL Inc: [signature]

Page ___ of ___

SPL, Inc.

Analysis Request & Chain of Custody Record

SPL Workorder No.: 08101633 | 313361 | page ____ of ____

Client Name: Tetra Tech / Conoco Phillips
Address: 6121 Indian School Rd NE Ste 200
Phone/Fax: 505-237-8440
Client Contact: Kelly Blanchard Email: Kelly.Blanchard@tetratech.com
Project Name/No.: Hampton #4M
Site Name:
Site Location: Farmington / Aztec
Invoice To: Ph:

SAMPLE ID	DATE	TIME	comp	grab	matrix (W=water S=soil O=oil SL=sludge X=other)	bottle (P=plastic A=amber glass G=glass V=vial X=other)	size (1=1 liter 4=4oz 40=vial 8=8oz 16=16oz X=other)	pres. (1=HCl 2=HNO3 3=H2SO4 X=other)	Number of Containers	Requested Analysis
Trip Blank	10/27	1430			W	V	40	1	2	

Client/Consultant Remarks:

Laboratory remarks:

Intact? ☐ Y ☐ N
Ice? ☐ Y ☐ N
Temp:

Requested TAT

Contract ☐ 72hr ☐
24hr ☐ Standard ☐
48hr ☐
Other ☐ _____

Special Reporting Requirements Results: Fax ☐ Email ☐ PDF ☐
Standard QC ☐ Level 3 QC ☐ Level 4 QC ☐ TX TRRP ☐ LA RECAP ☐

Special Detection Limits (specify):

PM review (initial):

	date	time		
1. Relinquished by Sampler:	10/27/08	1500	2. Received by:	
3. Relinquished by:	date	time	4. Received by:	
5. Relinquished by:	10/28/08	0930	6. Received by Laboratory:	

☐ 8880 Interchange Drive
Houston, TX 77054 (713) 660-0901

☐ 500 Ambassador Caffery Parkway
Scott, LA 70583 (337) 237-4775

☐ 459 Hughes Drive
Traverse City, MI 49686 (231) 947-5777

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

Conoco Phillips

Certificate of Analysis Number:

09010853

Report To:		Project Name:	COP Hampton 4M
Tetra Tech, Inc.		Site:	Aztec,NM
Kelly Blanchard		Site Address:	
6121 Indian School Road, N.E.			
Suite 200		PO Number:	4510016693
Albuquerque		State:	New Mexico
NM		State Cert. No.:	
87110-		Date Reported:	2/3/2009
ph: (505) 237-8440	fax:		

This Report Contains A Total Of 21 Pages

Excluding This Page, Chain Of Custody

And

Any Attachments

2/4/2009

Date

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

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

Case Narrative for:

Conoco Phillips

Certificate of Analysis Number:

09010853

Report To:		Project Name:	COP Hampton 4M
Tetra Tech, Inc.		Site:	Aztec,NM
Kelly Blanchard		Site Address:	
6121 Indian School Road, N.E.			
Suite 200		PO Number:	4510016693
Albuquerque		State:	New Mexico
NM		State Cert. No.:	
87110-		Date Reported:	2/3/2009
ph: (505) 237-8440	fax:		

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.

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.

Erica Cardenas
Project Manager

Date

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

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

Conoco Phillips

Certificate of Analysis Number:

09010853

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

Fax To:

Project Name: COP Hampton 4M
Site: Aztec,NM
Site Address:
PO Number: 4510016693
State: New Mexico
State Cert. No.:
Date Reported: 2/3/2009

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
MW-15	09010853-01	Water	1/21/2009 11:30:00 AM	1/22/2009 10:00:00 AM		☐
MW-1	09010853-02	Water	1/21/2009 11:50:00 AM	1/22/2009 10:00:00 AM		☐
MW-9	09010853-03	Water	1/21/2009 10:20:00 AM	1/22/2009 10:00:00 AM		☐
MW-16	09010853-04	Water	1/21/2009 11:10:00 AM	1/22/2009 10:00:00 AM		☐
SEEP	09010853-05	Water	1/21/2009 10:00:00 AM	1/22/2009 10:00:00 AM		☐
MW-5	09010853-06	Water	1/21/2009 9:45:00 AM	1/22/2009 10:00:00 AM		☐
MW-12	09010853-07	Water	1/21/2009 10:40:00 AM	1/22/2009 10:00:00 AM		☐
DUPLICATE	09010853-08	Water	1/21/2009 10:45:00 AM	1/22/2009 10:00:00 AM		☐
MW-7	09010853-09	Water	1/21/2009 9:10:00 AM	1/22/2009 10:00:00 AM		☐
MW-11	09010853-10	Water	1/21/2009 8:50:00 AM	1/22/2009 10:00:00 AM		☐
TRIP BLANK	09010853-11	Water	1/21/2009	1/22/2009 10:00:00 AM	316975	☐
TMW-1	09010853-12	Water	1/21/2009 9:25:00 AM	1/22/2009 10:00:00 AM	316975	☐

E Cardenas

2/4/2009

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-15 **Collected:** 01/21/2009 11:30 **SPL Sample ID:** 09010853-01

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**		
Benzene	ND		5	1	01/26/09 21:31	E_G	4879300
Ethylbenzene	ND		5	1	01/26/09 21:31	E_G	4879300
Toluene	ND		5	1	01/26/09 21:31	E_G	4879300
m,p-Xylene	ND		5	1	01/26/09 21:31	E_G	4879300
o-Xylene	ND		5	1	01/26/09 21:31	E_G	4879300
Xylenes,Total	ND		5	1	01/26/09 21:31	E_G	4879300
Surr: 1,2-Dichloroethane-d4	104		% 62-130	1	01/26/09 21:31	E_G	4879300
Surr: 4-Bromofluorobenzene	106		% 70-130	1	01/26/09 21:31	E_G	4879300
Surr: Toluene-d8	106		% 74-122	1	01/26/09 21:31	E_G	4879300

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:** 01/21/2009 11:50 **SPL Sample ID:** 09010853-02

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**		
Benzene	ND		5	1	01/26/09 22:52	E_G	4879303
Ethylbenzene	ND		5	1	01/26/09 22:52	E_G	4879303
Toluene	ND		5	1	01/26/09 22:52	E_G	4879303
m,p-Xylene	ND		5	1	01/26/09 22:52	E_G	4879303
o-Xylene	ND		5	1	01/26/09 22:52	E_G	4879303
Xylenes,Total	ND		5	1	01/26/09 22:52	E_G	4879303
Surr: 1,2-Dichloroethane-d4	106		% 62-130	1	01/26/09 22:52	E_G	4879303
Surr: 4-Bromofluorobenzene	108		% 70-130	1	01/26/09 22:52	E_G	4879303
Surr: Toluene-d8	108		% 74-122	1	01/26/09 22:52	E_G	4879303

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-9 **Collected:** 01/21/2009 10:20 **SPL Sample ID:** 09010853-03

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**		
Benzene	ND			5	1	01/26/09 23:19	E_G	4879304
Ethylbenzene	ND			5	1	01/26/09 23:19	E_G	4879304
Toluene	ND			5	1	01/26/09 23:19	E_G	4879304
m,p-Xylene	ND			5	1	01/26/09 23:19	E_G	4879304
o-Xylene	ND			5	1	01/26/09 23:19	E_G	4879304
Xylenes,Total	ND			5	1	01/26/09 23:19	E_G	4879304
Surr: 1,2-Dichloroethane-d4	100		%	62-130	1	01/26/09 23:19	E_G	4879304
Surr: 4-Bromofluorobenzene	108		%	70-130	1	01/26/09 23:19	E_G	4879304
Surr: Toluene-d8	108		%	74-122	1	01/26/09 23:19	E_G	4879304

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-16 **Collected:** 01/21/2009 11:10 **SPL Sample ID:** 09010853-04

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**		
Benzene	4200		500	100	01/29/09 15:38	E_G	4884303
Ethylbenzene	480 J		500	100	01/29/09 15:38	E_G	4884303
Toluene	7500		500	100	01/29/09 15:38	E_G	4884303
m,p-Xylene	5000		500	100	01/29/09 15:38	E_G	4884303
o-Xylene	1900		500	100	01/29/09 15:38	E_G	4884303
Xylenes,Total	6900		500	100	01/29/09 15:38	E_G	4884303
Surr: 1,2-Dichloroethane-d4	96.0		% 62-130	100	01/29/09 15:38	E_G	4884303
Surr: 4-Bromofluorobenzene	104		% 70-130	100	01/29/09 15:38	E_G	4884303
Surr: Toluene-d8	102		% 74-122	100	01/29/09 15:38	E_G	4884303

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: SEEP **Collected:** 01/21/2009 10:00 **SPL Sample ID:** 09010853-05

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**		
Benzene	ND		5	1	01/27/09 1:35	E_G	4879308
Ethylbenzene	ND		5	1	01/27/09 1:35	E_G	4879308
Toluene	ND		5	1	01/27/09 1:35	E_G	4879308
m,p-Xylene	ND		5	1	01/27/09 1:35	E_G	4879308
o-Xylene	ND		5	1	01/27/09 1:35	E_G	4879308
Xylenes,Total	ND		5	1	01/27/09 1:35	E_G	4879308
Surr: 1,2-Dichloroethane-d4	106		% 62-130	1	01/27/09 1:35	E_G	4879308
Surr: 4-Bromofluorobenzene	110		% 70-130	1	01/27/09 1:35	E_G	4879308
Surr: Toluene-d8	104		% 74-122	1	01/27/09 1:35	E_G	4879308

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-5 **Collected:** 01/21/2009 9:45 **SPL Sample ID:** 09010853-06

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**		
Benzene	250		100	20	01/29/09 15:11	E_G	4884302
Ethylbenzene	510		100	20	01/29/09 15:11	E_G	4884302
Toluene	3800		100	20	01/29/09 15:11	E_G	4884302
m,p-Xylene	4000		100	20	01/29/09 15:11	E_G	4884302
o-Xylene	1200		100	20	01/29/09 15:11	E_G	4884302
Xylenes,Total	5200		100	20	01/29/09 15:11	E_G	4884302
Surr: 1,2-Dichloroethane-d4	100		% 62-130	20	01/29/09 15:11	E_G	4884302
Surr: 4-Bromofluorobenzene	100		% 70-130	20	01/29/09 15:11	E_G	4884302
Surr: Toluene-d8	100		% 74-122	20	01/29/09 15:11	E_G	4884302

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-12 **Collected:** 01/21/2009 10:40 **SPL Sample ID:** 09010853-07

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**		
Benzene	1100			100	20	01/29/09 14:17	E_G	4884300
Ethylbenzene	110			5	1	01/26/09 23:46	E_G	4879305
Toluene	430			100	20	01/29/09 14:17	E_G	4884300
m,p-Xylene	290			5	1	01/26/09 23:46	E_G	4879305
o-Xylene	120			5	1	01/26/09 23:46	E_G	4879305
Xylenes,Total	410			5	1	01/26/09 23:46	E_G	4879305
Surr: 1,2-Dichloroethane-d4	100		%	62-130	20	01/29/09 14:17	E_G	4884300
Surr: 1,2-Dichloroethane-d4	106		%	62-130	1	01/26/09 23:46	E_G	4879305
Surr: 4-Bromofluorobenzene	110		%	70-130	20	01/29/09 14:17	E_G	4884300
Surr: 4-Bromofluorobenzene	108		%	70-130	1	01/26/09 23:46	E_G	4879305
Surr: Toluene-d8	100		%	74-122	20	01/29/09 14:17	E_G	4884300
Surr: Toluene-d8	106		%	74-122	1	01/26/09 23:46	E_G	4879305

Qualifiers:

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

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

Client Sample ID: DUPLICATE **Collected:** 01/21/2009 10:45 **SPL Sample ID:** 09010853-08

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**		
Benzene	1100		100	20	01/29/09 14:44	E_G	4884301
Ethylbenzene	140		5	1	01/27/09 0:14	E_G	4879306
Toluene	340		100	20	01/29/09 14:44	E_G	4884301
m,p-Xylene	400		5	1	01/27/09 0:14	E_G	4879306
o-Xylene	150		5	1	01/27/09 0:14	E_G	4879306
Xylenes,Total	550		5	1	01/27/09 0:14	E_G	4879306
Surr: 1,2-Dichloroethane-d4	99.0	%	62-130	20	01/29/09 14:44	E_G	4884301
Surr: 1,2-Dichloroethane-d4	108	%	62-130	1	01/27/09 0:14	E_G	4879306
Surr: 4-Bromofluorobenzene	100	%	70-130	20	01/29/09 14:44	E_G	4884301
Surr: 4-Bromofluorobenzene	106	%	70-130	1	01/27/09 0:14	E_G	4879306
Surr: Toluene-d8	100	%	74-122	20	01/29/09 14:44	E_G	4884301
Surr: Toluene-d8	106	%	74-122	1	01/27/09 0:14	E_G	4879306

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-7 **Collected:** 01/21/2009 9:10 **SPL Sample ID:** 09010853-09

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**		
Benzene	ND		5	1	01/29/09 12:28	E_G	4884296
Ethylbenzene	ND		5	1	01/29/09 12:28	E_G	4884296
Toluene	ND		5	1	01/29/09 12:28	E_G	4884296
m,p-Xylene	ND		5	1	01/29/09 12:28	E_G	4884296
o-Xylene	ND		5	1	01/29/09 12:28	E_G	4884296
Xylenes,Total	ND		5	1	01/29/09 12:28	E_G	4884296
Surr: 1,2-Dichloroethane-d4	100		% 62-130	1	01/29/09 12:28	E_G	4884296
Surr: 4-Bromofluorobenzene	106		% 70-130	1	01/29/09 12:28	E_G	4884296
Surr: Toluene-d8	102		% 74-122	1	01/29/09 12:28	E_G	4884296

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-11 **Collected:** 01/21/2009 8:50 **SPL Sample ID:** 09010853-10

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**		
Benzene	ND		5	1	01/27/09 1:08	E_G	4879307
Ethylbenzene	ND		5	1	01/27/09 1:08	E_G	4879307
Toluene	ND		5	1	01/27/09 1:08	E_G	4879307
m,p-Xylene	ND		5	1	01/27/09 1:08	E_G	4879307
o-Xylene	ND		5	1	01/27/09 1:08	E_G	4879307
Xylenes,Total	ND		5	1	01/27/09 1:08	E_G	4879307
Surr: 1,2-Dichloroethane-d4	104		% 62-130	1	01/27/09 1:08	E_G	4879307
Surr: 4-Bromofluorobenzene	108		% 70-130	1	01/27/09 1:08	E_G	4879307
Surr: Toluene-d8	106		% 74-122	1	01/27/09 1:08	E_G	4879307

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:** 01/21/2009 0:00 **SPL Sample ID:** 09010853-11

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**		
Benzene	ND		5	1	01/29/09 12:01	E_G	4884295
Ethylbenzene	ND		5	1	01/29/09 12:01	E_G	4884295
Toluene	ND		5	1	01/29/09 12:01	E_G	4884295
m,p-Xylene	ND		5	1	01/29/09 12:01	E_G	4884295
o-Xylene	ND		5	1	01/29/09 12:01	E_G	4884295
Xylenes,Total	ND		5	1	01/29/09 12:01	E_G	4884295
Surr: 1,2-Dichloroethane-d4	104		% 62-130	1	01/29/09 12:01	E_G	4884295
Surr: 4-Bromofluorobenzene	106		% 70-130	1	01/29/09 12:01	E_G	4884295
Surr: Toluene-d8	102		% 74-122	1	01/29/09 12:01	E_G	4884295

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: TMW-1 **Collected:** 01/21/2009 9:25 **SPL Sample ID:** 09010853-12

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**		
Benzene	13		5	1	01/29/09 13:50	E_G	4884299
Ethylbenzene	ND		5	1	01/29/09 13:50	E_G	4884299
Toluene	ND		5	1	01/29/09 13:50	E_G	4884299
m,p-Xylene	ND		5	1	01/29/09 13:50	E_G	4884299
o-Xylene	ND		5	1	01/29/09 13:50	E_G	4884299
Xylenes,Total	ND		5	1	01/29/09 13:50	E_G	4884299
Surr: 1,2-Dichloroethane-d4	100		% 62-130	1	01/29/09 13:50	E_G	4884299
Surr: 4-Bromofluorobenzene	106		% 70-130	1	01/29/09 13:50	E_G	4884299
Surr: Toluene-d8	104		% 74-122	1	01/29/09 13:50	E_G	4884299

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

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

Quality Control Report

Conoco Phillips

COP Hampton 4M

Analysis: Volatile Organics by Method 8260B **WorkOrder:** 09010853
Method: SW8260B **Lab Batch ID:** R263615

Method Blank

RunID: L_090126B-4879299 Units: ug/L
Analysis Date: 01/26/2009 21:04 Analyst: E_G
Preparation Date: 01/26/2009 21:04 Prep By: Method:

Analyte	Result	Rep Limit
Benzene	ND	5.0
Ethylbenzene	ND	5.0
Toluene	ND	5.0
m,p-Xylene	ND	5.0
o-Xylene	ND	5.0
Xylenes,Total	ND	5.0
Surr: 1,2-Dichloroethane-d4	106.0	62-130
Surr: 4-Bromofluorobenzene	106.0	70-130
Surr: Toluene-d8	108.0	74-122

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09010853-01A	MW-15
09010853-02A	MW-1
09010853-03A	MW-9
09010853-05A	SEEP
09010853-07A	MW-12
09010853-08A	DUPLICATE
09010853-10A	MW-11

Laboratory Control Sample (LCS)

RunID: L_090126B-4879298 Units: ug/L
Analysis Date: 01/26/2009 20:10 Analyst: E_G
Preparation Date: 01/26/2009 20:10 Prep By: Method:

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	20.0	19.0	95.0	76	126
Ethylbenzene	20.0	21.0	105	67	122
Toluene	20.0	21.0	105	70	131
m,p-Xylene	40.0	42.0	105	72	150
o-Xylene	20.0	21.0	105	78	141
Xylenes,Total	60	63	100	72	150
Surr: 1,2-Dichloroethane-d4	50.0	51	102	62	130
Surr: 4-Bromofluorobenzene	50.0	53	106	70	130
Surr: Toluene-d8	50.0	53	106	74	122

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

Sample Spiked: 09010853-01
RunID: L_090126B-4879301 Units: ug/L
Analysis Date: 01/26/2009 21:58 Analyst: E_G

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

COP Hampton 4M

Analysis: Volatile Organics by Method 8260B **WorkOrder:** 09010853
Method: SW8260B **Lab Batch ID:** R263615

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
Ethylbenzene	ND	20	20.0	100	20	20.0	100	0	20	35	175
Toluene	ND	20	20.0	100	20	20.0	100	0	24	70	131
m,p-Xylene	ND	40	41.0	102	40	40.0	100	2.47	20	35	175
o-Xylene	ND	20	20.0	100	20	20.0	100	0	20	35	175
Xylenes,Total	ND	60	61	100	60	60	100	1.7	20	35	175
Surr: 1,2-Dichloroethane-d4	ND	50	50	100	50	55.0	110	9.52	30	62	130
Surr: 4-Bromofluorobenzene	ND	50	55	110	50	55.0	110	0	30	70	130
Surr: Toluene-d8	ND	50	54	108	50	54.0	108	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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

COP Hampton 4M

Analysis: Volatile Organics by Method 8260B **WorkOrder:** 09010853
Method: SW8260B **Lab Batch ID:** R263896

Method Blank

RunID: L_090129A-4884294 Units: ug/L
Analysis Date: 01/29/2009 11:06 Analyst: E_G
Preparation Date: 01/29/2009 11:06 Prep By: Method:

Analyte	Result	Rep Limit
Benzene	ND	5.0
Ethylbenzene	ND	5.0
Toluene	ND	5.0
m,p-Xylene	ND	5.0
o-Xylene	ND	5.0
Xylenes,Total	ND	5.0
Surr: 1,2-Dichloroethane-d4	102.0	62-130
Surr: 4-Bromofluorobenzene	106.0	70-130
Surr: Toluene-d8	104.0	74-122

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09010853-04A	MW-16
09010853-06A	MW-5
09010853-07A	MW-12
09010853-08A	DUPLICATE
09010853-09A	MW-7
09010853-11A	TRIP BLANK
09010853-12A	TMW-1

Laboratory Control Sample (LCS)

RunID: L_090129A-4884293 Units: ug/L
Analysis Date: 01/29/2009 10:39 Analyst: E_G
Preparation Date: 01/29/2009 10:39 Prep By: Method:

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	20.0	21.0	105	76	126
Ethylbenzene	20.0	21.0	105	67	122
Toluene	20.0	21.0	105	70	131
m,p-Xylene	40.0	43.0	108	72	150
o-Xylene	20.0	22.0	110	78	141
Xylenes,Total	60	65	110	72	150
Surr: 1,2-Dichloroethane-d4	50.0	54	108	62	130
Surr: 4-Bromofluorobenzene	50.0	54	108	70	130
Surr: Toluene-d8	50.0	52	104	74	122

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

Sample Spiked: 09010853-09
RunID: L_090129A-4884297 Units: ug/L
Analysis Date: 01/29/2009 12:55 Analyst: E_G

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

COP Hampton 4M

Analysis: Volatile Organics by Method 8260B **WorkOrder:** 09010853
Method: SW8260B **Lab Batch ID:** R263896

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	21.0	90.0	20	21.0	90.0	0	22	76	127
Ethylbenzene	ND	20	18.0	90.0	20	18.0	90.0	0	20	35	175
Toluene	ND	20	18.0	90.0	20	17.0	85.0	5.71	24	70	131
m,p-Xylene	ND	40	36.0	90.0	40	35.0	87.5	2.82	20	35	175
o-Xylene	ND	20	18.0	90.0	20	18.0	90.0	0	20	35	175
Xylenes,Total	ND	60	54	90	60	53	88	1.9	20	35	175
Surr: 1,2-Dichloroethane-d4	ND	50	54	108	50	51.0	102	5.71	30	62	130
Surr: 4-Bromofluorobenzene	ND	50	53	106	50	54.0	108	1.87	30	70	130
Surr: Toluene-d8	ND	50	52	104	50	51.0	102	1.94	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.

Sample Receipt Checklist

And

Chain of Custody

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

Sample Receipt Checklist

Workorder:	09010853	Received By:	L_C
Date and Time Received:	1/22/2009 10:00:00 AM	Carrier name:	Fedex-Priority
Temperature:	2.5°C	Chilled by:	Water Ice

1.	Shipping container/cooler in good condition?	Yes	☑	No	☐	Not Present ☐
2.	Custody seals intact on shippping 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?	Yes	☑	No	☐	
11.	Container/Temp Blank temperature in compliance?	Yes	☑	No	☐	
12.	Water - VOA vials have zero headspace?	Yes	☑	No	☐	VOA Vials Not Present ☐
13.	Water - Preservation checked upon receipt (except VOA*)?	Yes	☐	No	☐	Not Applicable ☑

*VOA Preservation Checked After Sample Analysis

SPL Representative: _____ Contact Date & Time: _____

Client Name Contacted: _____

Non Conformance Issues: _____

Client Instructions: _____

8880 Interchange Drive, Houston, TX 77054

Analysis Request and Chain of Custody Record

SPL Workorder No.: 0901 0F53

Company Name: **Tetra Tech / Conoco Phillips**	
Contact: **Kelly Blanchard**	
Address: **6121 Indian School Rd. NE, Ste. 200**	
Phone/Fax: **(505) 237-8440 / (505) 237-8666**	
Email Address: **kelly.blanchard@tetratech.com**	
Invoice To:	
Purchase Order No:	
Project Name/No: **Hampton #4M**	
Site Address:	
Sampled By: Christine Matthews	

Sampling Event Description

- Quarterly ☒
- Semi-Annual ☐
- WC-Waste Char. ☐
- Other (describe below) ☐

QA/QC Level

- TRRP ☐ LVL 3 ☐
- STD ☐ Other ☐

SAMPLE ID	DATE	TIME	Water	Soil	Sludge	Other	Number Containers	Container Type	Preservative	BTEX - 8260
MW-15	1-21-09	1130	X				3	VOA	HCL	X
MW-1	1-21-09	1150	X				3	VOA	HCL	X
MW-9	1-21-09	1020	X				3	VOA	HCL	X
MW-16	1-21-09	1110	X				3	VOA	HCL	X
Seep	1-21-09	1000	X				3	VOA	HCL	X
MW-5	1-21-09	945	X				3	VOA	HCL	X
MW-12	1-21-09	1040	X				3	VOA	HCL	X
Duplicate	1-21-09	1045	X				3	VOA	HCL	X
MW-7	1-21-09	910	X				3	VOA	HCL	X
MW-11	1-21-09	850	X				3	VOA	HCL	X

TAT

- 24hr ☐ 72hr ☐
- 48hr ☐ 10 day ☐
- Other ☐ ☐

Special Detection Limits (Specify): Please analyze to the lowest limit possible

Special Reporting Requirements (Specify):

Consultant Remarks:

Laboratory Remarks:

PM review: 2-5-09

	Date	Time	
Relinquished by Sampler: Christine Matthews	1-21-09	1620	Received by:
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date 1/22/09	Time 10:00	Received by SPL, Inc.:

SPL, Inc.

Analysis Request & Chain of Custody Record

SPL Workorder No. 09010853 — 316975 — page ___ of ___

Client Name: Tetra Tech / ConocoPhillip
Address: 6121 Indian School Rd. Ste 200
Phone/Fax: 505-237-8440
Client Contact: Kelly Blanchard Email: Kelly.Blanchard@tetratech.com
Project Name/No.: Hampton 4M
Site Name:
Site Location: Aztec, NM
Invoice To: ConocoPhillips Ph:

Matrix: W=water S=soil O=oil SL=sludge X=other
Bottle: P=plastic A=amber glass G=glass V=vial X=other
Size: 1=1 liter 4=4oz 40=vial 8=8oz 16=16oz X=other
Pres.: 1=HCl 2=HNO3 3=H2SO4 X=other

SAMPLE ID	DATE	TIME	comp	grab	matrix	bottle	size	pres.	Number of Containers	BTEX
~~Duplicate~~ Trip Blank	1.21.09	1615		X	W	V	40	1	2	X
TMW-1	1.21.09	925		X	W	V	40	1	3	X

Client/Consultant Remarks: Please analyze to the lowest limit possible

Laboratory remarks:

Intact? ☒ Y ☐ N
Ice? ☐ Y ☐ N
Temp: 2.5°C

Requested TAT
Contract ☐ 72hr ☐
24hr ☐ Standard ☐
48hr ☐
Other ☐ ______

Special Reporting Requirements — Results: Fax ☐ Email ☐ PDF ☐
Standard QC ☐ Level 3 QC ☐ Level 4 QC ☐ TX TRRP ☐ LA RECAP ☐

Special Detection Limits (specify):

PM review (initial): [signature]

1. Relinquished by Sampler: [signature]	date 1.21.09	time 1620	2. Received by:
3. Relinquished by:	date	time	4. Received by:
5. Relinquished by:	date 1/22/09	time 10:00	6. Received by Laboratory: [signature]

☐ 8880 Interchange Drive, Houston, TX 77054 (713) 660-0901
☐ 500 Ambassador Caffery Parkway, Scott, LA 70583 (337) 237-4775
☐ 459 Hughes Drive, Traverse City, MI 49686 (231) 947-5777

TETRA TECH, INC.

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

August 7, 2009

RECEIVED OCD
2009 AUG 11 P 3:27

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

RE: ConocoPhillips Company Randleman #1 - Groundwater Monitor Well Installation and Baseline Groundwater Monitoring Report, Aztec, New Mexico

Dear Mr. von Gonten:

Enclosed please find one copy of the above-referenced document as compiled by Tetra Tech, Inc., for this Aztec-area site.

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

Sincerely,

Kelly E. Blanchard

Kelly E. Blanchard
Project Manager/Geologist

Enclosures (1)

GROUNDWATER MONITOR WELL INSTALLATION AND BASELINE GROUNDWATER MONITORING REPORT

CONOCOPHILLIPS COMPANY

RANDLEMAN #1
PRODUCTION FACILITY
SAN JUAN COUNTY, NEW MEXICO

OCD # 3RP-340-0

API # 30-045-10698

Prepared for:

ConocoPhillips

Risk Management and Remediation
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. 1158690090

August 2009

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

GROUNDWATER MONITOR WELL INSTALLATION AND BASELINE GROUNDWATER MONITORING REPORT RANDLEMAN #1, SAN JUAN COUNTY, NEW MEXICO JUNE 2009

1.0 INTRODUCTION

This report discusses the installation of 4 groundwater monitor wells by Tetra Tech, Inc. (Tetra Tech) in June 2009 at the ConocoPhillips Company Randleman #1 site located outside of Aztec, New Mexico (Site), and presents the results of the baseline groundwater monitoring event conducted at the Site by Tetra Tech in June 2009. The Site is located in Section 13, Township 31N, Range 11W, of San Juan County, New Mexico (Figure 1). A Site detail map is included as Figure 2.

1.1 Site Background

The historical timeline for the Site is summarized below, and is also presented in Table 1.

In April 1997, an unlined surface impoundment (Figure 2) was discovered to have been impacted by petroleum hydrocarbons. On April 29, 1997, excavation of the soil beneath the impoundment began; once complete, a total of 613 cubic yards of hydrocarbon impacted soil were removed and landfarmed at the nearby Randleman #3 site (Williams 2002). Three monitor wells were installed at the Site on May 14, 1997, and quarterly groundwater monitoring was conducted through March 1998. Evaluation of groundwater monitoring results initiated another excavation in April 1998 of 2,220 cubic yards of hydrocarbon impacted soil "to address residual soil contamination extending to the south of the original excavated area" (Williams, 2002). Quarterly groundwater monitoring was continued through September 2000, and after 4 consecutive quarters of groundwater quality monitoring results below New Mexico Water Quality Control Commission (NMWQCC) groundwater quality standards for benzene, toluene, ethylbenzene, and total xylenes (BTEX), Williams Environmental Services (Williams) requested that the New Mexico Oil Conservation Division (OCD) grant closure status to the Site. In June 2002, OCD granted closure for the Site, provided that Williams plug and abandon all Site groundwater monitor wells according to OCD standards (NMEMNRD, 2002). The historical excavation area and historical groundwater monitor wells are displayed in Figure 2.

On February 23, 2009, approximately 60 barrels of condensate were released from an on-Site production tank as a result of a hole in the tank. OCD Form C-141 was filled out by ConocoPhillips staff and notice was given to OCD via telephone. Form C-141 stated that the well was shut in, that the fluids remained in the berm surrounding the production tank, and that none of the fluids were recoverable. Form C-141 additionally stated that ConocoPhillips would remove the tank and would excavate hydrocarbon impacted soils and remove them from the Site.

On February 26, 2009, Envirotech Inc. of Farmington, NM (Envirotech) arrived on Site, performed the soil excavation, and collected soil samples for analysis. The area of release was excavated to approximately 42

feet by 51 feet by 7 feet deep. A total of 7 composite soil samples were collected from the excavation – 1 from each of the walls of the excavation and 3 samples from the bottom of the excavation. Soil samples were collected in the field and were analyzed for total petroleum hydrocarbons (TPH) using Environmental Protection Agency (EPA) Method 418.1. Additionally, organic vapors were analyzed in the field using a photoionization detector (PID) and heated headspace techniques. TPH results ranged from 8 parts per million (ppm) in the soil sample collected from the north wall of the excavation to 1,080 ppm in the sample collected from the south wall of the excavation. Depth of soil samples was not noted in the samples obtained from the walls of the excavation, but the samples obtained from the bottom of the excavation were obtained at 2.5 feet below ground surface (bgs) and at 3 feet bgs along the east and west sides of the excavation, respectively. The OCD recommended action level for TPH at the Site was determined to be 100 ppm. Organic vapor concentrations ranged from 6.8 ppm in the sample obtained from the north wall of the excavation to 898 ppm in the sample obtained from the south wall of the excavation. Due to levels of TPH and organic vapors above OCD action levels, the excavation was continued (Envirotech, 2009).

On February 27, 2009, Envirotech returned to the Site to continue the excavation and sampling activities. Due to the fact that soil samples collected from the north, west, and east ends of the excavation on February 26, 2009 were found to be below OCD action levels for TPH and organic vapor, the focus of the excavation on February 27, 2009 was the south wall, the southeast wall, and the bottom of the southeast corner. At the end of the day, the excavation measured 81 feet by 43 feet by 20 feet deep (total depth is given for the deepest part of the excavation; other areas determined to be below OCD action levels went to approximately 8 feet bgs). A total of 8 soil samples were collected and analyzed in the field for TPH and organic vapors. The excavation continued until all samples were found to be below the OCD action levels of 100 ppm for both TPH and organic vapors along all four walls and the bottom of the excavation. Using this excavation approach, the southeast corner became the focus of the excavation, where after obtaining soil samples at 8, 13, and 15 feet bgs with both TPH and organic vapor results greater than 100 ppm, soil sample results for both of these constituents were not detected at a depth of 20 feet bgs, and the excavation was discontinued (Envirotech, 2009). The excavation area is depicted in Figure 2.

On March 2, 2009, groundwater was found seeping into the southeast corner of the excavation at a depth of approximately 20 feet bgs. A Rock Springs vacuum truck was contracted by Envirotech to collect groundwater from the excavation; approximately 10 gallons of water were removed. After removal of collected groundwater, Envirotech obtained a soil sample from the southeast corner of the excavation at a depth of 20 feet bgs. TPH and organic vapor results were found to be above OCD action levels. During field analysis of the soil sample, more groundwater had seeped into the excavation. More water was then removed from the excavation, and additional excavation was performed in order to attempt to obtain a soil sample below OCD action levels. A groundwater sample was collected from the area where water continued to seep into the excavation, and was sent for laboratory analysis of volatile organic compounds by EPA Method 8260. The groundwater sample was found to contain benzene, total xylenes and total naphthalenes above NMWQCC groundwater quality standards. Once this sample had been obtained, the excavation caved in, making further water removal via the vacuum truck impossible (Envirotech, 2009). The excavation area is depicted in Figure 2.

A total of 611 cubic yards of soil were removed from the Site and were transported to an OCD-permitted facility; clean fill was obtained from the landowner to backfill the excavation. Envirotech recommended the installation of groundwater monitor wells at the Site under OCD guidelines (Envirotech, 2009).

Tetra Tech installed groundwater monitor wells at the Site between June 9, 2009 and June 10, 2009. Tetra Tech conducted the first groundwater monitoring event at the Site on June 12, 2009. On June 17, 2009, depth to water measurements were again taken in Site monitor wells to determine if hydrocarbons were accumulating in the water column (see Section 1.2). On June 18, 2009, the decision was made to place hydrocarbon absorbent socks into monitor wells MW-2 and MW-3.

1.2 Groundwater Monitor Well Installation

Between June 9, 2009 and June 10, 2009, WDC Exploration and Wells (WDC) installed 4 groundwater monitor wells at the Site under the supervision of Tetra Tech: MW-1, MW-2, MW-3, and MW-4. All wells were drilled using a CME-85 drill rig, hollow stem augers, and split-spoon sampling techniques; 15 feet of .010 polyvinylchloride (PVC) slotted screening was placed in each well. MW-1 was installed on June 10, 2009 to a total depth of 25.5 feet bgs. The depth to water was recorded at 13.98 feet bgs and the screened interval was placed from 9 feet bgs to 24 feet bgs. MW-2 was installed on June 10, 2009 to a total depth of 23.8 feet bgs. The screened interval was placed from 8.9 to 23.8 feet bgs and depth to water was recorded at 15.57 feet bgs. MW-3 was installed on June 10, 2009 to a total depth of 22 feet bgs and the depth to water was recorded at 16.0 feet bgs. The screened interval for MW-3 was placed from 6.5 to 21.5 feet bgs (flowing sands in the boring for MW-3 caused difficulty with casing and screen placement, and as a result, the screened interval was not placed at least 10 feet below the water table as discussed in the work plan for the Site). MW-4 was installed on June 9, 2009 to a total depth of 29.5 feet bgs and the depth to water was recorded at 17.68 feet bgs. The screened interval for MW-4 was placed from 11 to 26 feet bgs. Wells were constructed using 2-inch PVC casing, and were all above-ground completions set in concrete with the exception of MW-1, which was constructed as a flush-mount monitor well. After installation, each monitor well was developed using a 1.5-inch diameter, poly-vinyl disposable bailer. Between 35 and 70 gallons of water was purged from each well and was disposed of in the on-Site wastewater tank. Although no hydrocarbon sheen was noted during development of monitor wells MW-1 and MW-4, a slight, discontinuous, hydrocarbon sheen was noted in the purge water from MW-2 and MW-3 during development. As a result of this finding, a hydrocarbon absorbent sock was placed in these monitor wells on June 18, 2009. Soil boring logs and well completion forms are included as Appendix A. A generalized geologic cross section for the Site is presented in Figure 3.

During soil boring activities on June 9, 2009 and June 10, 2009, soil samples were collected from the soil borings for MW-2 and MW-4 from depths of 7 to 8.5 feet bgs and from 12.5 to 14 feet bgs, respectively. Soil samples were collected from MW-3 at depths of 7.5 to 9 feet bgs and from 12.5 to 14 feet bgs. No soil sample was collected from the boring for MW-1 as this well was placed within the area of the Envirotech excavation (Figure 2). As a result, soils encountered during boring activities for this monitor well were largely composed of clean backfill material. Each soil sample was analyzed for major ions by EPA Method 300.0; for total mercury by EPA Method 7471A; total metals by EPA Methods 6010B and 6020A;

semivolatile organic compounds (SVOCs) by EPA Method 8270C; volatile organic compounds (VOCs) by EPA Method 8260B; and gasoline range organics (GRO) and diesel range organics (DRO) by EPA Method 8015B. None of the soil analytes were detected in concentrations above OCD recommended action levels. Results of the soil analysis are shown in Table 2 and Appendix B.

2.0 MONITORING SUMMARY, SAMPLING METHODOLOGY AND RESULTS

2.1 Monitoring Summary

A baseline groundwater quality monitoring event at the site was conducted on June 12, 2009. Prior to collection of groundwater samples from monitor well MW-1, MW-2, MW-3 and MW-4, depth to groundwater in each well was determined. Results are displayed in Table 3.

The casings for Site monitor wells were surveyed in June 2009 using the wellhead as a reference-elevation of 100 feet above mean sea level (amsl). The data obtained from the Site survey and from the June 2009 sampling event was used to create a groundwater elevation map for the Site (Figure 4). Using this data, it was determined that the groundwater flow direction at the Site is to the east/southeast.

2.2 Groundwater Sampling Methodology

During the baseline groundwater monitoring event, Site monitor wells were purged of at least 3 casing volumes of groundwater using a 1.5-inch diameter, poly-vinyl disposable bailer. While bailing each well, groundwater parameter data such as temperature, pH, conductivity, total dissolved solids (TDS), oxidation-reduction potential (ORP) and dissolved oxygen (DO) were collected using a YSI 556 multi-parameter sonde and results were recorded on a Tetra Tech Water Sampling Field Form (Appendix C). Collected groundwater samples were placed in laboratory prepared bottles, packed on ice, and shipped with chain-of-custody documentation. Analysis of all groundwater samples collected during the June 2009 groundwater monitoring event were performed by Southern Petroleum Laboratory (SPL) of Houston, Texas.

During the June 2009 groundwater monitoring event, each groundwater sample collected was analyzed for major ions by EPA Method 300.0; for total mercury by EPA Method 7470A; total metals by EPA Methods 6010B and 6020A; SVOCs by EPA Method 8270C; VOCs by EPA Method 8260B; alkalinity (as $CaCO_3$) by EPA Method 310.1; diesel range organics (DRO) and gasoline range organics (GRO) by EPA Method 8015B; and total nitrate and nitrite (as nitrogen) by standard method 4500. Results of these analyses are displayed in Table 4.

Since Site closure through OCD is dependent upon a decrease in BTEX concentrations over time, Tetra Tech has prepared an historical analytical results table for BTEX in Site wells for the June 2009 monitoring event (Table 5). Results from future groundwater monitoring events at the Site will be compiled in this table.

2.3 Groundwater Sampling Analytical Results

The New Mexico Water Quality Control Commission (NMWQCC) mandates that groundwater quality in New Mexico be protected, and has issued groundwater quality standards in Title 20, Chapter 6, Part 2, Section 3103 of the New Mexico Administrative Code (20.6.2.3103 NMAC). Groundwater quality standards have been set for the protection of human health, domestic water supply, and irrigation use. Exceedences of NMWQCC groundwater quality standards in Site monitor wells are discussed below.

- **Chloride**
  - The NMWQCC domestic water supply groundwater quality standard for chloride is 250 milligrams per liter (mg/L); the groundwater sample collected from monitor well MW-4 was found to contain chloride at concentration of 2,310 mg/L.
- **Sulfate**
  - The NMWQCC domestic water supply groundwater quality standard for sulfate is 600 mg/L; groundwater samples collected from monitor well MW-1, MW-2, MW-3 and MW-4 were found to contain sulfate at concentrations of 1,690 mg/L, 1,360 mg/L, 1,510 mg/L, and 4,190 mg/L, respectively.
- **Aluminum**
  - The NMWQCC aluminum groundwater quality standard for irrigation use is 5 mg/L; groundwater samples collected from monitor well MW-1 and MW-4 were found to contain aluminum at concentrations of 9.22 mg/L and 13.6 mg/L, respectively.
- **Iron**
  - The NMWQCC domestic water supply groundwater quality standard for iron is 1 mg/L; groundwater samples collected from monitor well MW-1, MW-2, MW-3 and MW-4 were found to contain iron at concentrations of 6.81 mg/L, 3.7 mg/L, 1.65 mg/L, and 20 mg/L, respectively.
- **Chromium**
  - The human health NMWQCC groundwater quality standard for chromium is 0.05 milligrams per liter (mg/L); the groundwater sample collected from monitor well MW-4 was found to contain chromium at a concentration of 0.117 mg/L.
- **Manganese**
  - The NMWQCC domestic water supply groundwater quality standard for manganese is 0.2 milligrams per liter (mg/L); groundwater samples collected from monitor well MW-1, MW-2, MW-3 and MW-4 were found to contain manganese at concentrations of 4.79 mg/L, 3.56 mg/L, 3 mg/L, and 4.92 mg/L, respectively.

- **Polycyclic Aromatic Hydrocarbons**
    - The human health NMWQCC groundwater quality standard for polycyclic aromatic hydrocarbons (PAHs), defined as the sum of total naphthalene and mono-methylnaphthalenes, is 30 micrograms per liter (µg/L); the groundwater sample collected from monitor well MW-3 was found to contain PAHs at a concentration of 32 µg/L using EPA Method 8270C (SVOCs), and at a concentration of 36 mg/L using EPA Method 8260B (VOCs).
- **Benzene**
    - Benzene was found at a concentration of 10 µg/L in MW-3, the human health NMWQCC groundwater quality standard for this constituent.
- **Toluene**
    - Toluene was detected in groundwater samples collected from monitor wells MW-2 and MW-3 at concentrations of 1,100 µg/L and 1,400 µg/L, respectively. The human health NMWQCC groundwater quality standard for this constituent is 750 µg/L.
- **Total Xylenes**
    - The human health NMWQCC groundwater quality standard for total xylenes is 620 µg/L, while this constituent was detected at concentrations of 2,280 µg/L and 4,050 µg/L in monitor wells MW-2 and MW-3, respectively.

The corresponding laboratory analysis reports for the June 2009 groundwater sampling event, including quality control summaries, are included in Appendix D. A map showing BTEX concentrations in Site wells during the June 2009 groundwater sampling event is included as Figure 5.

3.0 CONCLUSIONS AND RECOMMENDATIONS

Tetra Tech has installed 4 groundwater monitor wells at the Site and has conducted the first baseline groundwater monitoring event at the Site. The groundwater monitor wells will be incorporated into a quarterly monitoring schedule, and the next groundwater monitoring event at the Site is scheduled for September 2009. The groundwater flow direction at the Site was determined to be to the east/southeast as of June 2009. Tetra Tech will continue to determine the groundwater flow direction at the Site and will note any changes as they occur.

As a result of the suite of chemical analyses conducted on all groundwater monitor wells at the Site during 2009, continued groundwater quality monitoring beyond BTEX analysis is warranted. Concentrations of chloride, sulfate, aluminum, iron, chromium, manganese, and PAHs have been detected above NMWQCC groundwater quality standards in varying combinations in all groundwater monitor wells at the Site. As a result, Tetra Tech recommends that these constituents be incorporated into the quarterly monitoring program for all Site groundwater monitor wells. Tetra Tech will continue to monitor for BTEX parameters in order to move toward Site closure. In addition, Tetra Tech will prepare a work plan for the OCD that will detail plans to completely delineate groundwater impacts at the Site.

Please contact Kelly Blanchard at 505-237-8440 or kelly.blanchard@tetratech.com if you have any questions or require additional information.

4.0 REFERENCES

Envirotech Incorporated (2009). *Spill Cleanup Report, Located at: Burlington Resources* [sic] *Randleman #1 Well Site, Section 13, Township 31N, Range 11W, San Juan County, New Mexico.* Prepared for ConocoPhillips. Report Dated February 2009. 3 pp (not including Figures, Tables, and Appendices).

New Mexico Energy, Minerals and Natural Resources Department (2002). *Case # 3R0-340, Randleman #1 Dehy Pit, San Juan County* [sic], *New Mexico.* Letter from NMEMNRD to Williams Field Services. Dated June 14, 2002. 6 pp.

Williams Environmental Services (2002). *Randleman #1 Pit Remediation and Closure Report. Prepared for the New Mexico Oil Conservation Division.* Report Dated February 11, 2002. 3 pp (not including Figures, Tables, and Appendices).

FIGURES

FIGURE 1.

Site Location Map
ConocoPhillips
Randleman #1
Aztec, NM

ConocoPhillips
Randleman #1 Site Location

0 175 350
Feet

Source: Google™ Earth

N

TETRA TECH, INC.

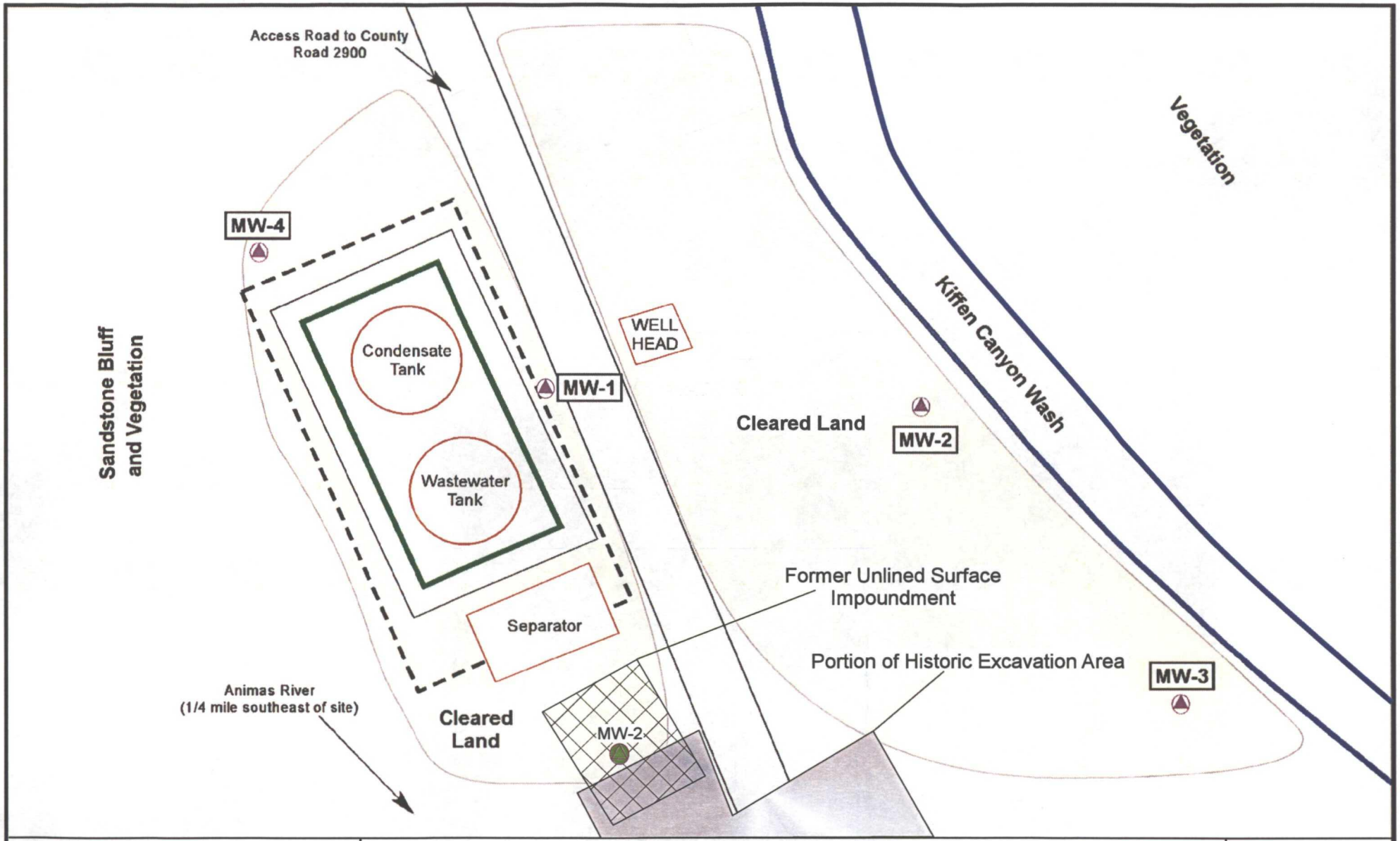


FIGURE 2:
SITE DETAIL MAP
CONOCOPHILLIPS COMPANY
RANDLEMAN #1 OIL AND GAS PRODUCTION WELL
Sec 13, T31N, R11W
Aztec, New Mexico

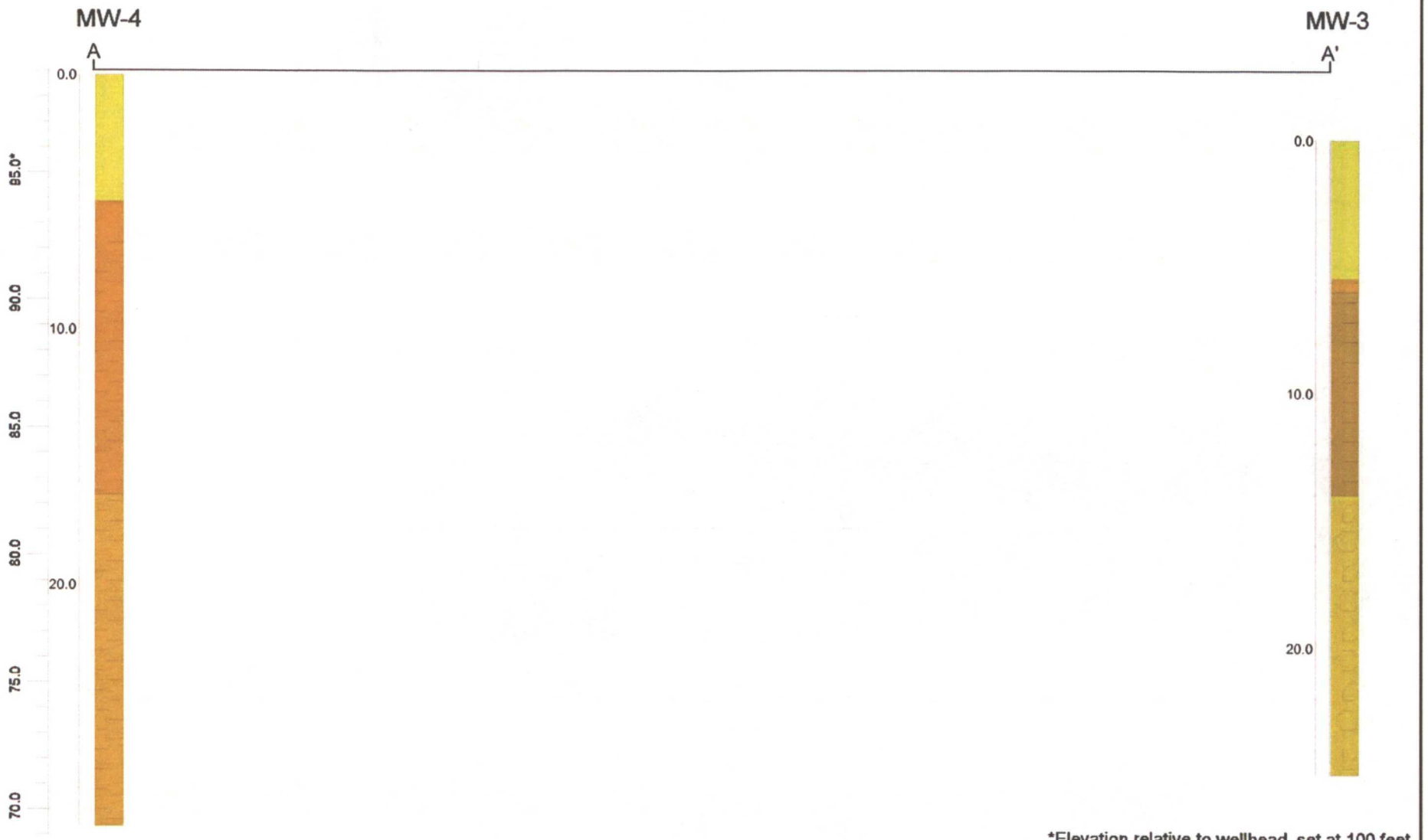


FIGURE 3:
GENERALIZED GEOLOGIC CROSS SECTION
CONOCOPHILLIPS COMPANY
Randleman #1
Sec 13, T31N, R11W
Aztec, New Mexico

LEGEND

- Medium to large grained sand
- Sandstone, moderate cementation
- Sandy silt, fine to medium grained
- Fine to medium grained sand
- Medium grained sand

TETRA TECH, INC.

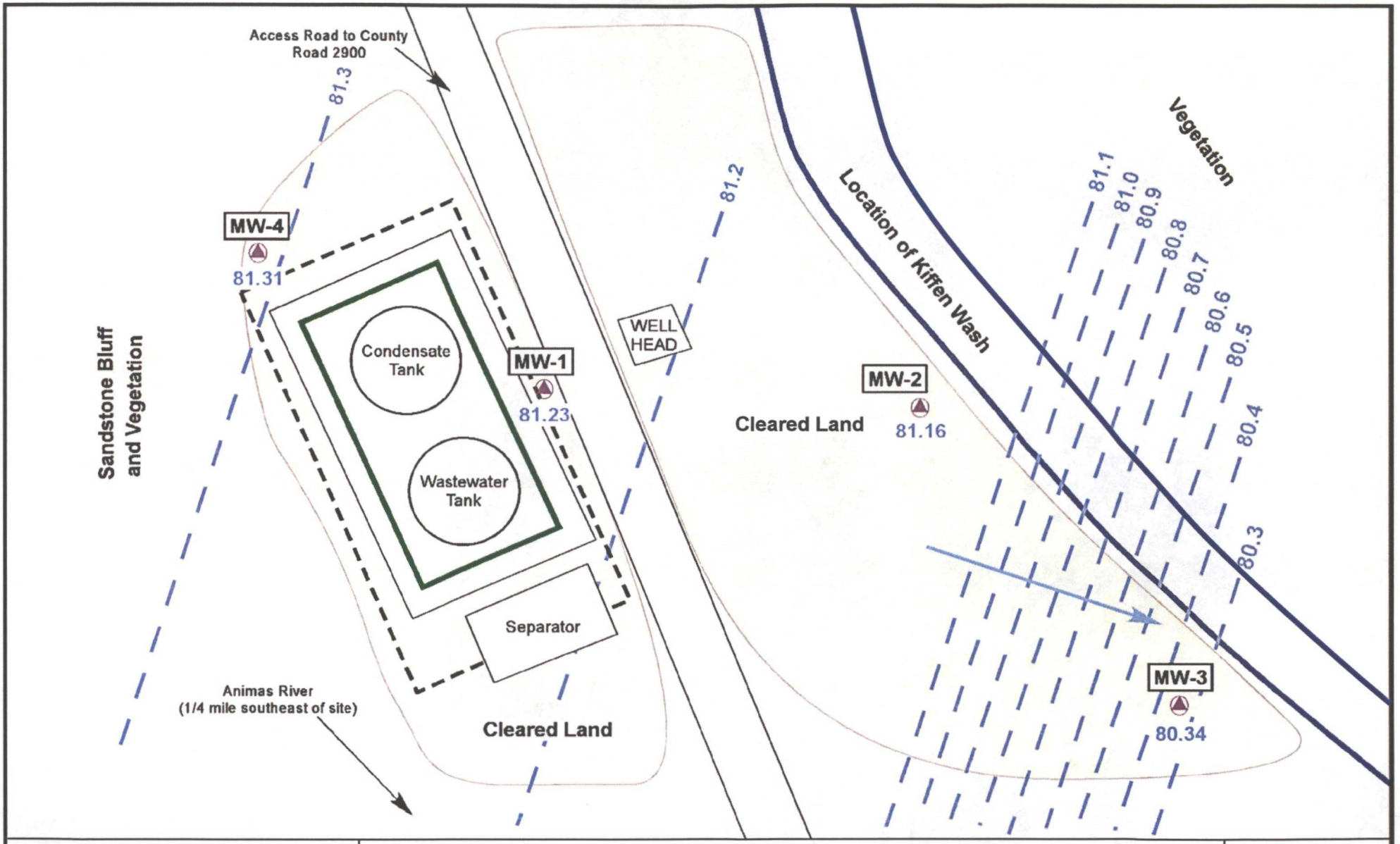


FIGURE 4:
GROUNDWATER ELEVATION MAP - JUNE 2009
CONOCOPHILLIPS COMPANY
RANDLEMAN #1 OIL AND GAS PRODUCTION WELL
Sec 13, T31N, R11W
Aztec, New Mexico

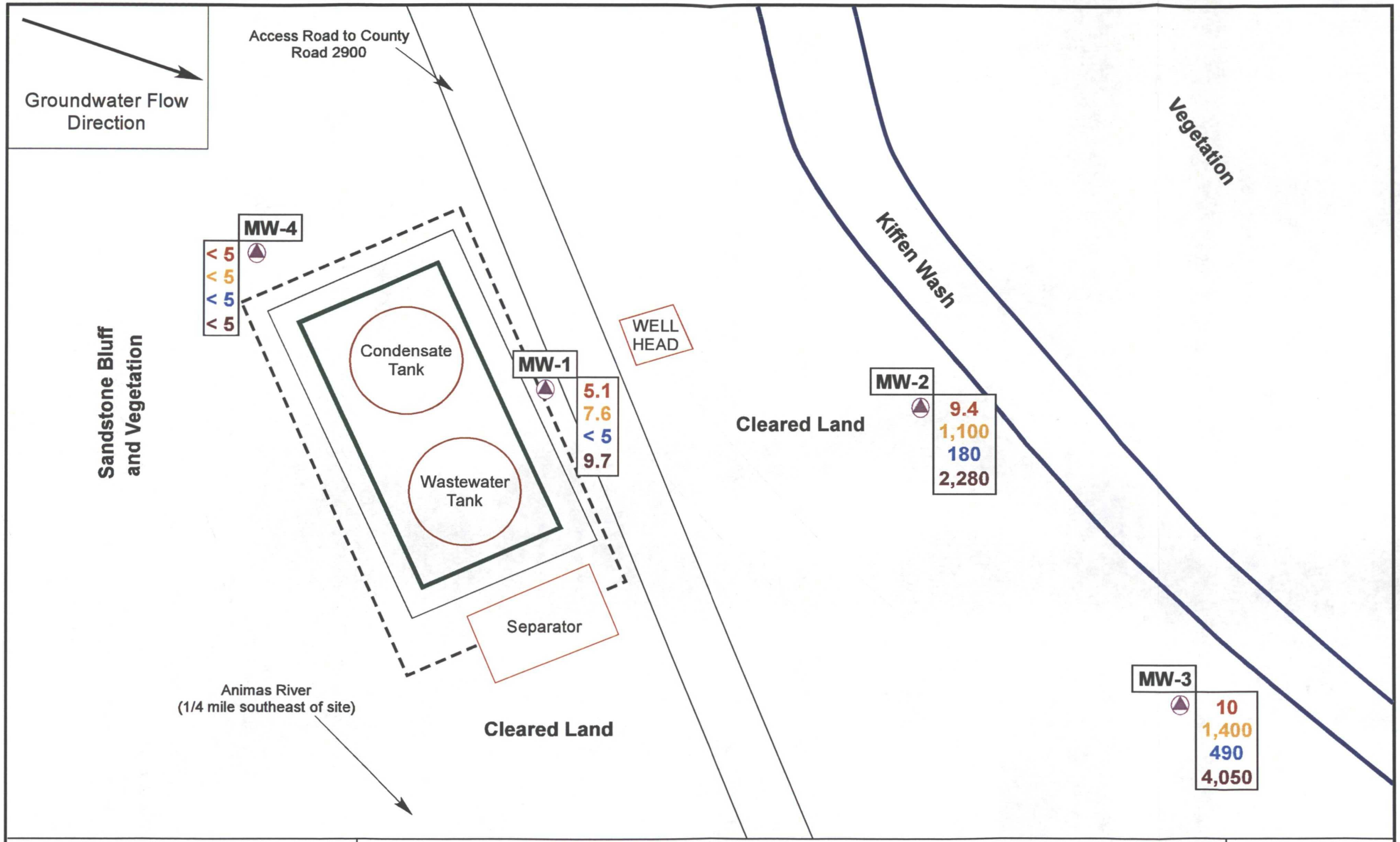


FIGURE 5:
BTEX GROUNDWATER CONCENTRATION MAP
CONOCOPHILLIPS COMPANY
RANDLEMAN #1 OIL AND GAS PRODUCTION WELL
Sec 13, T31N, R11W
Aztec, New Mexico

New Mexico Water Quality Control Commission Groundwater Quality Standards (ug/L)

< 10	Benzene
< 750	Toluene
< 750	Ethylbenzene
< 620	Xylenes, Total

EXCAVATION AREA
BERM
MONITORING WELL
EQUIPMENT

0 15 30
FEET

N

TETRA TECH, INC.

TABLES

Table 1. Randleman #1 Site History Timeline

DATE	ACTIVITY
September 20, 1951	Well spudded by Southern Union Gas Company.
August 1, 1952	Well acquired by Aztec Oil and Gas Company.
December 1976	Southland Royalty Company acquired Aztec Oil and Gas Company (exact date unknown).
November 22, 1985	Southland Royalty Company acquired by Burlington Resources.
April 1997	An unlined surface impoundment was discovered to have been impacted by petroleum hydrocarbons. On April 29, 1997, excavation of the soil beneath the impoundment began; once complete, a total of 613 cubic yards of hydrocarbon impacted soil were removed and landfarmed at the nearby Randleman #3 site.
May 14, 1997	Three groundwater monitor wells were installed at the Site. Groundwater monitoring was initiated on a quarterly basis through March 1998.
April 1998	Evaluation of groundwater monitoring results initiated another excavation of 2,220 cubic yards of hydrocarbon impacted soil "to address residual soil contamination extending to the south of the original excavated area" (Williams, 2002).
February 2002	Quarterly groundwater monitoring was continued through September 2000, and after 4 consecutive quarters of groundwater quality monitoring results below New Mexico Water Quality Control Commission (NMWQCC) groundwater quality standards for benzene, toluene, ethylbenzene, and total xylenes (BTEX), Williams Environmental Services (Williams) requested that the New Mexico Oil Conservation Division (OCD) grant closure status to the Site.
June 2002	OCD granted closure for the Site, provided that Williams plug and abandon all Site groundwater monitoring wells according to OCD standards (NMEMNRD, 2002). The historical excavation area and historical groundwater monitor wells are displayed in Figure 2.
March 31, 2006	ConocoPhillips Company acquired Burlington Resources.
February 23, 2009	Approximately 60 barrels of condensate were found to have spilled from a hole located on the back side of an on-Site condensate tank. The condensate was released into the bermed area surrounding the tank. Upon discovery, the site operator shut in the well and notified a supervisor. Form C-141 (Appendix B) was filled out by ConocoPhillips staff and notice was given to Brandon Powell of OCD via telephone. The spilled fluids remained in the berm and none of the condensate was recovered. Form C-141 stated that the spill impacted the soil on the ground surface around the tank, that the production tank was to be removed, and that the affected soils were to be excavated.

Table 1. Randleman #1 Site History Timeline

DATE	ACTIVITY
February 26, 2009	Envirotech Inc. of Farmington, NM (Envirotech) arrived on Site, performed the soil excavation, and collected soil samples for analysis. The area of release was excavated to approximately 42 feet by 51 feet by 7 feet deep. A total of 7 composite soil samples were collected from the excavation – 1 from each of the walls of the excavation and 3 samples from the bottom of the excavation. Soil samples were collected in the field and were analyzed for total petroleum hydrocarbons (TPH) using Environmental Protection Agency (EPA) Method 418.1. Additionally, organic vapors were analyzed in the field using a Photoionization Detector (PID) and heated headspace techniques. TPH results ranged from 8 parts per million (ppm) in the soil sample collected from the north wall of the excavation to 1,080 ppm in the sample collected from the south wall of the excavation. Depth of soil samples was not noted in the samples obtained from the walls of the excavation, but the samples obtained from the bottom of the excavation were obtained at 2.5 feet below ground surface (bgs) and at 3 feet bgs along the east and west sides of the excavation, respectively. The OCD recommended action level for TPH at the Site was determined to be 100 ppm. Organic vapor concentrations ranged from 6.8 ppm in the sample obtained from the north wall of the excavation to 898 ppm in the sample obtained from the south wall of the excavation. The OCD recommended action level for organic vapor (in lieu of benzene and benzene, toluene, ethylbenzene, and total xylenes (BTEX) concentrations) is 100 ppm. Due to levels of TPH and organic vapors above OCD action levels, the excavation was continued (Envirotech, 2009).
February 27, 2009	Envirotech returned to the Site to continue the excavation and sampling activities. Due to the fact that soil samples collected from the north, west, and east ends of the excavation on February 26, 2009 were found to be below OCD action levels for TPH and organic vapor, the focus of the excavation on February 27, 2009 was the south wall, the southeast wall, and the bottom of the southeast corner. At the end of the day, the excavation measured 81 feet by 43 feet by 20 feet deep (total depth is given for the deepest part of the excavation; other areas determined to be below OCD action levels went to approximately 8 feet bgs). A total of 8 soil samples were collected and analyzed in the field for TPH and organic vapors. The excavation continued until all samples were found to be below the OCD action levels of 100 ppm for both TPH and organic vapors along all four walls and the bottom of the excavation. Using this excavation approach, the southeast corner became the focus of the excavation, where after obtaining soil samples at 8, 13, and 15 feet bgs with both TPH and organic vapor results greater than 100 ppm, soil sample results for both of these constituents were not detected at a depth of 20 feet bgs, and the excavation was discontinued (Envirotech, 2009).

Table 1. Randleman #1 Site History Timeline

DATE	ACTIVITY
March 2, 2009	Groundwater was found seeping into the southeast corner of the excavation at a depth of 20 feet bgs. A Rock Springs vacuum truck was contracted by Envirotech to collect groundwater from the excavation; approximately 10 gallons of water were removed. After removal of collected groundwater, Envirotech obtained a soil sample from the southeast corner of the excavation at a depth of 20 feet bgs. TPH and organic vapor results were found to be above OCD action levels. During field analysis of the soil sample, more groundwater had seeped into the excavation. More water was then removed from the excavation, and additional excavation was performed in order to attempt to obtain a soil sample below OCD action levels. A groundwater sample was collected from the area where water continued to seep into the excavation, and was sent for laboratory analysis of volatile organic compounds by EPA Method 8260. The groundwater sample was found to contain benzene, total xylenes and total naphthalenes above New Mexico Water Quality Control Commission (NMWQCC) groundwater quality standards. Once this sample had been obtained, the excavation caved in, making further water removal via the vacuum truck impossible (Envirotech, 2009). A total of 611 cubic yards of soil were removed from the Site and were transported to an OCD-permitted facility; clean fill was obtained from the landowner to backfill the excavation. Envirotech recommended the installation of groundwater monitoring wells at the Site under OCD guidelines (Envirotech, 2009).
June 9, 2009 through June 11, 2009	Tetra Tech installs 4 groundwater monitor wells at the Site; MW-1, MW-2, MW-3 and MW-4.
June 12, 2009	Tetra Tech conducts the first groundwater monitoring event at the Site.
June 17, 2009	Depth to water measurements were taken in Site monitor wells to determine if hydrocarbons were accumulating in the water column.
June 18, 2009	Hydrocarbon-absorbent socks were placed in monitor wells MW-2 and MW-3 by Tetra Tech.

Table 2. Soil Boring Laboratory Analytical Results - ConocoPhillips Randleman #1

Constituent			Sample ID (soil samples collected on June 9th, 2009 and June 10th, 2009)				
Ions	**Method**	**Units**	**MW-2 (7-8.5 feet)**	**MW-3 (7.5 - 9 feet)**	**MW-3 (12.5-14 feet)**	**MW-4 (12.5-14 feet)**	**NMOCD**
Bromide	E300.0	mg/kg - dry	<6.31	<6.22	<5.66	<5.29	NE
Chloride	E300.0	mg/kg - dry	<6.31	<6.22	<5.66	324	NE
Fluoride	E300.0	mg/kg - dry	9.36	13.4	<5.66	<5.29	NE
Orthophospate (as P)	E300.0	mg/kg - dry	<6.31	<6.22	<5.66	<5.29	NE
Sulfate	E300.0	mg/kg - dry	351	187	2050	254	NE
Nitrate (as N)	E300.0	mg/kg - dry	<6.31	< 6.22	<5.66	< 5.29	NE
Nitrite (as N)	E300.0	mg/kg - dry	<6.31	< 6.22	<5.66	< 5.29	NE
Metals, Total	**Method**	**Units**	**MW-2 (7-8.5 feet)**	**MW-3 (7.5 - 9 feet)**	**MW-3 (12.5-14 feet)**	**MW-4 (12.5-14 feet)**	**NMOCD**
Mercury	SW7471A	mg/kg - dry	<0.0378	<0.0373	<0.0339	<0.0318	NE
Aluminum	SW6010B	mg/kg - dry	3,010	2,050	3,020	6,320	NE
Boron	SW6010B	mg/kg - dry	2.18	1.48	1.93	2.88	NE
Calcium	SW6010B	mg/kg - dry	3,250	1,350	3,940	14,200	NE
Iron	SW6010B	mg/kg - dry	5,420	3,400	4,950	11,600	NE
Magnesium	SW6010B	mg/kg - dry	943	563	835	2,360	NE
Potassium	SW6010B	mg/kg - dry	642	361	534	883	NE
Sodium	SW6010B	mg/kg - dry	117	130	262	635	NE
Strontium	SW6010B	mg/kg - dry	45.2	60.7	74	73.5	NE
Tin	SW6010B	mg/kg - dry	0.656	<0.622	0.871	0.699	NE
Antimony	SW6020A	mg/kg - dry	<0.631	<0.622	<0.566	<0.529	NE
Arsenic	SW6020A	mg/kg - dry	2.42	1.51	1.9	2.35	NE
Barium	SW6020A	mg/kg - dry	66.3	177	145	245	NE
Beryllium	SW6020A	mg/kg - dry	<0.504	<0.498	<0.452	<0.424	NE
Cadmium	SW6020A	mg/kg - dry	<0.631	<0.622	<0.566	<0.529	NE
Chromium	SW6020A	mg/kg - dry	2.68	2.06	3.93	48.9	NE
Cobalt	SW6020A	mg/kg - dry	2.24	1.63	2.48	4.49	NE
Copper	SW6020A	mg/kg - dry	5.37	2.99	5.77	11.2	NE
Lead	SW6020A	mg/kg - dry	3.97	2.51	4.26	5.94	NE
Manganese	SW6020A	mg/kg - dry	140	100	193	364	NE
Molybdenum	SW6020A	mg/kg - dry	<0.631	<0.622	<0.566	1.84	NE
Nickel	SW6020A	mg/kg - dry	2.81	2.17	3.37	6.41	NE
Selenium	SW6020A	mg/kg - dry	<0.631	<0.622	<0.566	<0.529	NE
Silver	SW6020A	mg/kg - dry	<0.631	<0.622	<0.566	<0.529	NE
Thallium	SW6020A	mg/kg - dry	<0.631	<0.622	<0.566	<0.529	NE
Vanadium	SW6020A	mg/kg - dry	6.26	3.84	6.29	15.6	NE
Zinc	SW6020A	mg/kg - dry	13.4	7.24	12.6	22.2	NE
SVOCS (detections only)	**Method**	**Units**	**MW-2 (7-8.5 feet)**	**MW-3 (7.5 - 9 feet)**	**MW-3 (12.5-14 feet)**	**MW-4 (12.5-14 feet)**	**NMOCD**
As listed	8270C	µg/kg - dry	--	--	--	--	--
VOCs (detections and BTEX only)	**Method**	**Units**	**MW-2 (7-8.5 feet)**	**MW-3 (7.5 - 9 feet)**	**MW-3 (12.5-14 feet)**	**MW-4 (12.5-14 feet)**	**NMOCD**
1,2,4-Trimethylbenzene	8260B	µg/kg - dry	<6.3	< 6.2	2900	< 5.3	NE
1,3,5-Trimethylbenzene	8260B	µg/kg - dry	<6.3	< 6.2	220	< 5.3	NE
4-Isopropyltoluene	8260B	µg/kg - dry	<6.3	< 6.2	49	< 5.3	NE
Isopropylbenzene	8260B	µg/kg - dry	<6.3	< 6.2	110	< 5.3	NE
Naphthalene	8260B	µg/kg - dry	<6.3	< 6.2	11	< 5.3	NE
n-Butylbenzene	8260B	µg/kg - dry	<6.3	< 6.2	12	< 5.3	NE
n-Propylbenzene	8260B	µg/kg - dry	<6.3	< 6.2	180	< 5.3	NE
sec-Butylbenzene	8260B	µg/kg - dry	<6.3	< 6.2	48	< 5.3	NE
tert-Butylbenzene	8260B	µg/kg - dry	<6.3	< 6.2	54	< 5.3	NE
Benzene	8260B	µg/kg - dry	<6.3	< 6.2	<5.7	<5.3	10,000
Toluene	8260B	µg/kg - dry	<6.3	< 6.2	92	<5.3	NE
Ethylbenzene	8260B	µg/kg - dry	<6.3	< 6.2	200	<5.3	NE
Total Xylenes	8260B	µg/kg - dry	<6.3	< 6.2	1,410	<5.3	NE
Total BTEX	--	µg/kg - dry	<6.3	< 6.2	1,702	<5.3	50,000
Other	**Method**	**Units**	**MW-2 (7-8.5 feet)**	**MW-3 (7.5 - 9 feet)**	**MW-3 (12.5-14 feet)**	**MW-4 (12.5-14 feet)**	**NMOCD**
Alkalinity*	E310.1	mg/kg - dry	227	NA	NA	NA	NE
Percent Moisture	D2216	%	20.7	19.6	11.6	5.55	NE
Semivolatile Hydrocarbons	**Method**	**Units**	**MW-2 (7-8.5 feet)**	**MW-3 (7.5 - 9 feet)**	**MW-3 (12.5-14 feet)**	**MW-4 (12.5-14 feet)**	**NMOCD**
Gasoline Range Organics	SW8015B	mg/kg - dry	<0.13	<0.12	2.3	<0.11	100
Diesel Range Organics	SW8015B	mg/kg - dry	<6.3	<6.2	30	<5.3	

Notes:

MW = monitor well

NMOCD = New Mexico Oil Conservation Division recommended action level

SVOCs = semi-volatile organic compounds

VOCs = volatile organic compounds

mg/kg - dry = milligrams per kilogram, analyzed after residual water removed from the soil

µg/kg - dry = micrograms per kilogram

P = phosphate

N = nitrogen

NE = not established

*SPL failed to analyze MW-3 or MW-4 soil boring soil samples for alkalinity where "NA" is noted in the table. The chain of custody reveals that Tetra Tech requested this analysis on all soil samples, however.

Table 3 - Groundwater Elevation Data Summary

Well ID	Total Depth (ft bgs)	Screen Interval (ft)	*Elevation (ft) (TOC)	Date Measured	Depth to Groundwater (ft below TOC)	Relative Groundwater Elevation
MW-1	25.5	9 - 24	95.19	6/12/2009	13.98	81.21
				6/17/2009	13.96	81.23
MW-2	23.80	8.9 - 23.8	96.79	6/12/2009	15.57	81.22
				6/17/2009	15.63	81.16
MW-3	22.00	6.5 - 21.5	96.31	6/12/2009	16.00	80.31
				6/17/2009	15.97	80.34
MW-4	29.50	11 - 26	98.83	6/12/2009	17.68	81.15
				6/17/2009	17.52	81.31

ft = Feet
TOC = Top of casing
bgs = below ground surface
* Elevation relative to wellhead, set at 100 feet.

Table 4. Groundwater Laboratory Analytical Results Summary, Baseline Parameters - ConocoPhillips Randleman #1

Constituent			Sample ID (samples collected on June 12, 2009)					
Ions	**Method**	**Units**	**MW-1**	**MW-2**	**MW-3**	**Duplicate**	**MW-4**	**NMWQCC Groundwater Quality Standard**
Bromide	E300.0	mg/L	< 0.5	<0.5	<0.5	NA	< 0.5	NE
Chloride	E300.0	mg/L	119	40.1	40.3	NA	**2,310**	250
Fluoride	E300.0	mg/L	0.518	0.621	<0.5	NA	0.652	1.6
Orthophospate (as P)	E300.0	mg/L	< 0.5	< 0.5	<0.5	NA	< 0.5	NE
Sulfate	E300.0	mg/L	**1,690**	**1,360**	**1,510**	NA	**4,190**	600
Nitrate (as N)	E300.0	mg/L	0.78	0.52	< 0.5	NA	< 0.5	10
Nitrite (as N)	E300.0	mg/L	< 0.5	< 0.5	< 0.5	NA	< 0.5	NE
Metals, Total	**Method**	**Units**	**MW-1**	**MW-2**	**MW-3**	**Duplicate**	**MW-4**	**NMWQCC Groundwater Quality Standard**
Mercury	SW7470A	mg/L	<0.0002	<0.0002	<0.0002	NA	< 0.0002	0.002
Aluminum	SW6010B	mg/L	**9.22**	2.99	1.1	NA	**13.6**	5
Boron	SW6010B	mg/L	0.135	<0.1	0.107	NA	0.523	0.75
Calcium	SW6010B	mg/L	473	528	527	NA	496	NE
Iron	SW6010B	mg/L	**6.81**	**3.7**	**1.65**	NA	**20**	1.0
Magnesium	SW6010B	mg/L	27.1	19.7	23.9	NA	32.2	NE
Potassium	SW6010B	mg/L	7.31	7.53	6	NA	19.1	NE
Sodium	SW6010B	mg/L	454	196	242	NA	2720	NE
Strontium	SW6010B	mg/L	8.51	8.54	10.5	NA	11.6	NE
Tin	SW6010B	mg/L	<0.005	<0.005	0.0061	NA	<0.005	NE
Antimony	SW6020A	mg/L	< 0.005	<0.005	<0.005	NA	< 0.005	NE
Arsenic	SW6020A	mg/L	< 0.005	0.00759	< 0.005	NA	<0.005	0.1
Barium	SW6020A	mg/L	0.0857	0.107	0.0537	NA	0.131	1.0
Beryllium	SW6020A	mg/L	< 0.004	<0.004	<0.004	NA	0.00468	NE
Cadmium	SW6020A	mg/L	< 0.005	< 0.005	< 0.005	NA	<0.005	0.01
Chromium	SW6020A	mg/L	0.00601	< 0.005	< 0.005	NA	**0.117**	0.05
Cobalt	SW6020A	mg/L	0.0157	< 0.005	< 0.005	NA	0.0312	0.05
Copper	SW6020A	mg/L	0.022	0.00699	< 0.005	NA	0.041	1.0
Lead	SW6020A	mg/L	0.0124	0.00561	< 0.005	NA	0.0418	0.05
Manganese	SW6020A	mg/L	**4.79**	**3.56**	**3**	NA	**4.92**	0.2
Molybdenum	SW6020A	mg/L	< 0.01	<0.01	<0.01	NA	0.0146	1.0
Nickel	SW6020A	mg/L	0.0185	0.0107	0.00971	NA	0.0372	0.2
Selenium	SW6020A	mg/L	< 0.005	< 0.005	< 0.005	NA	0.00558	0.05
Silver	SW6020A	mg/L	< 0.005	< 0.005	< 0.005	NA	< 0.005	0.05
Thallium	SW6020A	mg/L	< 0.005	< 0.005	< 0.005	NA	< 0.005	NE
Vanadium	SW6020A	mg/L	0.012	0.00592	< 0.005	NA	0.0269	NE
Zinc	SW6020A	mg/L	0.0322	0.0152	<0.01	NA	0.103	10
SVOCS (detections only)	**Method**	**Units**	**MW-1**	**MW-2**	**MW-3**	**Duplicate**	**MW-4**	**NMWQCC Groundwater Quality Standard**
2,4-Dimethylphenol	8270C	µg/L	<5	<5	18	NA	<5	NE
2-Methylnaphthalene	8270C	µg/L	<5	13	12	NA	<5	see
Naphthalene	8270C	µg/L	<5	14	20	NA	<5	below
Sum of 2-Methylnaphthalene & Naphthalene	8270C	µg/L	--	27	**32**	NA	--	30
Benzyl alcohol	8270C	µg/L	<5	6.8	<5		<5	NE
2-Methylphenol	8270C	µg/L	<5	<5	7.2	NA	<5	NE
3&4-Methylphenol	8270C	µg/L	<5	<5	8.3	NA	<5	NE
VOCs (detections and BTEX only)	**Method**	**Units**	**MW-1**	**MW-2**	**MW-3**	**Duplicate**	**MW-4**	**NMWQCC Groundwater Quality Standard**
1,2,4-Trimethylbenzene	8260B	µg/L	< 5	300	440	NA	< 5	NE
1,3,5-Trimethylbenzene	8260B	µg/L	< 5	96	140	NA	< 5	NE
4-Isopropyltoluene	8260B	µg/L	< 5	7.2	6.3	NA	< 5	NE
Isopropylbenzene	8260B	µg/L	< 5	24	46	NA	< 5	NE
Naphthalene	8260B	µg/L	< 5	21	**36**	NA	< 5	30
n-Butylbenzene	8260B	µg/L	< 5	5.2	< 5	NA	< 5	NE
n-Propylbenzene	8260B	µg/L	< 5	25	48	NA	< 5	NE
sec-Butylbenzene	8260B	µg/L	< 5	6.6	6.1	NA	< 5	NE
Benzene	8260B	µg/L	5.1	9.4	**10**	**10**	< 5	10
Toluene	8260B	µg/L	7.6	**1,100**	**1,400**	**1,400**	< 5	750
Ethylbenzene	8260B	µg/L	< 5	180	490	540	< 5	750
Total Xylenes	8260B	µg/L	9.7	**2,280**	**4,050**	**4,300**	< 5	620
Other	**Method**	**Units**	**MW-1**	**MW-2**	**MW-3**	**Duplicate**	**MW-4**	**NMWQCC Groundwater Quality Standard**
Alkalinity (as Calcium Carbonate)	SM2320B	mg/L	165	215	99	NA	200	NE
Diesel Range Organics	SW8015B	mg/L	< 0.1	0.76	1.2	NA	< 0.1	NE
Gasoline Range Organics	SW8015B	mg/L	0.22	11	21	NA	< 0.1	NE

Notes:
MW = monitoring well
NMWQCC = New Mexico Water Quality Control Commission
Constituents in **BOLD** are in excess of NMWQCC groundwater quality standards
SVOCs = semi-volatile organic compounds
VOCs = volatile organic compounds
mg/L = milligrams per liter
µg/L = micrograms per liter
P = phosphate
N = nitrogen
NE = not established
NA = not analyzed

Table 5. Groundwater Laboratory Analytical Results Summary, BTEX Parameters - ConocoPhillips Randleman #1

Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
MW-1	6/12/2009	5.1	7.6	< 5	9.7
MW-2	6/12/2009	9.4	**1,100**	180	**2,280**
MW-3	6/12/2009	**10**	**1,400**	490	**4,050**
MW-3 Duplicate	6/12/2009	**10**	**1,400**	540	**4,300**
MW-4	6/12/2009	<5	<5	<5	<5
NMWQCC Groundwater Quality Standards		10	750	750	620

Notes:
MW = monitoring well
NMWQCC = New Mexico Water Quality Control Commission
Constituents in **BOLD** are in excess of NMWQCC groundwater quality standards
µg/L = micrograms per liter (parts per billion)
< 5 = Below laboratory detection limit of 5 µg/L

APPENDICES

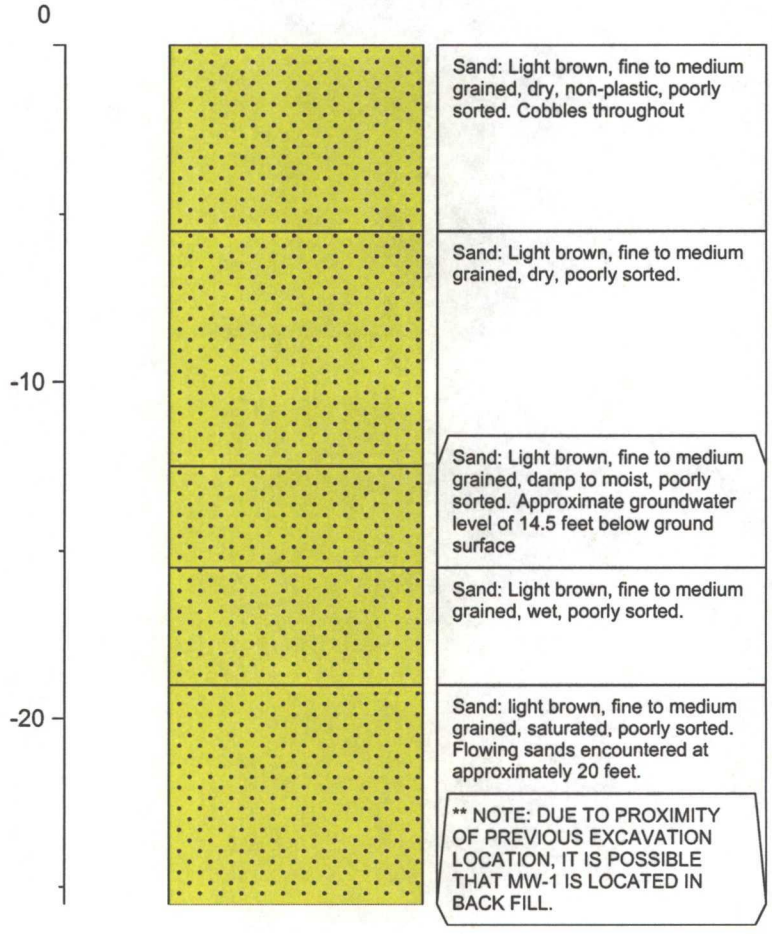
APPENDIX A

Soil Boring Logs and Well Completion Forms

Tetra Tech

Site Location: Aztec, NM
Boring ID: MW-1
Project: Randleman No. 1
Logged by: Kelly Blanchard
Boring advanced by: WDC Exploration and Wells
Total depth: 25.5 feet
Date advanced: 6/9/2009

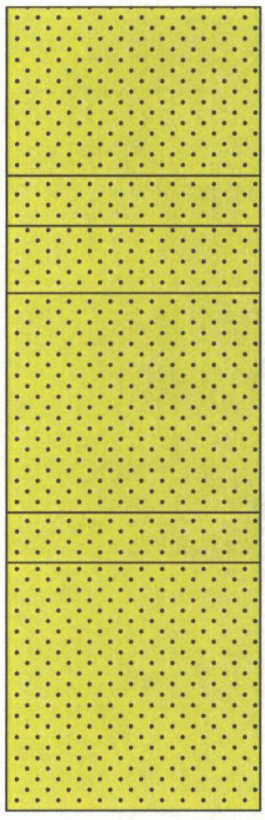
DEPTH (in feet bgs)	INTERPRETED LITHOLOGY	DESCRIPTIONS



Tetra Tech

Site Location: Aztec, NM
Project: Randleman No. 1
Boring advanced by: WDC Exploration and Wells
Date advanced: 6/10/2009

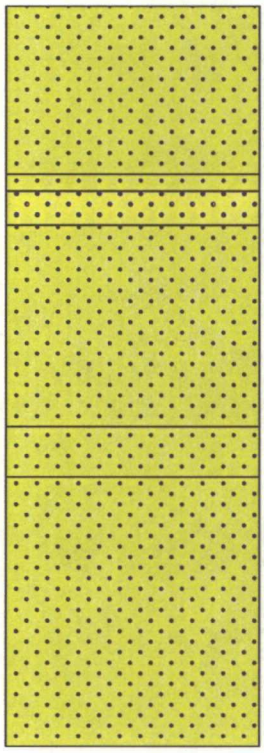
Boring ID: MW-2
Logged by: Christine Mathews
Total depth: 23.8 feet

DEPTH (in feet bgs)	INTERPRETED LITHOLOGY	DESCRIPTIONS
0		Sand: Light brown, fine to medium grained, dry, non-plastic, poorly sorted. Cobbles throughout
		Sand: Light brown, fine to medium grained, damp, poorly sorted. Small cobbles throughout
		Sand: Light brown, medium to large grained, moist, poorly sorted. Few small cobbles and some gravel
-10		Sand: Zero percent recovery from split spoon sampling. Encountered larger cobbles which caused issues with sample retreival.
		Sand: Light brown, medium to large grained, wet, poorly sorted. No cobbles, few pebbles, some gravel.
-20		Sand: light brown, fmedium to large grained, wet, poorly sorted. No cobbles, few pebbles, some gravel. Flowing sands encountered at approximately 20 feet below ground surface.

Tetra Tech

Site Location: Aztec, NM
Project: Randleman No. 1
Boring advanced by: WDC Explortion and Wells
Date advanced: 6/10/2009

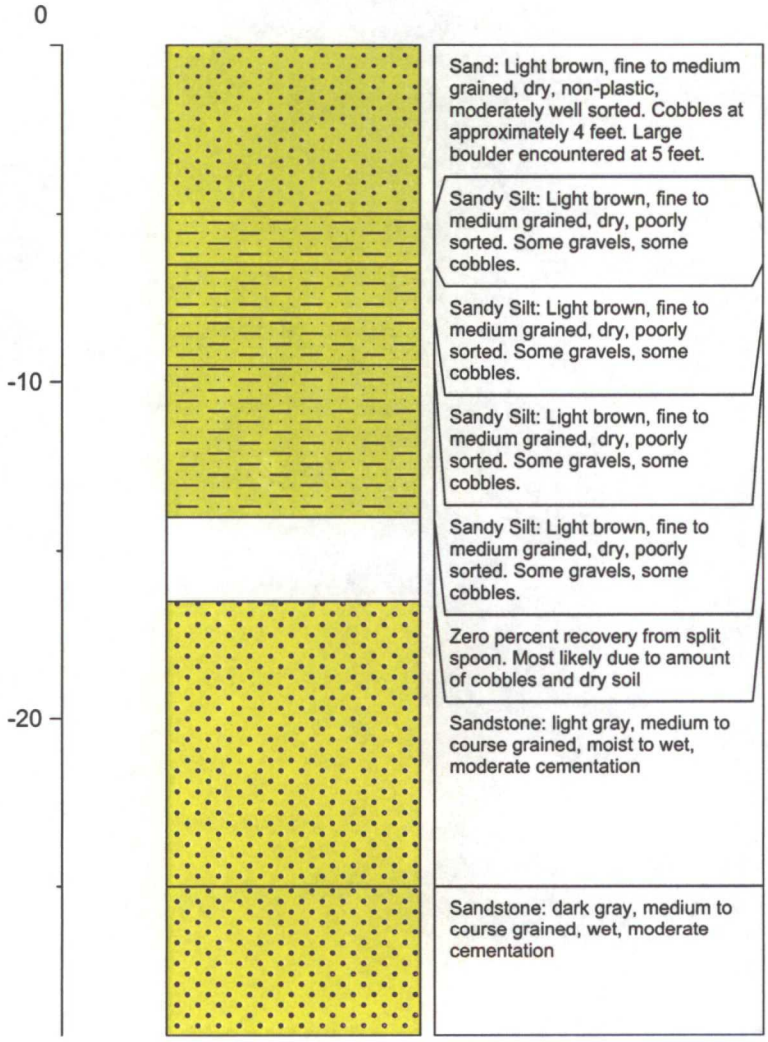
Boring ID: MW-3
Logged by: Cassandre Brown
Total depth: 22 feet

DEPTH (in feet bgs)	INTERPRETED LITHOLOGY	DESCRIPTIONS
0		Sand: Light brown, fine to medium grained, dry, non-plastic, poorly sorted. Cobbles throughout
		Sand: Light brown, fine to medium grained, damp, poorly sorted, trace cobbles.
		Sandstone: light brown, medium to large grained, damp, poorly sorted. Moderate cementation.
-10		Sand: brown, medium grained, damp, poorly sorted, trace pebbles.
		Sand: light gray, medium grained, wet, poorly sorted. Hydrocarbon odor noticed at this depth. Believed to be groundwater interface.
		Sand: Light brown, medium to large grained, wet, poorly sorted. No cobbles, few pebbles. Some gravel. Flowing sands encountered at approximately 20 feet below ground surface.
-20		

Tetra Tech

Site Location: Aztec, NM
Boring ID: MW-4
Project: Randleman No. 1
Logged by: Kelly Blanchard
Boring advanced by: WDC Exploration and Wells **Total depth:** 29.5 feet
Date advanced: 6/9/2009

DEPTH (in feet bgs)	INTERPRETED LITHOLOGY	DESCRIPTIONS



TETRA TECH, INC.

Well Completion Diagram

Well ID MW-1

Job Name: Randleman #1

Job No.: 114-690115 Date: 6/10/2009

Project Manager: Kelly Blanchard

Well I.D.: MW-1

Field Geologist: Cassie Brown

Driller: Matt Cain - WDC

Equipment: CME 85

Materials

700	Pounds	Silica Sand		Filter Pack
100	Pounds	Chips		Bentonite Seal
	Gallons			Grout
	Pounds			Concrete
	Feet of native fill/ slough			
9	Feet of	2 inch	pvc	Blank Casing
15	Feet of	2 inch	010 pvc	Slotted Screen
	Feet of			Outer Casing
	Feet of			Sump/ Silt Trap

Placement Method:

Notes: Casing and screen joint type - flush thread

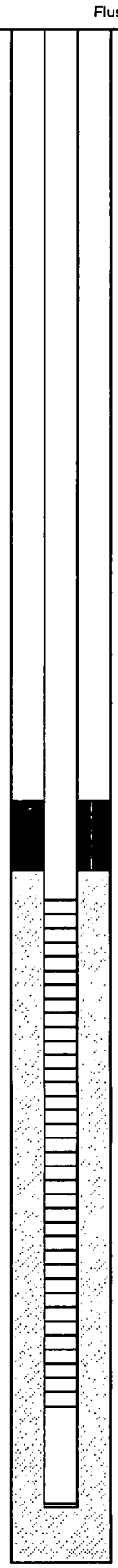
Development

Method: Hand-bail

Date: 6/11/2009

Amount Purged: 60 gallons

Notes: purge water was disposed of in the waste water tank on-site



Flush Mount

Steel Casing

Other:

2" locking cap

Casing:

0 ft. to 9 ft.

8 inch diameter Borehole:

0 ft. to 25.5 ft.

Outer Casing:

ft. to ft.

Concrete: approx. 4 sq. ft well pads

0 ft. to 1 ft.

Grout:

1 ft. to 4.75 ft.

Bentonite Seal:

4.75 ft. to 7.75 ft.

Filter Pack:

7.75 ft. to 24 ft.

Slotted Screen:

9 ft. to 24 ft.

Native fill/ slough:

ft. to ft.

8 inch diameter Borehole:

0 ft. to 25.5 ft.

Sump/ Silt Trap:

24 ft. to 25.5 ft.

Total Depth Borehole (feet): 25.5

TETRA TECH, INC.

Well Completion Diagram

Well ID MW-2

Job Name Randleman #1

Job No. 114-690115 Date 6/10/2009

Project Manager Kelly Blanchard

Well I.D. MW-2

Field Geologist Cassie Brown

Driller Matt Cain - WDC

Equipment CME 85

Materials

450	Pounds	Silica Sand	Filter Pack
150	Pounds	Chips	Bentonite Seal
	Gallons		Grout
	Pounds		Concrete
	Feet of native fill/ slough		
11.5	Feet of	2 inch pvc	Blank Casing
15	Feet of	2 inch 010 pvc	Slotted Screen
	Feet of		Outer Casing
	Feet of		Sump/ Silt Trap

Placement Method

Notes Casing and screen joint type - flush thread

Development

Method Hand Bailer

Date 6/10/2009

Amount Purged 70 gallons

Notes re-charge is slower in this well. Pump would draw well down quickly.

Used a bailer to purge. Disposed of H2O in waste water tank on site.

Stickup (feet): approx. 3 ft.

Steel Casing

Other:

2" locking cap

Casing:

0 ft. to 8.9 ft.

8 inch diameter Borehole:

0 ft. to 23.8 ft.

Outer Casing:

ft. to ft.

Concrete: approx. 4 sq. ft well pads

0 ft. to 1 ft.

Grout: (bentonite used)

ft. to ft.

Bentonite Seal:

1 ft. to 5 ft.

Filter Pack:

5 ft. to 23.8 ft.

Slotted Screen:

8.9 ft. to 23.8 ft.

Native fill/ slough:

ft. to ft.

8 inch diameter Borehole:

0 ft. to 23.8 ft.

Sump/ Silt Trap:

ft. to ft.

Total Depth Borehole (feet): 23.8

TETRA TECH, INC.

Well Completion Diagram

Well ID MW-3

Job Name Randleman #1

Job No. 114-690115 Date 6/10/2009

Project Manager Kelly Blanchard

Well I.D. MW-3

Field Geologist Cassie Brown

Driller Matt Cain - WDC

Equipment CME 85

Materials

600 Pounds Silica Sand Filter Pack

50 Pounds Chips Bentonite Seal

____ Gallons ____ Grout

____ Pounds ____ Concrete

____ Feet of native fill/ slough

6.5 Feet of 2 inch pvc Blank Casing

15 Feet of 2 inch 010 pvc Slotted Screen

____ Feet of ____ Outer Casing

____ Feet of ____ Sump/ Silt Trap

Placement Method ____

Notes Casing and screen joint type - flush thread

Development

Method Submersible Pump / Bailer

Date 6/10/2009

Amount Purged 35 gallons

Notes re-charge is slower in this well. Pump would draw well down quickly.

Used a bailer to purge. Disposed of H2O in waste tank on site.

Stickup (feet): approx. 3 ft.

Steel Casing

Other:

2" locking cap

Casing:

0 ft. to 6.5 ft.

8 inch diameter Borehole:

0 ft. to 22 ft.

Outer Casing:

____ ft. to ____ ft.

Concrete: approx. 4 sq. ft well pads

0 ft. to 1 ft.

Grout: (bentonite used)

____ ft. to ____ ft.

Bentonite Seal:

1 ft. to 4.5 ft.

Filter Pack:

4.5 ft. to 21.5 ft.

Slotted Screen:

6.5 ft. to 21.5 ft.

Native fill/ slough:

____ ft. to ____ ft.

8 inch diameter Borehole:

0 ft. to 21.5 ft.

Sump/ Silt Trap:

21.5 ft. to 22 ft.

Total Depth Borehole (feet): 22

TETRA TECH, INC.

Well Completion Diagram

Well ID MW-4

Job Name Randleman #1

Job No. 114-690115 Date 6/9/2009

Project Manager Kelly Blanchard

Well I.D. MW-4

Field Geologist Cassie Brown, Kelly Blanchard, Christine Mathews

Driller Matt Cain - WDC

Equipment CME 85

Materials

1000 Pounds Silica Sand Filter Pack

100 Pounds Chips Bentonite Seal

____ Gallons ____ Grout

____ Pounds ____ Concrete

____ Feet of native fill/ slough

10 Feet of 2 inch pvc Blank Casing

15 Feet of 2 inch 010 pvc Slotted Screen

____ Feet of ____ Outer Casing

4 Feet of Colorado Silica Sump/ Silt Trap

Placement Method ____

Notes Casing and screen joint type - flush thread

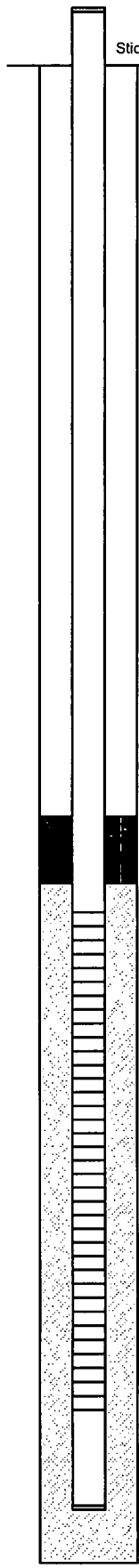
Development

Method Submersible Pump

Date 6/10/2009

Amount Purged 45 gallons

Notes purge water was disposed of in the on-site waste water tank



Stickup (feet): approx. 3 ft.

Steel Casing

Other:

2" locking cap

Casing:

0 ft. to 11 ft.

8 inch diameter Borehole:

0 ft. to 29.5 ft.

Outer Casing:

____ ft. to ____ ft.

Concrete: approx. 4 sq. ft well pads

0 ft. to 1 ft.

Grout:

1 ft. to 6 ft.

Bentonite Seal:

6 ft. to 9 ft.

Filter Pack:

9 ft. to 26 ft.

Slotted Screen:

11 ft. to 26 ft.

Native fill/ slough:

____ ft. to ____ ft.

8 inch diameter Borehole:

0 ft. to 29.5 ft.

Sump/ Silt Trap:

26 ft. to 29.5 ft.

Total Depth Borehole (feet): 29.5

APPENDIX B

Soil Boring Laboratory Analysis Report

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

Conoco Phillips

Certificate of Analysis Number:

09060712

Report To:		Project Name:	Randleman #1
Tetra Tech, Inc.		Site:	San Juan County, NM
Kelly Blanchard		Site Address:	
6121 Indian School Road, N.E.			
Suite 200		PO Number:	
Albuquerque		State:	New Mexico
NM		State Cert. No.:	
87110-		Date Reported:	6/29/2009
ph: (505) 237-8440	fax:		

This Report Contains A Total Of 66 Pages

Excluding This Page, Chain Of Custody

And

Any Attachments

6/29/2009

Date

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

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

Case Narrative for:

Conoco Phillips

Certificate of Analysis Number:

09060712

Report To:		Project Name:	Randleman #1
Tetra Tech, Inc.		Site:	San Juan County, NM
Kelly Blanchard		Site Address:	
6121 Indian School Road, N.E.			
Suite 200		PO Number:	
Albuquerque		State:	New Mexico
NM		State Cert. No.:	
87110-		Date Reported:	6/29/2009
ph: (505) 237-8440	fax:		

I. SAMPLE RECEIPT:

All samples were received intact. The internal ice chest temperatures were measured on receipt and are recorded on the attached Sample Receipt Checklist.

II: ANALYSES AND EXCEPTIONS:

Semivolatile Hydrocarbons (8015):

Sample "(7-8.5) MW-2" (SPL ID: 09060712-01) has light hydrocarbons from C9-C44 which are below the reporting limit.

Sample "MW-4 (12.5-14)" (SPL ID: 09060712-02) has light hydrocarbons from C9-C18 which do not resemble a specific pattern, and heavy hydrocarbons from C18-C44. Per client's request sample was reported as Oil range organics (C19-C36), however, sample pattern resembles crude oil pattern.

Sample has heavy coelution of different hydrcarbon components. Per client's request hydrocarbons were reported as such diesel range organics (C9-C18) and Oil range organics (C19-C36), however, sample pattern resembles crude oil pattern.

Sample has light hydrocarbons from C9-C44 which are below the reporting limit and does not resemble any specific hydrocarbon pattern

Total Metals (6010):

Sample ID "MW-3 (12.5-14)" (SPL ID:09060712-03) was randomly selected for use in SPL's quality control program for the Total Metals analysis by SW846 Method 6010B (Batch ID:91142). The Matrix Spike (MS) recovery was outside of the advisable quality control limits due to possible matrix interference for the following analyte:

Potassium

A Post Digestion Spike (PDS) and Post Digestion Spike Duplicate (PDSD) was performed and all recoveries were within quality control limits. A Laboratory Control Sample (LCS) was analyzed as a quality control check for the analytical batch and all recoveries were within acceptable limits.

Sample ID "MW-3 (12.5-14)" (SPL ID:09060712-03) was randomly selected for use in SPL's quality control program for the Total Metals analysis by SW846 Method 6020A (Batch ID:91142-I). The Matrix Spike (MS) and Matrix Spike Duplicate (MSD) recoveries were outside of the advisable quality control limits due to possible matrix interference for the following analytes:

Antimony
Zinc

A Post Digestion Spike (PDS) and Post Digestion Spike Duplicate (PDSD) was performed and all recoveries were within quality control limits. A Laboratory Control Sample (LCS) was analyzed as a quality control check for the analytical batch and all recoveries were within acceptable limits.

Sample ID "MW-3 (12.5-14)" (SPL ID:09060712-03) was randomly selected for use in SPL's quality control program for the Total Metals analysis by SW846 Method 6020A (Batch ID:91242). The Matrix Spike (MS) and Matrix Spike Duplicate (MSD) recoveries were outside of the advisable

Erica Cardenas — Date
Project Manager

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

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

Case Narrative for:

Conoco Phillips

Certificate of Analysis Number:

09060712

quality control limits due to possible matrix interference for the following analytes:

Sodium

A Post Digestion Spike (PDS) and Post Digestion Spike Duplicate (PDSD) was performed and all recoveries were within quality control limits. A Laboratory Control Sample (LCS) was analyzed as a quality control check for the analytical batch and all recoveries were within acceptable limits.

Ion Chromatography (300):

Sample ID "MW-3 (12.5-14)" (SPL ID:09060712-03) was randomly selected for use in SPL's quality control program for the Ion Chromatography analysis by EPA Method 300.0 MOD (Batch ID:R276034). The Matrix Spike (MS) and Matrix Spike Duplicate (MSD) recoveries were outside of the advisable quality control limits due to possible matrix interference for the following analytes:

Ortho-phosphate (As P)
Sulfate

A Laboratory Control Sample (LCS) was analyzed as a quality control check for the analytical batch and all recoveries were within acceptable limits.

III. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report (" mg\kg-dry " or " ug\kg-dry ").

Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

Some of the percent recoveries and RPD's on the QC report for the MS/MSD may be different than the calculated recoveries and RPD's using the sample result and the MS/MSD results that appear on the report because, the actual raw result is used to perform the calculations for percent recovery and RPD.

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or by his designee, as verified by the following signature.

6/29/2009

Erica Cardenas
Project Manager

Date

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

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

Conoco Phillips

Certificate of Analysis Number:

09060712

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

Fax To:

Project Name: Randleman #1
Site: San Juan County, NM
Site Address:
PO Number:
State: New Mexico
State Cert. No.:
Date Reported: 6/29/2009

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
(7-8.5) MW-2	09060712-01	Soil	6/10/2009 10:50:00 AM	6/12/2009 9:00:00 AM	327652	☐
MW-4 (12.5-14)	09060712-02	Soil	6/9/2009 3:10:00 PM	6/12/2009 9:00:00 AM	327652	☐
MW-3 (12.5-14)	09060712-03	Soil	6/10/2009 1:45:00 PM	6/12/2009 9:00:00 AM	327652	☐
MW-3 (7.5-9)	09060712-04	Soil	6/10/2009 1:32:00 PM	6/12/2009 9:00:00 AM	327652	☐
TRIP BLANK	09060712-05	Water	6/10/2009	6/12/2009 9:00:00 AM	327652	☑

Erica Cardenas

6/29/2009

Erica Cardenas
Project Manager

Date

Kesavalu M. Bagawandoss Ph.D., J.D.
Laboratory Director

Ted Yen
Quality Assurance Officer

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

Client Sample ID: (7-8.5) MW-2 **Collected:** 06/10/2009 10:50 **SPL Sample ID:** 09060712-01

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
ALKALINITY (AS CACO3), TOTAL			**MCL**	**E310.1**	**Units: mg/Kg-dry**		
Alkalinity, Total (As CaCO3)	227		25.2	1	06/15/09 12:30	PAC	5067063
GASOLINE RANGE ORGANICS			**MCL**	**SW8015B**	**Units: mg/kg-dry**		
Gasoline Range Organics	ND		0.13	1	06/19/09 11:26	WLV	5075620
Surr: 1,4-Difluorobenzene	101	%	63-142	1	06/19/09 11:26	WLV	5075620
Surr: 4-Bromofluorobenzene	101	%	50-159	1	06/19/09 11:26	WLV	5075620

Prep Method	Prep Date	Prep Initials	Prep Factor
SW5030B	06/19/2009 9:19	XML	1.00

ION CHROMATOGRAPHY			**MCL**	**E300.0 MOD**	**Units: mg/kg-dry**		
Bromide	ND		6.31	1	06/17/09 19:07	BDG	5073746
Chloride	ND		6.31	1	06/17/09 19:07	BDG	5073746
Fluoride	9.36		6.31	1	06/17/09 19:07	BDG	5073746
Ortho-phosphate (As P)	ND		6.31	1	06/19/09 19:57	BDG	5076746
Sulfate	351		12.6	2	06/19/09 20:16	BDG	5076747
Nitrogen,Nitrate (As N)	ND		6.31	1	06/17/09 19:07	BDG	5073686
Nitrogen,Nitrite (As N)	ND		6.31	1	06/17/09 19:07	BDG	5073686
MERCURY, TOTAL			**MCL**	**SW7471A**	**Units: mg/kg-dry**		
Mercury	ND		0.0378	1	06/17/09 14:57	F_S	5071955

Prep Method	Prep Date	Prep Initials	Prep Factor
SW7471A	06/17/2009 12:00	F_S	1.00

METALS BY METHOD 6010B, TOTAL			**MCL**	**SW6010B**	**Units: mg/kg-dry**		
Aluminum	3010		12.6	1	06/18/09 14:17	EG	5073488
Boron	2.18		1.26	1	06/18/09 14:17	EG	5073488
Calcium	3250		12.6	1	06/18/09 14:17	EG	5073488
Iron	5420		1.26	1	06/18/09 14:17	EG	5073488
Magnesium	943		12.6	1	06/18/09 14:17	EG	5073488
Potassium	642		63.1	1	06/18/09 14:17	EG	5073488
Sodium	117		12.6	1	06/19/09 10:49	EG	5075345
Strontium	45.2		0.378	1	06/18/09 14:17	EG	5073488
Tin	0.656		0.631	1	06/18/09 14:17	EG	5073488

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3050B	06/18/2009 17:00	AB1	1.00
SW3050B	06/16/2009 10:30	AB1	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: (7-8.5) MW-2 **Collected:** 06/10/2009 10:50 **SPL Sample ID:** 09060712-01

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
METALS BY METHOD 6020A, TOTAL			**MCL**	**SW6020A**	**Units: mg/kg-dry**		
Antimony	ND		0.631	1	06/17/09 22:55	AL_H	5072406
Arsenic	2.42		0.631	1	06/17/09 22:55	AL_H	5072406
Barium	66.3		0.631	1	06/18/09 13:09	AL_H	5073066
Beryllium	ND		0.504	1	06/18/09 13:09	AL_H	5073066
Cadmium	ND		0.631	1	06/17/09 22:55	AL_H	5072406
Chromium	2.68		0.631	1	06/17/09 22:55	AL_H	5072406
Cobalt	2.24		0.631	1	06/17/09 22:55	AL_H	5072406
Copper	5.37		0.631	1	06/17/09 22:55	AL_H	5072406
Lead	3.97		0.631	1	06/17/09 22:55	AL_H	5072406
Manganese	140		0.631	1	06/18/09 13:09	AL_H	5073066
Molybdenum	ND		0.631	1	06/17/09 22:55	AL_H	5072406
Nickel	2.81		0.631	1	06/17/09 22:55	AL_H	5072406
Selenium	ND		0.631	1	06/17/09 22:55	AL_H	5072406
Silver	ND		0.631	1	06/17/09 22:55	AL_H	5072406
Thallium	ND		0.631	1	06/17/09 22:55	AL_H	5072406
Vanadium	6.26		0.631	1	06/17/09 22:55	AL_H	5072406
Zinc	13.4		1.26	1	06/17/09 22:55	AL_H	5072406

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3050B	06/16/2009 10:30	AB1	1.00

PERCENT MOISTURE			MCL	D2216	Units: wt%		
Percent Moisture	20.7		0	1	06/15/09 17:02	EB1	5068030

SEMIVOLATILE HYDROCARBONS			MCL	SW8015B	Units: mg/kg-dry		
Diesel Range Organics	ND		6.3	1	06/19/09 1:18	NW	5085860
Fuel Oil Range Organics	ND		13	1	06/19/09 1:18	NW	5085860
Hydraulic Fluid Range Organics	ND		13	1	06/19/09 1:18	NW	5085860
Kerosene Range Organics	ND		13	1	06/19/09 1:18	NW	5085860
Mineral Spirits Range Organics	ND		13	1	06/19/09 1:18	NW	5085860
Oil Range Organics	ND		13	1	06/19/09 1:18	NW	5085860
Surr: n-Pentacosane	68.3	%	20-154	1	06/19/09 1:18	NW	5085860

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3550B	06/18/2009 14:12	QMT	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: (7-8.5) MW-2 **Collected:** 06/10/2009 10:50 **SPL Sample ID:** 09060712-01

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
SEMIVOLATILE ORGANICS BY METHOD 8270C			**MCL**	**SW8270C**	**Units: ug/kg-dry**		
1,2,4-Trichlorobenzene	ND		420	1	06/18/09 19:57	GY	5074321
1,2-Dichlorobenzene	ND		420	1	06/18/09 19:57	GY	5074321
1,2-Diphenylhydrazine	ND		420	1	06/18/09 19:57	GY	5074321
1,3-Dichlorobenzene	ND		420	1	06/18/09 19:57	GY	5074321
1,4-Dichlorobenzene	ND		420	1	06/18/09 19:57	GY	5074321
2,4,5-Trichlorophenol	ND		1000	1	06/18/09 19:57	GY	5074321
2,4,6-Trichlorophenol	ND		420	1	06/18/09 19:57	GY	5074321
2,4-Dichlorophenol	ND		420	1	06/18/09 19:57	GY	5074321
2,4-Dimethylphenol	ND		420	1	06/18/09 19:57	GY	5074321
2,4-Dinitrophenol	ND		1000	1	06/18/09 19:57	GY	5074321
2,4-Dinitrotoluene	ND		1000	1	06/18/09 19:57	GY	5074321
2,6-Dinitrotoluene	ND		420	1	06/18/09 19:57	GY	5074321
2-Chloronaphthalene	ND		420	1	06/18/09 19:57	GY	5074321
2-Chlorophenol	ND		420	1	06/18/09 19:57	GY	5074321
2-Methylnaphthalene	ND		420	1	06/18/09 19:57	GY	5074321
2-Nitroaniline	ND		1000	1	06/18/09 19:57	GY	5074321
2-Nitrophenol	ND		420	1	06/18/09 19:57	GY	5074321
3,3'-Dichlorobenzidine	ND		420	1	06/18/09 19:57	GY	5074321
3-Nitroaniline	ND		1000	1	06/18/09 19:57	GY	5074321
4,6-Dinitro-2-methylphenol	ND		1000	1	06/18/09 19:57	GY	5074321
4-Bromophenyl phenyl ether	ND		420	1	06/18/09 19:57	GY	5074321
4-Chloro-3-methylphenol	ND		420	1	06/18/09 19:57	GY	5074321
4-Chloroaniline	ND		420	1	06/18/09 19:57	GY	5074321
4-Chlorophenyl phenyl ether	ND		420	1	06/18/09 19:57	GY	5074321
4-Nitroaniline	ND		1000	1	06/18/09 19:57	GY	5074321
4-Nitrophenol	ND		1000	1	06/18/09 19:57	GY	5074321
Acenaphthene	ND		420	1	06/18/09 19:57	GY	5074321
Acenaphthylene	ND		420	1	06/18/09 19:57	GY	5074321
Aniline	ND		420	1	06/18/09 19:57	GY	5074321
Anthracene	ND		420	1	06/18/09 19:57	GY	5074321
Benz(a)anthracene	ND		420	1	06/18/09 19:57	GY	5074321
Benzo(a)pyrene	ND		420	1	06/18/09 19:57	GY	5074321
Benzo(b)fluoranthene	ND		420	1	06/18/09 19:57	GY	5074321
Benzo(g,h,i)perylene	ND		420	1	06/18/09 19:57	GY	5074321
Benzo(k)fluoranthene	ND		420	1	06/18/09 19:57	GY	5074321
Benzoic acid	ND		2000	1	06/18/09 19:57	GY	5074321
Benzyl alcohol	ND		420	1	06/18/09 19:57	GY	5074321
Bis(2-chloroethoxy)methane	ND		420	1	06/18/09 19:57	GY	5074321
Bis(2-chloroethyl)ether	ND		420	1	06/18/09 19:57	GY	5074321

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: (7-8.5) MW-2 **Collected:** 06/10/2009 10:50 **SPL Sample ID:** 09060712-01

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
Bis(2-chloroisopropyl)ether	ND		420	1	06/18/09 19:57	GY	5074321
Bis(2-ethylhexyl)phthalate	ND		420	1	06/18/09 19:57	GY	5074321
Butyl benzyl phthalate	ND		420	1	06/18/09 19:57	GY	5074321
Carbazole	ND		420	1	06/18/09 19:57	GY	5074321
Chrysene	ND		420	1	06/18/09 19:57	GY	5074321
Dibenz(a,h)anthracene	ND		420	1	06/18/09 19:57	GY	5074321
Dibenzofuran	ND		420	1	06/18/09 19:57	GY	5074321
Diethyl phthalate	ND		420	1	06/18/09 19:57	GY	5074321
Dimethyl phthalate	ND		420	1	06/18/09 19:57	GY	5074321
Di-n-butyl phthalate	ND		420	1	06/18/09 19:57	GY	5074321
Di-n-octyl phthalate	ND		420	1	06/18/09 19:57	GY	5074321
Fluoranthene	ND		420	1	06/18/09 19:57	GY	5074321
Fluorene	ND		420	1	06/18/09 19:57	GY	5074321
Hexachlorobenzene	ND		420	1	06/18/09 19:57	GY	5074321
Hexachlorobutadiene	ND		420	1	06/18/09 19:57	GY	5074321
Hexachlorocyclopentadiene	ND		420	1	06/18/09 19:57	GY	5074321
Hexachloroethane	ND		420	1	06/18/09 19:57	GY	5074321
Indeno(1,2,3-cd)pyrene	ND		420	1	06/18/09 19:57	GY	5074321
Isophorone	ND		420	1	06/18/09 19:57	GY	5074321
Naphthalene	ND		420	1	06/18/09 19:57	GY	5074321
Nitrobenzene	ND		420	1	06/18/09 19:57	GY	5074321
N-Nitrosodi-n-propylamine	ND		420	1	06/18/09 19:57	GY	5074321
N-Nitrosodiphenylamine	ND		420	1	06/18/09 19:57	GY	5074321
Pentachlorophenol	ND		1000	1	06/18/09 19:57	GY	5074321
Phenanthrene	ND		420	1	06/18/09 19:57	GY	5074321
Phenol	ND		420	1	06/18/09 19:57	GY	5074321
Pyrene	ND		420	1	06/18/09 19:57	GY	5074321
Pyridine	ND		420	1	06/18/09 19:57	GY	5074321
2-Methylphenol	ND		420	1	06/18/09 19:57	GY	5074321
3 & 4-Methylphenol	ND		420	1	06/18/09 19:57	GY	5074321
Surr: 2,4,6-Tribromophenol	92.0		% 19-135	1	06/18/09 19:57	GY	5074321
Surr: 2-Fluorobiphenyl	70.6		% 15-140	1	06/18/09 19:57	GY	5074321
Surr: 2-Fluorophenol	64.0		% 15-122	1	06/18/09 19:57	GY	5074321
Surr: Nitrobenzene-d5	59.4		% 10-134	1	06/18/09 19:57	GY	5074321
Surr: Phenol-d5	62.4		% 10-123	1	06/18/09 19:57	GY	5074321
Surr: Terphenyl-d14	69.4		% 18-166	1	06/18/09 19:57	GY	5074321

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3550C	06/15/2009 10:31	FAK	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: (7-8.5) MW-2 **Collected:** 06/10/2009 10:50 **SPL Sample ID:** 09060712-01

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
TOTAL PETROLEUM HYDROCARBONS				**MCL**	**E418.1**	**Units: mg/kg-dry**	
Petroleum Hydrocarbons,TR	ND		13	1	06/15/09 15:24	LLL	5067477

Prep Method	Prep Date	Prep Initials	Prep Factor
	06/15/2009 11:10		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: (7-8.5) MW-2 **Collected:** 06/10/2009 10:50 **SPL Sample ID:** 09060712-01

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B				**MCL**	**SW8260B**	**Units: ug/kg-dry**	
1,1,1,2-Tetrachloroethane	ND		6.3	1	06/15/09 16:42	E_G	5068517
1,1,1-Trichloroethane	ND		6.3	1	06/15/09 16:42	E_G	5068517
1,1,2,2-Tetrachloroethane	ND		6.3	1	06/15/09 16:42	E_G	5068517
1,1,2-Trichloroethane	ND		6.3	1	06/15/09 16:42	E_G	5068517
1,1-Dichloroethane	ND		6.3	1	06/15/09 16:42	E_G	5068517
1,1-Dichloroethene	ND		6.3	1	06/15/09 16:42	E_G	5068517
1,1-Dichloropropene	ND		6.3	1	06/15/09 16:42	E_G	5068517
1,2,3-Trichlorobenzene	ND		6.3	1	06/15/09 16:42	E_G	5068517
1,2,3-Trichloropropane	ND		6.3	1	06/15/09 16:42	E_G	5068517
1,2,4-Trichlorobenzene	ND		6.3	1	06/15/09 16:42	E_G	5068517
1,2,4-Trimethylbenzene	ND		6.3	1	06/15/09 16:42	E_G	5068517
1,2-Dibromo-3-chloropropane	ND		6.3	1	06/15/09 16:42	E_G	5068517
1,2-Dibromoethane	ND		6.3	1	06/15/09 16:42	E_G	5068517
1,2-Dichlorobenzene	ND		6.3	1	06/15/09 16:42	E_G	5068517
1,2-Dichloroethane	ND		6.3	1	06/15/09 16:42	E_G	5068517
1,2-Dichloropropane	ND		6.3	1	06/15/09 16:42	E_G	5068517
1,3,5-Trimethylbenzene	ND		6.3	1	06/15/09 16:42	E_G	5068517
1,3-Dichlorobenzene	ND		6.3	1	06/15/09 16:42	E_G	5068517
1,3-Dichloropropane	ND		6.3	1	06/15/09 16:42	E_G	5068517
1,4-Dichlorobenzene	ND		6.3	1	06/15/09 16:42	E_G	5068517
2,2-Dichloropropane	ND		6.3	1	06/15/09 16:42	E_G	5068517
2-Butanone	ND		25	1	06/15/09 16:42	E_G	5068517
2-Chloroethyl vinyl ether	ND		13	1	06/15/09 16:42	E_G	5068517
2-Chlorotoluene	ND		6.3	1	06/15/09 16:42	E_G	5068517
2-Hexanone	ND		13	1	06/15/09 16:42	E_G	5068517
4-Chlorotoluene	ND		6.3	1	06/15/09 16:42	E_G	5068517
4-Isopropyltoluene	ND		6.3	1	06/15/09 16:42	E_G	5068517
4-Methyl-2-pentanone	ND		13	1	06/15/09 16:42	E_G	5068517
Acetone	ND		130	1	06/15/09 16:42	E_G	5068517
Acrylonitrile	ND		63	1	06/15/09 16:42	E_G	5068517
Benzene	ND		6.3	1	06/15/09 16:42	E_G	5068517
Bromobenzene	ND		6.3	1	06/15/09 16:42	E_G	5068517
Bromochloromethane	ND		6.3	1	06/15/09 16:42	E_G	5068517
Bromodichloromethane	ND		6.3	1	06/15/09 16:42	E_G	5068517
Bromoform	ND		6.3	1	06/15/09 16:42	E_G	5068517
Bromomethane	ND		13	1	06/15/09 16:42	E_G	5068517
Carbon disulfide	ND		6.3	1	06/15/09 16:42	E_G	5068517
Carbon tetrachloride	ND		6.3	1	06/15/09 16:42	E_G	5068517
Chlorobenzene	ND		6.3	1	06/15/09 16:42	E_G	5068517

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: (7-8.5) MW-2 **Collected:** 06/10/2009 10:50 **SPL Sample ID:** 09060712-01

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
Chloroethane	ND		13	1	06/15/09 16:42	E_G	5068517
Chloroform	ND		6.3	1	06/15/09 16:42	E_G	5068517
Chloromethane	ND		13	1	06/15/09 16:42	E_G	5068517
Dibromochloromethane	ND		6.3	1	06/15/09 16:42	E_G	5068517
Dibromomethane	ND		6.3	1	06/15/09 16:42	E_G	5068517
Dichlorodifluoromethane	ND		13	1	06/15/09 16:42	E_G	5068517
Ethylbenzene	ND		6.3	1	06/15/09 16:42	E_G	5068517
Hexachlorobutadiene	ND		6.3	1	06/15/09 16:42	E_G	5068517
Isopropylbenzene	ND		6.3	1	06/15/09 16:42	E_G	5068517
Methyl tert-butyl ether	ND		6.3	1	06/15/09 16:42	E_G	5068517
Methylene chloride	ND		6.3	1	06/15/09 16:42	E_G	5068517
Naphthalene	ND		6.3	1	06/15/09 16:42	E_G	5068517
n-Butylbenzene	ND		6.3	1	06/15/09 16:42	E_G	5068517
n-Propylbenzene	ND		6.3	1	06/15/09 16:42	E_G	5068517
sec-Butylbenzene	ND		6.3	1	06/15/09 16:42	E_G	5068517
Styrene	ND		6.3	1	06/15/09 16:42	E_G	5068517
tert-Butylbenzene	ND		6.3	1	06/15/09 16:42	E_G	5068517
Tetrachloroethene	ND		6.3	1	06/15/09 16:42	E_G	5068517
Toluene	ND		6.3	1	06/15/09 16:42	E_G	5068517
Trichloroethene	ND		6.3	1	06/15/09 16:42	E_G	5068517
Trichlorofluoromethane	ND		6.3	1	06/15/09 16:42	E_G	5068517
Vinyl acetate	ND		13	1	06/15/09 16:42	E_G	5068517
Vinyl chloride	ND		13	1	06/15/09 16:42	E_G	5068517
cis-1,2-Dichloroethene	ND		6.3	1	06/15/09 16:42	E_G	5068517
cis-1,3-Dichloropropene	ND		6.3	1	06/15/09 16:42	E_G	5068517
m,p-Xylene	ND		6.3	1	06/15/09 16:42	E_G	5068517
o-Xylene	ND		6.3	1	06/15/09 16:42	E_G	5068517
trans-1,2-Dichloroethene	ND		6.3	1	06/15/09 16:42	E_G	5068517
trans-1,3-Dichloropropene	ND		6.3	1	06/15/09 16:42	E_G	5068517
Xylenes,Total	ND		6.3	1	06/15/09 16:42	E_G	5068517
1,2-Dichloroethene (total)	ND		6.3	1	06/15/09 16:42	E_G	5068517
Surr: 1,2-Dichloroethane-d4	103		% 71-130	1	06/15/09 16:42	E_G	5068517
Surr: 4-Bromofluorobenzene	95.0		% 65-131	1	06/15/09 16:42	E_G	5068517
Surr: Toluene-d8	105		% 75-136	1	06/15/09 16:42	E_G	5068517

Prep Method	Prep Date	Prep Initials	Prep Factor
SW5030B	06/13/2009 11:14	E_G	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-4 (12.5-14) **Collected:** 06/09/2009 15:10 **SPL Sample ID:** 09060712-02

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS			**MCL**	**SW8015B**	**Units: mg/kg-dry**		
Gasoline Range Organics	ND		0.11	1	06/19/09 11:55	WLV	5075621
Surr: 1,4-Difluorobenzene	101		% 63-142	1	06/19/09 11:55	WLV	5075621
Surr: 4-Bromofluorobenzene	101		% 50-159	1	06/19/09 11:55	WLV	5075621

Prep Method	Prep Date	Prep Initials	Prep Factor
SW5030B	06/19/2009 9:22	XML	1.00

ION CHROMATOGRAPHY			MCL	E300.0 MOD	Units: mg/kg-dry		
Bromide	ND		5.29	1	06/17/09 19:26	BDG	5073747
Chloride	324		10.6	2	06/19/09 20:55	BDG	5076749
Fluoride	ND		5.29	1	06/17/09 19:26	BDG	5073747
Ortho-phosphate (As P)	ND		5.29	1	06/19/09 20:35	BDG	5076748
Sulfate	254		10.6	2	06/19/09 20:55	BDG	5076749
Nitrogen,Nitrate (As N)	ND		5.29	1	06/17/09 19:26	BDG	5073687
Nitrogen,Nitrite (As N)	ND		5.29	1	06/17/09 19:26	BDG	5073687

MERCURY, TOTAL			MCL	SW7471A	Units: mg/kg-dry		
Mercury	ND		0.0318	1	06/17/09 15:09	F_S	5071960

Prep Method	Prep Date	Prep Initials	Prep Factor
SW7471A	06/17/2009 12:00	F_S	1.00

METALS BY METHOD 6010B, TOTAL			MCL	SW6010B	Units: mg/kg-dry		
Aluminum	6320		10.6	1	06/18/09 14:21	EG	5073489
Boron	2.88		1.06	1	06/18/09 14:21	EG	5073489
Calcium	14200		10.6	1	06/18/09 14:21	EG	5073489
Iron	11600		1.06	1	06/18/09 14:21	EG	5073489
Magnesium	2360		10.6	1	06/18/09 14:21	EG	5073489
Potassium	883		52.9	1	06/18/09 14:21	EG	5073489
Sodium	635		10.6	1	06/19/09 10:53	EG	5075346
Strontium	73.5		0.318	1	06/18/09 14:21	EG	5073489
Tin	0.699		0.529	1	06/18/09 14:21	EG	5073489

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3050B	06/18/2009 17:00	AB1	1.00
SW3050B	06/16/2009 10:30	AB1	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-4 (12.5-14) **Collected:** 06/09/2009 15:10 **SPL Sample ID:** 09060712-02

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
METALS BY METHOD 6020A, TOTAL			**MCL**	**SW6020A**	**Units: mg/kg-dry**		
Antimony	ND		0.529	1	06/17/09 23:00	AL_H	5072407
Arsenic	2.35		0.529	1	06/17/09 23:00	AL_H	5072407
Barium	245		0.529	1	06/18/09 13:14	AL_H	5073067
Beryllium	ND		0.424	1	06/18/09 13:14	AL_H	5073067
Cadmium	ND		0.529	1	06/17/09 23:00	AL_H	5072407
Chromium	48.9		0.529	1	06/17/09 23:00	AL_H	5072407
Cobalt	4.49		0.529	1	06/17/09 23:00	AL_H	5072407
Copper	11.2		0.529	1	06/17/09 23:00	AL_H	5072407
Lead	5.94		0.529	1	06/17/09 23:00	AL_H	5072407
Manganese	364		0.529	1	06/18/09 13:14	AL_H	5073067
Molybdenum	1.84		0.529	1	06/17/09 23:00	AL_H	5072407
Nickel	6.41		0.529	1	06/17/09 23:00	AL_H	5072407
Selenium	ND		0.529	1	06/17/09 23:00	AL_H	5072407
Silver	ND		0.529	1	06/17/09 23:00	AL_H	5072407
Thallium	ND		0.529	1	06/17/09 23:00	AL_H	5072407
Vanadium	15.6		0.529	1	06/17/09 23:00	AL_H	5072407
Zinc	22.2		1.06	1	06/17/09 23:00	AL_H	5072407

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3050B	06/16/2009 10:30	AB1	1.00

PERCENT MOISTURE			MCL	D2216	Units: wt%	
Percent Moisture	5.55		0	1	06/15/09 17:02	EB1	5068029

SEMIVOLATILE HYDROCARBONS			MCL	SW8015B	Units: mg/kg-dry	
Diesel Range Organics	ND		5.3	1	06/19/09 2:39	NW	5085864
Fuel Oil Range Organics	ND		11	1	06/19/09 2:39	NW	5085864
Hydraulic Fluid Range Organics	ND		11	1	06/19/09 2:39	NW	5085864
Kerosene Range Organics	ND		11	1	06/19/09 2:39	NW	5085864
Mineral Spirits Range Organics	ND		11	1	06/19/09 2:39	NW	5085864
Oil Range Organics	43		11	1	06/19/09 2:39	NW	5085864
Surr: n-Pentacosane	62.7	%	20-154	1	06/19/09 2:39	NW	5085864

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3550B	06/18/2009 14:12	QMT	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-4 (12.5-14) **Collected:** 06/09/2009 15:10 **SPL Sample ID:** 09060712-02

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
SEMIVOLATILE ORGANICS BY METHOD 8270C			**MCL**	**SW8270C**	**Units: ug/kg-dry**		
1,2,4-Trichlorobenzene	ND		350	1	06/18/09 20:30	GY	5074322
1,2-Dichlorobenzene	ND		350	1	06/18/09 20:30	GY	5074322
1,2-Diphenylhydrazine	ND		350	1	06/18/09 20:30	GY	5074322
1,3-Dichlorobenzene	ND		350	1	06/18/09 20:30	GY	5074322
1,4-Dichlorobenzene	ND		350	1	06/18/09 20:30	GY	5074322
2,4,5-Trichlorophenol	ND		850	1	06/18/09 20:30	GY	5074322
2,4,6-Trichlorophenol	ND		350	1	06/18/09 20:30	GY	5074322
2,4-Dichlorophenol	ND		350	1	06/18/09 20:30	GY	5074322
2,4-Dimethylphenol	ND		350	1	06/18/09 20:30	GY	5074322
2,4-Dinitrophenol	ND		850	1	06/18/09 20:30	GY	5074322
2,4-Dinitrotoluene	ND		850	1	06/18/09 20:30	GY	5074322
2,6-Dinitrotoluene	ND		350	1	06/18/09 20:30	GY	5074322
2-Chloronaphthalene	ND		350	1	06/18/09 20:30	GY	5074322
2-Chlorophenol	ND		350	1	06/18/09 20:30	GY	5074322
2-Methylnaphthalene	ND		350	1	06/18/09 20:30	GY	5074322
2-Nitroaniline	ND		850	1	06/18/09 20:30	GY	5074322
2-Nitrophenol	ND		350	1	06/18/09 20:30	GY	5074322
3,3'-Dichlorobenzidine	ND		350	1	06/18/09 20:30	GY	5074322
3-Nitroaniline	ND		850	1	06/18/09 20:30	GY	5074322
4,6-Dinitro-2-methylphenol	ND		850	1	06/18/09 20:30	GY	5074322
4-Bromophenyl phenyl ether	ND		350	1	06/18/09 20:30	GY	5074322
4-Chloro-3-methylphenol	ND		350	1	06/18/09 20:30	GY	5074322
4-Chloroaniline	ND		350	1	06/18/09 20:30	GY	5074322
4-Chlorophenyl phenyl ether	ND		350	1	06/18/09 20:30	GY	5074322
4-Nitroaniline	ND		850	1	06/18/09 20:30	GY	5074322
4-Nitrophenol	ND		850	1	06/18/09 20:30	GY	5074322
Acenaphthene	ND		350	1	06/18/09 20:30	GY	5074322
Acenaphthylene	ND		350	1	06/18/09 20:30	GY	5074322
Aniline	ND		350	1	06/18/09 20:30	GY	5074322
Anthracene	ND		350	1	06/18/09 20:30	GY	5074322
Benz(a)anthracene	ND		350	1	06/18/09 20:30	GY	5074322
Benzo(a)pyrene	ND		350	1	06/18/09 20:30	GY	5074322
Benzo(b)fluoranthene	ND		350	1	06/18/09 20:30	GY	5074322
Benzo(g,h,i)perylene	ND		350	1	06/18/09 20:30	GY	5074322
Benzo(k)fluoranthene	ND		350	1	06/18/09 20:30	GY	5074322
Benzoic acid	ND		1700	1	06/18/09 20:30	GY	5074322
Benzyl alcohol	ND		350	1	06/18/09 20:30	GY	5074322
Bis(2-chloroethoxy)methane	ND		350	1	06/18/09 20:30	GY	5074322
Bis(2-chloroethyl)ether	ND		350	1	06/18/09 20:30	GY	5074322

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-4 (12.5-14) **Collected:** 06/09/2009 15:10 **SPL Sample ID:** 09060712-02

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
Bis(2-chloroisopropyl)ether	ND		350	1	06/18/09 20:30	GY	5074322
Bis(2-ethylhexyl)phthalate	ND		350	1	06/18/09 20:30	GY	5074322
Butyl benzyl phthalate	ND		350	1	06/18/09 20:30	GY	5074322
Carbazole	ND		350	1	06/18/09 20:30	GY	5074322
Chrysene	ND		350	1	06/18/09 20:30	GY	5074322
Dibenz(a,h)anthracene	ND		350	1	06/18/09 20:30	GY	5074322
Dibenzofuran	ND		350	1	06/18/09 20:30	GY	5074322
Diethyl phthalate	ND		350	1	06/18/09 20:30	GY	5074322
Dimethyl phthalate	ND		350	1	06/18/09 20:30	GY	5074322
Di-n-butyl phthalate	ND		350	1	06/18/09 20:30	GY	5074322
Di-n-octyl phthalate	ND		350	1	06/18/09 20:30	GY	5074322
Fluoranthene	ND		350	1	06/18/09 20:30	GY	5074322
Fluorene	ND		350	1	06/18/09 20:30	GY	5074322
Hexachlorobenzene	ND		350	1	06/18/09 20:30	GY	5074322
Hexachlorobutadiene	ND		350	1	06/18/09 20:30	GY	5074322
Hexachlorocyclopentadiene	ND		350	1	06/18/09 20:30	GY	5074322
Hexachloroethane	ND		350	1	06/18/09 20:30	GY	5074322
Indeno(1,2,3-cd)pyrene	ND		350	1	06/18/09 20:30	GY	5074322
Isophorone	ND		350	1	06/18/09 20:30	GY	5074322
Naphthalene	ND		350	1	06/18/09 20:30	GY	5074322
Nitrobenzene	ND		350	1	06/18/09 20:30	GY	5074322
N-Nitrosodi-n-propylamine	ND		350	1	06/18/09 20:30	GY	5074322
N-Nitrosodiphenylamine	ND		350	1	06/18/09 20:30	GY	5074322
Pentachlorophenol	ND		850	1	06/18/09 20:30	GY	5074322
Phenanthrene	ND		350	1	06/18/09 20:30	GY	5074322
Phenol	ND		350	1	06/18/09 20:30	GY	5074322
Pyrene	ND		350	1	06/18/09 20:30	GY	5074322
Pyridine	ND		350	1	06/18/09 20:30	GY	5074322
2-Methylphenol	ND		350	1	06/18/09 20:30	GY	5074322
3 & 4-Methylphenol	ND		350	1	06/18/09 20:30	GY	5074322
Surr: 2,4,6-Tribromophenol	81.6		% 19-135	1	06/18/09 20:30	GY	5074322
Surr: 2-Fluorobiphenyl	63.5		% 15-140	1	06/18/09 20:30	GY	5074322
Surr: 2-Fluorophenol	57.6		% 15-122	1	06/18/09 20:30	GY	5074322
Surr: Nitrobenzene-d5	51.8		% 10-134	1	06/18/09 20:30	GY	5074322
Surr: Phenol-d5	55.6		% 10-123	1	06/18/09 20:30	GY	5074322
Surr: Terphenyl-d14	63.5		% 18-166	1	06/18/09 20:30	GY	5074322

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3550C	06/15/2009 10:31	FAK	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-4 (12.5-14) **Collected:** 06/09/2009 15:10 **SPL Sample ID:** 09060712-02

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
TOTAL PETROLEUM HYDROCARBONS				**MCL**	**E418.1**	**Units: mg/kg-dry**	
Petroleum Hydrocarbons,TR	130		11	1	06/15/09 15:24	LLL	5067478

Prep Method	Prep Date	Prep Initials	Prep Factor
	06/15/2009 11:10		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-4 (12.5-14) **Collected:** 06/09/2009 15:10 **SPL Sample ID:** 09060712-02

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			**MCL**	**SW8260B**	**Units: ug/kg-dry**		
1,1,1,2-Tetrachloroethane	ND		5.3	1	06/15/09 18:15	E_G	5068520
1,1,1-Trichloroethane	ND		5.3	1	06/15/09 18:15	E_G	5068520
1,1,2,2-Tetrachloroethane	ND		5.3	1	06/15/09 18:15	E_G	5068520
1,1,2-Trichloroethane	ND		5.3	1	06/15/09 18:15	E_G	5068520
1,1-Dichloroethane	ND		5.3	1	06/15/09 18:15	E_G	5068520
1,1-Dichloroethene	ND		5.3	1	06/15/09 18:15	E_G	5068520
1,1-Dichloropropene	ND		5.3	1	06/15/09 18:15	E_G	5068520
1,2,3-Trichlorobenzene	ND		5.3	1	06/15/09 18:15	E_G	5068520
1,2,3-Trichloropropane	ND		5.3	1	06/15/09 18:15	E_G	5068520
1,2,4-Trichlorobenzene	ND		5.3	1	06/15/09 18:15	E_G	5068520
1,2,4-Trimethylbenzene	ND		5.3	1	06/15/09 18:15	E_G	5068520
1,2-Dibromo-3-chloropropane	ND		5.3	1	06/15/09 18:15	E_G	5068520
1,2-Dibromoethane	ND		5.3	1	06/15/09 18:15	E_G	5068520
1,2-Dichlorobenzene	ND		5.3	1	06/15/09 18:15	E_G	5068520
1,2-Dichloroethane	ND		5.3	1	06/15/09 18:15	E_G	5068520
1,2-Dichloropropane	ND		5.3	1	06/15/09 18:15	E_G	5068520
1,3,5-Trimethylbenzene	ND		5.3	1	06/15/09 18:15	E_G	5068520
1,3-Dichlorobenzene	ND		5.3	1	06/15/09 18:15	E_G	5068520
1,3-Dichloropropane	ND		5.3	1	06/15/09 18:15	E_G	5068520
1,4-Dichlorobenzene	ND		5.3	1	06/15/09 18:15	E_G	5068520
2,2-Dichloropropane	ND		5.3	1	06/15/09 18:15	E_G	5068520
2-Butanone	ND		21	1	06/15/09 18:15	E_G	5068520
2-Chloroethyl vinyl ether	ND		11	1	06/15/09 18:15	E_G	5068520
2-Chlorotoluene	ND		5.3	1	06/15/09 18:15	E_G	5068520
2-Hexanone	ND		11	1	06/15/09 18:15	E_G	5068520
4-Chlorotoluene	ND		5.3	1	06/15/09 18:15	E_G	5068520
4-Isopropyltoluene	ND		5.3	1	06/15/09 18:15	E_G	5068520
4-Methyl-2-pentanone	ND		11	1	06/15/09 18:15	E_G	5068520
Acetone	ND		110	1	06/15/09 18:15	E_G	5068520
Acrylonitrile	ND		53	1	06/15/09 18:15	E_G	5068520
Benzene	ND		5.3	1	06/15/09 18:15	E_G	5068520
Bromobenzene	ND		5.3	1	06/15/09 18:15	E_G	5068520
Bromochloromethane	ND		5.3	1	06/15/09 18:15	E_G	5068520
Bromodichloromethane	ND		5.3	1	06/15/09 18:15	E_G	5068520
Bromoform	ND		5.3	1	06/15/09 18:15	E_G	5068520
Bromomethane	ND		11	1	06/15/09 18:15	E_G	5068520
Carbon disulfide	ND		5.3	1	06/15/09 18:15	E_G	5068520
Carbon tetrachloride	ND		5.3	1	06/15/09 18:15	E_G	5068520
Chlorobenzene	ND		5.3	1	06/15/09 18:15	E_G	5068520

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-4 (12.5-14) **Collected:** 06/09/2009 15:10 **SPL Sample ID:** 09060712-02

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
Chloroethane	ND		11	1	06/15/09 18:15	E_G	5068520
Chloroform	ND		5.3	1	06/15/09 18:15	E_G	5068520
Chloromethane	ND		11	1	06/15/09 18:15	E_G	5068520
Dibromochloromethane	ND		5.3	1	06/15/09 18:15	E_G	5068520
Dibromomethane	ND		5.3	1	06/15/09 18:15	E_G	5068520
Dichlorodifluoromethane	ND		11	1	06/15/09 18:15	E_G	5068520
Ethylbenzene	ND		5.3	1	06/15/09 18:15	E_G	5068520
Hexachlorobutadiene	ND		5.3	1	06/15/09 18:15	E_G	5068520
Isopropylbenzene	ND		5.3	1	06/15/09 18:15	E_G	5068520
Methyl tert-butyl ether	ND		5.3	1	06/15/09 18:15	E_G	5068520
Methylene chloride	ND		5.3	1	06/15/09 18:15	E_G	5068520
Naphthalene	ND		5.3	1	06/15/09 18:15	E_G	5068520
n-Butylbenzene	ND		5.3	1	06/15/09 18:15	E_G	5068520
n-Propylbenzene	ND		5.3	1	06/15/09 18:15	E_G	5068520
sec-Butylbenzene	ND		5.3	1	06/15/09 18:15	E_G	5068520
Styrene	ND		5.3	1	06/15/09 18:15	E_G	5068520
tert-Butylbenzene	ND		5.3	1	06/15/09 18:15	E_G	5068520
Tetrachloroethene	ND		5.3	1	06/15/09 18:15	E_G	5068520
Toluene	ND		5.3	1	06/15/09 18:15	E_G	5068520
Trichloroethene	ND		5.3	1	06/15/09 18:15	E_G	5068520
Trichlorofluoromethane	ND		5.3	1	06/15/09 18:15	E_G	5068520
Vinyl acetate	ND		11	1	06/15/09 18:15	E_G	5068520
Vinyl chloride	ND		11	1	06/15/09 18:15	E_G	5068520
cis-1,2-Dichloroethene	ND		5.3	1	06/15/09 18:15	E_G	5068520
cis-1,3-Dichloropropene	ND		5.3	1	06/15/09 18:15	E_G	5068520
m,p-Xylene	ND		5.3	1	06/15/09 18:15	E_G	5068520
o-Xylene	ND		5.3	1	06/15/09 18:15	E_G	5068520
trans-1,2-Dichloroethene	ND		5.3	1	06/15/09 18:15	E_G	5068520
trans-1,3-Dichloropropene	ND		5.3	1	06/15/09 18:15	E_G	5068520
Xylenes,Total	ND		5.3	1	06/15/09 18:15	E_G	5068520
1,2-Dichloroethene (total)	ND		5.3	1	06/15/09 18:15	E_G	5068520
Surr: 1,2-Dichloroethane-d4	104		% 71-130	1	06/15/09 18:15	E_G	5068520
Surr: 4-Bromofluorobenzene	95.9		% 65-131	1	06/15/09 18:15	E_G	5068520
Surr: Toluene-d8	106		% 75-136	1	06/15/09 18:15	E_G	5068520

Prep Method	Prep Date	Prep Initials	Prep Factor
SW5030B	06/13/2009 11:15	E_G	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-3 (12.5-14) **Collected:** 06/10/2009 13:45 **SPL Sample ID:** 09060712-03

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS			**MCL**	**SW8015B**	**Units: mg/kg-dry**		
Gasoline Range Organics	2.3		0.57	1	06/19/09 12:23	WLV	5075710
Surr: 1,4-Difluorobenzene	106		% 63-142	1	06/19/09 12:23	WLV	5075710
Surr: 4-Bromofluorobenzene	118		% 50-159	1	06/19/09 12:23	WLV	5075710

Prep Method	Prep Date	Prep Initials	Prep Factor
SW5030B	06/19/2009 9:24	XML	5.00

ION CHROMATOGRAPHY			**MCL**	**E300.0 MOD**	**Units: mg/kg-dry**		
Bromide	ND		5.66	1	06/17/09 19:45	BDG	5073748
Chloride	ND		5.66	1	06/17/09 19:45	BDG	5073748
Fluoride	ND		5.66	1	06/17/09 19:45	BDG	5073748
Ortho-phosphate (As P)	ND		5.66	1	06/19/09 21:14	BDG	5076750
Sulfate	2050		113	20	06/19/09 21:33	BDG	5076751
Nitrogen,Nitrate (As N)	ND		5.66	1	06/17/09 19:45	BDG	5073688
Nitrogen,Nitrite (As N)	ND		5.66	1	06/17/09 19:45	BDG	5073688

MERCURY, TOTAL			**MCL**	**SW7471A**	**Units: mg/kg-dry**		
Mercury	ND		0.0339	1	06/17/09 15:12	F_S	5071961

Prep Method	Prep Date	Prep Initials	Prep Factor
SW7471A	06/17/2009 12:00	F_S	1.00

METALS BY METHOD 6010B, TOTAL			**MCL**	**SW6010B**	**Units: mg/kg-dry**		
Aluminum	3020		11.3	1	06/18/09 13:43	EG	5073480
Boron	1.93		1.13	1	06/18/09 13:43	EG	5073480
Calcium	3940		11.3	1	06/18/09 13:43	EG	5073480
Iron	4950		1.13	1	06/18/09 13:43	EG	5073480
Magnesium	835		11.3	1	06/18/09 13:43	EG	5073480
Potassium	534		56.6	1	06/18/09 13:43	EG	5073480
Sodium	262		11.3	1	06/19/09 10:14	EG	5075337
Strontium	74		0.339	1	06/18/09 13:43	EG	5073480
Tin	0.871		0.566	1	06/18/09 13:43	EG	5073480

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3050B	06/18/2009 17:00	AB1	1.00
SW3050B	06/16/2009 10:30	AB1	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-3 (12.5-14) **Collected:** 06/10/2009 13:45 **SPL Sample ID:** 09060712-03

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
METALS BY METHOD 6020A, TOTAL				**MCL**	**SW6020A**	**Units: mg/kg-dry**	
Antimony	ND		0.566	1	06/17/09 22:15	AL_H	5072398
Arsenic	1.9		0.566	1	06/17/09 22:15	AL_H	5072398
Barium	145		0.566	1	06/18/09 12:30	AL_H	5073058
Beryllium	ND		0.452	1	06/18/09 12:30	AL_H	5073058
Cadmium	ND		0.566	1	06/17/09 22:15	AL_H	5072398
Chromium	3.93		0.566	1	06/17/09 22:15	AL_H	5072398
Cobalt	2.48		0.566	1	06/17/09 22:15	AL_H	5072398
Copper	5.77		0.566	1	06/17/09 22:15	AL_H	5072398
Lead	4.26		0.566	1	06/17/09 22:15	AL_H	5072398
Manganese	193		0.566	1	06/18/09 12:30	AL_H	5073058
Molybdenum	ND		0.566	1	06/17/09 22:15	AL_H	5072398
Nickel	3.37		0.566	1	06/17/09 22:15	AL_H	5072398
Selenium	ND		0.566	1	06/17/09 22:15	AL_H	5072398
Silver	ND		0.566	1	06/17/09 22:15	AL_H	5072398
Thallium	ND		0.566	1	06/17/09 22:15	AL_H	5072398
Vanadium	6.29		0.566	1	06/17/09 22:15	AL_H	5072398
Zinc	12.6		1.13	1	06/17/09 22:15	AL_H	5072398

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3050B	06/16/2009 10:30	AB1	1.00

PERCENT MOISTURE				MCL	D2216	Units: wt%	
Percent Moisture	11.6		0	1	06/15/09 17:02	EB1	5068028

SEMIVOLATILE HYDROCARBONS				MCL	SW8015B	Units: mg/kg-dry	
Diesel Range Organics	30		5.7	1	06/19/09 2:18	NW	5085863
Fuel Oil Range Organics	ND		11	1	06/19/09 2:18	NW	5085863
Hydraulic Fluid Range Organics	ND		11	1	06/19/09 2:18	NW	5085863
Kerosene Range Organics	ND		11	1	06/19/09 2:18	NW	5085863
Mineral Spirits Range Organics	ND		11	1	06/19/09 2:18	NW	5085863
Oil Range Organics	44		11	1	06/19/09 2:18	NW	5085863
Surr: n-Pentacosane	108		% 20-154	1	06/19/09 2:18	NW	5085863

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3550B	06/18/2009 14:12	QMT	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-3 (12.5-14) **Collected:** 06/10/2009 13:45 **SPL Sample ID:** 09060712-03

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
SEMIVOLATILE ORGANICS BY METHOD 8270C			**MCL**	**SW8270C**	**Units: ug/kg-dry**		
1,2,4-Trichlorobenzene	ND		370	1	06/18/09 21:03	GY	5074333
1,2-Dichlorobenzene	ND		370	1	06/18/09 21:03	GY	5074333
1,2-Diphenylhydrazine	ND		370	1	06/18/09 21:03	GY	5074333
1,3-Dichlorobenzene	ND		370	1	06/18/09 21:03	GY	5074333
1,4-Dichlorobenzene	ND		370	1	06/18/09 21:03	GY	5074333
2,4,5-Trichlorophenol	ND		900	1	06/18/09 21:03	GY	5074333
2,4,6-Trichlorophenol	ND		370	1	06/18/09 21:03	GY	5074333
2,4-Dichlorophenol	ND		370	1	06/18/09 21:03	GY	5074333
2,4-Dimethylphenol	ND		370	1	06/18/09 21:03	GY	5074333
2,4-Dinitrophenol	ND		900	1	06/18/09 21:03	GY	5074333
2,4-Dinitrotoluene	ND		900	1	06/18/09 21:03	GY	5074333
2,6-Dinitrotoluene	ND		370	1	06/18/09 21:03	GY	5074333
2-Chloronaphthalene	ND		370	1	06/18/09 21:03	GY	5074333
2-Chlorophenol	ND		370	1	06/18/09 21:03	GY	5074333
2-Methylnaphthalene	ND		370	1	06/18/09 21:03	GY	5074333
2-Nitroaniline	ND		900	1	06/18/09 21:03	GY	5074333
2-Nitrophenol	ND		370	1	06/18/09 21:03	GY	5074333
3,3'-Dichlorobenzidine	ND		370	1	06/18/09 21:03	GY	5074333
3-Nitroaniline	ND		900	1	06/18/09 21:03	GY	5074333
4,6-Dinitro-2-methylphenol	ND		900	1	06/18/09 21:03	GY	5074333
4-Bromophenyl phenyl ether	ND		370	1	06/18/09 21:03	GY	5074333
4-Chloro-3-methylphenol	ND		370	1	06/18/09 21:03	GY	5074333
4-Chloroaniline	ND		370	1	06/18/09 21:03	GY	5074333
4-Chlorophenyl phenyl ether	ND		370	1	06/18/09 21:03	GY	5074333
4-Nitroaniline	ND		900	1	06/18/09 21:03	GY	5074333
4-Nitrophenol	ND		900	1	06/18/09 21:03	GY	5074333
Acenaphthene	ND		370	1	06/18/09 21:03	GY	5074333
Acenaphthylene	ND		370	1	06/18/09 21:03	GY	5074333
Aniline	ND		370	1	06/18/09 21:03	GY	5074333
Anthracene	ND		370	1	06/18/09 21:03	GY	5074333
Benz(a)anthracene	ND		370	1	06/18/09 21:03	GY	5074333
Benzo(a)pyrene	ND		370	1	06/18/09 21:03	GY	5074333
Benzo(b)fluoranthene	ND		370	1	06/18/09 21:03	GY	5074333
Benzo(g,h,i)perylene	ND		370	1	06/18/09 21:03	GY	5074333
Benzo(k)fluoranthene	ND		370	1	06/18/09 21:03	GY	5074333
Benzoic acid	ND		1800	1	06/18/09 21:03	GY	5074333
Benzyl alcohol	ND		370	1	06/18/09 21:03	GY	5074333
Bis(2-chloroethoxy)methane	ND		370	1	06/18/09 21:03	GY	5074333
Bis(2-chloroethyl)ether	ND		370	1	06/18/09 21:03	GY	5074333

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-3 (12.5-14) **Collected:** 06/10/2009 13:45 **SPL Sample ID:** 09060712-03

Site: San Juan County, NM

Analyses/Method	Result	QUAL		Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
Bis(2-chloroisopropyl)ether	ND			370	1	06/18/09 21:03	GY	5074333
Bis(2-ethylhexyl)phthalate	ND			370	1	06/18/09 21:03	GY	5074333
Butyl benzyl phthalate	ND			370	1	06/18/09 21:03	GY	5074333
Carbazole	ND			370	1	06/18/09 21:03	GY	5074333
Chrysene	ND			370	1	06/18/09 21:03	GY	5074333
Dibenz(a,h)anthracene	ND			370	1	06/18/09 21:03	GY	5074333
Dibenzofuran	ND			370	1	06/18/09 21:03	GY	5074333
Diethyl phthalate	ND			370	1	06/18/09 21:03	GY	5074333
Dimethyl phthalate	ND			370	1	06/18/09 21:03	GY	5074333
Di-n-butyl phthalate	ND			370	1	06/18/09 21:03	GY	5074333
Di-n-octyl phthalate	ND			370	1	06/18/09 21:03	GY	5074333
Fluoranthene	ND			370	1	06/18/09 21:03	GY	5074333
Fluorene	ND			370	1	06/18/09 21:03	GY	5074333
Hexachlorobenzene	ND			370	1	06/18/09 21:03	GY	5074333
Hexachlorobutadiene	ND			370	1	06/18/09 21:03	GY	5074333
Hexachlorocyclopentadiene	ND			370	1	06/18/09 21:03	GY	5074333
Hexachloroethane	ND			370	1	06/18/09 21:03	GY	5074333
Indeno(1,2,3-cd)pyrene	ND			370	1	06/18/09 21:03	GY	5074333
Isophorone	ND			370	1	06/18/09 21:03	GY	5074333
Naphthalene	ND			370	1	06/18/09 21:03	GY	5074333
Nitrobenzene	ND			370	1	06/18/09 21:03	GY	5074333
N-Nitrosodi-n-propylamine	ND			370	1	06/18/09 21:03	GY	5074333
N-Nitrosodiphenylamine	ND			370	1	06/18/09 21:03	GY	5074333
Pentachlorophenol	ND			900	1	06/18/09 21:03	GY	5074333
Phenanthrene	ND			370	1	06/18/09 21:03	GY	5074333
Phenol	ND			370	1	06/18/09 21:03	GY	5074333
Pyrene	ND			370	1	06/18/09 21:03	GY	5074333
Pyridine	ND			370	1	06/18/09 21:03	GY	5074333
2-Methylphenol	ND			370	1	06/18/09 21:03	GY	5074333
3 & 4-Methylphenol	ND			370	1	06/18/09 21:03	GY	5074333
Surr: 2,4,6-Tribromophenol	102		%	19-135	1	06/18/09 21:03	GY	5074333
Surr: 2-Fluorobiphenyl	76.5		%	15-140	1	06/18/09 21:03	GY	5074333
Surr: 2-Fluorophenol	70.0		%	15-122	1	06/18/09 21:03	GY	5074333
Surr: Nitrobenzene-d5	63.5		%	10-134	1	06/18/09 21:03	GY	5074333
Surr: Phenol-d5	69.2		%	10-123	1	06/18/09 21:03	GY	5074333
Surr: Terphenyl-d14	78.2		%	18-166	1	06/18/09 21:03	GY	5074333

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3550C	06/15/2009 10:31	FAK	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-3 (12.5-14) **Collected:** 06/10/2009 13:45 **SPL Sample ID:** 09060712-03

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
TOTAL PETROLEUM HYDROCARBONS				**MCL**	**E418.1**	**Units: mg/kg-dry**	
Petroleum Hydrocarbons,TR	85		11	1	06/15/09 15:24	LLL	5067479

Prep Method	Prep Date	Prep Initials	Prep Factor
	06/15/2009 11:10		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-3 (12.5-14) **Collected:** 06/10/2009 13:45 **SPL Sample ID:** 09060712-03

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			**MCL**	**SW8260B**	**Units: ug/kg-dry**		
1,1,1,2-Tetrachloroethane	ND		5.7	1	06/15/09 18:46	E_G	5068521
1,1,1-Trichloroethane	ND		5.7	1	06/15/09 18:46	E_G	5068521
1,1,2,2-Tetrachloroethane	ND		5.7	1	06/15/09 18:46	E_G	5068521
1,1,2-Trichloroethane	ND		5.7	1	06/15/09 18:46	E_G	5068521
1,1-Dichloroethane	ND		5.7	1	06/15/09 18:46	E_G	5068521
1,1-Dichloroethene	ND		5.7	1	06/15/09 18:46	E_G	5068521
1,1-Dichloropropene	ND		5.7	1	06/15/09 18:46	E_G	5068521
1,2,3-Trichlorobenzene	ND		5.7	1	06/15/09 18:46	E_G	5068521
1,2,3-Trichloropropane	ND		5.7	1	06/15/09 18:46	E_G	5068521
1,2,4-Trichlorobenzene	ND		5.7	1	06/15/09 18:46	E_G	5068521
1,2,4-Trimethylbenzene	2900		280	50	06/22/09 16:03	LU_L	5078884
1,2-Dibromo-3-chloropropane	ND		5.7	1	06/15/09 18:46	E_G	5068521
1,2-Dibromoethane	ND		5.7	1	06/15/09 18:46	E_G	5068521
1,2-Dichlorobenzene	ND		5.7	1	06/15/09 18:46	E_G	5068521
1,2-Dichloroethane	ND		5.7	1	06/15/09 18:46	E_G	5068521
1,2-Dichloropropane	ND		5.7	1	06/15/09 18:46	E_G	5068521
1,3,5-Trimethylbenzene	220		5.7	1	06/15/09 18:46	E_G	5068521
1,3-Dichlorobenzene	ND		5.7	1	06/15/09 18:46	E_G	5068521
1,3-Dichloropropane	ND		5.7	1	06/15/09 18:46	E_G	5068521
1,4-Dichlorobenzene	ND		5.7	1	06/15/09 18:46	E_G	5068521
2,2-Dichloropropane	ND		5.7	1	06/15/09 18:46	E_G	5068521
2-Butanone	ND		23	1	06/15/09 18:46	E_G	5068521
2-Chloroethyl vinyl ether	ND		11	1	06/15/09 18:46	E_G	5068521
2-Chlorotoluene	ND		5.7	1	06/15/09 18:46	E_G	5068521
2-Hexanone	ND		11	1	06/15/09 18:46	E_G	5068521
4-Chlorotoluene	ND		5.7	1	06/15/09 18:46	E_G	5068521
4-Isopropyltoluene	49		5.7	1	06/15/09 18:46	E_G	5068521
4-Methyl-2-pentanone	ND		11	1	06/15/09 18:46	E_G	5068521
Acetone	ND		110	1	06/15/09 18:46	E_G	5068521
Acrylonitrile	ND		57	1	06/15/09 18:46	E_G	5068521
Benzene	ND		5.7	1	06/15/09 18:46	E_G	5068521
Bromobenzene	ND		5.7	1	06/15/09 18:46	E_G	5068521
Bromochloromethane	ND		5.7	1	06/15/09 18:46	E_G	5068521
Bromodichloromethane	ND		5.7	1	06/15/09 18:46	E_G	5068521
Bromoform	ND		5.7	1	06/15/09 18:46	E_G	5068521
Bromomethane	ND		11	1	06/15/09 18:46	E_G	5068521
Carbon disulfide	ND		5.7	1	06/15/09 18:46	E_G	5068521
Carbon tetrachloride	ND		5.7	1	06/15/09 18:46	E_G	5068521
Chlorobenzene	ND		5.7	1	06/15/09 18:46	E_G	5068521

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-3 (12.5-14) **Collected:** 06/10/2009 13:45 **SPL Sample ID:** 09060712-03

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
Chloroethane	ND		11	1	06/15/09 18:46	E_G	5068521
Chloroform	ND		5.7	1	06/15/09 18:46	E_G	5068521
Chloromethane	ND		11	1	06/15/09 18:46	E_G	5068521
Dibromochloromethane	ND		5.7	1	06/15/09 18:46	E_G	5068521
Dibromomethane	ND		5.7	1	06/15/09 18:46	E_G	5068521
Dichlorodifluoromethane	ND		11	1	06/15/09 18:46	E_G	5068521
Ethylbenzene	200		5.7	1	06/15/09 18:46	E_G	5068521
Hexachlorobutadiene	ND		5.7	1	06/15/09 18:46	E_G	5068521
Isopropylbenzene	110		5.7	1	06/15/09 18:46	E_G	5068521
Methyl tert-butyl ether	ND		5.7	1	06/15/09 18:46	E_G	5068521
Methylene chloride	ND		5.7	1	06/15/09 18:46	E_G	5068521
Naphthalene	11		5.7	1	06/15/09 18:46	E_G	5068521
n-Butylbenzene	12		5.7	1	06/15/09 18:46	E_G	5068521
n-Propylbenzene	180		5.7	1	06/15/09 18:46	E_G	5068521
sec-Butylbenzene	48		5.7	1	06/15/09 18:46	E_G	5068521
Styrene	ND		5.7	1	06/15/09 18:46	E_G	5068521
tert-Butylbenzene	54		5.7	1	06/15/09 18:46	E_G	5068521
Tetrachloroethene	ND		5.7	1	06/15/09 18:46	E_G	5068521
Toluene	92		5.7	1	06/15/09 18:46	E_G	5068521
Trichloroethene	ND		5.7	1	06/15/09 18:46	E_G	5068521
Trichlorofluoromethane	ND		5.7	1	06/15/09 18:46	E_G	5068521
Vinyl acetate	ND		11	1	06/15/09 18:46	E_G	5068521
Vinyl chloride	ND		11	1	06/15/09 18:46	E_G	5068521
cis-1,2-Dichloroethene	ND		5.7	1	06/15/09 18:46	E_G	5068521
cis-1,3-Dichloropropene	ND		5.7	1	06/15/09 18:46	E_G	5068521
m,p-Xylene	950		280	50	06/22/09 16:03	LU_L	5078884
o-Xylene	460		280	50	06/22/09 16:03	LU_L	5078884
trans-1,2-Dichloroethene	ND		5.7	1	06/15/09 18:46	E_G	5068521
trans-1,3-Dichloropropene	ND		5.7	1	06/15/09 18:46	E_G	5068521
Xylenes,Total	1410		283	50	06/22/09 16:03	LU_L	5078884
1,2-Dichloroethene (total)	ND		5.7	1	06/15/09 18:46	E_G	5068521
Surr: 1,2-Dichloroethane-d4	100		% 78-116	50	06/22/09 16:03	LU_L	5078884
Surr: 1,2-Dichloroethane-d4	99.6		% 71-130	1	06/15/09 18:46	E_G	5068521
Surr: 4-Bromofluorobenzene	104		% 65-131	1	06/15/09 18:46	E_G	5068521
Surr: 4-Bromofluorobenzene	104		% 74-125	50	06/22/09 16:03	LU_L	5078884
Surr: Toluene-d8	103		% 75-136	1	06/15/09 18:46	E_G	5068521
Surr: Toluene-d8	107		% 82-118	50	06/22/09 16:03	LU_L	5078884

Prep Method	Prep Date	Prep Initials	Prep Factor
SW5030B	06/16/2009 11:40	E_G	1.00
SW5030B	06/13/2009 11:16	E_G	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-3 (7.5-9) **Collected:** 06/10/2009 13:32 **SPL Sample ID:** 09060712-04

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS				**MCL**	**SW8015B**	**Units: mg/kg-dry**	
Gasoline Range Organics	ND		0.12	1	06/19/09 12:52	WLV	5075697
Surr: 1,4-Difluorobenzene	99.6		% 63-142	1	06/19/09 12:52	WLV	5075697
Surr: 4-Bromofluorobenzene	104		% 50-159	1	06/19/09 12:52	WLV	5075697

Prep Method	Prep Date	Prep Initials	Prep Factor
SW5030B	06/19/2009 9:26	XML	1.00

ION CHROMATOGRAPHY				MCL	E300.0 MOD	Units: mg/kg-dry	
Bromide	ND		6.22	1	06/17/09 20:05	BDG	5073749
Chloride	ND		6.22	1	06/17/09 20:05	BDG	5073749
Fluoride	13.4		6.22	1	06/17/09 20:05	BDG	5073749
Ortho-phosphate (As P)	ND		6.22	1	06/19/09 23:09	BDG	5076756
Sulfate	187		6.22	1	06/17/09 20:05	BDG	5073749
Nitrogen,Nitrate (As N)	ND		6.22	1	06/17/09 20:05	BDG	5073689
Nitrogen,Nitrite (As N)	ND		6.22	1	06/17/09 20:05	BDG	5073689

MERCURY, TOTAL				MCL	SW7471A	Units: mg/kg-dry	
Mercury	ND		0.0373	1	06/17/09 15:07	F_S	5071959

Prep Method	Prep Date	Prep Initials	Prep Factor
SW7471A	06/17/2009 12:00	F_S	1.00

METALS BY METHOD 6010B, TOTAL				MCL	SW6010B	Units: mg/kg-dry	
Aluminum	2050		12.4	1	06/18/09 14:25	EG	5073490
Boron	1.48		1.24	1	06/18/09 14:25	EG	5073490
Calcium	1350		12.4	1	06/18/09 14:25	EG	5073490
Iron	3400		1.24	1	06/18/09 14:25	EG	5073490
Magnesium	563		12.4	1	06/18/09 14:25	EG	5073490
Potassium	361		62.2	1	06/18/09 14:25	EG	5073490
Sodium	130		12.4	1	06/19/09 10:57	EG	5075347
Strontium	60.7		0.373	1	06/18/09 14:25	EG	5073490
Tin	ND		0.622	1	06/18/09 14:25	EG	5073490

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3050B	06/18/2009 17:00	AB1	1.00
SW3050B	06/16/2009 10:30	AB1	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-3 (7.5-9) **Collected:** 06/10/2009 13:32 **SPL Sample ID:** 09060712-04

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
METALS BY METHOD 6020A, TOTAL			**MCL**	**SW6020A**	**Units: mg/kg-dry**		
Antimony	ND		0.622	1	06/17/09 23:05	AL_H	5072408
Arsenic	1.51		0.622	1	06/17/09 23:05	AL_H	5072408
Barium	177		0.622	1	06/18/09 13:19	AL_H	5073068
Beryllium	ND		0.498	1	06/18/09 13:19	AL_H	5073068
Cadmium	ND		0.622	1	06/17/09 23:05	AL_H	5072408
Chromium	2.06		0.622	1	06/17/09 23:05	AL_H	5072408
Cobalt	1.63		0.622	1	06/17/09 23:05	AL_H	5072408
Copper	2.99		0.622	1	06/17/09 23:05	AL_H	5072408
Lead	2.51		0.622	1	06/17/09 23:05	AL_H	5072408
Manganese	100		0.622	1	06/18/09 13:19	AL_H	5073068
Molybdenum	ND		0.622	1	06/17/09 23:05	AL_H	5072408
Nickel	2.17		0.622	1	06/17/09 23:05	AL_H	5072408
Selenium	ND		0.622	1	06/17/09 23:05	AL_H	5072408
Silver	ND		0.622	1	06/17/09 23:05	AL_H	5072408
Thallium	ND		0.622	1	06/17/09 23:05	AL_H	5072408
Vanadium	3.84		0.622	1	06/17/09 23:05	AL_H	5072408
Zinc	7.24		1.24	1	06/17/09 23:05	AL_H	5072408

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3050B	06/16/2009 10:30	AB1	1.00

PERCENT MOISTURE			**MCL**	**D2216**	**Units: wt%**		
Percent Moisture	19.6		0	1	06/15/09 17:02	EB1	5068027

SEMIVOLATILE HYDROCARBONS			**MCL**	**SW8015B**	**Units: mg/kg-dry**		
Diesel Range Organics	ND		6.2	1	06/19/09 2:59	NW	5085865
Fuel Oil Range Organics	ND		12	1	06/19/09 2:59	NW	5085865
Hydraulic Fluid Range Organics	ND		12	1	06/19/09 2:59	NW	5085865
Kerosene Range Organics	ND		12	1	06/19/09 2:59	NW	5085865
Mineral Spirits Range Organics	ND		12	1	06/19/09 2:59	NW	5085865
Oil Range Organics	ND		12	1	06/19/09 2:59	NW	5085865
Surr: n-Pentacosane	68.1	%	20-154	1	06/19/09 2:59	NW	5085865

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3550B	06/18/2009 14:12	QMT	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-3 (7.5-9) **Collected:** 06/10/2009 13:32 **SPL Sample ID:** 09060712-04

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
SEMIVOLATILE ORGANICS BY METHOD 8270C			**MCL**	**SW8270C**	**Units: ug/kg-dry**		
1,2,4-Trichlorobenzene	ND		410	1	06/18/09 18:17	GY	5074318
1,2-Dichlorobenzene	ND		410	1	06/18/09 18:17	GY	5074318
1,2-Diphenylhydrazine	ND		410	1	06/18/09 18:17	GY	5074318
1,3-Dichlorobenzene	ND		410	1	06/18/09 18:17	GY	5074318
1,4-Dichlorobenzene	ND		410	1	06/18/09 18:17	GY	5074318
2,4,5-Trichlorophenol	ND		1000	1	06/18/09 18:17	GY	5074318
2,4,6-Trichlorophenol	ND		410	1	06/18/09 18:17	GY	5074318
2,4-Dichlorophenol	ND		410	1	06/18/09 18:17	GY	5074318
2,4-Dimethylphenol	ND		410	1	06/18/09 18:17	GY	5074318
2,4-Dinitrophenol	ND		1000	1	06/18/09 18:17	GY	5074318
2,4-Dinitrotoluene	ND		1000	1	06/18/09 18:17	GY	5074318
2,6-Dinitrotoluene	ND		410	1	06/18/09 18:17	GY	5074318
2-Chloronaphthalene	ND		410	1	06/18/09 18:17	GY	5074318
2-Chlorophenol	ND		410	1	06/18/09 18:17	GY	5074318
2-Methylnaphthalene	ND		410	1	06/18/09 18:17	GY	5074318
2-Nitroaniline	ND		1000	1	06/18/09 18:17	GY	5074318
2-Nitrophenol	ND		410	1	06/18/09 18:17	GY	5074318
3,3'-Dichlorobenzidine	ND		410	1	06/18/09 18:17	GY	5074318
3-Nitroaniline	ND		1000	1	06/18/09 18:17	GY	5074318
4,6-Dinitro-2-methylphenol	ND		1000	1	06/18/09 18:17	GY	5074318
4-Bromophenyl phenyl ether	ND		410	1	06/18/09 18:17	GY	5074318
4-Chloro-3-methylphenol	ND		410	1	06/18/09 18:17	GY	5074318
4-Chloroaniline	ND		410	1	06/18/09 18:17	GY	5074318
4-Chlorophenyl phenyl ether	ND		410	1	06/18/09 18:17	GY	5074318
4-Nitroaniline	ND		1000	1	06/18/09 18:17	GY	5074318
4-Nitrophenol	ND		1000	1	06/18/09 18:17	GY	5074318
Acenaphthene	ND		410	1	06/18/09 18:17	GY	5074318
Acenaphthylene	ND		410	1	06/18/09 18:17	GY	5074318
Aniline	ND		410	1	06/18/09 18:17	GY	5074318
Anthracene	ND		410	1	06/18/09 18:17	GY	5074318
Benz(a)anthracene	ND		410	1	06/18/09 18:17	GY	5074318
Benzo(a)pyrene	ND		410	1	06/18/09 18:17	GY	5074318
Benzo(b)fluoranthene	ND		410	1	06/18/09 18:17	GY	5074318
Benzo(g,h,i)perylene	ND		410	1	06/18/09 18:17	GY	5074318
Benzo(k)fluoranthene	ND		410	1	06/18/09 18:17	GY	5074318
Benzoic acid	ND		2000	1	06/18/09 18:17	GY	5074318
Benzyl alcohol	ND		410	1	06/18/09 18:17	GY	5074318
Bis(2-chloroethoxy)methane	ND		410	1	06/18/09 18:17	GY	5074318
Bis(2-chloroethyl)ether	ND		410	1	06/18/09 18:17	GY	5074318

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-3 (7.5-9) **Collected:** 06/10/2009 13:32 **SPL Sample ID:** 09060712-04

Site: San Juan County, NM

Analyses/Method	Result	QUAL		Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
Bis(2-chloroisopropyl)ether	ND			410	1	06/18/09 18:17	GY	5074318
Bis(2-ethylhexyl)phthalate	ND			410	1	06/18/09 18:17	GY	5074318
Butyl benzyl phthalate	ND			410	1	06/18/09 18:17	GY	5074318
Carbazole	ND			410	1	06/18/09 18:17	GY	5074318
Chrysene	ND			410	1	06/18/09 18:17	GY	5074318
Dibenz(a,h)anthracene	ND			410	1	06/18/09 18:17	GY	5074318
Dibenzofuran	ND			410	1	06/18/09 18:17	GY	5074318
Diethyl phthalate	ND			410	1	06/18/09 18:17	GY	5074318
Dimethyl phthalate	ND			410	1	06/18/09 18:17	GY	5074318
Di-n-butyl phthalate	ND			410	1	06/18/09 18:17	GY	5074318
Di-n-octyl phthalate	ND			410	1	06/18/09 18:17	GY	5074318
Fluoranthene	ND			410	1	06/18/09 18:17	GY	5074318
Fluorene	ND			410	1	06/18/09 18:17	GY	5074318
Hexachlorobenzene	ND			410	1	06/18/09 18:17	GY	5074318
Hexachlorobutadiene	ND			410	1	06/18/09 18:17	GY	5074318
Hexachlorocyclopentadiene	ND			410	1	06/18/09 18:17	GY	5074318
Hexachloroethane	ND			410	1	06/18/09 18:17	GY	5074318
Indeno(1,2,3-cd)pyrene	ND			410	1	06/18/09 18:17	GY	5074318
Isophorone	ND			410	1	06/18/09 18:17	GY	5074318
Naphthalene	ND			410	1	06/18/09 18:17	GY	5074318
Nitrobenzene	ND			410	1	06/18/09 18:17	GY	5074318
N-Nitrosodi-n-propylamine	ND			410	1	06/18/09 18:17	GY	5074318
N-Nitrosodiphenylamine	ND			410	1	06/18/09 18:17	GY	5074318
Pentachlorophenol	ND			1000	1	06/18/09 18:17	GY	5074318
Phenanthrene	ND			410	1	06/18/09 18:17	GY	5074318
Phenol	ND			410	1	06/18/09 18:17	GY	5074318
Pyrene	ND			410	1	06/18/09 18:17	GY	5074318
Pyridine	ND			410	1	06/18/09 18:17	GY	5074318
2-Methylphenol	ND			410	1	06/18/09 18:17	GY	5074318
3 & 4-Methylphenol	ND			410	1	06/18/09 18:17	GY	5074318
Surr: 2,4,6-Tribromophenol	111		%	19-135	1	06/18/09 18:17	GY	5074318
Surr: 2-Fluorobiphenyl	84.1		%	15-140	1	06/18/09 18:17	GY	5074318
Surr: 2-Fluorophenol	76.8		%	15-122	1	06/18/09 18:17	GY	5074318
Surr: Nitrobenzene-d5	69.4		%	10-134	1	06/18/09 18:17	GY	5074318
Surr: Phenol-d5	76.0		%	10-123	1	06/18/09 18:17	GY	5074318
Surr: Terphenyl-d14	83.5		%	18-166	1	06/18/09 18:17	GY	5074318

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3550C	06/15/2009 10:31	FAK	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-3 (7.5-9) **Collected:** 06/10/2009 13:32 **SPL Sample ID:** 09060712-04

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
TOTAL PETROLEUM HYDROCARBONS				**MCL**	**E418.1**	**Units: mg/kg-dry**	
Petroleum Hydrocarbons,TR	ND		12	1	06/15/09 15:24	LLL	5067480

Prep Method	Prep Date	Prep Initials	Prep Factor
	06/15/2009 11:10		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-3 (7.5-9) **Collected:** 06/10/2009 13:32 **SPL Sample ID:** 09060712-04

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			**MCL**	**SW8260B**	**Units: ug/kg-dry**		
1,1,1,2-Tetrachloroethane	ND		6.2	1	06/15/09 19:17	E_G	5068522
1,1,1-Trichloroethane	ND		6.2	1	06/15/09 19:17	E_G	5068522
1,1,2,2-Tetrachloroethane	ND		6.2	1	06/15/09 19:17	E_G	5068522
1,1,2-Trichloroethane	ND		6.2	1	06/15/09 19:17	E_G	5068522
1,1-Dichloroethane	ND		6.2	1	06/15/09 19:17	E_G	5068522
1,1-Dichloroethene	ND		6.2	1	06/15/09 19:17	E_G	5068522
1,1-Dichloropropene	ND		6.2	1	06/15/09 19:17	E_G	5068522
1,2,3-Trichlorobenzene	ND		6.2	1	06/15/09 19:17	E_G	5068522
1,2,3-Trichloropropane	ND		6.2	1	06/15/09 19:17	E_G	5068522
1,2,4-Trichlorobenzene	ND		6.2	1	06/15/09 19:17	E_G	5068522
1,2,4-Trimethylbenzene	ND		6.2	1	06/15/09 19:17	E_G	5068522
1,2-Dibromo-3-chloropropane	ND		6.2	1	06/15/09 19:17	E_G	5068522
1,2-Dibromoethane	ND		6.2	1	06/15/09 19:17	E_G	5068522
1,2-Dichlorobenzene	ND		6.2	1	06/15/09 19:17	E_G	5068522
1,2-Dichloroethane	ND		6.2	1	06/15/09 19:17	E_G	5068522
1,2-Dichloropropane	ND		6.2	1	06/15/09 19:17	E_G	5068522
1,3,5-Trimethylbenzene	ND		6.2	1	06/15/09 19:17	E_G	5068522
1,3-Dichlorobenzene	ND		6.2	1	06/15/09 19:17	E_G	5068522
1,3-Dichloropropane	ND		6.2	1	06/15/09 19:17	E_G	5068522
1,4-Dichlorobenzene	ND		6.2	1	06/15/09 19:17	E_G	5068522
2,2-Dichloropropane	ND		6.2	1	06/15/09 19:17	E_G	5068522
2-Butanone	ND		25	1	06/15/09 19:17	E_G	5068522
2-Chloroethyl vinyl ether	ND		12	1	06/15/09 19:17	E_G	5068522
2-Chlorotoluene	ND		6.2	1	06/15/09 19:17	E_G	5068522
2-Hexanone	ND		12	1	06/15/09 19:17	E_G	5068522
4-Chlorotoluene	ND		6.2	1	06/15/09 19:17	E_G	5068522
4-Isopropyltoluene	ND		6.2	1	06/15/09 19:17	E_G	5068522
4-Methyl-2-pentanone	ND		12	1	06/15/09 19:17	E_G	5068522
Acetone	ND		120	1	06/15/09 19:17	E_G	5068522
Acrylonitrile	ND		62	1	06/15/09 19:17	E_G	5068522
Benzene	ND		6.2	1	06/15/09 19:17	E_G	5068522
Bromobenzene	ND		6.2	1	06/15/09 19:17	E_G	5068522
Bromochloromethane	ND		6.2	1	06/15/09 19:17	E_G	5068522
Bromodichloromethane	ND		6.2	1	06/15/09 19:17	E_G	5068522
Bromoform	ND		6.2	1	06/15/09 19:17	E_G	5068522
Bromomethane	ND		12	1	06/15/09 19:17	E_G	5068522
Carbon disulfide	ND		6.2	1	06/15/09 19:17	E_G	5068522
Carbon tetrachloride	ND		6.2	1	06/15/09 19:17	E_G	5068522
Chlorobenzene	ND		6.2	1	06/15/09 19:17	E_G	5068522

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-3 (7.5-9) **Collected:** 06/10/2009 13:32 **SPL Sample ID:** 09060712-04

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
Chloroethane	ND		12	1	06/15/09 19:17	E_G	5068522
Chloroform	ND		6.2	1	06/15/09 19:17	E_G	5068522
Chloromethane	ND		12	1	06/15/09 19:17	E_G	5068522
Dibromochloromethane	ND		6.2	1	06/15/09 19:17	E_G	5068522
Dibromomethane	ND		6.2	1	06/15/09 19:17	E_G	5068522
Dichlorodifluoromethane	ND		12	1	06/15/09 19:17	E_G	5068522
Ethylbenzene	ND		6.2	1	06/15/09 19:17	E_G	5068522
Hexachlorobutadiene	ND		6.2	1	06/15/09 19:17	E_G	5068522
Isopropylbenzene	ND		6.2	1	06/15/09 19:17	E_G	5068522
Methyl tert-butyl ether	ND		6.2	1	06/15/09 19:17	E_G	5068522
Methylene chloride	ND		6.2	1	06/15/09 19:17	E_G	5068522
Naphthalene	ND		6.2	1	06/15/09 19:17	E_G	5068522
n-Butylbenzene	ND		6.2	1	06/15/09 19:17	E_G	5068522
n-Propylbenzene	ND		6.2	1	06/15/09 19:17	E_G	5068522
sec-Butylbenzene	ND		6.2	1	06/15/09 19:17	E_G	5068522
Styrene	ND		6.2	1	06/15/09 19:17	E_G	5068522
tert-Butylbenzene	ND		6.2	1	06/15/09 19:17	E_G	5068522
Tetrachloroethene	ND		6.2	1	06/15/09 19:17	E_G	5068522
Toluene	ND		6.2	1	06/15/09 19:17	E_G	5068522
Trichloroethene	ND		6.2	1	06/15/09 19:17	E_G	5068522
Trichlorofluoromethane	ND		6.2	1	06/15/09 19:17	E_G	5068522
Vinyl acetate	ND		12	1	06/15/09 19:17	E_G	5068522
Vinyl chloride	ND		12	1	06/15/09 19:17	E_G	5068522
cis-1,2-Dichloroethene	ND		6.2	1	06/15/09 19:17	E_G	5068522
cis-1,3-Dichloropropene	ND		6.2	1	06/15/09 19:17	E_G	5068522
m,p-Xylene	ND		6.2	1	06/15/09 19:17	E_G	5068522
o-Xylene	ND		6.2	1	06/15/09 19:17	E_G	5068522
trans-1,2-Dichloroethene	ND		6.2	1	06/15/09 19:17	E_G	5068522
trans-1,3-Dichloropropene	ND		6.2	1	06/15/09 19:17	E_G	5068522
Xylenes,Total	ND		6.2	1	06/15/09 19:17	E_G	5068522
1,2-Dichloroethene (total)	ND		6.2	1	06/15/09 19:17	E_G	5068522
Surr: 1,2-Dichloroethane-d4	99.0		% 71-130	1	06/15/09 19:17	E_G	5068522
Surr: 4-Bromofluorobenzene	101		% 65-131	1	06/15/09 19:17	E_G	5068522
Surr: Toluene-d8	105		% 75-136	1	06/15/09 19:17	E_G	5068522

Prep Method	Prep Date	Prep Initials	Prep Factor
SW5030B	06/13/2009 11:16	E_G	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

Quality Control Documentation

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Total Petroleum Hydrocarbons
Method: E418.1
WorkOrder: 09060712
Lab Batch ID: R275474

Method Blank

RunID: EX_090615C-5067473 Units: mg/kg
Analysis Date: 06/15/2009 15:24 Analyst: LLL
Preparation Date: 06/15/2009 11:10 Prep By: Method:

Analyte	Result	Rep Limit
Petroleum Hydrocarbons,TR	ND	10

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09060712-01B	(7-8.5) MW-2
09060712-02B	MW-4 (12.5-14)
09060712-03B	MW-3 (12.5-14)
09060712-04B	MW-3 (7.5-9)

Laboratory Control Sample (LCS)

RunID: EX_090615C-5067474 Units: mg/kg
Analysis Date: 06/15/2009 15:24 Analyst: LLL
Preparation Date: 06/15/2009 11:10 Prep By: Method:

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Petroleum Hydrocarbons,TR	200	195	97.5	80	120

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

Sample Spiked: 09060712-01
RunID: EX_090615C-5067481 Units: mg/kg-dry
Analysis Date: 06/15/2009 15:24 Analyst: LLL
Preparation Date: 06/15/2009 11:10 Prep By: Method:

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Petroleum Hydrocarbons,TR	12.6	252	240	90.0	252	246	92.5	2.60	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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Semivolatile Hydrocarbons
Method: SW8015B
WorkOrder: 09060712
Lab Batch ID: 91215

Method Blank

RunID: HP_V_090618D-5085858 Units: mg/kg
Analysis Date: 06/19/2009 0:38 Analyst: NW
Preparation Date: 06/18/2009 14:12 Prep By: QMT Method: SW3550B

Analyte	Result	Rep Limit
Diesel Range Organics	ND	5.0
Fuel Oil Range Organics	ND	10
Hydraulic Fluid Range Organics	ND	10
Kerosene Range Organics	ND	10
Mineral Spirits Range Organics	ND	10
Oil Range Organics	ND	10
Surr: n-Pentacosane	120.8	20-154

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09060712-01B	(7-8.5) MW-2
09060712-02B	MW-4 (12.5-14)
09060712-03B	MW-3 (12.5-14)
09060712-04B	MW-3 (7.5-9)

Laboratory Control Sample (LCS)

RunID: HP_V_090618D-5085859 Units: mg/kg
Analysis Date: 06/19/2009 0:58 Analyst: NW
Preparation Date: 06/18/2009 14:12 Prep By: QMT Method: SW3550B

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Diesel Range Organics	16.6	19.6	118	57	150
Surr: n-Pentacosane	1.66	0.934	56.3	20	154

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

Sample Spiked: 09060712-01
RunID: HP_V_090618D-5085861 Units: mg/kg-dry
Analysis Date: 06/19/2009 1:38 Analyst: NW
Preparation Date: 06/18/2009 14:12 Prep By: QMT Method: SW3550B

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Diesel Range Organics	ND	21	23.5	112	42	34.3	81.6	37.3	50	21	175
Surr: n-Pentacosane	ND	1.05	1.15	109	2.09	1.94	92.5	51.1 *	30	20	154

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Gasoline Range Organics
Method: SW8015B

WorkOrder: 09060712
Lab Batch ID: R275951

Method Blank

RunID: HP_R_090619A-5075619 Units: mg/kg
Analysis Date: 06/19/2009 10:29 Analyst: WLV
Preparation Date: 06/19/2009 10:29 Prep By: Method: SW5030B

Analyte	Result	Rep Limit
Gasoline Range Organics	ND	0.10
Surr: 1,4-Difluorobenzene	98.8	63-142
Surr: 4-Bromofluorobenzene	99.7	50-159

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09060712-01B	(7-8.5) MW-2
09060712-02A	MW-4 (12.5-14)
09060712-03B	MW-3 (12.5-14)
09060712-04B	MW-3 (7.5-9)

Laboratory Control Sample (LCS)

RunID: HP_R_090619A-5075618 Units: mg/kg
Analysis Date: 06/19/2009 9:31 Analyst: WLV
Preparation Date: 06/19/2009 9:31 Prep By: Method: SW5030B

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Gasoline Range Organics	1.00	1.01	101	70	130
Surr: 1,4-Difluorobenzene	0.100	0.106	106	63	142
Surr: 4-Bromofluorobenzene	0.100	0.104	104	50	159

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

Sample Spiked: 09060712-04
RunID: HP_R_090619A-5075626 Units: mg/kg-dry
Analysis Date: 06/19/2009 15:11 Analyst: WLV
Preparation Date: 06/18/2009 19:32 Prep By: JWS Method: SW5030B

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	ND	1.24	1.13	90.5	1.24	1.18	95.0	4.77	50	26	147
Surr: 1,4-Difluorobenzene	ND	0.124	0.132	106	0.124	0.131	105	0.379	30	63	142
Surr: 4-Bromofluorobenzene	ND	0.124	0.132	106	0.124	0.131	105	0.662	30	50	159

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Metals by Method 6010B, Total
Method: SW6010B
WorkOrder: 09060712
Lab Batch ID: 91142

Method Blank

RunID: ICP2_090618A-5073478 Units: mg/kg
Analysis Date: 06/18/2009 13:34 Analyst: EG
Preparation Date: 06/16/2009 10:30 Prep By: AB1 Method: SW3050B

Analyte	Result	Rep Limit
Aluminum	ND	10
Boron	ND	1
Calcium	ND	10
Iron	ND	1
Magnesium	ND	10
Potassium	ND	50
Strontium	ND	0.3
Tin	ND	0.5

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09060712-01C	(7-8.5) MW-2
09060712-02B	MW-4 (12.5-14)
09060712-03B	MW-3 (12.5-14)
09060712-04C	MW-3 (7.5-9)

Laboratory Control Sample (LCS)

RunID: ICP2_090618A-5073479 Units: mg/kg
Analysis Date: 06/18/2009 13:38 Analyst: EG
Preparation Date: 06/16/2009 10:30 Prep By: AB1 Method: SW3050B

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Aluminum	7590	5812	76.57	58	142
Boron	96.60	81.41	84.28	56	144
Calcium	4320	4010	92.82	79	121
Iron	14400	11170	77.57	52	149
Magnesium	2220	1922	86.58	77	123
Potassium	2380	2216	93.11	71	129
Strontium	113.0	106.4	94.16	80	120
Tin	175.0	155.2	88.69	70	130

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

Sample Spiked: 09060712-03
RunID: ICP2_090618A-5073484 Units: mg/kg-dry
Analysis Date: 06/18/2009 14:00 Analyst: EG

Analyte	Sample Result	PDS Spike Added	PDS Result	PDS % Recovery	PDSD Spike Added	PDSD Result	PDSD % Recovery	RPD	RPD Limit	Low Limit	High Limit

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Metals by Method 6010B, Total **WorkOrder:** 09060712
Method: SW6010B **Lab Batch ID:** 91142

Potassium	534	1131.2	1837	115.2	1131.2	1843	115.7	0.3074	20	75	125

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

Sample Spiked: 09060712-03
RunID: ICP2_090618A-5073481 Units: mg/kg-dry
Analysis Date: 06/18/2009 13:47 Analyst: EG
Preparation Date: 06/16/2009 10:30 Prep By: AB1 Method: SW3050B

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Aluminum	3016	113.1	6673	N/C	113.1	5810	N/C	N/C	20	75	125
Boron	1.934	113.1	100.3	86.92	113.1	101.3	87.82	1.010	20	75	125
Calcium	3937	113.1	3497	N/C	113.1	2902	N/C	N/C	20	75	125
Iron	4949	113.1	6889	N/C	113.1	5926	N/C	N/C	20	75	125
Magnesium	834.7	113.1	1393	N/C	113.1	1164	N/C	N/C	20	75	125
Potassium	533.9	1131	2015	130.9 *	1131	1922	122.7	4.713	20	75	125
Strontium	73.97	113.1	205.0	115.8	113.1	181.0	94.61	12.43	20	75	125
Tin	0.8710	113.1	110.1	96.56	113.1	109.2	95.77	0.8150	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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Metals by Method 6020A, Total
Method: SW6020A
WorkOrder: 09060712
Lab Batch ID: 91142A-I

Method Blank

RunID: ICPMS_090618A-5073056 Units: mg/kg
Analysis Date: 06/18/2009 12:20 Analyst: AL_H
Preparation Date: 06/16/2009 10:30 Prep By: AB1 Method: SW3050B

Analyte	Result	Rep Limit
Barium	ND	0.5
Beryllium	ND	0.4
Manganese	ND	0.5

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09060712-01C	(7-8.5) MW-2
09060712-02B	MW-4 (12.5-14)
09060712-03B	MW-3 (12.5-14)
09060712-04C	MW-3 (7.5-9)

Laboratory Control Sample (LCS)

RunID: ICPMS_090618A-5073057 Units: mg/kg
Analysis Date: 06/18/2009 12:25 Analyst: AL_H
Preparation Date: 06/16/2009 10:30 Prep By: AB1 Method: SW3050B

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Barium	156.0	136.1	87.24	82	119
Beryllium	143.0	143.9	100.6	82	118
Manganese	304.0	278.5	91.61	80	120

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

Sample Spiked: 09060712-03
RunID: ICPMS_090618A-5073059 Units: mg/kg-dry
Analysis Date: 06/18/2009 12:35 Analyst: AL_H
Preparation Date: 06/16/2009 10:30 Prep By: AB1 Method: SW3050B

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Barium	145.1	11.31	131.9	N/C	11.31	171.6	N/C	N/C	20	75	125
Beryllium	ND	11.31	9.224	79.13	11.31	9.245	79.32	0.2327	20	75	125
Manganese	192.8	11.31	183.1	N/C	11.31	153.5	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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Metals by Method 6020A, Total
Method: SW6020A
WorkOrder: 09060712
Lab Batch ID: 91142-I

Method Blank

RunID: ICPMS_090617A-5072396 Units: mg/kg
Analysis Date: 06/17/2009 22:05 Analyst: AL_H
Preparation Date: 06/16/2009 10:30 Prep By: AB1 Method: SW3050B

Analyte	Result	Rep Limit
Antimony	ND	0.5
Arsenic	ND	0.5
Cadmium	ND	0.5
Chromium	ND	0.5
Cobalt	ND	0.5
Copper	ND	0.5
Lead	ND	0.5
Molybdenum	ND	0.5
Nickel	ND	0.5
Selenium	ND	0.5
Silver	ND	0.5
Thallium	ND	0.5
Vanadium	ND	0.5
Zinc	ND	1

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09060712-01C	(7-8.5) MW-2
09060712-02B	MW-4 (12.5-14)
09060712-03B	MW-3 (12.5-14)
09060712-04C	MW-3 (7.5-9)

Laboratory Control Sample (LCS)

RunID: ICPMS_090617A-5072397 Units: mg/kg
Analysis Date: 06/17/2009 22:10 Analyst: AL_H
Preparation Date: 06/16/2009 10:30 Prep By: AB1 Method: SW3050B

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Antimony	77.50	55.56	71.69	30	223
Arsenic	80.90	78.30	96.79	79	121
Cadmium	233.0	231.8	99.48	81	119
Chromium	60.80	59.58	97.99	78	121
Cobalt	68.60	68.90	100.4	82	118
Copper	131.0	130.9	99.92	79	118
Lead	76.80	71.35	92.90	81	120
Molybdenum	58.40	55.00	94.18	79	121
Nickel	49.60	51.70	104.2	81	119
Selenium	82.90	89.06	107.4	76	124
Silver	80.00	85.50	106.9	61	139
Thallium	158.0	152.8	96.71	76	125
Vanadium	72.40	63.90	88.26	71	128
Zinc	116.0	106.8	92.07	78	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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips
Randleman #1

Analysis: Metals by Method 6020A, Total
Method: SW6020A
WorkOrder: 09060712
Lab Batch ID: 91142-I

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

Sample Spiked: 09060712-03
RunID: ICPMS_090617A-5072402 Units: mg/kg-dry
Analysis Date: 06/17/2009 22:35 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
Antimony	ND	11.312	11.2	99.04	11.312	11.23	99.27	0.2320	20	75	125
Zinc	12.6	11.312	22.56	87.80	11.312	22.41	86.50	0.6541	20	75	125

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

Sample Spiked: 09060712-03
RunID: ICPMS_090617A-5072399 Units: mg/kg-dry
Analysis Date: 06/17/2009 22:20 Analyst: AL_H
Preparation Date: 06/16/2009 10:30 Prep By: AB1 Method: SW3050B

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Antimony	ND	11.31	3.736	33.03 *	11.31	3.700	32.71 *	0.9735	20	75	125
Arsenic	1.898	11.31	11.43	84.22	11.31	12.06	89.82	5.395	20	75	125
Cadmium	ND	11.31	9.995	88.36	11.31	10.23	90.41	2.293	20	75	125
Chromium	3.928	11.31	13.81	87.38	11.31	14.77	95.88	6.727	20	75	125
Cobalt	2.483	11.31	12.22	86.05	11.31	12.33	87.05	0.9217	20	75	125
Copper	5.768	11.31	14.56	77.71	11.31	14.49	77.11	0.4673	20	75	125
Lead	4.259	11.31	14.04	86.45	11.31	13.96	85.75	0.5657	20	75	125
Molybdenum	ND	11.31	9.193	78.16	11.31	9.592	81.68	4.239	20	75	125
Nickel	3.368	11.31	13.10	86.03	11.31	13.02	85.33	0.6063	20	75	125
Selenium	ND	11.31	9.426	80.77	11.31	10.24	87.95	8.260	20	75	125
Silver	ND	11.31	10.77	95.24	11.31	11.06	97.73	2.581	20	75	125
Thallium	ND	11.31	9.719	84.63	11.31	9.984	86.97	2.687	20	75	125
Vanadium	6.285	11.31	16.13	87.04	11.31	15.67	82.94	2.917	20	75	125
Zinc	12.62	11.31	20.23	67.20 *	11.31	19.10	57.20 *	5.754	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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Mercury, Total
Method: SW7471A

WorkOrder: 09060712
Lab Batch ID: 91177

Method Blank

RunID: HGLC_090617A-5071953 Units: mg/kg
Analysis Date: 06/17/2009 14:52 Analyst: F_S
Preparation Date: 06/17/2009 12:00 Prep By: F_S Method: SW7471A

Analyte	Result	Rep Limit
Mercury	ND	0.03

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09060712-01C	(7-8.5) MW-2
09060712-02B	MW-4 (12.5-14)
09060712-03B	MW-3 (12.5-14)
09060712-04C	MW-3 (7.5-9)

Laboratory Control Sample (LCS)

RunID: HGLC_090617A-5071954 Units: mg/kg
Analysis Date: 06/17/2009 14:54 Analyst: F_S
Preparation Date: 06/17/2009 12:00 Prep By: F_S Method: SW7471A

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Mercury	3.600	3.889	108.0	68	132

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

Sample Spiked: 09060712-01
RunID: HGLC_090617A-5071956 Units: mg/kg-dry
Analysis Date: 06/17/2009 15:00 Analyst: F_S
Preparation Date: 06/17/2009 12:00 Prep By: F_S Method: SW7471A

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	0.3783	0.4106	104.9	0.3783	0.4038	103.1	1.667	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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Metals by Method 6010B, Total
Method: SW6010B
WorkOrder: 09060712
Lab Batch ID: 91242

Method Blank

RunID: ICP2_090619A-5075370 Units: mg/kg
Analysis Date: 06/19/2009 12:59 Analyst: EG
Preparation Date: 06/18/2009 17:00 Prep By: AB1 Method: SW3050B

Analyte	Result	Rep Limit
Sodium	ND	10

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09060712-01C	(7-8.5) MW-2
09060712-02B	MW-4 (12.5-14)
09060712-03B	MW-3 (12.5-14)
09060712-04C	MW-3 (7.5-9)

Laboratory Control Sample (LCS)

RunID: ICP2_090619A-5075336 Units: mg/kg
Analysis Date: 06/19/2009 10:10 Analyst: EG
Preparation Date: 06/18/2009 17:00 Prep By: AB1 Method: SW3050B

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Sodium	456.0	477.5	104.7	56	144

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

Sample Spiked: 09060712-03
RunID: ICP2_090619A-5075341 Units: mg/kg-dry
Analysis Date: 06/19/2009 10:32 Analyst: EG

Analyte	Sample Result	PDS Spike Added	PDS Result	PDS % Recovery	PDSD Spike Added	PDSD Result	PDSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Sodium	262	113.12	352.9	80.40	113.12	352.3	79.80	0.1925	20	75	125

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

Sample Spiked: 09060712-03
RunID: ICP2_090619A-5075338 Units: mg/kg-dry
Analysis Date: 06/19/2009 10:19 Analyst: EG
Preparation Date: 06/18/2009 17:00 Prep By: AB1 Method: SW3050B

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	262.0	113.1	317.6	49.20 *	113.1	326.2	56.80 *	2.670	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

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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis:	**Metals by Method 6010B, Total**	**WorkOrder:**	**09060712**
Method:	**SW6010B**	**Lab Batch ID:**	**91242**

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
- MI - Matrix Interference
- D - Recovery Unreportable due to Dilution
- * - Recovery Outside Advisable QC Limits
- 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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Semivolatile Organics by Method 8270C
Method: SW8270C
WorkOrder: 09060712
Lab Batch ID: 91075b

Method Blank

RunID: H_090618C-5073119 Units: ug/kg
Analysis Date: 06/18/2009 12:45 Analyst: GY
Preparation Date: 06/15/2009 10:31 Prep By: FAK Method: SW3550C

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09060712-01B	(7-8.5) MW-2
09060712-02B	MW-4 (12.5-14)
09060712-03B	MW-3 (12.5-14)
09060712-04B	MW-3 (7.5-9)

Analyte	Result	Rep Limit
1,2,4-Trichlorobenzene	ND	330
1,2-Dichlorobenzene	ND	330
1,2-Diphenylhydrazine	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
2,4,5-Trichlorophenol	ND	800
2,4,6-Trichlorophenol	ND	330
2,4-Dichlorophenol	ND	330
2,4-Dimethylphenol	ND	330
2,4-Dinitrophenol	ND	800
2,4-Dinitrotoluene	ND	800
2,6-Dinitrotoluene	ND	330
2-Chloronaphthalene	ND	330
2-Chlorophenol	ND	330
2-Methylnaphthalene	ND	330
2-Nitroaniline	ND	800
2-Nitrophenol	ND	330
3,3'-Dichlorobenzidine	ND	330
3-Nitroaniline	ND	800
4,6-Dinitro-2-methylphenol	ND	800
4-Bromophenyl phenyl ether	ND	330
4-Chloro-3-methylphenol	ND	330
4-Chloroaniline	ND	330
4-Chlorophenyl phenyl ether	ND	330
4-Nitroaniline	ND	800
4-Nitrophenol	ND	800
Acenaphthene	ND	330
Acenaphthylene	ND	330
Aniline	ND	330
Anthracene	ND	330
Benz(a)anthracene	ND	330
Benzo(a)pyrene	ND	330
Benzo(b)fluoranthene	ND	330
Benzo(g,h,i)perylene	ND	330
Benzo(k)fluoranthene	ND	330
Benzoic acid	ND	1600
Benzyl alcohol	ND	330
Bis(2-chloroethoxy)methane	ND	330
Bis(2-chloroethyl)ether	ND	330
Bis(2-chloroisopropyl)ether	ND	330
Bis(2-ethylhexyl)phthalate	ND	330
Butyl benzyl phthalate	ND	330
Carbazole	ND	330
Chrysene	ND	330
Dibenz(a,h)anthracene	ND	330
Dibenzofuran	ND	330

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Semivolatile Organics by Method 8270C
Method: SW8270C
WorkOrder: 09060712
Lab Batch ID: 91075b

Method Blank

RunID: H_090618C-5073119 Units: ug/kg
Analysis Date: 06/18/2009 12:45 Analyst: GY
Preparation Date: 06/15/2009 10:31 Prep By: FAK Method: SW3550C

Analyte	Result	Rep Limit
Diethyl phthalate	ND	330
Dimethyl phthalate	ND	330
Di-n-butyl phthalate	ND	330
Di-n-octyl phthalate	ND	330
Fluoranthene	ND	330
Fluorene	ND	330
Hexachlorobenzene	ND	330
Hexachlorobutadiene	ND	330
Hexachlorocyclopentadiene	ND	330
Hexachloroethane	ND	330
Indeno(1,2,3-cd)pyrene	ND	330
Isophorone	ND	330
Naphthalene	ND	330
Nitrobenzene	ND	330
N-Nitrosodi-n-propylamine	ND	330
N-Nitrosodiphenylamine	ND	330
Pentachlorophenol	ND	800
Phenanthrene	ND	330
Phenol	ND	330
Pyrene	ND	330
Pyridine	ND	330
2-Methylphenol	ND	330
3 & 4-Methylphenol	ND	330
Surr: 2,4,6-Tribromophenol	100.8	19-135
Surr: 2-Fluorobiphenyl	74.7	15-140
Surr: 2-Fluorophenol	67.6	15-122
Surr: Nitrobenzene-d5	60.6	10-134
Surr: Phenol-d5	66.4	10-123
Surr: Terphenyl-d14	81.8	18-166

Laboratory Control Sample (LCS)

RunID: H_090618C-5073120 Units: ug/kg
Analysis Date: 06/18/2009 13:17 Analyst: GY
Preparation Date: 06/15/2009 10:31 Prep By: FAK Method: SW3550C

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,2,4-Trichlorobenzene	850	781	91.9	34	116
1,2-Dichlorobenzene	850	685	80.6	32	129
1,2-Diphenylhydrazine	850	560	65.9	10	256

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Semivolatile Organics by Method 8270C **WorkOrder:** 09060712
Method: SW8270C **Lab Batch ID:** 91075b

Laboratory Control Sample (LCS)

RunID: H_090618C-5073120 Units: ug/kg
Analysis Date: 06/18/2009 13:17 Analyst: GY
Preparation Date: 06/15/2009 10:31 Prep By: FAK Method: SW3550C

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,3-Dichlorobenzene	850	678	79.8	10	172
1,4-Dichlorobenzene	850	671	78.9	20	124
2,4,5-Trichlorophenol	850	868	102	40	150
2,4,6-Trichlorophenol	850	886	104	37	144
2,4-Dichlorophenol	850	822	96.7	39	135
2,4-Dimethylphenol	850	736	86.6	32	119
2,4-Dinitrophenol	850	912	107	10	191
2,4-Dinitrotoluene	850	881	104	30	150
2,6-Dinitrotoluene	850	836	98.4	30	150
2-Chloronaphthalene	850	729	85.8	20	175
2-Chlorophenol	850	720	84.7	23	134
2-Methylnaphthalene	850	772	90.8	30	135
2-Nitroaniline	850	577	67.9	20	175
2-Nitrophenol	850	791	93.1	29	182
3,3'-Dichlorobenzidine	850	739	86.9	10	261
3-Nitroaniline	850	751	88.4	20	175
4,6-Dinitro-2-methylphenol	850	832	97.9	10	181
4-Bromophenyl phenyl ether	850	807	94.9	20	175
4-Chloro-3-methylphenol	850	838	98.6	22	147
4-Chloroaniline	850	762	89.6	20	175
4-Chlorophenyl phenyl ether	850	851	100	25	158
4-Nitroaniline	850	746	87.8	20	175
4-Nitrophenol	850	572	67.3	10	132
Acenaphthene	850	750	88.2	30	160
Acenaphthylene	850	784	92.2	10	150
Aniline	1700	1120	65.9	10	160
Anthracene	850	760	89.4	27	133
Benz(a)anthracene	850	758	89.2	33	143
Benzo(a)pyrene	850	690	81.2	17	163
Benzo(b)fluoranthene	850	780	91.8	24	159
Benzo(g,h,i)perylene	850	852	100	10	219
Benzo(k)fluoranthene	850	722	84.9	11	162
Benzoic acid	850	752	88.5	10	450
Benzyl alcohol	850	708	83.3	30	160

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Semivolatile Organics by Method 8270C **WorkOrder:** 09060712
Method: SW8270C **Lab Batch ID:** 91075b

Laboratory Control Sample (LCS)

RunID: H_090618C-5073120 Units: ug/kg
Analysis Date: 06/18/2009 13:17 Analyst: GY
Preparation Date: 06/15/2009 10:31 Prep By: FAK Method: SW3550C

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Bis(2-chloroethoxy)methane	850	640	75.3	33	184
Bis(2-chloroethyl)ether	850	608	71.5	28	158
Bis(2-chloroisopropyl)ether	850	471	55.4	36	166
Bis(2-ethylhexyl)phthalate	850	799	94.0	10	158
Butyl benzyl phthalate	850	761	89.5	10	152
Carbazole	850	736	86.6	45	135
Chrysene	850	759	89.3	17	168
Dibenz(a,h)anthracene	850	855	101	10	227
Dibenzofuran	850	792	93.2	30	160
Diethyl phthalate	850	805	94.7	10	160
Dimethyl phthalate	850	819	96.4	10	112
Di-n-butyl phthalate	850	775	91.2	10	118
Di-n-octyl phthalate	850	733	86.2	10	146
Fluoranthene	850	795	93.5	26	137
Fluorene	850	789	92.8	35	135
Hexachlorobenzene	850	854	100	10	152
Hexachlorobutadiene	850	799	94.0	20	140
Hexachlorocyclopentadiene	850	331	38.9	10	152
Hexachloroethane	850	593	69.8	25	118
Indeno(1,2,3-cd)pyrene	850	984	116	10	171
Isophorone	850	723	85.1	21	196
Naphthalene	850	727	85.5	21	133
Nitrobenzene	850	587	69.1	35	180
N-Nitrosodi-n-propylamine	850	515	60.6	10	230
N-Nitrosodiphenylamine	1700	1760	104	30	160
Pentachlorophenol	850	859	101	14	176
Phenanthrene	850	763	89.8	35	135
Phenol	850	675	79.4	44	120
Pyrene	850	802	94.4	34	138
Pyridine	1700	993	58.4	10	150
2-Methylphenol	850	699	82.2	40	160
3 & 4-Methylphenol	850	642	75.5	40	160
Surr: 2,4,6-Tribromophenol	2500	3350	134	19	135
Surr: 2-Fluorobiphenyl	1700	1680	98.8	15	140

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Semivolatile Organics by Method 8270C
Method: SW8270C
WorkOrder: 09060712
Lab Batch ID: 91075b

Laboratory Control Sample (LCS)

RunID: H_090618C-5073120 Units: ug/kg
Analysis Date: 06/18/2009 13:17 Analyst: GY
Preparation Date: 06/15/2009 10:31 Prep By: FAK Method: SW3550C

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Surr: 2-Fluorophenol	2500	2200	88.0	15	122
Surr: Nitrobenzene-d5	1700	1370	80.6	32	153
Surr: Phenol-d5	2500	2180	87.2	10	123
Surr: Terphenyl-d14	1700	1780	105	18	166

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

Sample Spiked: 09060712-04
RunID: H_090618C-5074319 Units: ug/kg-dry
Analysis Date: 06/18/2009 18:51 Analyst: GY
Preparation Date: 06/15/2009 10:31 Prep By: FAK Method: SW3550C

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
1,2,4-Trichlorobenzene	ND	1060	734	69.4	1060	979	92.6	28.6 *	28	34	116
1,2-Dichlorobenzene	ND	1060	663	62.7	1060	862	81.5	26.1	60	32	129
1,2-Diphenylhydrazine	ND	1060	471	44.6	1060	633	59.9	29.3	60	10	256
1,3-Dichlorobenzene	ND	1060	663	62.7	1060	856	80.9	25.4	60	10	172
1,4-Dichlorobenzene	ND	1060	647	61.2	1060	850	80.4	27.1	28	20	124
2,4,5-Trichlorophenol	ND	1060	738	69.8	1060	976	92.4	27.9	60	40	150
2,4,6-Trichlorophenol	ND	1060	728	68.8	1060	980	92.7	29.6	60	37	144
2,4-Dichlorophenol	ND	1060	700	66.2	1060	960	90.8	31.3	60	39	135
2,4-Dimethylphenol	ND	1060	622	58.8	1060	837	79.2	29.5	60	32	119
2,4-Dinitrophenol	ND	1060	716	67.8	1060	990	93.6	32.1	60	10	191
2,4-Dinitrotoluene	ND	1060	708	66.9	1060	980	92.7	32.3	50	30	150
2,6-Dinitrotoluene	ND	1060	682	64.5	1060	922	87.2	29.9	60	30	150
2-Chloronaphthalene	ND	1060	649	61.4	1060	866	81.9	28.6	60	20	175
2-Chlorophenol	ND	1060	662	62.6	1060	882	83.4	28.5	40	23	134
2-Methylnaphthalene	ND	1060	687	64.9	1060	925	87.5	29.6	60	30	135
2-Nitroaniline	ND	1060	478	45.2	1060	654	61.9	31.2	60	20	175
2-Nitrophenol	ND	1060	745	70.5	1060	1030	97.6	32.3	60	29	182
3,3'-Dichlorobenzidine	ND	1060	595	56.2	1060	796	75.3	29.0	60	10	261

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Semivolatile Organics by Method 8270C
Method: SW8270C
WorkOrder: 09060712
Lab Batch ID: 91075b

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

Sample Spiked: 09060712-04
RunID: H_090618C-5074319 Units: ug/kg-dry
Analysis Date: 06/18/2009 18:51 Analyst: GY
Preparation Date: 06/15/2009 10:31 Prep By: FAK Method: SW3550C

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
3-Nitroaniline	ND	1060	662	62.6	1060	898	84.9	30.3	60	20	175
4,6-Dinitro-2-methylphenol	ND	1060	674	63.8	1060	914	86.5	30.2	60	10	181
4-Bromophenyl phenyl ether	ND	1060	673	63.6	1060	900	85.2	28.9	60	20	175
4-Chloro-3-methylphenol	ND	1060	682	64.5	1060	939	88.8	31.8	42	22	147
4-Chloroaniline	ND	1060	646	61.1	1060	900	85.2	33.0	60	20	175
4-Chlorophenyl phenyl ether	ND	1060	709	67.1	1060	953	90.1	29.3	60	25	158
4-Nitroaniline	ND	1060	652	61.6	1060	850	80.4	26.3	60	20	175
4-Nitrophenol	ND	1060	468	44.2	1060	644	60.9	31.8	50	10	132
Acenaphthene	ND	1060	654	61.9	1060	864	81.8	27.7	31	30	160
Acenaphthylene	ND	1060	673	63.6	1060	899	85.1	28.8	50	10	150
Aniline	ND	2110	1090	51.4	2110	1420	67.1	26.4	60	10	160
Anthracene	ND	1060	637	60.2	1060	847	80.1	28.3	50	27	133
Benz(a)anthracene	ND	1060	622	58.8	1060	823	77.9	27.9	50	33	143
Benzo(a)pyrene	ND	1060	546	51.6	1060	719	68.0	27.3	60	17	163
Benzo(b)fluoranthene	ND	1060	582	55.1	1060	815	77.1	33.3	60	24	159
Benzo(g,h,i)perylene	ND	1060	675	63.9	1060	908	85.9	29.4	60	10	219
Benzo(k)fluoranthene	ND	1060	600	56.7	1060	757	71.6	23.3	60	11	162
Benzoic acid	ND	1060	782	74.0	1060	868	82.1	10.4	60	10	450
Benzyl alcohol	ND	1060	627	59.3	1060	843	79.8	29.4	60	30	160
Bis(2-chloroethoxy)methane	ND	1060	567	53.6	1060	766	72.5	29.9	60	33	184
Bis(2-chloroethyl)ether	ND	1060	572	54.1	1060	743	70.2	25.9	60	28	158
Bis(2-chloroisopropyl)ether	ND	1060	445	42.1	1060	582	55.1	26.6	60	36	166
Bis(2-ethylhexyl)phthalate	ND	1060	654	61.9	1060	861	81.4	27.3	60	10	158
Butyl benzyl phthalate	ND	1060	617	58.4	1060	821	77.6	28.4	60	10	152
Carbazole	ND	1060	622	58.8	1060	830	78.5	28.6	60	45	135
Chrysene	ND	1060	631	59.6	1060	815	77.1	25.5	60	17	168
Dibenz(a,h)anthracene	ND	1060	687	64.9	1060	873	82.6	23.9	60	10	227
Dibenzofuran	ND	1060	684	64.7	1060	912	86.2	28.5	60	45	135
Diethyl phthalate	ND	1060	650	61.5	1060	872	82.5	29.1	60	10	160
Dimethyl phthalate	ND	1060	665	62.9	1060	892	84.4	29.1	60	10	112
Di-n-butyl phthalate	ND	1060	650	61.5	1060	864	81.8	28.2	60	40	132
Di-n-octyl phthalate	ND	1060	657	62.1	1060	836	79.1	24.0	60	10	146

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Semivolatile Organics by Method 8270C **WorkOrder:** 09060712
Method: SW8270C **Lab Batch ID:** 91075b

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

Sample Spiked: 09060712-04
RunID: H_090618C-5074319 Units: ug/kg-dry
Analysis Date: 06/18/2009 18:51 Analyst: GY
Preparation Date: 06/15/2009 10:31 Prep By: FAK Method: SW3550C

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Fluoranthene	ND	1060	675	63.9	1060	888	84.0	27.2	60	26	137
Fluorene	ND	1060	672	63.5	1060	891	84.2	28.0	60	45	135
Hexachlorobenzene	ND	1060	735	69.5	1060	969	91.6	27.4	60	10	152
Hexachlorobutadiene	ND	1060	746	70.6	1060	1010	95.4	29.9	60	20	140
Hexachlorocyclopentadiene	ND	1060	447	42.2	1060	583	55.2	26.6	60	10	152
Hexachloroethane	ND	1060	570	53.9	1060	755	71.4	28.0	60	25	118
Indeno(1,2,3-cd)pyrene	ND	1060	820	77.5	1060	1090	104	28.7	60	10	171
Isophorone	ND	1060	636	60.1	1060	854	80.8	29.4	60	21	196
Naphthalene	ND	1060	674	63.8	1060	898	84.9	28.5	60	21	133
Nitrobenzene	ND	1060	544	51.4	1060	726	68.7	28.8	60	35	180
N-Nitrosodi-n-propylamine	ND	1060	469	44.4	1060	626	59.2	28.6	38	10	230
N-Nitrosodiphenylamine	ND	2110	1490	70.6	2110	1980	93.5	28.0	60	30	160
Pentachlorophenol	ND	1060	537	50.8	1060	841	79.5	44.0	50	14	176
Phenanthrene	ND	1060	648	61.3	1060	852	80.6	27.2	60	45	135
Phenol	ND	1060	618	58.5	1060	816	77.2	27.6	42	44	120
Pyrene	ND	1060	652	61.6	1060	853	80.7	26.8	31	26	127
Pyridine	ND	2110	991	46.9	2110	1280	60.6	25.5	60	10	150
2-Methylphenol	ND	1060	602	56.9	1060	823	77.9	31.1	60	40	160
3 & 4-Methylphenol	ND	1060	557	52.7	1060	751	71.1	29.7	60	40	160
Surr: 2,4,6-Tribromophenol	ND	3110	2700	86.8	3110	3710	119	31.5 *	30	19	135
Surr: 2-Fluorobiphenyl	ND	2110	1410	66.5	2110	1870	88.2	28.1	30	15	140
Surr: 2-Fluorophenol	ND	3110	1940	62.4	3110	2560	82.4	27.6	30	15	122
Surr: Nitrobenzene-d5	ND	2110	1180	55.9	2110	1590	75.3	29.5	30	10	134
Surr: Phenol-d5	ND	3110	1850	59.6	3110	2460	79.2	28.2	30	10	123
Surr: Terphenyl-d14	ND	2110	1380	65.3	2110	1790	84.7	25.9	30	18	166

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Volatile Organics by Method 8260B
Method: SW8260B
WorkOrder: 09060712
Lab Batch ID: R275534

Method Blank

RunID: M_090615A-5068516 Units: ug/kg
Analysis Date: 06/15/2009 15:40 Analyst: E_G

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09060712-01A	(7-8.5) MW-2
09060712-02A	MW-4 (12.5-14)
09060712-03A	MW-3 (12.5-14)
09060712-04A	MW-3 (7.5-9)

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	50
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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Volatile Organics by Method 8260B **WorkOrder:** 09060712
Method: SW8260B **Lab Batch ID:** R275534

Method Blank

RunID: M_090615A-5068516 Units: ug/kg
Analysis Date: 06/15/2009 15:40 Analyst: E_G

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	103.8	71-130
Surr: 4-Bromofluorobenzene	96.0	65-131
Surr: Toluene-d8	106.6	75-136

Laboratory Control Sample (LCS)

RunID: M_090615A-5068515 Units: ug/kg
Analysis Date: 06/15/2009 15:01 Analyst: E_G

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,1,1,2-Tetrachloroethane	20.0	21.0	105	56	140
1,1,1-Trichloroethane	20.0	20.9	104	58	135
1,1,2,2-Tetrachloroethane	20.0	18.3	91.4	52	139
1,1,2-Trichloroethane	20.0	19.9	99.6	81	138
1,1-Dichloroethane	20.0	19.7	98.5	56	137

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Volatile Organics by Method 8260B
Method: SW8260B
WorkOrder: 09060712
Lab Batch ID: R275534

Laboratory Control Sample (LCS)

RunID: M_090615A-5068515 Units: ug/kg
Analysis Date: 06/15/2009 15:01 Analyst: E_G

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,1-Dichloroethene	20.0	20.0	99.9	56	135
1,1-Dichloropropene	20.0	21.1	105	62	132
1,2,3-Trichlorobenzene	20.0	21.3	107	53	144
1,2,3-Trichloropropane	20.0	17.3	86.6	44	141
1,2,4-Trichlorobenzene	20.0	21.0	105	51	143
1,2,4-Trimethylbenzene	20.0	21.8	109	59	148
1,2-Dibromo-3-chloropropane	20.0	18.0	90.1	53	144
1,2-Dibromoethane	20.0	19.0	95.1	55	138
1,2-Dichlorobenzene	20.0	21.5	107	63	137
1,2-Dichloroethane	20.0	18.2	91.1	56	135
1,2-Dichloropropane	20.0	19.8	99.2	62	132
1,3,5-Trimethylbenzene	20.0	21.6	108	54	145
1,3-Dichlorobenzene	20.0	22.2	111	66	137
1,3-Dichloropropane	20.0	19.4	97.0	59	138
1,4-Dichlorobenzene	20.0	21.5	108	61	142
2,2-Dichloropropane	20.0	21.2	106	55	138
2-Butanone	20.0	15.8	79.0	10	191
2-Chloroethyl vinyl ether	20.0	21.0	105	10	181
2-Chlorotoluene	20.0	22.2	111	64	139
2-Hexanone	20.0	16.0	79.9	18	182
4-Chlorotoluene	20.0	21.5	107	63	138
4-Isopropyltoluene	20.0	22.2	111	59	156
4-Methyl-2-pentanone	20.0	14.5	72.4	10	166
Acetone	20.0	19.8	98.9	10	200
Acrylonitrile	20.0	15.6	78.2	38	169
Benzene	20.0	19.7	98.5	64	130
Bromobenzene	20.0	21.0	105	58	139
Bromochloromethane	20.0	19.1	95.3	66	127
Bromodichloromethane	20.0	19.7	98.4	59	134
Bromoform	20.0	19.6	97.9	65	135
Bromomethane	20.0	17.2	86.0	40	134
Carbon disulfide	20.0	19.9	99.4	53	130
Carbon tetrachloride	20.0	21.1	105	61	132
Chlorobenzene	20.0	20.7	104	60	140

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Volatile Organics by Method 8260B **WorkOrder:** 09060712
Method: SW8260B **Lab Batch ID:** R275534

Laboratory Control Sample (LCS)

RunID: M_090615A-5068515 Units: ug/kg
Analysis Date: 06/15/2009 15:01 Analyst: E_G

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Chloroethane	20.0	19.0	94.9	45	140
Chloroform	20.0	19.5	97.3	64	131
Chloromethane	20.0	16.4	82.1	39	140
Dibromochloromethane	20.0	20.4	102	54	138
Dibromomethane	20.0	18.7	93.7	64	131
Dichlorodifluoromethane	20.0	19.3	96.3	35	133
Ethylbenzene	20.0	20.9	105	58	143
Hexachlorobutadiene	20.0	22.9	114	56	166
Isopropylbenzene	20.0	18.3	91.4	58	133
Methyl tert-butyl ether	40.0	36.2	90.4	50	132
Methylene chloride	20.0	23.2	116	52	144
Naphthalene	20.0	19.1	95.7	51	139
n-Butylbenzene	20.0	22.7	114	59	164
n-Propylbenzene	20.0	21.5	107	57	140
sec-Butylbenzene	20.0	22.8	114	63	146
Styrene	20.0	20.4	102	57	134
tert-Butylbenzene	20.0	22.2	111	57	144
Tetrachloroethene	20.0	20.5	103	41	156
Toluene	20.0	20.9	105	63	139
Trichloroethene	20.0	20.4	102	62	135
Trichlorofluoromethane	20.0	20.6	103	53	140
Vinyl acetate	20.0	17.6	87.9	17	163
Vinyl chloride	20.0	19.8	98.9	45	148
cis-1,2-Dichloroethene	20.0	20.4	102	70	129
cis-1,3-Dichloropropene	20.0	20.7	103	58	132
m,p-Xylene	40.0	43.0	108	64	137
o-Xylene	20.0	21.8	109	64	143
trans-1,2-Dichloroethene	20.0	19.6	97.9	63	130
trans-1,3-Dichloropropene	20.0	19.8	99.1	58	128
1,2-Dichloroethene (total)	40	40	100	63	130
Xylenes,Total	60.0	64.8	108	64	143
Surr: 1,2-Dichloroethane-d4	50.0	47.7	95.3	71	130
Surr: 4-Bromofluorobenzene	50.0	48.9	97.8	65	131
Surr: Toluene-d8	50.0	52.2	104	75	136

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Volatile Organics by Method 8260B **WorkOrder:** 09060712
Method: SW8260B **Lab Batch ID:** R275534

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

Sample Spiked: 09060712-01
RunID: M_090615A-5068518 Units: ug/kg-dry
Analysis Date: 06/15/2009 17:13 Analyst: E_G
Preparation Date: 06/13/2009 11:15 Prep By: E_G Method: SW5030B

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	25.2	24.3	96.2	25.2	23.8	94.2	2.04	30	38	129
1,1,1-Trichloroethane	ND	25.2	23.8	94.4	25.2	23.2	92.1	2.50	30	44	154
1,1,2,2-Tetrachloroethane	ND	25.2	22.0	87.3	25.2	24.0	95.2	8.64	30	14	143
1,1,2-Trichloroethane	ND	25.2	24.4	96.6	25.2	25.4	101	4.38	30	34	135
1,1-Dichloroethane	ND	25.2	23.3	92.4	25.2	22.7	89.8	2.80	30	42	146
1,1-Dichloroethene	ND	25.2	24.1	95.4	25.2	23.4	93.0	2.64	22	39	168
1,1-Dichloropropene	ND	25.2	24.0	95.3	25.2	23.1	91.5	4.08	30	42	156
1,2,3-Trichlorobenzene	ND	25.2	19.2	75.9	25.2	19.7	78.0	2.73	30	10	125
1,2,3-Trichloropropane	ND	25.2	21.3	84.5	25.2	23.9	94.6	11.2	30	10	154
1,2,4-Trichlorobenzene	ND	25.2	19.0	75.3	25.2	18.7	74.0	1.78	30	10	128
1,2,4-Trimethylbenzene	ND	25.2	23.7	94.1	25.2	22.8	90.5	3.90	30	22	139
1,2-Dibromo-3-chloropropane	ND	25.2	20.3	80.4	25.2	24.3	96.3	17.9	30	23	139
1,2-Dibromoethane	ND	25.2	22.8	90.2	25.2	23.7	93.8	3.94	30	32	129
1,2-Dichlorobenzene	ND	25.2	23.1	91.7	25.2	22.9	90.8	0.937	30	17	130
1,2-Dichloroethane	ND	25.2	22.4	88.9	25.2	22.9	90.7	2.08	30	15	158
1,2-Dichloropropane	ND	25.2	23.7	93.9	25.2	23.1	91.5	2.61	30	42	133
1,3,5-Trimethylbenzene	ND	25.2	23.1	91.7	25.2	22.1	87.8	4.34	30	22	135
1,3-Dichlorobenzene	ND	25.2	24.0	95.2	25.2	23.0	91.1	4.42	30	22	130
1,3-Dichloropropane	ND	25.2	24.1	95.5	25.2	24.6	97.5	2.11	30	37	131
1,4-Dichlorobenzene	ND	25.2	23.3	92.6	25.2	22.7	90.0	2.85	30	20	129
2,2-Dichloropropane	ND	25.2	23.4	92.9	25.2	23.1	91.6	1.41	30	39	155
2-Butanone	ND	25.2	17.7	70.3	25.2	21.9	86.9	21.1	30	10	200
2-Chloroethyl vinyl ether	ND	25.2	18.7	74.0	25.2	20.1	79.8	7.55	30	10	168
2-Chlorotoluene	ND	25.2	24.3	96.2	25.2	23.7	93.9	2.37	30	30	133
2-Hexanone	ND	25.2	18.3	72.7	25.2	22.3	88.6	19.7	30	14	151
4-Chlorotoluene	ND	25.2	23.0	91.2	25.2	22.3	88.5	2.92	30	24	133
4-Isopropyltoluene	ND	25.2	23.1	91.6	25.2	22.1	87.5	4.59	30	17	143
4-Methyl-2-pentanone	ND	25.2	17.1	67.8	25.2	20.7	81.9	18.8	30	10	176
Acetone	ND	25.2	22.7	90.2	25.2	28.3	112	21.7	30	10	200
Acrylonitrile	ND	25.2	19.9	78.8	25.2	23.7	94.1	17.7	30	10	200

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Volatile Organics by Method 8260B
Method: SW8260B
WorkOrder: 09060712
Lab Batch ID: R275534

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

Sample Spiked: 09060712-01
RunID: M_090615A-5068518 Units: ug/kg-dry
Analysis Date: 06/15/2009 17:13 Analyst: E_G
Preparation Date: 06/13/2009 11:15 Prep By: E_G Method: SW5030B

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	25.2	23.0	91.4	25.2	22.3	88.3	3.47	21	49	135
Bromobenzene	ND	25.2	23.6	93.5	25.2	22.8	90.2	3.59	30	29	127
Bromochloromethane	ND	25.2	23.2	92.0	25.2	23.4	92.6	0.612	30	27	147
Bromodichloromethane	ND	25.2	23.2	92.2	25.2	23.1	91.7	0.555	30	32	138
Bromoform	ND	25.2	23.6	93.4	25.2	24.6	97.4	4.19	30	27	129
Bromomethane	ND	25.2	20.5	81.2	25.2	18.1	71.8	12.3	30	32	142
Carbon disulfide	ND	25.2	22.8	90.3	25.2	21.6	85.6	5.42	30	25	168
Carbon tetrachloride	ND	25.2	24.5	97.2	25.2	23.3	92.6	4.95	30	48	151
Chlorobenzene	ND	25.2	24.0	95.2	25.2	23.2	91.8	3.66	21	38	130
Chloroethane	ND	25.2	22.7	90.2	25.2	20.4	81.0	10.7	30	29	161
Chloroform	ND	25.2	23.2	91.9	25.2	22.8	90.3	1.82	30	34	153
Chloromethane	ND	25.2	19.7	78.2	25.2	18.1	71.8	8.46	30	31	151
Dibromochloromethane	ND	25.2	24.1	95.6	25.2	24.4	96.7	1.21	30	31	127
Dibromomethane	ND	25.2	23.0	91.3	25.2	23.5	93.3	2.19	30	30	141
Dichlorodifluoromethane	ND	25.2	22.3	88.3	25.2	20.6	81.8	7.61	30	15	167
Ethylbenzene	ND	25.2	23.5	93.2	25.2	22.4	88.8	4.89	30	39	135
Hexachlorobutadiene	ND	25.2	20.9	82.7	25.2	20.3	80.4	2.87	30	10	149
Isopropylbenzene	ND	25.2	20.4	80.8	25.2	19.6	77.7	3.85	30	25	142
Methyl tert-butyl ether	ND	50.4	43.0	85.2	50.4	45.2	89.7	5.16	30	19	142
Methylene chloride	ND	25.2	25.5	101	25.2	25.0	99.2	2.08	30	13	170
Naphthalene	ND	25.2	17.6	69.8	25.2	20.3	80.4	14.0	30	10	124
n-Butylbenzene	ND	25.2	23.7	93.8	25.2	22.6	89.5	4.69	30	10	156
n-Propylbenzene	ND	25.2	22.9	90.8	25.2	21.6	85.7	5.73	30	20	141
sec-Butylbenzene	ND	25.2	23.5	93.2	25.2	23.3	92.3	0.943	30	29	142
Styrene	ND	25.2	23.5	93.2	25.2	22.5	89.1	4.51	30	28	133
tert-Butylbenzene	ND	25.2	23.5	93.3	25.2	22.1	87.5	6.36	30	26	141
Tetrachloroethene	ND	25.2	22.7	90.0	25.2	22.4	88.9	1.23	30	33	149
Toluene	ND	25.2	24.3	96.2	25.2	23.4	92.8	3.59	21	49	133
Trichloroethene	ND	25.2	23.2	92.1	25.2	22.5	89.2	3.14	24	51	142
Trichlorofluoromethane	ND	25.2	24.0	95.3	25.2	22.9	90.6	5.00	30	24	184
Vinyl acetate	ND	25.2	6.84	27.1	25.2	6.55	26.0	4.37	30	10	174
Vinyl chloride	ND	25.2	27.3	108	25.2	25.1	99.6	8.34	30	29	177

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Volatile Organics by Method 8260B **WorkOrder:** 09060712
Method: SW8260B **Lab Batch ID:** R275534

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

Sample Spiked: 09060712-01
RunID: M_090615A-5068518 Units: ug/kg-dry
Analysis Date: 06/15/2009 17:13 Analyst: E_G
Preparation Date: 06/13/2009 11:15 Prep By: E_G Method: SW5030B

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	25.2	23.8	94.3	25.2	23.6	93.6	0.825	30	38	151
cis-1,3-Dichloropropene	ND	25.2	24.0	95.2	25.2	24.1	95.7	0.514	30	31	131
m,p-Xylene	ND	50.4	49.0	97.1	50.4	46.5	92.2	5.10	30	32	140
o-Xylene	ND	25.2	25.0	99.0	25.2	24.0	95.1	4.04	30	36	142
trans-1,2-Dichloroethene	ND	25.2	23.2	91.9	25.2	22.4	88.9	3.33	30	41	153
trans-1,3-Dichloropropene	ND	25.2	23.3	92.6	25.2	23.4	92.9	0.393	30	27	128
1,2-Dichloroethene (total)	ND	50	47	93	50	46	91	2.1	30	38	153
Xylenes,Total	ND	76	74	98	76	70	93	4.7	30	32	142
Surr: 1,2-Dichloroethane-d4	ND	63.1	60.9	96.6	63.1	62.9	99.8	3.24	30	71	130
Surr: 4-Bromofluorobenzene	ND	63.1	62.8	99.6	63.1	62.7	99.4	0.199	30	65	131
Surr: Toluene-d8	ND	63.1	66.6	106	63.1	66.6	106	0.114	30	75	136

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Volatile Organics by Method 8260B **WorkOrder:** 09060712
Method: SW8260B **Lab Batch ID:** R276156

Method Blank

RunID: L_090622A-5078883 Units: ug/kg
Analysis Date: 06/22/2009 15:13 Analyst: LU_L

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09060712-03A	MW-3 (12.5-14)

Analyte	Result	Rep Limit
1,2,4-Trimethylbenzene	ND	250
m,p-Xylene	ND	250
o-Xylene	ND	250
Xylenes,Total	ND	250
Surr: 1,2-Dichloroethane-d4	103.3	78-116
Surr: 4-Bromofluorobenzene	105.7	74-125
Surr: Toluene-d8	104.4	82-118

Laboratory Control Sample (LCS)

RunID: L_090622A-5078881 Units: ug/kg
Analysis Date: 06/22/2009 14:35 Analyst: LU_L

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,2,4-Trimethylbenzene	20.0	21.1	106	64	128
m,p-Xylene	40.0	43.8	109	71	129
o-Xylene	20.0	21.9	109	74	130
Xylenes,Total	60.0	65.7	109	71	130
Surr: 1,2-Dichloroethane-d4	50.0	49.9	99.9	78	116
Surr: 4-Bromofluorobenzene	50.0	51.8	104	74	125
Surr: Toluene-d8	50.0	51.9	104	82	118

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

Sample Spiked: 09060942-05
RunID: L_090622A-5080013 Units: ug/kg
Analysis Date: 06/22/2009 18:08 Analyst: LU_L
Preparation Date: 06/18/2009 12:15 Prep By: Method: SW5030B

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
1,2,4-Trimethylbenzene	97500	20000	123000	N/C	20000	122000	N/C	N/C	20	43	132

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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Volatile Organics by Method 8260B **WorkOrder:** 09060712
Method: SW8260B **Lab Batch ID:** R276156

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

Sample Spiked: 09060942-05
RunID: L_090622A-5080013 Units: ug/kg
Analysis Date: 06/22/2009 18:08 Analyst: LU_L
Preparation Date: 06/18/2009 12:15 Prep By: Method: SW5030B

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
m,p-Xylene	157000	40000	204000	117	40000	207000	125	1.56	20	69	127
o-Xylene	65200	20000	87400	111	20000	89500	121 *	2.38	20	84	114
Xylenes,Total	222500	60000	291400	114.7	60000	296500	123.6	1.805	20	69	127
Surr: 1,2-Dichloroethane-d4	ND	50000	48900	97.8	50000	50400	101	2.93	30	78	116
Surr: 4-Bromofluorobenzene	ND	50000	50600	101	50000	50600	101	0.00989	30	74	125
Surr: Toluene-d8	ND	50000	51900	104	50000	52300	105	0.851	30	82	118

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

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Alkalinity (as CaCO3), Total
Method: E310.1
WorkOrder: 09060712
Lab Batch ID: R275459

Method Blank

RunID: WET_090615F-5067060 Units: mg/Kg
Analysis Date: 06/15/2009 12:30 Analyst: PAC

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09060712-01C	(7-8.5) MW-2

Analyte	Result	Rep Limit
Alkalinity, Total (As CaCO3)	ND	20

Laboratory Control Sample (LCS)

RunID: WET_090615F-5067062 Units: mg/Kg
Analysis Date: 06/15/2009 12:30 Analyst: PAC

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Alkalinity, Total (As CaCO3)	387.0	380.0	98.19	90	110

Sample Duplicate

Original Sample: 09060712-01
RunID: WET_090615F-5067063 Units: mg/Kg-dry
Analysis Date: 06/15/2009 12:30 Analyst: PAC

Analyte	Sample Result	DUP Result	RPD	RPD Limit
Alkalinity, Total (As CaCO3)	227	227	0	20

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: PERCENT MOISTURE
Method: D2216

WorkOrder: 09060712
Lab Batch ID: R275504C

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09060712-01C	(7-8.5) MW-2
09060712-02B	MW-4 (12.5-14)
09060712-03B	MW-3 (12.5-14)
09060712-04C	MW-3 (7.5-9)

Sample Duplicate

Original Sample: 09060776-01
RunID: WET_090615L-5068026 Units: wt%
Analysis Date: 06/15/2009 17:02 Analyst: EB1

Analyte	Sample Result	DUP Result	RPD	RPD Limit
Percent Moisture	13.2	13.18	0	20

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Ion Chromatography
Method: E300.0 MOD

WorkOrder: 09060712
Lab Batch ID: R275853

Method Blank

RunID: IC2_090617B-5073684 Units: mg/kg
Analysis Date: 06/17/2009 18:28 Analyst: BDG

Analyte	Result	Rep Limit
Nitrogen,Nitrate (As N)	ND	5.0
Nitrogen,Nitrite (As N)	ND	5.0

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09060712-01C	(7-8.5) MW-2
09060712-02B	MW-4 (12.5-14)
09060712-03B	MW-3 (12.5-14)
09060712-04C	MW-3 (7.5-9)

Laboratory Control Sample (LCS)

RunID: IC2_090617B-5073685 Units: mg/kg
Analysis Date: 06/17/2009 18:48 Analyst: BDG

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Nitrogen,Nitrate (As N)	100.0	102.2	102.2	90	110
Nitrogen,Nitrite (As N)	100.0	106.2	106.2	90	110

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

Sample Spiked: 09060712-03
RunID: IC2_090617B-5073693 Units: mg/kg-dry
Analysis Date: 06/17/2009 22:58 Analyst: BDG

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Nitrogen,Nitrate (As N)	ND	113.1	119.8	105.3	113.1	97.01	85.12	21.04 *	20	80	120
Nitrogen,Nitrite (As N)	ND	113.1	122.8	108.6	113.1	102.3	90.40	18.25	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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Ion Chromatography
Method: E300.0 MOD

WorkOrder: 09060712
Lab Batch ID: R275861

Method Blank

RunID: IC2_090617D-5073744 Units: mg/kg
Analysis Date: 06/17/2009 18:28 Analyst: BDG

Analyte	Result	Rep Limit
Bromide	ND	5.0
Chloride	ND	5.0
Fluoride	ND	5.0
Sulfate	ND	5.0

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09060712-01C	(7-8.5) MW-2
09060712-02B	MW-4 (12.5-14)
09060712-03B	MW-3 (12.5-14)
09060712-04C	MW-3 (7.5-9)

Laboratory Control Sample (LCS)

RunID: IC2_090617D-5073745 Units: mg/kg
Analysis Date: 06/17/2009 18:48 Analyst: BDG

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Bromide	100.0	109.2	109.2	80	120
Chloride	100.0	104.5	104.5	80	120
Fluoride	100.0	109.1	109.1	80	120
Sulfate	100.0	103.7	103.7	80	120

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

Sample Spiked: 09060712-03
RunID: IC2_090617D-5073757 Units: mg/kg-dry
Analysis Date: 06/17/2009 22:58 Analyst: BDG

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Bromide	ND	113.1	129.1	114.2	113.1	104.1	92.06	21.42 *	20	75	125
Chloride	ND	113.1	123.2	105.4	113.1	131.6	112.8	6.578	20	75	125
Fluoride	ND	113.1	127.0	110.4	113.1	139.7	121.6	9.544	20	75	125
Sulfate	844.5	113.1	862.7	N/C	113.1	872.0	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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Ion Chromatography
Method: E300.0 MOD

WorkOrder: 09060712
Lab Batch ID: R276034

Method Blank

RunID: IC2_090619C-5076740 Units: mg/kg
Analysis Date: 06/19/2009 12:35 Analyst: BDG

Analyte	Result	Rep Limit
Chloride	ND	5.0
Ortho-phosphate (As P)	ND	5.0
Sulfate	ND	5.0

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09060712-01C	(7-8.5) MW-2
09060712-02B	MW-4 (12.5-14)
09060712-03B	MW-3 (12.5-14)
09060712-04C	MW-3 (7.5-9)

Laboratory Control Sample (LCS)

RunID: IC2_090619C-5076741 Units: mg/kg
Analysis Date: 06/19/2009 12:54 Analyst: BDG

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Chloride	100.0	94.36	94.36	80	120
Ortho-phosphate (As P)	100.0	103.0	103.0	80	120
Sulfate	100.0	102.6	102.6	80	120

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

Sample Spiked: 09060712-03
RunID: IC2_090619C-5076754 Units: mg/kg-dry
Analysis Date: 06/19/2009 22:31 Analyst: BDG

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Chloride	ND	2262	1932	85.41	2262	2149	94.97	10.60	20	75	125
Ortho-phosphate (As P)	ND	2262	2870	126.8 *	2262	2963	130.9 *	3.172	20	75	125
Sulfate	300.7	2262	4251	174.6 *	2262	4784	198.1 *	11.78	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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

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

Sample Receipt Checklist

And

Chain of Custody

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

Sample Receipt Checklist

Workorder:	09060712	Received By:	NW
Date and Time Received:	6/12/2009 9:00:00 AM	Carrier name:	Fedex-Priority
Temperature:	2.0°C	Chilled by:	Water Ice

1.	Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2.	Custody seals intact on shippping 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?	Yes ☑	No ☐	
11.	Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
12.	Water - VOA vials have zero headspace?	Yes ☐	No ☐	VOA Vials Not Present ☑
13.	Water - Preservation checked upon receipt (except VOA*)?	Yes ☐	No ☐	Not Applicable ☑

*VOA Preservation Checked After Sample Analysis

SPL Representative: Contact Date & Time:

Client Name Contacted:

Non Conformance Issues: Received trip blank not listed on the chain of custody. Logged in on hold.

Client Instructions:

SPL, Inc.
Analysis Request & Chain of Custody Record

SPL Workorder No.: 327652
0906071Z
page ____ of ____

Client Name: Tetra Tech / ConocoPhillips
Address: 6121 Indian School Rd Ste 200
City: Albuquerque State: NM Zip: 87110
Phone/Fax: 505-237-8440 505-237-8656
Client Contact: Kelly Blanchard Email: kelly.blanchard@tetratech.com
Project Name/No.: Randleman #1
Site Name:
Site Location: ~~Randleman #1~~ San Juan County
Invoice To: ConocoPhillips Ph:

SAMPLE ID	DATE	TIME	comp	grab	matrix (W=water S=soil O=oil A=air SL=sludge E=encore X=other)	bottle (P=plastic A=amber glass G=glass V=vial X=other)	size (1=1 liter 4=4oz 40=vial 8=8oz 16=16oz X=other)	pres. (1=HCl 2=HNO3 3=H2SO4 X=other)	Number of Containers	Requested Analysis: VOCs	SVOCs / TPH	Total Metals / General Chemistry
8.5) MW-2 ~~(12.5-14)~~	6/10/09	1050			S	G	4	None	1	X		
8.5) MW-2 ~~(12.5-14)~~	6/10/09	1050			S	G	8	None	1		X	
8.5) MW-2 ~~(12.5-14)~~	6/10/09	1050			S	G	8	None	1			X
MW-4 (12.5-14)	6/9/09	1510			S	G	4	None	1	X		
MW-4 (12.5-14)	6/9/09	1510			S	G	8	None	1		X	X
MW-3 (12.5-14)	6/10/09	1345			S	G	4	None	1	X		
MW-3 (12.5-14)	6/10/09	1345			S	G	8	None	1		X	X
MW-3 (7.5-9)	6/10/09	1332			S	G	4	None	1	X		
MW-3 (7.5-9)	6/10/09	1332			S	G	8	None	1		X	
MW-3 (7.5-9)	6/10/09	1332			S	G	8	None	1			X

Client/Consultant Remarks:
General Chem = Alk, Br, Cld, Fl, Ortho, SO4, NO3/NO2

Laboratory remarks:

Intact? ☐ Y ☐ N
Ice? ☐ Y ☐ N
Temp:

Requested TAT
☐ 1 Business Day ☐ Contract
☐ 2 Business Days ☐ Standard
☐ 3 Business Days
☐ Other ____
Rush TAT requires prior notice

Special Reporting Requirements Results: Fax ☐ Email ☐ PDF ☐
Standard QC ☐ Level 3 QC ☐ Level 4 QC ☐ TX TRRP ☐ LA RECAP ☐

Special Detection Limits (specify):

PM review (initial):

1. Relinquished by Sampler:	date ~~6/11/09~~ CM	time 1600	2. Received by:	
3. Relinquished by:	date 6/11/09	time	4. Received by:	
5. Relinquished by:	date 6/12/09	time 0900	6. Received by Laboratory:	

☐ 8880 Interchange Drive
Houston, TX 77054 (713) 660-0901

☐ 500 Ambassador Caffery Parkway
Scott, LA 70583 (337) 237-4775

☐ 459 Hughes Drive
Traverse City, MI 49686 (231) 947-5777

APPENDIX C

Groundwater Sampling Field Forms

WATER SAMPLING FIELD FORM

Project No. Randalman #1 — 1 of 4

Site Location Aztec, NM

Site/Well No. MW- 1 — Coded/ Replicate No. ____ — Date 6/12/09

Weather Sunny — Time Sampling Began ____ — Time Sampling Completed 1100

EVACUATION DATA

Description of Measuring Pt (MP) ____

Height of MP Above/Below Land Surface ____ — MP Elevation ____

Total Sounded Depth of Well Below MP 24.34 — Water-Level Elevation ____

Held ____ — Depth to Water Below MP 13.98 — Diameter of Casing 2 inch / 4 inch

Wet ____ — Water Column in Well 10.36 — Gallons Pumped/Bailed Prior to Sampling 5

Gallons per Foot 0.16

Gallons in Well 1.6576 x 3 = 4.9728 — Sampling Pump Intake (feet below land surface) ____

Purging Equipment Bailed

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature	pH	Conductivity	TDS	DO	DO%	ORP	Other
1052	13.01	7.23	3445	2.237	4.16	35.2	-17.5	
1054	12.93	7.13	3457	2.240	3.80	32.0	-14.4	
1055	12.88	7.14	3487	2.267	3.93	28.1	-14.0	

Sampling Equipment Low Flow Pump / Disposable Bailer

Constituents Sampled	Container Description	Preservative

Remarks tan, slightly silty, fast recharge

Sampling Personnel Cassie Brown, Kelly Blanchard, Christine Mathews

Well Casing Volumes

Gal./ft.							
	1 ¼" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1 ½" = 0.10	2 ½" = 0.24	3" ½ = 0.50	6" = 1.46

WATER SAMPLING FIELD FORM

Project No. Randalman #1 — 2 of 4

Site Location Aztec, NM

Site/Well No. MW- 2 — Coded/ Replicate No. ____ — Date 6/12/09

Weather Sunny — Time Sampling Began ____ — Time Sampling Completed ____

EVACUATION DATA

Description of Measuring Pt (MP) ____

Height of MP Above/Below Land Surface ____ — MP Elevation ____

Total Sounded Depth of Well Below MP 26.54 — Water-Level Elevation ____

Held ____ — Depth to Water Below MP 13.57 — Diameter of Casing 2 inch / 4 inch

Wet ____ — Water Column in Well 16.97 — Gallons Pumped/Bailed Prior to Sampling 5.5

Gallons per Foot 0.16

Gallons in Well 1.7552 x 3 = 5.2656 — Sampling Pump Intake (feet below land surface) ____

Purging Equipment bailed

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature	pH	Conductivity	TDS	DO	DO%	ORP	Other
1027	10.77	7.56	3035	1.843	1.41	12.9	-99.3	
1029	10.88	7.54	2852	1.854	1.72	16.2	-95.2	
1031	10.92	7.54	2868	1.865	1.63	14.8	-92.9	

Sampling Equipment Low Flow Pump / Disposable Bailer

Constituents Sampled	Container Description	Preservative

Remarks ____

Sampling Personnel Cassie Brown, Kelly Blanchard, Christine Mathews

Well Casing Volumes

Gal./ft.							
	1 ¼" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1 ½" = 0.10	2 ½" = 0.24	3" ½ = 0.50	6" = 1.46

WATER SAMPLING FIELD FORM

Project No. Randleman #1 — 3 of 4

Site Location Aztec, NM

Site/Well No. MW-3 — Coded/ Replicate No. 1130 — Date 6/12/09

Weather Sunny — Time Sampling Began 1005 — Time Sampling Completed 1045

EVACUATION DATA

Description of Measuring Pt (MP)

Height of MP Above/Below Land Surface — MP Elevation

Total Sounded Depth of Well Below MP 24.87 — Water-Level Elevation

Held ____ — Depth to Water Below MP 16.00 — Diameter of Casing (2 inch / 4 inch)

Wet ____ — Water Column in Well 8.87 — Gallons Pumped/Bailed Prior to Sampling

Gallons per Foot 0.16

Gallons in Well 1.492 x 3 = 4.2576 — Sampling Pump Intake (feet below land surface)

Purging Equipment bailed

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature	pH	Conductivity	TDS	DO	DO%	ORP	Other
1013	11.17	6.92	2.397	2.117	5.04	45.1	-56.0	
1015	11.12	7.02	2.392	2.115	4.05	37.3	-77.8	
1017	11.12	7.13	2.384	2.107	4.40	40.4	-99.9	
1019	11.14	7.21	2.379	2.102	4.59	42.9	-117.9	
1022	11.34	7.80	2.374	2.087	4.49	41.4	-139.4	

Sampling Equipment — Low Flow Pump / Disposable Bailer

Constituents Sampled	Container Description	Preservative
VOCs, SVOCs,	2 Ambers 2 preserved	HCl, HNO_3
Metals, TPH GRO & DRO	ambers, 2 32oz Plastic	
General Chem	1 16oz Plastic, two sets was weathered	

Remarks H2O is gray w/ hydrocarbon odor, spotty discontinuous sheen

Sampling Personnel Cassie Brown, Christine Mathews, Kelly Blanchard

Well Casing Volumes

Gal./ft.							
	1 ¼" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1 ½" = 0.10	2 ½" = 0.24	3" ½ = 0.50	6" = 1.46

MW-2 1035 MW-1 1100 MW-4 1130

WATER SAMPLING FIELD FORM

Project No. Rardeman #1 — 4 of 4

Site Location Aztec, NM

Site/Well No. MW- 4 — Coded/ Replicate No. ____ — Date 6/12/09

Weather Sunny — Time Sampling Began ____ — Time Sampling Completed 1130

EVACUATION DATA

Description of Measuring Pt (MP) ____

Height of MP Above/Below Land Surface ____ — MP Elevation ____

Total Sounded Depth of Well Below MP 28.7 — Water-Level Elevation ____

Held ____ — Depth to Water Below MP 17.68 — Diameter of Casing (2 inch / 4 inch)

Wet ____ — Water Column in Well 11.02 — Gallons Pumped/Bailed Prior to Sampling 5

Gallons ~~per Foot~~ in well 1.7632 x 3 =

Gallons ~~in Well~~ 5.2896 — Sampling Pump Intake (feet below land surface) ____

Purging Equipment Bailer

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature	pH	Conductivity	TDS	DO	DO%	ORP	Other
12.40	14.43	8.40	12477	8.090	11.16	113.0	24.9	
12.42	13.55	8.17	12182	7.916	9.32	88.6	19.3	
12.44	13.94	8.03	12177	7.829	7.84	79.3	17.1	
12.45	13.77	7.93	12517	8.146	7.53	75.3	14.5	

Sampling Equipment — Low Flow Pump / (Disposable Bailer)

Constituents Sampled	Container Description	Preservative

Remarks Water is tan slightly silty, recharge moderate

Sampling Personnel Casey Brown, Christine Mathews, Kelly Blanchard

Well Casing Volumes

Gal./ft.				
	1 ¼" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1 ½" = 0.10	2 ½" = 0.24	3" ½ = 0.50	6" = 1.46

APPENDIX D

Groundwater Laboratory Analysis Reports

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

Conoco Phillips

Certificate of Analysis Number:

09060743

Report To:		Project Name:	Randleman #1
Tetra Tech, Inc.		Site:	San Juan County, NM
Kelly Blanchard		Site Address:	
6121 Indian School Road, N.E.			
Suite 200		PO Number:	
Albuquerque		State:	New Mexico
NM		State Cert. No.:	
87110-		Date Reported:	6/23/2009
ph: (505) 237-8440	fax:		

This Report Contains A Total Of 64 Pages

Excluding This Page, Chain Of Custody

And

Any Attachments

6/23/2009

Date

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

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

Case Narrative for:

Conoco Phillips

Certificate of Analysis Number:

09060743

Report To:		Project Name:	Randleman #1
Tetra Tech, Inc.		Site:	San Juan County, NM
Kelly Blanchard		Site Address:	
6121 Indian School Road, N.E.			
Suite 200		PO Number:	
Albuquerque		State:	New Mexico
NM		State Cert. No.:	
87110-		Date Reported:	6/23/2009
ph: (505) 237-8440	fax:		

I. SAMPLE RECEIPT:

There were no exceptions.

II: ANALYSES AND EXCEPTIONS:

SW8260B Volatile Organics:

For Volatile Organics analysis (8260B), the results for 2-chloroethyl vinyl ether are estimated due to sample preservation. The result for this compound is reported as "ND J" for all samples in the report.

SW8015 Diesel Range Organics:

Due to limited sample volume, a Matrix Spike (MS) or Matrix Spike Duplicate (MSD) was not extracted with Batch ID:91124 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.

SW8270C Semivolatile Organics:

Due to limited sample volume, a Matrix Spike (MS) or Matrix Spike Duplicate (MSD) was not extracted with Batch ID: 91162 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.

SM4500 Nitrite as Nitrogen:

Your sample ID "MW-3" (SPL ID: 09060743-01) was randomly selected for use in SPL's quality control program for the Total Nitrite as Nitrogen analysis by Standard Method 4500 (Batch ID: R275563). The Matrix Spike Duplicate (MSD) recovery was outside of the advisable quality control limits due to possible matrix interference.

III. CERTIFICATION:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or by his designee, as verified by the following signature.

IV. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report (" mg\kg-dry " or " ug\kg-dry ").

Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. Since the

Erica Cardenas — Date
Project Manager

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

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

Case Narrative for:

Conoco Phillips

Certificate of Analysis Number:

09060743

MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

Some of the percent recoveries and RPD's on the QC report for the MS/MSD may be different than the calculated recoveries and RPD's using the sample result and the MS/MSD results that appear on the report because, the actual raw result is used to perform the calculations for percent recovery and RPD.

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

6/23/2009

Erica Cardenas
Project Manager

Date

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

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

Conoco Phillips

Certificate of Analysis Number:

09060743

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

Fax To:

Project Name: Randleman #1
Site: San Juan County, NM
Site Address:
PO Number:
State: New Mexico
State Cert. No.:
Date Reported: 6/23/2009

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
MW-3	09060743-01	Water	6/12/2009 10:45:00 AM	6/13/2009 10:00:00 AM	327653	☐
MW-3	09060743-01	Water	6/12/2009 10:45:00 AM	6/13/2009 10:00:00 AM	7653,327829,327	☐
MW-2	09060743-02	Water	6/12/2009 10:35:00 AM	6/13/2009 10:00:00 AM		☐
MW-1	09060743-03	Water	6/12/2009 11:00:00 AM	6/13/2009 10:00:00 AM		☐
MW-4	09060743-04	Water	6/12/2009 11:30:00 AM	6/13/2009 10:00:00 AM		☐
Trip Blank	09060743-06	Water	6/12/2009 11:00:00 AM	6/13/2009 10:00:00 AM		☐
Duplicate	09060743-07	Water	6/12/2009 11:30:00 AM	6/13/2009 10:00:00 AM		☐

Erica Cardenas
Project Manager

6/23/2009
Date

Kesavalu M. Bagawandoss Ph.D., J.D.
Laboratory Director

Ted Yen
Quality Assurance Officer

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

Client Sample ID: MW-3 **Collected:** 06/12/2009 10:45 **SPL Sample ID:** 09060743-01

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
ALKALINITY (AS CACO3), TOTAL			**MCL**	**E310.1**	**Units: mg/L**		
Alkalinity, Total (As CaCO3)	99		2	1	06/14/09 12:15	PAC	5065992
DIESEL RANGE ORGANICS			**MCL**	**SW8015B**	**Units: mg/L**		
Diesel Range Organics (C10-C28)	1.2		0.1	1	06/19/09 18:29	NW	5077348
Surr: n-Pentacosane	59.0		% 20-150	1	06/19/09 18:29	NW	5077348

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	06/16/2009 10:43	N_M	1.00

GASOLINE RANGE ORGANICS			**MCL**	**SW8015B**	**Units: mg/L**		
Gasoline Range Organics	21		10	100	06/17/09 2:46	EMB	5070812
Surr: 1,4-Difluorobenzene	97.5		% 60-155	100	06/17/09 2:46	EMB	5070812
Surr: 4-Bromofluorobenzene	107		% 50-158	100	06/17/09 2:46	EMB	5070812
ION CHROMATOGRAPHY			**MCL**	**E300.0**	**Units: mg/L**		
Bromide	ND		0.5	1	06/19/09 13:52	BDG	5076623
Chloride	40.3		5	10	06/19/09 14:11	BDG	5076624
Fluoride	ND		0.5	1	06/19/09 13:52	BDG	5076623
Ortho-phosphate (As P)	ND		0.5	1	06/19/09 13:52	BDG	5076623
Sulfate	1510		100	200	06/19/09 14:30	BDG	5076625
MERCURY, TOTAL			**MCL**	**SW7470A**	**Units: mg/L**		
Mercury	ND		0.0002	1	06/18/09 13:45	F_S	5073576

Prep Method	Prep Date	Prep Initials	Prep Factor
SW7470A	06/18/2009 10:15	F_S	1.00

METALS BY METHOD 6010B, TOTAL			**MCL**	**SW6010B**	**Units: mg/L**		
Aluminum	1.1		0.1	1	06/21/09 15:12	EG	5077088
Boron	0.107		0.1	1	06/21/09 15:12	EG	5077088
Calcium	527		1	10	06/21/09 15:16	EG	5077089
Iron	1.65		0.02	1	06/21/09 15:12	EG	5077088
Magnesium	23.9		0.1	1	06/21/09 15:12	EG	5077088
Potassium	6		1	1	06/21/09 15:12	EG	5077088
Sodium	242		1	10	06/21/09 15:16	EG	5077089
Strontium	10.5		0.5	10	06/21/09 15:16	EG	5077089
Tin	0.0061		0.005	1	06/21/09 15:12	EG	5077088

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3010A	06/16/2009 10:30	AB1	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-3 **Collected:** 06/12/2009 10:45 **SPL Sample ID:** 09060743-01

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
METALS BY METHOD 6020A, TOTAL				**MCL**	**SW6020A**	**Units: mg/L**	
Antimony	ND		0.005	1	06/18/09 0:09	AL_H	5072421
Arsenic	ND		0.005	1	06/18/09 0:09	AL_H	5072421
Barium	0.0537		0.005	1	06/19/09 16:26	S_C	5077039
Beryllium	ND		0.004	1	06/19/09 16:26	S_C	5077039
Cadmium	ND		0.005	1	06/18/09 0:09	AL_H	5072421
Chromium	ND		0.005	1	06/18/09 0:09	AL_H	5072421
Cobalt	ND		0.005	1	06/18/09 0:09	AL_H	5072421
Copper	ND		0.005	1	06/18/09 0:09	AL_H	5072421
Lead	ND		0.005	1	06/18/09 0:09	AL_H	5072421
Manganese	3		0.005	1	06/19/09 16:26	S_C	5077039
Molybdenum	ND		0.01	1	06/18/09 0:09	AL_H	5072421
Nickel	0.00971		0.005	1	06/18/09 0:09	AL_H	5072421
Selenium	ND		0.005	1	06/18/09 0:09	AL_H	5072421
Silver	ND		0.005	1	06/18/09 0:09	AL_H	5072421
Thallium	ND		0.005	1	06/18/09 0:09	AL_H	5072421
Vanadium	ND		0.005	1	06/18/09 0:09	AL_H	5072421
Zinc	ND		0.01	1	06/18/09 0:09	AL_H	5072421

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3010A	06/16/2009 10:30	AB1	1.00

NITRATE NITROGEN (AS N), TOTAL				**MCL**	**SM4500-NO3 F**	**Units: mg/L**	
Nitrogen, Nitrate (As N)	ND		0.5	1	06/13/09 16:00	ESK	5069046
NITRITE NITROGEN (AS N), TOTAL				**MCL**	**SM4500-NO2 B**	**Units: mg/L**	
Nitrogen,Nitrite	ND		0.5	1	06/13/09 14:15	ESK	5068989

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-3 **Collected:** 06/12/2009 10:45 **SPL Sample ID:** 09060743-01

Site: San Juan County, 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	06/18/09 16:03	GY	5074314
1,2-Dichlorobenzene	ND		5	1	06/18/09 16:03	GY	5074314
1,2-Diphenylhydrazine	ND		10	1	06/18/09 16:03	GY	5074314
1,3-Dichlorobenzene	ND		5	1	06/18/09 16:03	GY	5074314
1,4-Dichlorobenzene	ND		5	1	06/18/09 16:03	GY	5074314
2,4,5-Trichlorophenol	ND		10	1	06/18/09 16:03	GY	5074314
2,4,6-Trichlorophenol	ND		5	1	06/18/09 16:03	GY	5074314
2,4-Dichlorophenol	ND		5	1	06/18/09 16:03	GY	5074314
2,4-Dimethylphenol	18		5	1	06/18/09 16:03	GY	5074314
2,4-Dinitrophenol	ND		25	1	06/18/09 16:03	GY	5074314
2,4-Dinitrotoluene	ND		5	1	06/18/09 16:03	GY	5074314
2,6-Dinitrotoluene	ND		5	1	06/18/09 16:03	GY	5074314
2-Chloronaphthalene	ND		5	1	06/18/09 16:03	GY	5074314
2-Chlorophenol	ND		5	1	06/18/09 16:03	GY	5074314
2-Methylnaphthalene	12		5	1	06/18/09 16:03	GY	5074314
2-Nitroaniline	ND		25	1	06/18/09 16:03	GY	5074314
2-Nitrophenol	ND		5	1	06/18/09 16:03	GY	5074314
3,3'-Dichlorobenzidine	ND		10	1	06/18/09 16:03	GY	5074314
3-Nitroaniline	ND		25	1	06/18/09 16:03	GY	5074314
4,6-Dinitro-2-methylphenol	ND		25	1	06/18/09 16:03	GY	5074314
4-Bromophenyl phenyl ether	ND		5	1	06/18/09 16:03	GY	5074314
4-Chloro-3-methylphenol	ND		5	1	06/18/09 16:03	GY	5074314
4-Chloroaniline	ND		5	1	06/18/09 16:03	GY	5074314
4-Chlorophenyl phenyl ether	ND		5	1	06/18/09 16:03	GY	5074314
4-Nitroaniline	ND		25	1	06/18/09 16:03	GY	5074314
4-Nitrophenol	ND		25	1	06/18/09 16:03	GY	5074314
Acenaphthene	ND		5	1	06/18/09 16:03	GY	5074314
Acenaphthylene	ND		5	1	06/18/09 16:03	GY	5074314
Aniline	ND		5	1	06/18/09 16:03	GY	5074314
Anthracene	ND		5	1	06/18/09 16:03	GY	5074314
Benz(a)anthracene	ND		5	1	06/18/09 16:03	GY	5074314
Benzo(a)pyrene	ND		5	1	06/18/09 16:03	GY	5074314
Benzo(b)fluoranthene	ND		5	1	06/18/09 16:03	GY	5074314
Benzo(g,h,i)perylene	ND		5	1	06/18/09 16:03	GY	5074314
Benzo(k)fluoranthene	ND		5	1	06/18/09 16:03	GY	5074314
Benzoic acid	ND		25	1	06/18/09 16:03	GY	5074314
Benzyl alcohol	ND		5	1	06/18/09 16:03	GY	5074314
Bis(2-chloroethoxy)methane	ND		5	1	06/18/09 16:03	GY	5074314
Bis(2-chloroethyl)ether	ND		5	1	06/18/09 16:03	GY	5074314

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-3 **Collected:** 06/12/2009 10:45 **SPL Sample ID:** 09060743-01

Site: San Juan County, NM

Analyses/Method	Result	QUAL		Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
Bis(2-chloroisopropyl)ether	ND			5	1	06/18/09 16:03	GY	5074314
Bis(2-ethylhexyl)phthalate	ND			5	1	06/18/09 16:03	GY	5074314
Butyl benzyl phthalate	ND			5	1	06/18/09 16:03	GY	5074314
Carbazole	ND			5	1	06/18/09 16:03	GY	5074314
Chrysene	ND			5	1	06/18/09 16:03	GY	5074314
Dibenz(a,h)anthracene	ND			5	1	06/18/09 16:03	GY	5074314
Dibenzofuran	ND			5	1	06/18/09 16:03	GY	5074314
Diethyl phthalate	ND			5	1	06/18/09 16:03	GY	5074314
Dimethyl phthalate	ND			5	1	06/18/09 16:03	GY	5074314
Di-n-butyl phthalate	ND			5	1	06/18/09 16:03	GY	5074314
Di-n-octyl phthalate	ND			5	1	06/18/09 16:03	GY	5074314
Fluoranthene	ND			5	1	06/18/09 16:03	GY	5074314
Fluorene	ND			5	1	06/18/09 16:03	GY	5074314
Hexachlorobenzene	ND			5	1	06/18/09 16:03	GY	5074314
Hexachlorobutadiene	ND			5	1	06/18/09 16:03	GY	5074314
Hexachlorocyclopentadiene	ND			5	1	06/18/09 16:03	GY	5074314
Hexachloroethane	ND			5	1	06/18/09 16:03	GY	5074314
Indeno(1,2,3-cd)pyrene	ND			5	1	06/18/09 16:03	GY	5074314
Isophorone	ND			5	1	06/18/09 16:03	GY	5074314
Naphthalene	20			5	1	06/18/09 16:03	GY	5074314
Nitrobenzene	ND			5	1	06/18/09 16:03	GY	5074314
N-Nitrosodi-n-propylamine	ND			5	1	06/18/09 16:03	GY	5074314
N-Nitrosodiphenylamine	ND			5	1	06/18/09 16:03	GY	5074314
Pentachlorophenol	ND			25	1	06/18/09 16:03	GY	5074314
Phenanthrene	ND			5	1	06/18/09 16:03	GY	5074314
Phenol	ND			5	1	06/18/09 16:03	GY	5074314
Pyrene	ND			5	1	06/18/09 16:03	GY	5074314
Pyridine	ND			5	1	06/18/09 16:03	GY	5074314
2-Methylphenol	7.2			5	1	06/18/09 16:03	GY	5074314
3 & 4-Methylphenol	8.3			5	1	06/18/09 16:03	GY	5074314
Surr: 2,4,6-Tribromophenol	105		%	10-123	1	06/18/09 16:03	GY	5074314
Surr: 2-Fluorobiphenyl	75.8		%	23-116	1	06/18/09 16:03	GY	5074314
Surr: 2-Fluorophenol	57.5		%	16-110	1	06/18/09 16:03	GY	5074314
Surr: Nitrobenzene-d5	63.2		%	21-114	1	06/18/09 16:03	GY	5074314
Surr: Phenol-d5	43.2		%	10-110	1	06/18/09 16:03	GY	5074314
Surr: Terphenyl-d14	76.0		%	22-141	1	06/18/09 16:03	GY	5074314

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	06/17/2009 7:29	N_M	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-3 **Collected:** 06/12/2009 10:45 **SPL Sample ID:** 09060743-01

Site: San Juan County, 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	06/20/09 18:52	LU_L	5076481
1,1,1-Trichloroethane	ND		5	1	06/20/09 18:52	LU_L	5076481
1,1,2,2-Tetrachloroethane	ND		5	1	06/20/09 18:52	LU_L	5076481
1,1,2-Trichloroethane	ND		5	1	06/20/09 18:52	LU_L	5076481
1,1-Dichloroethane	ND		5	1	06/20/09 18:52	LU_L	5076481
1,1-Dichloroethene	ND		5	1	06/20/09 18:52	LU_L	5076481
1,1-Dichloropropene	ND		5	1	06/20/09 18:52	LU_L	5076481
1,2,3-Trichlorobenzene	ND		5	1	06/20/09 18:52	LU_L	5076481
1,2,3-Trichloropropane	ND		5	1	06/20/09 18:52	LU_L	5076481
1,2,4-Trichlorobenzene	ND		5	1	06/20/09 18:52	LU_L	5076481
1,2,4-Trimethylbenzene	440		100	20	06/21/09 10:45	LU_L	5078047
1,2-Dibromo-3-chloropropane	ND		5	1	06/20/09 18:52	LU_L	5076481
1,2-Dibromoethane	ND		5	1	06/20/09 18:52	LU_L	5076481
1,2-Dichlorobenzene	ND		5	1	06/20/09 18:52	LU_L	5076481
1,2-Dichloroethane	ND		5	1	06/20/09 18:52	LU_L	5076481
1,2-Dichloropropane	ND		5	1	06/20/09 18:52	LU_L	5076481
1,3,5-Trimethylbenzene	140		5	1	06/20/09 18:52	LU_L	5076481
1,3-Dichlorobenzene	ND		5	1	06/20/09 18:52	LU_L	5076481
1,3-Dichloropropane	ND		5	1	06/20/09 18:52	LU_L	5076481
1,4-Dichlorobenzene	ND		5	1	06/20/09 18:52	LU_L	5076481
2,2-Dichloropropane	ND		5	1	06/20/09 18:52	LU_L	5076481
2-Butanone	ND		20	1	06/20/09 18:52	LU_L	5076481
2-Chloroethyl vinyl ether	ND J		10	1	06/20/09 18:52	LU_L	5076481
2-Chlorotoluene	ND		5	1	06/20/09 18:52	LU_L	5076481
2-Hexanone	ND		10	1	06/20/09 18:52	LU_L	5076481
4-Chlorotoluene	ND		5	1	06/20/09 18:52	LU_L	5076481
4-Isopropyltoluene	6.3		5	1	06/20/09 18:52	LU_L	5076481
4-Methyl-2-pentanone	ND		10	1	06/20/09 18:52	LU_L	5076481
Acetone	ND		20	1	06/20/09 18:52	LU_L	5076481
Acrylonitrile	ND		10	1	06/20/09 18:52	LU_L	5076481
Benzene	10		5	1	06/20/09 18:52	LU_L	5076481
Bromobenzene	ND		5	1	06/20/09 18:52	LU_L	5076481
Bromochloromethane	ND		5	1	06/20/09 18:52	LU_L	5076481
Bromodichloromethane	ND		5	1	06/20/09 18:52	LU_L	5076481
Bromoform	ND		5	1	06/20/09 18:52	LU_L	5076481
Bromomethane	ND		10	1	06/20/09 18:52	LU_L	5076481
Carbon disulfide	ND		5	1	06/20/09 18:52	LU_L	5076481
Carbon tetrachloride	ND		5	1	06/20/09 18:52	LU_L	5076481
Chlorobenzene	ND		5	1	06/20/09 18:52	LU_L	5076481

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-3 **Collected:** 06/12/2009 10:45 **SPL Sample ID:** 09060743-01

Site: San Juan County, NM

Analyses/Method	Result	QUAL		Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
Chloroethane	ND			10	1	06/20/09 18:52	LU_L	5076481
Chloroform	ND			5	1	06/20/09 18:52	LU_L	5076481
Chloromethane	ND			10	1	06/20/09 18:52	LU_L	5076481
Dibromochloromethane	ND			5	1	06/20/09 18:52	LU_L	5076481
Dibromomethane	ND			5	1	06/20/09 18:52	LU_L	5076481
Dichlorodifluoromethane	ND			10	1	06/20/09 18:52	LU_L	5076481
Ethylbenzene	490			100	20	06/21/09 10:45	LU_L	5078047
Hexachlorobutadiene	ND			5	1	06/20/09 18:52	LU_L	5076481
Isopropylbenzene	46			5	1	06/20/09 18:52	LU_L	5076481
Methyl tert-butyl ether	ND			5	1	06/20/09 18:52	LU_L	5076481
Methylene chloride	ND			5	1	06/20/09 18:52	LU_L	5076481
Naphthalene	36			5	1	06/20/09 18:52	LU_L	5076481
n-Butylbenzene	ND			5	1	06/20/09 18:52	LU_L	5076481
n-Propylbenzene	48			5	1	06/20/09 18:52	LU_L	5076481
sec-Butylbenzene	6.1			5	1	06/20/09 18:52	LU_L	5076481
Styrene	ND			5	1	06/20/09 18:52	LU_L	5076481
tert-Butylbenzene	ND			5	1	06/20/09 18:52	LU_L	5076481
Tetrachloroethene	ND			5	1	06/20/09 18:52	LU_L	5076481
Toluene	1400			100	20	06/21/09 10:45	LU_L	5078047
Trichloroethene	ND			5	1	06/20/09 18:52	LU_L	5076481
Trichlorofluoromethane	ND			5	1	06/20/09 18:52	LU_L	5076481
Vinyl acetate	ND			10	1	06/20/09 18:52	LU_L	5076481
Vinyl chloride	ND			2	1	06/20/09 18:52	LU_L	5076481
cis-1,2-Dichloroethene	ND			5	1	06/20/09 18:52	LU_L	5076481
cis-1,3-Dichloropropene	ND			5	1	06/20/09 18:52	LU_L	5076481
m,p-Xylene	3100			100	20	06/21/09 10:45	LU_L	5078047
o-Xylene	950			100	20	06/21/09 10:45	LU_L	5078047
trans-1,2-Dichloroethene	ND			5	1	06/20/09 18:52	LU_L	5076481
trans-1,3-Dichloropropene	ND			5	1	06/20/09 18:52	LU_L	5076481
1,2-Dichloroethene (total)	ND			5	1	06/20/09 18:52	LU_L	5076481
Xylenes,Total	4050			100	20	06/21/09 10:45	LU_L	5078047
Surr: 1,2-Dichloroethane-d4	97.2		%	78-116	1	06/20/09 18:52	LU_L	5076481
Surr: 1,2-Dichloroethane-d4	95.8		%	78-116	20	06/21/09 10:45	LU_L	5078047
Surr: 4-Bromofluorobenzene	103		%	74-125	20	06/21/09 10:45	LU_L	5078047
Surr: 4-Bromofluorobenzene	105		%	74-125	1	06/20/09 18:52	LU_L	5076481
Surr: Toluene-d8	92.2		%	82-118	20	06/21/09 10:45	LU_L	5078047
Surr: Toluene-d8	90.4		%	82-118	1	06/20/09 18:52	LU_L	5076481

Qualifiers:

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

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

Client Sample ID: MW-2 **Collected:** 06/12/2009 10:35 **SPL Sample ID:** 09060743-02

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
ALKALINITY (AS CACO3), TOTAL			**MCL**	**E310.1**	**Units: mg/L**		
Alkalinity, Total (As CaCO3)	215		2	1	06/14/09 12:15	PAC	5065993
DIESEL RANGE ORGANICS			**MCL**	**SW8015B**	**Units: mg/L**		
Diesel Range Organics (C10-C28)	0.76		0.1	1	06/19/09 18:49	NW	5077349
Surr: n-Pentacosane	44.2		% 20-150	1	06/19/09 18:49	NW	5077349

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	06/16/2009 10:43	N_M	1.00

GASOLINE RANGE ORGANICS			**MCL**	**SW8015B**	**Units: mg/L**		
Gasoline Range Organics	11		5	50	06/17/09 3:15	EMB	5070813
Surr: 1,4-Difluorobenzene	98.5		% 60-155	50	06/17/09 3:15	EMB	5070813
Surr: 4-Bromofluorobenzene	106		% 50-158	50	06/17/09 3:15	EMB	5070813
ION CHROMATOGRAPHY			**MCL**	**E300.0**	**Units: mg/L**		
Bromide	ND		0.5	1	06/19/09 16:07	BDG	5076630
Chloride	40.1		5	10	06/19/09 16:25	BDG	5076631
Fluoride	0.621		0.5	1	06/19/09 16:07	BDG	5076630
Ortho-phosphate (As P)	ND		0.5	1	06/19/09 16:07	BDG	5076630
Sulfate	1360		100	200	06/19/09 16:45	BDG	5076632
MERCURY, TOTAL			**MCL**	**SW7470A**	**Units: mg/L**		
Mercury	ND		0.0002	1	06/18/09 13:48	F_S	5073577

Prep Method	Prep Date	Prep Initials	Prep Factor
SW7470A	06/18/2009 10:15	F_S	1.00

METALS BY METHOD 6010B, TOTAL			**MCL**	**SW6010B**	**Units: mg/L**		
Aluminum	2.99		0.1	1	06/21/09 15:20	EG	5077090
Boron	ND		0.1	1	06/21/09 15:20	EG	5077090
Calcium	528		1	10	06/21/09 15:24	EG	5077091
Iron	3.7		0.02	1	06/21/09 15:20	EG	5077090
Magnesium	19.7		0.1	1	06/21/09 15:20	EG	5077090
Potassium	7.53		1	1	06/21/09 15:20	EG	5077090
Sodium	196		1	10	06/21/09 15:24	EG	5077091
Strontium	8.54		0.5	10	06/21/09 15:24	EG	5077091
Tin	ND		0.005	1	06/21/09 15:20	EG	5077090

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3010A	06/16/2009 10:30	AB1	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-2 **Collected:** 06/12/2009 10:35 **SPL Sample ID:** 09060743-02

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
METALS BY METHOD 6020A, TOTAL				**MCL**	**SW6020A**	**Units: mg/L**	
Antimony	ND		0.005	1	06/18/09 0:14	AL_H	5072422
Arsenic	0.00759		0.005	1	06/18/09 0:14	AL_H	5072422
Barium	0.107		0.005	1	06/19/09 16:31	S_C	5077040
Beryllium	ND		0.004	1	06/19/09 16:31	S_C	5077040
Cadmium	ND		0.005	1	06/18/09 0:14	AL_H	5072422
Chromium	ND		0.005	1	06/18/09 0:14	AL_H	5072422
Cobalt	ND		0.005	1	06/18/09 0:14	AL_H	5072422
Copper	0.00699		0.005	1	06/18/09 0:14	AL_H	5072422
Lead	0.00561		0.005	1	06/18/09 0:14	AL_H	5072422
Manganese	3.56		0.005	1	06/19/09 16:31	S_C	5077040
Molybdenum	ND		0.01	1	06/18/09 0:14	AL_H	5072422
Nickel	0.0107		0.005	1	06/18/09 0:14	AL_H	5072422
Selenium	ND		0.005	1	06/18/09 0:14	AL_H	5072422
Silver	ND		0.005	1	06/18/09 0:14	AL_H	5072422
Thallium	ND		0.005	1	06/18/09 0:14	AL_H	5072422
Vanadium	0.00592		0.005	1	06/18/09 0:14	AL_H	5072422
Zinc	0.0152		0.01	1	06/18/09 0:14	AL_H	5072422

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3010A	06/16/2009 10:30	AB1	1.00

NITRATE NITROGEN (AS N), TOTAL				**MCL**	**SM4500-NO3 F**	**Units: mg/L**	
Nitrogen, Nitrate (As N)	0.52		0.5	1	06/13/09 16:00	ESK	5069049
NITRITE NITROGEN (AS N), TOTAL				**MCL**	**SM4500-NO2 B**	**Units: mg/L**	
Nitrogen,Nitrite	ND		0.5	1	06/13/09 14:15	ESK	5068992

Qualifiers:

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

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

Client Sample ID: MW-2 **Collected:** 06/12/2009 10:35 **SPL Sample ID:** 09060743-02

Site: San Juan County, 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	06/18/09 16:36	GY	5074315
1,2-Dichlorobenzene	ND		5	1	06/18/09 16:36	GY	5074315
1,2-Diphenylhydrazine	ND		10	1	06/18/09 16:36	GY	5074315
1,3-Dichlorobenzene	ND		5	1	06/18/09 16:36	GY	5074315
1,4-Dichlorobenzene	ND		5	1	06/18/09 16:36	GY	5074315
2,4,5-Trichlorophenol	ND		10	1	06/18/09 16:36	GY	5074315
2,4,6-Trichlorophenol	ND		5	1	06/18/09 16:36	GY	5074315
2,4-Dichlorophenol	ND		5	1	06/18/09 16:36	GY	5074315
2,4-Dimethylphenol	ND		5	1	06/18/09 16:36	GY	5074315
2,4-Dinitrophenol	ND		25	1	06/18/09 16:36	GY	5074315
2,4-Dinitrotoluene	ND		5	1	06/18/09 16:36	GY	5074315
2,6-Dinitrotoluene	ND		5	1	06/18/09 16:36	GY	5074315
2-Chloronaphthalene	ND		5	1	06/18/09 16:36	GY	5074315
2-Chlorophenol	ND		5	1	06/18/09 16:36	GY	5074315
2-Methylnaphthalene	13		5	1	06/18/09 16:36	GY	5074315
2-Nitroaniline	ND		25	1	06/18/09 16:36	GY	5074315
2-Nitrophenol	ND		5	1	06/18/09 16:36	GY	5074315
3,3'-Dichlorobenzidine	ND		10	1	06/18/09 16:36	GY	5074315
3-Nitroaniline	ND		25	1	06/18/09 16:36	GY	5074315
4,6-Dinitro-2-methylphenol	ND		25	1	06/18/09 16:36	GY	5074315
4-Bromophenyl phenyl ether	ND		5	1	06/18/09 16:36	GY	5074315
4-Chloro-3-methylphenol	ND		5	1	06/18/09 16:36	GY	5074315
4-Chloroaniline	ND		5	1	06/18/09 16:36	GY	5074315
4-Chlorophenyl phenyl ether	ND		5	1	06/18/09 16:36	GY	5074315
4-Nitroaniline	ND		25	1	06/18/09 16:36	GY	5074315
4-Nitrophenol	ND		25	1	06/18/09 16:36	GY	5074315
Acenaphthene	ND		5	1	06/18/09 16:36	GY	5074315
Acenaphthylene	ND		5	1	06/18/09 16:36	GY	5074315
Aniline	ND		5	1	06/18/09 16:36	GY	5074315
Anthracene	ND		5	1	06/18/09 16:36	GY	5074315
Benz(a)anthracene	ND		5	1	06/18/09 16:36	GY	5074315
Benzo(a)pyrene	ND		5	1	06/18/09 16:36	GY	5074315
Benzo(b)fluoranthene	ND		5	1	06/18/09 16:36	GY	5074315
Benzo(g,h,i)perylene	ND		5	1	06/18/09 16:36	GY	5074315
Benzo(k)fluoranthene	ND		5	1	06/18/09 16:36	GY	5074315
Benzoic acid	ND		25	1	06/18/09 16:36	GY	5074315
Benzyl alcohol	6.8		5	1	06/18/09 16:36	GY	5074315
Bis(2-chloroethoxy)methane	ND		5	1	06/18/09 16:36	GY	5074315
Bis(2-chloroethyl)ether	ND		5	1	06/18/09 16:36	GY	5074315

Qualifiers:

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

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

Client Sample ID: MW-2 **Collected:** 06/12/2009 10:35 **SPL Sample ID:** 09060743-02

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
Bis(2-chloroisopropyl)ether	ND		5	1	06/18/09 16:36	GY	5074315
Bis(2-ethylhexyl)phthalate	ND		5	1	06/18/09 16:36	GY	5074315
Butyl benzyl phthalate	ND		5	1	06/18/09 16:36	GY	5074315
Carbazole	ND		5	1	06/18/09 16:36	GY	5074315
Chrysene	ND		5	1	06/18/09 16:36	GY	5074315
Dibenz(a,h)anthracene	ND		5	1	06/18/09 16:36	GY	5074315
Dibenzofuran	ND		5	1	06/18/09 16:36	GY	5074315
Diethyl phthalate	ND		5	1	06/18/09 16:36	GY	5074315
Dimethyl phthalate	ND		5	1	06/18/09 16:36	GY	5074315
Di-n-butyl phthalate	ND		5	1	06/18/09 16:36	GY	5074315
Di-n-octyl phthalate	ND		5	1	06/18/09 16:36	GY	5074315
Fluoranthene	ND		5	1	06/18/09 16:36	GY	5074315
Fluorene	ND		5	1	06/18/09 16:36	GY	5074315
Hexachlorobenzene	ND		5	1	06/18/09 16:36	GY	5074315
Hexachlorobutadiene	ND		5	1	06/18/09 16:36	GY	5074315
Hexachlorocyclopentadiene	ND		5	1	06/18/09 16:36	GY	5074315
Hexachloroethane	ND		5	1	06/18/09 16:36	GY	5074315
Indeno(1,2,3-cd)pyrene	ND		5	1	06/18/09 16:36	GY	5074315
Isophorone	ND		5	1	06/18/09 16:36	GY	5074315
Naphthalene	14		5	1	06/18/09 16:36	GY	5074315
Nitrobenzene	ND		5	1	06/18/09 16:36	GY	5074315
N-Nitrosodi-n-propylamine	ND		5	1	06/18/09 16:36	GY	5074315
N-Nitrosodiphenylamine	ND		5	1	06/18/09 16:36	GY	5074315
Pentachlorophenol	ND		25	1	06/18/09 16:36	GY	5074315
Phenanthrene	ND		5	1	06/18/09 16:36	GY	5074315
Phenol	ND		5	1	06/18/09 16:36	GY	5074315
Pyrene	ND		5	1	06/18/09 16:36	GY	5074315
Pyridine	ND		5	1	06/18/09 16:36	GY	5074315
2-Methylphenol	ND		5	1	06/18/09 16:36	GY	5074315
3 & 4-Methylphenol	ND		5	1	06/18/09 16:36	GY	5074315
Surr: 2,4,6-Tribromophenol	109		% 10-123	1	06/18/09 16:36	GY	5074315
Surr: 2-Fluorobiphenyl	76.8		% 23-116	1	06/18/09 16:36	GY	5074315
Surr: 2-Fluorophenol	58.4		% 16-110	1	06/18/09 16:36	GY	5074315
Surr: Nitrobenzene-d5	66.0		% 21-114	1	06/18/09 16:36	GY	5074315
Surr: Phenol-d5	42.9		% 10-110	1	06/18/09 16:36	GY	5074315
Surr: Terphenyl-d14	82.8		% 22-141	1	06/18/09 16:36	GY	5074315

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	06/17/2009 7:29	N_M	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-2 **Collected:** 06/12/2009 10:35 **SPL Sample ID:** 09060743-02

Site: San Juan County, 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	06/20/09 19:47	LU_L	5076483
1,1,1-Trichloroethane	ND		5	1	06/20/09 19:47	LU_L	5076483
1,1,2,2-Tetrachloroethane	ND		5	1	06/20/09 19:47	LU_L	5076483
1,1,2-Trichloroethane	ND		5	1	06/20/09 19:47	LU_L	5076483
1,1-Dichloroethane	ND		5	1	06/20/09 19:47	LU_L	5076483
1,1-Dichloroethene	ND		5	1	06/20/09 19:47	LU_L	5076483
1,1-Dichloropropene	ND		5	1	06/20/09 19:47	LU_L	5076483
1,2,3-Trichlorobenzene	ND		5	1	06/20/09 19:47	LU_L	5076483
1,2,3-Trichloropropane	ND		5	1	06/20/09 19:47	LU_L	5076483
1,2,4-Trichlorobenzene	ND		5	1	06/20/09 19:47	LU_L	5076483
1,2,4-Trimethylbenzene	300		50	10	06/21/09 10:18	LU_L	5078046
1,2-Dibromo-3-chloropropane	ND		5	1	06/20/09 19:47	LU_L	5076483
1,2-Dibromoethane	ND		5	1	06/20/09 19:47	LU_L	5076483
1,2-Dichlorobenzene	ND		5	1	06/20/09 19:47	LU_L	5076483
1,2-Dichloroethane	ND		5	1	06/20/09 19:47	LU_L	5076483
1,2-Dichloropropane	ND		5	1	06/20/09 19:47	LU_L	5076483
1,3,5-Trimethylbenzene	96		5	1	06/20/09 19:47	LU_L	5076483
1,3-Dichlorobenzene	ND		5	1	06/20/09 19:47	LU_L	5076483
1,3-Dichloropropane	ND		5	1	06/20/09 19:47	LU_L	5076483
1,4-Dichlorobenzene	ND		5	1	06/20/09 19:47	LU_L	5076483
2,2-Dichloropropane	ND		5	1	06/20/09 19:47	LU_L	5076483
2-Butanone	ND		20	1	06/20/09 19:47	LU_L	5076483
2-Chloroethyl vinyl ether	ND J		10	1	06/20/09 19:47	LU_L	5076483
2-Chlorotoluene	ND		5	1	06/20/09 19:47	LU_L	5076483
2-Hexanone	ND		10	1	06/20/09 19:47	LU_L	5076483
4-Chlorotoluene	ND		5	1	06/20/09 19:47	LU_L	5076483
4-Isopropyltoluene	7.2		5	1	06/20/09 19:47	LU_L	5076483
4-Methyl-2-pentanone	ND		10	1	06/20/09 19:47	LU_L	5076483
Acetone	ND		20	1	06/20/09 19:47	LU_L	5076483
Acrylonitrile	ND		10	1	06/20/09 19:47	LU_L	5076483
Benzene	9.4		5	1	06/20/09 19:47	LU_L	5076483
Bromobenzene	ND		5	1	06/20/09 19:47	LU_L	5076483
Bromochloromethane	ND		5	1	06/20/09 19:47	LU_L	5076483
Bromodichloromethane	ND		5	1	06/20/09 19:47	LU_L	5076483
Bromoform	ND		5	1	06/20/09 19:47	LU_L	5076483
Bromomethane	ND		10	1	06/20/09 19:47	LU_L	5076483
Carbon disulfide	ND		5	1	06/20/09 19:47	LU_L	5076483
Carbon tetrachloride	ND		5	1	06/20/09 19:47	LU_L	5076483
Chlorobenzene	ND		5	1	06/20/09 19:47	LU_L	5076483

Qualifiers:

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

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

Client Sample ID: MW-2 **Collected:** 06/12/2009 10:35 **SPL Sample ID:** 09060743-02

Site: San Juan County, NM

Analyses/Method	Result	QUAL		Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
Chloroethane	ND			10	1	06/20/09 19:47	LU_L	5076483
Chloroform	ND			5	1	06/20/09 19:47	LU_L	5076483
Chloromethane	ND			10	1	06/20/09 19:47	LU_L	5076483
Dibromochloromethane	ND			5	1	06/20/09 19:47	LU_L	5076483
Dibromomethane	ND			5	1	06/20/09 19:47	LU_L	5076483
Dichlorodifluoromethane	ND			10	1	06/20/09 19:47	LU_L	5076483
Ethylbenzene	180			5	1	06/20/09 19:47	LU_L	5076483
Hexachlorobutadiene	ND			5	1	06/20/09 19:47	LU_L	5076483
Isopropylbenzene	24			5	1	06/20/09 19:47	LU_L	5076483
Methyl tert-butyl ether	ND			5	1	06/20/09 19:47	LU_L	5076483
Methylene chloride	ND			5	1	06/20/09 19:47	LU_L	5076483
Naphthalene	21			5	1	06/20/09 19:47	LU_L	5076483
n-Butylbenzene	5.2			5	1	06/20/09 19:47	LU_L	5076483
n-Propylbenzene	25			5	1	06/20/09 19:47	LU_L	5076483
sec-Butylbenzene	6.6			5	1	06/20/09 19:47	LU_L	5076483
Styrene	ND			5	1	06/20/09 19:47	LU_L	5076483
tert-Butylbenzene	ND			5	1	06/20/09 19:47	LU_L	5076483
Tetrachloroethene	ND			5	1	06/20/09 19:47	LU_L	5076483
Toluene	1100			50	10	06/21/09 10:18	LU_L	5078046
Trichloroethene	ND			5	1	06/20/09 19:47	LU_L	5076483
Trichlorofluoromethane	ND			5	1	06/20/09 19:47	LU_L	5076483
Vinyl acetate	ND			10	1	06/20/09 19:47	LU_L	5076483
Vinyl chloride	ND			2	1	06/20/09 19:47	LU_L	5076483
cis-1,2-Dichloroethene	ND			5	1	06/20/09 19:47	LU_L	5076483
cis-1,3-Dichloropropene	ND			5	1	06/20/09 19:47	LU_L	5076483
m,p-Xylene	1800			50	10	06/21/09 10:18	LU_L	5078046
o-Xylene	480			50	10	06/21/09 10:18	LU_L	5078046
trans-1,2-Dichloroethene	ND			5	1	06/20/09 19:47	LU_L	5076483
trans-1,3-Dichloropropene	ND			5	1	06/20/09 19:47	LU_L	5076483
1,2-Dichloroethene (total)	ND			5	1	06/20/09 19:47	LU_L	5076483
Xylenes,Total	2280			50	10	06/21/09 10:18	LU_L	5078046
Surr: 1,2-Dichloroethane-d4	94.5		%	78-116	1	06/20/09 19:47	LU_L	5076483
Surr: 1,2-Dichloroethane-d4	93.7		%	78-116	10	06/21/09 10:18	LU_L	5078046
Surr: 4-Bromofluorobenzene	103		%	74-125	10	06/21/09 10:18	LU_L	5078046
Surr: 4-Bromofluorobenzene	107		%	74-125	1	06/20/09 19:47	LU_L	5076483
Surr: Toluene-d8	93.4		%	82-118	1	06/20/09 19:47	LU_L	5076483
Surr: Toluene-d8	91.6		%	82-118	10	06/21/09 10:18	LU_L	5078046

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:** 06/12/2009 11:00 **SPL Sample ID:** 09060743-03

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
ALKALINITY (AS CACO3), TOTAL			**MCL**	**E310.1**	**Units: mg/L**		
Alkalinity, Total (As CaCO3)	165		2	1	06/14/09 12:15	PAC	5065994
DIESEL RANGE ORGANICS			**MCL**	**SW8015B**	**Units: mg/L**		
Diesel Range Organics (C10-C28)	ND		0.1	1	06/19/09 19:10	NW	5077350
Surr: n-Pentacosane	66.8	%	20-150	1	06/19/09 19:10	NW	5077350

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	06/16/2009 10:43	N_M	1.00

GASOLINE RANGE ORGANICS			**MCL**	**SW8015B**	**Units: mg/L**		
Gasoline Range Organics	0.22		0.1	1	06/17/09 3:43	EMB	5070814
Surr: 1,4-Difluorobenzene	101	%	60-155	1	06/17/09 3:43	EMB	5070814
Surr: 4-Bromofluorobenzene	106	%	50-158	1	06/17/09 3:43	EMB	5070814
ION CHROMATOGRAPHY			**MCL**	**E300.0**	**Units: mg/L**		
Bromide	ND		0.5	1	06/19/09 17:04	BDG	5076633
Chloride	119		5	10	06/19/09 17:23	BDG	5076634
Fluoride	0.518		0.5	1	06/19/09 17:04	BDG	5076633
Ortho-phosphate (As P)	ND		0.5	1	06/19/09 17:04	BDG	5076633
Sulfate	1690		100	200	06/19/09 18:59	BDG	5076637
MERCURY, TOTAL			**MCL**	**SW7470A**	**Units: mg/L**		
Mercury	ND		0.0002	1	06/18/09 13:51	F_S	5073578

Prep Method	Prep Date	Prep Initials	Prep Factor
SW7470A	06/18/2009 10:15	F_S	1.00

METALS BY METHOD 6010B, TOTAL			**MCL**	**SW6010B**	**Units: mg/L**		
Aluminum	9.22		0.1	1	06/21/09 15:28	EG	5077092
Boron	0.135		0.1	1	06/21/09 15:28	EG	5077092
Calcium	473		1	10	06/21/09 15:32	EG	5077093
Iron	6.81		0.02	1	06/21/09 15:28	EG	5077092
Magnesium	27.1		0.1	1	06/21/09 15:28	EG	5077092
Potassium	7.31		1	1	06/21/09 15:28	EG	5077092
Sodium	454		1	10	06/21/09 15:32	EG	5077093
Strontium	8.51		0.5	10	06/21/09 15:32	EG	5077093
Tin	ND		0.005	1	06/21/09 15:28	EG	5077092

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3010A	06/16/2009 10:30	AB1	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:** 06/12/2009 11:00 **SPL Sample ID:** 09060743-03

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
METALS BY METHOD 6020A, TOTAL				**MCL**	**SW6020A**	**Units: mg/L**	
Antimony	ND		0.005	1	06/18/09 0:19	AL_H	5072423
Arsenic	ND		0.005	1	06/18/09 0:19	AL_H	5072423
Barium	0.0857		0.005	1	06/19/09 16:37	S_C	5077041
Beryllium	ND		0.004	1	06/19/09 16:37	S_C	5077041
Cadmium	ND		0.005	1	06/18/09 0:19	AL_H	5072423
Chromium	0.00601		0.005	1	06/18/09 0:19	AL_H	5072423
Cobalt	0.0157		0.005	1	06/18/09 0:19	AL_H	5072423
Copper	0.022		0.005	1	06/18/09 0:19	AL_H	5072423
Lead	0.0124		0.005	1	06/18/09 0:19	AL_H	5072423
Manganese	4.79		0.005	1	06/19/09 16:37	S_C	5077041
Molybdenum	ND		0.01	1	06/18/09 0:19	AL_H	5072423
Nickel	0.0185		0.005	1	06/18/09 0:19	AL_H	5072423
Selenium	ND		0.005	1	06/18/09 0:19	AL_H	5072423
Silver	ND		0.005	1	06/18/09 0:19	AL_H	5072423
Thallium	ND		0.005	1	06/18/09 0:19	AL_H	5072423
Vanadium	0.012		0.005	1	06/18/09 0:19	AL_H	5072423
Zinc	0.0322		0.01	1	06/18/09 0:19	AL_H	5072423

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3010A	06/16/2009 10:30	AB1	1.00

NITRATE NITROGEN (AS N), TOTAL				**MCL**	**SM4500-NO3 F**	**Units: mg/L**	
Nitrogen, Nitrate (As N)	0.78		0.5	1	06/13/09 16:00	ESK	5069050
NITRITE NITROGEN (AS N), TOTAL				**MCL**	**SM4500-NO2 B**	**Units: mg/L**	
Nitrogen,Nitrite	ND		0.5	1	06/13/09 14:15	ESK	5068993

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:** 06/12/2009 11:00 **SPL Sample ID:** 09060743-03

Site: San Juan County, 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	06/18/09 17:10	GY	5074316
1,2-Dichlorobenzene	ND		5	1	06/18/09 17:10	GY	5074316
1,2-Diphenylhydrazine	ND		10	1	06/18/09 17:10	GY	5074316
1,3-Dichlorobenzene	ND		5	1	06/18/09 17:10	GY	5074316
1,4-Dichlorobenzene	ND		5	1	06/18/09 17:10	GY	5074316
2,4,5-Trichlorophenol	ND		10	1	06/18/09 17:10	GY	5074316
2,4,6-Trichlorophenol	ND		5	1	06/18/09 17:10	GY	5074316
2,4-Dichlorophenol	ND		5	1	06/18/09 17:10	GY	5074316
2,4-Dimethylphenol	ND		5	1	06/18/09 17:10	GY	5074316
2,4-Dinitrophenol	ND		25	1	06/18/09 17:10	GY	5074316
2,4-Dinitrotoluene	ND		5	1	06/18/09 17:10	GY	5074316
2,6-Dinitrotoluene	ND		5	1	06/18/09 17:10	GY	5074316
2-Chloronaphthalene	ND		5	1	06/18/09 17:10	GY	5074316
2-Chlorophenol	ND		5	1	06/18/09 17:10	GY	5074316
2-Methylnaphthalene	ND		5	1	06/18/09 17:10	GY	5074316
2-Nitroaniline	ND		25	1	06/18/09 17:10	GY	5074316
2-Nitrophenol	ND		5	1	06/18/09 17:10	GY	5074316
3,3'-Dichlorobenzidine	ND		10	1	06/18/09 17:10	GY	5074316
3-Nitroaniline	ND		25	1	06/18/09 17:10	GY	5074316
4,6-Dinitro-2-methylphenol	ND		25	1	06/18/09 17:10	GY	5074316
4-Bromophenyl phenyl ether	ND		5	1	06/18/09 17:10	GY	5074316
4-Chloro-3-methylphenol	ND		5	1	06/18/09 17:10	GY	5074316
4-Chloroaniline	ND		5	1	06/18/09 17:10	GY	5074316
4-Chlorophenyl phenyl ether	ND		5	1	06/18/09 17:10	GY	5074316
4-Nitroaniline	ND		25	1	06/18/09 17:10	GY	5074316
4-Nitrophenol	ND		25	1	06/18/09 17:10	GY	5074316
Acenaphthene	ND		5	1	06/18/09 17:10	GY	5074316
Acenaphthylene	ND		5	1	06/18/09 17:10	GY	5074316
Aniline	ND		5	1	06/18/09 17:10	GY	5074316
Anthracene	ND		5	1	06/18/09 17:10	GY	5074316
Benz(a)anthracene	ND		5	1	06/18/09 17:10	GY	5074316
Benzo(a)pyrene	ND		5	1	06/18/09 17:10	GY	5074316
Benzo(b)fluoranthene	ND		5	1	06/18/09 17:10	GY	5074316
Benzo(g,h,i)perylene	ND		5	1	06/18/09 17:10	GY	5074316
Benzo(k)fluoranthene	ND		5	1	06/18/09 17:10	GY	5074316
Benzoic acid	ND		25	1	06/18/09 17:10	GY	5074316
Benzyl alcohol	ND		5	1	06/18/09 17:10	GY	5074316
Bis(2-chloroethoxy)methane	ND		5	1	06/18/09 17:10	GY	5074316
Bis(2-chloroethyl)ether	ND		5	1	06/18/09 17:10	GY	5074316

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:** 06/12/2009 11:00 **SPL Sample ID:** 09060743-03

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
Bis(2-chloroisopropyl)ether	ND		5	1	06/18/09 17:10	GY	5074316
Bis(2-ethylhexyl)phthalate	ND		5	1	06/18/09 17:10	GY	5074316
Butyl benzyl phthalate	ND		5	1	06/18/09 17:10	GY	5074316
Carbazole	ND		5	1	06/18/09 17:10	GY	5074316
Chrysene	ND		5	1	06/18/09 17:10	GY	5074316
Dibenz(a,h)anthracene	ND		5	1	06/18/09 17:10	GY	5074316
Dibenzofuran	ND		5	1	06/18/09 17:10	GY	5074316
Diethyl phthalate	ND		5	1	06/18/09 17:10	GY	5074316
Dimethyl phthalate	ND		5	1	06/18/09 17:10	GY	5074316
Di-n-butyl phthalate	ND		5	1	06/18/09 17:10	GY	5074316
Di-n-octyl phthalate	ND		5	1	06/18/09 17:10	GY	5074316
Fluoranthene	ND		5	1	06/18/09 17:10	GY	5074316
Fluorene	ND		5	1	06/18/09 17:10	GY	5074316
Hexachlorobenzene	ND		5	1	06/18/09 17:10	GY	5074316
Hexachlorobutadiene	ND		5	1	06/18/09 17:10	GY	5074316
Hexachlorocyclopentadiene	ND		5	1	06/18/09 17:10	GY	5074316
Hexachloroethane	ND		5	1	06/18/09 17:10	GY	5074316
Indeno(1,2,3-cd)pyrene	ND		5	1	06/18/09 17:10	GY	5074316
Isophorone	ND		5	1	06/18/09 17:10	GY	5074316
Naphthalene	ND		5	1	06/18/09 17:10	GY	5074316
Nitrobenzene	ND		5	1	06/18/09 17:10	GY	5074316
N-Nitrosodi-n-propylamine	ND		5	1	06/18/09 17:10	GY	5074316
N-Nitrosodiphenylamine	ND		5	1	06/18/09 17:10	GY	5074316
Pentachlorophenol	ND		25	1	06/18/09 17:10	GY	5074316
Phenanthrene	ND		5	1	06/18/09 17:10	GY	5074316
Phenol	ND		5	1	06/18/09 17:10	GY	5074316
Pyrene	ND		5	1	06/18/09 17:10	GY	5074316
Pyridine	ND		5	1	06/18/09 17:10	GY	5074316
2-Methylphenol	ND		5	1	06/18/09 17:10	GY	5074316
3 & 4-Methylphenol	ND		5	1	06/18/09 17:10	GY	5074316
Surr: 2,4,6-Tribromophenol	89.6		% 10-123	1	06/18/09 17:10	GY	5074316
Surr: 2-Fluorobiphenyl	66.8		% 23-116	1	06/18/09 17:10	GY	5074316
Surr: 2-Fluorophenol	49.9		% 16-110	1	06/18/09 17:10	GY	5074316
Surr: Nitrobenzene-d5	56.2		% 21-114	1	06/18/09 17:10	GY	5074316
Surr: Phenol-d5	37.1		% 10-110	1	06/18/09 17:10	GY	5074316
Surr: Terphenyl-d14	64.0		% 22-141	1	06/18/09 17:10	GY	5074316

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	06/17/2009 7:29	N_M	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:** 06/12/2009 11:00 **SPL Sample ID:** 09060743-03

Site: San Juan County, 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	06/21/09 9:51	LU_L	5078045
1,1,1-Trichloroethane	ND		5	1	06/21/09 9:51	LU_L	5078045
1,1,2,2-Tetrachloroethane	ND		5	1	06/21/09 9:51	LU_L	5078045
1,1,2-Trichloroethane	ND		5	1	06/21/09 9:51	LU_L	5078045
1,1-Dichloroethane	ND		5	1	06/21/09 9:51	LU_L	5078045
1,1-Dichloroethene	ND		5	1	06/21/09 9:51	LU_L	5078045
1,1-Dichloropropene	ND		5	1	06/21/09 9:51	LU_L	5078045
1,2,3-Trichlorobenzene	ND		5	1	06/21/09 9:51	LU_L	5078045
1,2,3-Trichloropropane	ND		5	1	06/21/09 9:51	LU_L	5078045
1,2,4-Trichlorobenzene	ND		5	1	06/21/09 9:51	LU_L	5078045
1,2,4-Trimethylbenzene	ND		5	1	06/21/09 9:51	LU_L	5078045
1,2-Dibromo-3-chloropropane	ND		5	1	06/21/09 9:51	LU_L	5078045
1,2-Dibromoethane	ND		5	1	06/21/09 9:51	LU_L	5078045
1,2-Dichlorobenzene	ND		5	1	06/21/09 9:51	LU_L	5078045
1,2-Dichloroethane	ND		5	1	06/21/09 9:51	LU_L	5078045
1,2-Dichloropropane	ND		5	1	06/21/09 9:51	LU_L	5078045
1,3,5-Trimethylbenzene	ND		5	1	06/21/09 9:51	LU_L	5078045
1,3-Dichlorobenzene	ND		5	1	06/21/09 9:51	LU_L	5078045
1,3-Dichloropropane	ND		5	1	06/21/09 9:51	LU_L	5078045
1,4-Dichlorobenzene	ND		5	1	06/21/09 9:51	LU_L	5078045
2,2-Dichloropropane	ND		5	1	06/21/09 9:51	LU_L	5078045
2-Butanone	ND		20	1	06/21/09 9:51	LU_L	5078045
2-Chloroethyl vinyl ether	ND	J	10	1	06/21/09 9:51	LU_L	5078045
2-Chlorotoluene	ND		5	1	06/21/09 9:51	LU_L	5078045
2-Hexanone	ND		10	1	06/21/09 9:51	LU_L	5078045
4-Chlorotoluene	ND		5	1	06/21/09 9:51	LU_L	5078045
4-Isopropyltoluene	ND		5	1	06/21/09 9:51	LU_L	5078045
4-Methyl-2-pentanone	ND		10	1	06/21/09 9:51	LU_L	5078045
Acetone	ND		20	1	06/21/09 9:51	LU_L	5078045
Acrylonitrile	ND		10	1	06/21/09 9:51	LU_L	5078045
Benzene	5.1		5	1	06/21/09 9:51	LU_L	5078045
Bromobenzene	ND		5	1	06/21/09 9:51	LU_L	5078045
Bromochloromethane	ND		5	1	06/21/09 9:51	LU_L	5078045
Bromodichloromethane	ND		5	1	06/21/09 9:51	LU_L	5078045
Bromoform	ND		5	1	06/21/09 9:51	LU_L	5078045
Bromomethane	ND		10	1	06/21/09 9:51	LU_L	5078045
Carbon disulfide	ND		5	1	06/21/09 9:51	LU_L	5078045
Carbon tetrachloride	ND		5	1	06/21/09 9:51	LU_L	5078045
Chlorobenzene	ND		5	1	06/21/09 9:51	LU_L	5078045

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:** 06/12/2009 11:00 **SPL Sample ID:** 09060743-03

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
Chloroethane	ND		10	1	06/21/09 9:51	LU_L	5078045
Chloroform	ND		5	1	06/21/09 9:51	LU_L	5078045
Chloromethane	ND		10	1	06/21/09 9:51	LU_L	5078045
Dibromochloromethane	ND		5	1	06/21/09 9:51	LU_L	5078045
Dibromomethane	ND		5	1	06/21/09 9:51	LU_L	5078045
Dichlorodifluoromethane	ND		10	1	06/21/09 9:51	LU_L	5078045
Ethylbenzene	ND		5	1	06/21/09 9:51	LU_L	5078045
Hexachlorobutadiene	ND		5	1	06/21/09 9:51	LU_L	5078045
Isopropylbenzene	ND		5	1	06/21/09 9:51	LU_L	5078045
Methyl tert-butyl ether	ND		5	1	06/21/09 9:51	LU_L	5078045
Methylene chloride	ND		5	1	06/21/09 9:51	LU_L	5078045
Naphthalene	ND		5	1	06/21/09 9:51	LU_L	5078045
n-Butylbenzene	ND		5	1	06/21/09 9:51	LU_L	5078045
n-Propylbenzene	ND		5	1	06/21/09 9:51	LU_L	5078045
sec-Butylbenzene	ND		5	1	06/21/09 9:51	LU_L	5078045
Styrene	ND		5	1	06/21/09 9:51	LU_L	5078045
tert-Butylbenzene	ND		5	1	06/21/09 9:51	LU_L	5078045
Tetrachloroethene	ND		5	1	06/21/09 9:51	LU_L	5078045
Toluene	7.6		5	1	06/21/09 9:51	LU_L	5078045
Trichloroethene	ND		5	1	06/21/09 9:51	LU_L	5078045
Trichlorofluoromethane	ND		5	1	06/21/09 9:51	LU_L	5078045
Vinyl acetate	ND		10	1	06/21/09 9:51	LU_L	5078045
Vinyl chloride	ND		2	1	06/21/09 9:51	LU_L	5078045
cis-1,2-Dichloroethene	ND		5	1	06/21/09 9:51	LU_L	5078045
cis-1,3-Dichloropropene	ND		5	1	06/21/09 9:51	LU_L	5078045
m,p-Xylene	9.7		5	1	06/21/09 9:51	LU_L	5078045
o-Xylene	ND		5	1	06/21/09 9:51	LU_L	5078045
trans-1,2-Dichloroethene	ND		5	1	06/21/09 9:51	LU_L	5078045
trans-1,3-Dichloropropene	ND		5	1	06/21/09 9:51	LU_L	5078045
1,2-Dichloroethene (total)	ND		5	1	06/21/09 9:51	LU_L	5078045
Xylenes,Total	9.7		5	1	06/21/09 9:51	LU_L	5078045
Surr: 1,2-Dichloroethane-d4	91.8		% 78-116	1	06/21/09 9:51	LU_L	5078045
Surr: 4-Bromofluorobenzene	94.9		% 74-125	1	06/21/09 9:51	LU_L	5078045
Surr: Toluene-d8	89.0		% 82-118	1	06/21/09 9:51	LU_L	5078045

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-4 **Collected:** 06/12/2009 11:30 **SPL Sample ID:** 09060743-04

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
ALKALINITY (AS CACO3), TOTAL			**MCL**		**E310.1**	**Units: mg/L**	
Alkalinity, Total (As CaCO3)	200		2	1	06/14/09 12:15	PAC	5065995
DIESEL RANGE ORGANICS			**MCL**		**SW8015B**	**Units: mg/L**	
Diesel Range Organics (C10-C28)	ND		0.1	1	06/19/09 19:30	NW	5077351
Surr: n-Pentacosane	41.8	%	20-150	1	06/19/09 19:30	NW	5077351

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	06/16/2009 10:43	N_M	1.00

GASOLINE RANGE ORGANICS			**MCL**		**SW8015B**	**Units: mg/L**	
Gasoline Range Organics	ND		0.1	1	06/17/09 4:12	EMB	5070815
Surr: 1,4-Difluorobenzene	94.7	%	60-155	1	06/17/09 4:12	EMB	5070815
Surr: 4-Bromofluorobenzene	106	%	50-158	1	06/17/09 4:12	EMB	5070815
ION CHROMATOGRAPHY			**MCL**		**E300.0**	**Units: mg/L**	
Bromide	ND		0.5	1	06/19/09 19:18	BDG	5076638
Chloride	2310		250	500	06/19/09 19:37	BDG	5076639
Fluoride	0.652		0.5	1	06/19/09 19:18	BDG	5076638
Ortho-phosphate (As P)	ND		0.5	1	06/19/09 19:18	BDG	5076638
Sulfate	4190		250	500	06/19/09 19:37	BDG	5076639
MERCURY, TOTAL			**MCL**		**SW7470A**	**Units: mg/L**	
Mercury	ND		0.0002	1	06/18/09 13:54	F_S	5073579

Prep Method	Prep Date	Prep Initials	Prep Factor
SW7470A	06/18/2009 10:15	F_S	1.00

METALS BY METHOD 6010B, TOTAL			**MCL**		**SW6010B**	**Units: mg/L**	
Aluminum	13.6		0.1	1	06/21/09 15:36	EG	5077094
Boron	0.523		0.1	1	06/21/09 15:36	EG	5077094
Calcium	496		1	10	06/21/09 15:40	EG	5077095
Iron	20		0.02	1	06/21/09 15:36	EG	5077094
Magnesium	32.2		0.1	1	06/21/09 15:36	EG	5077094
Potassium	19.1		1	1	06/21/09 15:36	EG	5077094
Sodium	2720		2	20	06/21/09 15:45	EG	5077096
Strontium	11.6		0.5	10	06/21/09 15:40	EG	5077095
Tin	ND		0.005	1	06/21/09 15:36	EG	5077094

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3010A	06/16/2009 10:30	AB1	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-4 **Collected:** 06/12/2009 11:30 **SPL Sample ID:** 09060743-04

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
METALS BY METHOD 6020A, TOTAL				**MCL**	**SW6020A**	**Units: mg/L**	
Antimony	ND		0.005	1	06/18/09 0:24	AL_H	5072424
Arsenic	ND		0.005	1	06/18/09 0:24	AL_H	5072424
Barium	0.131		0.005	1	06/19/09 16:43	S_C	5077042
Beryllium	0.00468		0.004	1	06/19/09 16:43	S_C	5077042
Cadmium	ND		0.005	1	06/18/09 0:24	AL_H	5072424
Chromium	0.117		0.005	1	06/18/09 0:24	AL_H	5072424
Cobalt	0.0312		0.005	1	06/18/09 0:24	AL_H	5072424
Copper	0.041		0.005	1	06/18/09 0:24	AL_H	5072424
Lead	0.0418		0.005	1	06/18/09 0:24	AL_H	5072424
Manganese	4.92		0.005	1	06/19/09 16:43	S_C	5077042
Molybdenum	0.0146		0.01	1	06/18/09 0:24	AL_H	5072424
Nickel	0.0372		0.005	1	06/18/09 0:24	AL_H	5072424
Selenium	0.00558		0.005	1	06/19/09 16:43	S_C	5077042
Silver	ND		0.005	1	06/18/09 0:24	AL_H	5072424
Thallium	ND		0.005	1	06/18/09 0:24	AL_H	5072424
Vanadium	0.0269		0.005	1	06/18/09 0:24	AL_H	5072424
Zinc	0.103		0.01	1	06/18/09 0:24	AL_H	5072424

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3010A	06/16/2009 10:30	AB1	1.00

NITRATE NITROGEN (AS N), TOTAL				**MCL**	**SM4500-NO3 F**	**Units: mg/L**	
Nitrogen, Nitrate (As N)	ND		0.5	1	06/13/09 16:00	ESK	5069051
NITRITE NITROGEN (AS N), TOTAL				**MCL**	**SM4500-NO2 B**	**Units: mg/L**	
Nitrogen,Nitrite	ND		0.5	1	06/13/09 14:15	ESK	5068994

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-4 **Collected:** 06/12/2009 11:30 **SPL Sample ID:** 09060743-04

Site: San Juan County, 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	06/18/09 17:44	GY	5074317
1,2-Dichlorobenzene	ND		5	1	06/18/09 17:44	GY	5074317
1,2-Diphenylhydrazine	ND		10	1	06/18/09 17:44	GY	5074317
1,3-Dichlorobenzene	ND		5	1	06/18/09 17:44	GY	5074317
1,4-Dichlorobenzene	ND		5	1	06/18/09 17:44	GY	5074317
2,4,5-Trichlorophenol	ND		10	1	06/18/09 17:44	GY	5074317
2,4,6-Trichlorophenol	ND		5	1	06/18/09 17:44	GY	5074317
2,4-Dichlorophenol	ND		5	1	06/18/09 17:44	GY	5074317
2,4-Dimethylphenol	ND		5	1	06/18/09 17:44	GY	5074317
2,4-Dinitrophenol	ND		25	1	06/18/09 17:44	GY	5074317
2,4-Dinitrotoluene	ND		5	1	06/18/09 17:44	GY	5074317
2,6-Dinitrotoluene	ND		5	1	06/18/09 17:44	GY	5074317
2-Chloronaphthalene	ND		5	1	06/18/09 17:44	GY	5074317
2-Chlorophenol	ND		5	1	06/18/09 17:44	GY	5074317
2-Methylnaphthalene	ND		5	1	06/18/09 17:44	GY	5074317
2-Nitroaniline	ND		25	1	06/18/09 17:44	GY	5074317
2-Nitrophenol	ND		5	1	06/18/09 17:44	GY	5074317
3,3'-Dichlorobenzidine	ND		10	1	06/18/09 17:44	GY	5074317
3-Nitroaniline	ND		25	1	06/18/09 17:44	GY	5074317
4,6-Dinitro-2-methylphenol	ND		25	1	06/18/09 17:44	GY	5074317
4-Bromophenyl phenyl ether	ND		5	1	06/18/09 17:44	GY	5074317
4-Chloro-3-methylphenol	ND		5	1	06/18/09 17:44	GY	5074317
4-Chloroaniline	ND		5	1	06/18/09 17:44	GY	5074317
4-Chlorophenyl phenyl ether	ND		5	1	06/18/09 17:44	GY	5074317
4-Nitroaniline	ND		25	1	06/18/09 17:44	GY	5074317
4-Nitrophenol	ND		25	1	06/18/09 17:44	GY	5074317
Acenaphthene	ND		5	1	06/18/09 17:44	GY	5074317
Acenaphthylene	ND		5	1	06/18/09 17:44	GY	5074317
Aniline	ND		5	1	06/18/09 17:44	GY	5074317
Anthracene	ND		5	1	06/18/09 17:44	GY	5074317
Benz(a)anthracene	ND		5	1	06/18/09 17:44	GY	5074317
Benzo(a)pyrene	ND		5	1	06/18/09 17:44	GY	5074317
Benzo(b)fluoranthene	ND		5	1	06/18/09 17:44	GY	5074317
Benzo(g,h,i)perylene	ND		5	1	06/18/09 17:44	GY	5074317
Benzo(k)fluoranthene	ND		5	1	06/18/09 17:44	GY	5074317
Benzoic acid	ND		25	1	06/18/09 17:44	GY	5074317
Benzyl alcohol	ND		5	1	06/18/09 17:44	GY	5074317
Bis(2-chloroethoxy)methane	ND		5	1	06/18/09 17:44	GY	5074317
Bis(2-chloroethyl)ether	ND		5	1	06/18/09 17:44	GY	5074317

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-4 **Collected:** 06/12/2009 11:30 **SPL Sample ID:** 09060743-04

Site: San Juan County, NM

Analyses/Method	Result	QUAL		Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
Bis(2-chloroisopropyl)ether	ND			5	1	06/18/09 17:44	GY	5074317
Bis(2-ethylhexyl)phthalate	ND			5	1	06/18/09 17:44	GY	5074317
Butyl benzyl phthalate	ND			5	1	06/18/09 17:44	GY	5074317
Carbazole	ND			5	1	06/18/09 17:44	GY	5074317
Chrysene	ND			5	1	06/18/09 17:44	GY	5074317
Dibenz(a,h)anthracene	ND			5	1	06/18/09 17:44	GY	5074317
Dibenzofuran	ND			5	1	06/18/09 17:44	GY	5074317
Diethyl phthalate	ND			5	1	06/18/09 17:44	GY	5074317
Dimethyl phthalate	ND			5	1	06/18/09 17:44	GY	5074317
Di-n-butyl phthalate	ND			5	1	06/18/09 17:44	GY	5074317
Di-n-octyl phthalate	ND			5	1	06/18/09 17:44	GY	5074317
Fluoranthene	ND			5	1	06/18/09 17:44	GY	5074317
Fluorene	ND			5	1	06/18/09 17:44	GY	5074317
Hexachlorobenzene	ND			5	1	06/18/09 17:44	GY	5074317
Hexachlorobutadiene	ND			5	1	06/18/09 17:44	GY	5074317
Hexachlorocyclopentadiene	ND			5	1	06/18/09 17:44	GY	5074317
Hexachloroethane	ND			5	1	06/18/09 17:44	GY	5074317
Indeno(1,2,3-cd)pyrene	ND			5	1	06/18/09 17:44	GY	5074317
Isophorone	ND			5	1	06/18/09 17:44	GY	5074317
Naphthalene	ND			5	1	06/18/09 17:44	GY	5074317
Nitrobenzene	ND			5	1	06/18/09 17:44	GY	5074317
N-Nitrosodi-n-propylamine	ND			5	1	06/18/09 17:44	GY	5074317
N-Nitrosodiphenylamine	ND			5	1	06/18/09 17:44	GY	5074317
Pentachlorophenol	ND			25	1	06/18/09 17:44	GY	5074317
Phenanthrene	ND			5	1	06/18/09 17:44	GY	5074317
Phenol	ND			5	1	06/18/09 17:44	GY	5074317
Pyrene	ND			5	1	06/18/09 17:44	GY	5074317
Pyridine	ND			5	1	06/18/09 17:44	GY	5074317
2-Methylphenol	ND			5	1	06/18/09 17:44	GY	5074317
3 & 4-Methylphenol	ND			5	1	06/18/09 17:44	GY	5074317
Surr: 2,4,6-Tribromophenol	75.5		%	10-123	1	06/18/09 17:44	GY	5074317
Surr: 2-Fluorobiphenyl	57.2		%	23-116	1	06/18/09 17:44	GY	5074317
Surr: 2-Fluorophenol	37.7		%	16-110	1	06/18/09 17:44	GY	5074317
Surr: Nitrobenzene-d5	47.2		%	21-114	1	06/18/09 17:44	GY	5074317
Surr: Phenol-d5	26.1		%	10-110	1	06/18/09 17:44	GY	5074317
Surr: Terphenyl-d14	47.6		%	22-141	1	06/18/09 17:44	GY	5074317

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	06/17/2009 7:29	N_M	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-4 **Collected:** 06/12/2009 11:30 **SPL Sample ID:** 09060743-04

Site: San Juan County, 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	06/20/09 20:42	LU_L	5076484
1,1,1-Trichloroethane	ND		5	1	06/20/09 20:42	LU_L	5076484
1,1,2,2-Tetrachloroethane	ND		5	1	06/20/09 20:42	LU_L	5076484
1,1,2-Trichloroethane	ND		5	1	06/20/09 20:42	LU_L	5076484
1,1-Dichloroethane	ND		5	1	06/20/09 20:42	LU_L	5076484
1,1-Dichloroethene	ND		5	1	06/20/09 20:42	LU_L	5076484
1,1-Dichloropropene	ND		5	1	06/20/09 20:42	LU_L	5076484
1,2,3-Trichlorobenzene	ND		5	1	06/20/09 20:42	LU_L	5076484
1,2,3-Trichloropropane	ND		5	1	06/20/09 20:42	LU_L	5076484
1,2,4-Trichlorobenzene	ND		5	1	06/20/09 20:42	LU_L	5076484
1,2,4-Trimethylbenzene	ND		5	1	06/20/09 20:42	LU_L	5076484
1,2-Dibromo-3-chloropropane	ND		5	1	06/20/09 20:42	LU_L	5076484
1,2-Dibromoethane	ND		5	1	06/20/09 20:42	LU_L	5076484
1,2-Dichlorobenzene	ND		5	1	06/20/09 20:42	LU_L	5076484
1,2-Dichloroethane	ND		5	1	06/20/09 20:42	LU_L	5076484
1,2-Dichloropropane	ND		5	1	06/20/09 20:42	LU_L	5076484
1,3,5-Trimethylbenzene	ND		5	1	06/20/09 20:42	LU_L	5076484
1,3-Dichlorobenzene	ND		5	1	06/20/09 20:42	LU_L	5076484
1,3-Dichloropropane	ND		5	1	06/20/09 20:42	LU_L	5076484
1,4-Dichlorobenzene	ND		5	1	06/20/09 20:42	LU_L	5076484
2,2-Dichloropropane	ND		5	1	06/20/09 20:42	LU_L	5076484
2-Butanone	ND		20	1	06/20/09 20:42	LU_L	5076484
2-Chloroethyl vinyl ether	ND	J	10	1	06/20/09 20:42	LU_L	5076484
2-Chlorotoluene	ND		5	1	06/20/09 20:42	LU_L	5076484
2-Hexanone	ND		10	1	06/20/09 20:42	LU_L	5076484
4-Chlorotoluene	ND		5	1	06/20/09 20:42	LU_L	5076484
4-Isopropyltoluene	ND		5	1	06/20/09 20:42	LU_L	5076484
4-Methyl-2-pentanone	ND		10	1	06/20/09 20:42	LU_L	5076484
Acetone	ND		20	1	06/20/09 20:42	LU_L	5076484
Acrylonitrile	ND		10	1	06/20/09 20:42	LU_L	5076484
Benzene	ND		5	1	06/20/09 20:42	LU_L	5076484
Bromobenzene	ND		5	1	06/20/09 20:42	LU_L	5076484
Bromochloromethane	ND		5	1	06/20/09 20:42	LU_L	5076484
Bromodichloromethane	ND		5	1	06/20/09 20:42	LU_L	5076484
Bromoform	ND		5	1	06/20/09 20:42	LU_L	5076484
Bromomethane	ND		10	1	06/20/09 20:42	LU_L	5076484
Carbon disulfide	ND		5	1	06/20/09 20:42	LU_L	5076484
Carbon tetrachloride	ND		5	1	06/20/09 20:42	LU_L	5076484
Chlorobenzene	ND		5	1	06/20/09 20:42	LU_L	5076484

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-4 **Collected:** 06/12/2009 11:30 **SPL Sample ID:** 09060743-04

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
Chloroethane	ND		10	1	06/20/09 20:42	LU_L	5076484
Chloroform	ND		5	1	06/20/09 20:42	LU_L	5076484
Chloromethane	ND		10	1	06/20/09 20:42	LU_L	5076484
Dibromochloromethane	ND		5	1	06/20/09 20:42	LU_L	5076484
Dibromomethane	ND		5	1	06/20/09 20:42	LU_L	5076484
Dichlorodifluoromethane	ND		10	1	06/20/09 20:42	LU_L	5076484
Ethylbenzene	ND		5	1	06/20/09 20:42	LU_L	5076484
Hexachlorobutadiene	ND		5	1	06/20/09 20:42	LU_L	5076484
Isopropylbenzene	ND		5	1	06/20/09 20:42	LU_L	5076484
Methyl tert-butyl ether	ND		5	1	06/20/09 20:42	LU_L	5076484
Methylene chloride	ND		5	1	06/20/09 20:42	LU_L	5076484
Naphthalene	ND		5	1	06/20/09 20:42	LU_L	5076484
n-Butylbenzene	ND		5	1	06/20/09 20:42	LU_L	5076484
n-Propylbenzene	ND		5	1	06/20/09 20:42	LU_L	5076484
sec-Butylbenzene	ND		5	1	06/20/09 20:42	LU_L	5076484
Styrene	ND		5	1	06/20/09 20:42	LU_L	5076484
tert-Butylbenzene	ND		5	1	06/20/09 20:42	LU_L	5076484
Tetrachloroethene	ND		5	1	06/20/09 20:42	LU_L	5076484
Toluene	ND		5	1	06/20/09 20:42	LU_L	5076484
Trichloroethene	ND		5	1	06/20/09 20:42	LU_L	5076484
Trichlorofluoromethane	ND		5	1	06/20/09 20:42	LU_L	5076484
Vinyl acetate	ND		10	1	06/20/09 20:42	LU_L	5076484
Vinyl chloride	ND		2	1	06/20/09 20:42	LU_L	5076484
cis-1,2-Dichloroethene	ND		5	1	06/20/09 20:42	LU_L	5076484
cis-1,3-Dichloropropene	ND		5	1	06/20/09 20:42	LU_L	5076484
m,p-Xylene	ND		5	1	06/20/09 20:42	LU_L	5076484
o-Xylene	ND		5	1	06/20/09 20:42	LU_L	5076484
trans-1,2-Dichloroethene	ND		5	1	06/20/09 20:42	LU_L	5076484
trans-1,3-Dichloropropene	ND		5	1	06/20/09 20:42	LU_L	5076484
1,2-Dichloroethene (total)	ND		5	1	06/20/09 20:42	LU_L	5076484
Xylenes,Total	ND		5	1	06/20/09 20:42	LU_L	5076484
Surr: 1,2-Dichloroethane-d4	97.0		% 78-116	1	06/20/09 20:42	LU_L	5076484
Surr: 4-Bromofluorobenzene	98.2		% 74-125	1	06/20/09 20:42	LU_L	5076484
Surr: Toluene-d8	93.2		% 82-118	1	06/20/09 20:42	LU_L	5076484

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:** 06/12/2009 11:00 **SPL Sample ID:** 09060743-06

Site: San Juan County, NM

Analyses/Method	Result	QUAL		Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B				**MCL**	**SW8260B**	**Units: ug/L**		
Benzene	ND			5	1	06/20/09 19:20	LU_L	5076482
Ethylbenzene	ND			5	1	06/20/09 19:20	LU_L	5076482
Toluene	ND			5	1	06/20/09 19:20	LU_L	5076482
m,p-Xylene	ND			5	1	06/20/09 19:20	LU_L	5076482
o-Xylene	ND			5	1	06/20/09 19:20	LU_L	5076482
Xylenes,Total	ND			5	1	06/20/09 19:20	LU_L	5076482
Surr: 1,2-Dichloroethane-d4	94.7		%	78-116	1	06/20/09 19:20	LU_L	5076482
Surr: 4-Bromofluorobenzene	101		%	74-125	1	06/20/09 19:20	LU_L	5076482
Surr: Toluene-d8	95.6		%	82-118	1	06/20/09 19:20	LU_L	5076482

Qualifiers:

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

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

Client Sample ID: Duplicate **Collected:** 06/12/2009 11:30 **SPL Sample ID:** 09060743-07

Site: San Juan County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			**MCL**	**SW8260B**	**Units: ug/L**		
Benzene	10		5	1	06/20/09 18:25	LU_L	5076480
Ethylbenzene	540		100	20	06/21/09 11:12	LU_L	5078048
Toluene	1400		100	20	06/21/09 11:12	LU_L	5078048
m,p-Xylene	3300		100	20	06/21/09 11:12	LU_L	5078048
o-Xylene	1000		100	20	06/21/09 11:12	LU_L	5078048
Xylenes,Total	4300		100	20	06/21/09 11:12	LU_L	5078048
Surr: 1,2-Dichloroethane-d4	95.7		% 78-116	20	06/21/09 11:12	LU_L	5078048
Surr: 1,2-Dichloroethane-d4	95.1		% 78-116	1	06/20/09 18:25	LU_L	5076480
Surr: 4-Bromofluorobenzene	105		% 74-125	20	06/21/09 11:12	LU_L	5078048
Surr: 4-Bromofluorobenzene	110		% 74-125	1	06/20/09 18:25	LU_L	5076480
Surr: Toluene-d8	94.8		% 82-118	20	06/21/09 11:12	LU_L	5078048
Surr: Toluene-d8	92.1		% 82-118	1	06/20/09 18:25	LU_L	5076480

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

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Diesel Range Organics
Method: SW8015B

WorkOrder: 09060743
Lab Batch ID: 91124

Method Blank

RunID: HP_V_090619A-5077354 Units: mg/L
Analysis Date: 06/20/2009 8:38 Analyst: NW
Preparation Date: 06/16/2009 10:43 Prep By: N_M Method: SW3510C

Analyte	Result	Rep Limit
Diesel Range Organics (C10-C28)	ND	0.10
Surr: n-Pentacosane	79.2	20-150

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09060743-01C	MW-3
09060743-02C	MW-2
09060743-03C	MW-1
09060743-04C	MW-4

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

RunID: HP_V_090619A-5077346 Units: mg/L
Analysis Date: 06/19/2009 17:48 Analyst: NW
Preparation Date: 06/16/2009 10:43 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)	1.00	0.651	65.1	1.00	0.653	65.3	0.4	20	21	130
Surr: n-Pentacosane	0.0500	0.0331	66.2	0.0500	0.0333	66.6	0.6	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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Gasoline Range Organics
Method: SW8015B

WorkOrder: 09060743
Lab Batch ID: R275684

Method Blank

RunID: HP_P_090616C-5070800 Units: mg/L
Analysis Date: 06/16/2009 19:44 Analyst: EMB

Analyte	Result	Rep Limit
Gasoline Range Organics	ND	0.10
Surr: 1,4-Difluorobenzene	94.6	60-155
Surr: 4-Bromofluorobenzene	106.5	50-158

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09060743-01B	MW-3
09060743-02B	MW-2
09060743-03B	MW-1
09060743-04B	MW-4

Laboratory Control Sample (LCS)

RunID: HP_P_090616C-5070799 Units: mg/L
Analysis Date: 06/16/2009 18:39 Analyst: EMB

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Gasoline Range Organics	1.00	0.974	97.4	42	136
Surr: 1,4-Difluorobenzene	0.100	0.104	104	60	155
Surr: 4-Bromofluorobenzene	0.100	0.111	110	50	158

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

Sample Spiked: 09060743-02
RunID: HP_P_090616C-5070818 Units: mg/L
Analysis Date: 06/17/2009 6:05 Analyst: EMB

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	11.5	50	49.9	76.9	50	50.6	78.2	1.31	36	22	174
Surr: 1,4-Difluorobenzene	ND	5	5.14	103	5	5.16	103	0.334	30	60	155
Surr: 4-Bromofluorobenzene	ND	5	5.38	108	5	5.39	108	0.230	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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Metals by Method 6010B, Total
Method: SW6010B
WorkOrder: 09060743
Lab Batch ID: 91143

Method Blank

RunID: ICP2_090621A-5077078 Units: mg/L
Analysis Date: 06/21/2009 14:30 Analyst: EG
Preparation Date: 06/16/2009 10:30 Prep By: AB1 Method: SW3010A

Analyte	Result	Rep Limit
Aluminum	ND	0.1
Boron	ND	0.1
Calcium	ND	0.1
Iron	ND	0.02
Magnesium	ND	0.1
Potassium	ND	1
Sodium	ND	0.1
Strontium	ND	0.05
Tin	ND	0.005

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09060743-01D	MW-3
09060743-02D	MW-2
09060743-03D	MW-1
09060743-04D	MW-4

Laboratory Control Sample (LCS)

RunID: ICP2_090621A-5077079 Units: mg/L
Analysis Date: 06/21/2009 14:34 Analyst: EG
Preparation Date: 06/16/2009 10:30 Prep By: AB1 Method: SW3010A

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Aluminum	1.000	1.082	108.2	80	120
Boron	1.000	1.029	102.9	80	120
Calcium	1.000	1.030	103.0	80	120
Iron	1.000	1.035	103.5	80	120
Magnesium	1.000	1.031	103.1	80	120
Potassium	10.00	10.24	102.4	80	120
Sodium	1.000	1.021	102.1	80	120
Strontium	1.000	1.059	105.9	80	120
Tin	1.000	1.083	108.3	80	120

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

Sample Spiked: 09060609-01
RunID: ICP2_090621A-5077081 Units: mg/L
Analysis Date: 06/21/2009 14:42 Analyst: EG
Preparation Date: 06/16/2009 10:30 Prep By: AB1 Method: SW3010A

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: **Metals by Method 6010B, Total** **WorkOrder:** **09060743**

Method: **SW6010B** **Lab Batch ID:** **91143**

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Aluminum	ND	1	1.809	106.4	1	1.985	124.0	9.278	20	75	125
Boron	ND	1	1.354	104.5	1	1.362	105.3	0.5891	20	75	125
Calcium	504.4	1	526.6	N/C	1	511.6	N/C	N/C	20	75	125
Iron	0.5626	1	1.585	102.2	1	1.634	107.1	3.044	20	75	125
Magnesium	192.3	1	201.9	N/C	1	196.9	N/C	N/C	20	75	125
Potassium	ND	10	15.03	120.5	10	14.53	115.5	3.383	20	75	125
Sodium	629.6	1	661.7	N/C	1	642.1	N/C	N/C	20	75	125
Strontium	4.237	1	5.520	N/C	1	5.394	N/C	N/C	20	75	125
Tin	ND	1	1.085	107.4	1	1.099	108.8	1.282	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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Metals by Method 6020A, Total
Method: SW6020A
WorkOrder: 09060743
Lab Batch ID: 91143A-I

Method Blank

RunID: ICPMS2_090619A-5077029 Units: mg/L
Analysis Date: 06/19/2009 15:31 Analyst: S_C
Preparation Date: 06/16/2009 10:30 Prep By: AB1 Method: SW3010A

Analyte	Result	Rep Limit
Barium	ND	0.005
Beryllium	ND	0.004
Manganese	ND	0.005
Selenium	ND	0.005

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09060743-01D	MW-3
09060743-02D	MW-2
09060743-03D	MW-1
09060743-04D	MW-4

Laboratory Control Sample (LCS)

RunID: ICPMS2_090619A-5077030 Units: mg/L
Analysis Date: 06/19/2009 15:36 Analyst: S_C
Preparation Date: 06/16/2009 10:30 Prep By: AB1 Method: SW3010A

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Barium	0.1000	0.09749	97.49	80	120
Beryllium	0.1000	0.1111	111.1	80	120
Manganese	0.1000	0.1037	103.7	80	120
Selenium	0.1000	0.1007	100.7	80	120

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

Sample Spiked: 09060609-01
RunID: ICPMS2_090619A-5077032 Units: mg/L
Analysis Date: 06/19/2009 15:47 Analyst: S_C
Preparation Date: 06/16/2009 10:30 Prep By: AB1 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
Barium	2.052	0.1	2.216	N/C	0.1	2.152	N/C	N/C	20	75	125
Beryllium	ND	0.1	0.1050	105.0	0.1	0.1028	102.8	2.117	20	75	125
Manganese	0.9074	0.1	1.039	N/C	0.1	0.9989	N/C	N/C	20	75	125
Selenium	ND	0.1	0.1128	112.8	0.1	0.1131	113.1	0.2656	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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Metals by Method 6020A, Total
Method: SW6020A
WorkOrder: 09060743
Lab Batch ID: 91143-I

Method Blank

RunID: ICPMS_090617A-5072411 Units: mg/L
Analysis Date: 06/17/2009 23:19 Analyst: AL_H
Preparation Date: 06/16/2009 10:30 Prep By: AB1 Method: SW3010A

Analyte	Result	Rep Limit
Antimony	ND	0.005
Arsenic	ND	0.005
Cadmium	ND	0.005
Chromium	ND	0.005
Cobalt	ND	0.005
Copper	ND	0.005
Lead	ND	0.005
Molybdenum	ND	0.01
Nickel	ND	0.005
Selenium	ND	0.005
Silver	ND	0.005
Thallium	ND	0.005
Vanadium	ND	0.005
Zinc	ND	0.01

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09060743-01D	MW-3
09060743-02D	MW-2
09060743-03D	MW-1
09060743-04D	MW-4

Laboratory Control Sample (LCS)

RunID: ICPMS_090617A-5072412 Units: mg/L
Analysis Date: 06/17/2009 23:25 Analyst: AL_H
Preparation Date: 06/16/2009 10:30 Prep By: AB1 Method: SW3010A

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Antimony	0.1000	0.09148	91.48	80	120
Arsenic	0.1000	0.09665	96.65	80	120
Cadmium	0.1000	0.09573	95.73	80	120
Chromium	0.1000	0.1004	100.4	80	120
Cobalt	0.1000	0.09957	99.57	80	120
Copper	0.1000	0.09664	96.64	80	120
Lead	0.1000	0.09452	94.52	80	120
Molybdenum	0.1000	0.09420	94.20	80	120
Nickel	0.1000	0.1010	101.0	80	120
Selenium	0.1000	0.09680	96.80	80	120
Silver	0.1000	0.1056	105.6	80	120
Thallium	0.1000	0.09113	91.13	80	120
Vanadium	0.1000	0.1006	100.6	80	120
Zinc	0.1000	0.08742	87.42	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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Metals by Method 6020A, Total
Method: SW6020A
WorkOrder: 09060743
Lab Batch ID: 91143-I

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

Sample Spiked: 09060609-01
RunID: ICPMS_090617A-5072417 Units: mg/L
Analysis Date: 06/17/2009 23:49 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
Zinc	ND	0.1	0.08382	78.54	0.1	0.08493	79.65	1.316	20	75	125

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

Sample Spiked: 09060609-01
RunID: ICPMS_090617A-5072414 Units: mg/L
Analysis Date: 06/17/2009 23:35 Analyst: AL_H
Preparation Date: 06/16/2009 10:30 Prep By: AB1 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
Antimony	ND	0.1	0.08676	86.76	0.1	0.08556	85.56	1.393	20	75	125
Arsenic	0.01035	0.1	0.09760	87.25	0.1	0.09549	85.14	2.186	20	75	125
Cadmium	ND	0.1	0.08421	84.21	0.1	0.08293	82.93	1.532	20	75	125
Chromium	0.005271	0.1	0.09718	91.91	0.1	0.09511	89.84	2.153	20	75	125
Cobalt	0.007312	0.1	0.09403	86.72	0.1	0.09136	84.05	2.880	20	75	125
Copper	ND	0.1	0.08558	82.77	0.1	0.08573	82.92	0.1751	20	75	125
Lead	ND	0.1	0.09519	95.19	0.1	0.09299	92.99	2.338	20	75	125
Molybdenum	ND	0.1	0.09094	90.94	0.1	0.08824	88.24	3.014	20	75	125
Nickel	0.01763	0.1	0.1009	83.27	0.1	0.09819	80.56	2.722	20	75	125
Selenium	ND	0.1	0.08330	83.30	0.1	0.07875	78.75	5.616	20	75	125
Silver	ND	0.1	0.08916	89.16	0.1	0.08845	88.45	0.7995	20	75	125
Thallium	ND	0.1	0.09376	93.76	0.1	0.09288	92.88	0.9430	20	75	125
Vanadium	ND	0.1	0.09408	93.17	0.1	0.09245	91.54	1.748	20	75	125
Zinc	ND	0.1	0.07727	71.99 *	0.1	0.07662	71.34 *	0.8448	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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Mercury, Total
Method: SW7470A

WorkOrder: 09060743
Lab Batch ID: 91212

Method Blank

RunID: HGLC_090618A-5073565 Units: mg/L
Analysis Date: 06/18/2009 13:08 Analyst: F_S
Preparation Date: 06/18/2009 10:15 Prep By: F_S Method: SW7470A

Analyte	Result	Rep Limit
Mercury	ND	0.0002

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09060743-01D	MW-3
09060743-02D	MW-2
09060743-03D	MW-1
09060743-04D	MW-4

Laboratory Control Sample (LCS)

RunID: HGLC_090618A-5073566 Units: mg/L
Analysis Date: 06/18/2009 13:10 Analyst: F_S
Preparation Date: 06/18/2009 10:15 Prep By: F_S Method: SW7470A

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Mercury	0.002000	0.001962	98.10	80	120

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

Sample Spiked: 09060553-01
RunID: HGLC_090618A-5073568 Units: mg/L
Analysis Date: 06/18/2009 13:16 Analyst: F_S
Preparation Date: 06/18/2009 10:15 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	0.001612	80.60	0.002	0.001613	80.67	0.09314	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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Semivolatile Organics by Method 8270C
Method: SW8270C
WorkOrder: 09060743
Lab Batch ID: 91162

Method Blank

RunID: H_090618B-5073113 Units: ug/L
Analysis Date: 06/18/2009 11:06 Analyst: GY
Preparation Date: 06/17/2009 7:29 Prep By: N_M Method: SW3510C

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09060743-01F	MW-3
09060743-02F	MW-2
09060743-03F	MW-1
09060743-04F	MW-4

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Semivolatile Organics by Method 8270C
Method: SW8270C
WorkOrder: 09060743
Lab Batch ID: 91162

Method Blank

RunID: H_090618B-5073113 Units: ug/L
Analysis Date: 06/18/2009 11:06 Analyst: GY
Preparation Date: 06/17/2009 7:29 Prep By: N_M 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	99.3	10-123
Surr: 2-Fluorobiphenyl	79.8	23-116
Surr: 2-Fluorophenol	65.3	16-110
Surr: Nitrobenzene-d5	64.4	21-114
Surr: Phenol-d5	53.5	10-110
Surr: Terphenyl-d14	84.4	22-141

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

RunID: H_090618B-5073114 Units: ug/L
Analysis Date: 06/18/2009 11:39 Analyst: GY
Preparation Date: 06/17/2009 7:29 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
1,2,4-Trichlorobenzene	25.0	16.7	66.8	25.0	17.2	68.8	2.9	39	21	120
1,2-Dichlorobenzene	25.0	14.8	59.2	25.0	15.4	61.6	4.0	50	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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Semivolatile Organics by Method 8270C **WorkOrder:** 09060743
Method: SW8270C **Lab Batch ID:** 91162

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

RunID: H_090618B-5073114 Units: ug/L
Analysis Date: 06/18/2009 11:39 Analyst: GY
Preparation Date: 06/17/2009 7:29 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
1,2-Diphenylhydrazine	25.0	10.8	43.2	25.0	11.2	44.8	3.6	50	10	251
1,3-Dichlorobenzene	25.0	14.5	58.0	25.0	15.4	61.6	6.0	50	20	150
1,4-Dichlorobenzene	25.0	14.7	58.8	25.0	15.6	62.4	5.9	45	20	150
2,4,5-Trichlorophenol	25.0	16.9	67.6	25.0	17.6	70.4	4.1	50	30	150
2,4,6-Trichlorophenol	25.0	16.6	66.4	25.0	17.3	69.2	4.1	50	30	150
2,4-Dichlorophenol	25.0	15.9	63.6	25.0	16.6	66.4	4.3	50	30	150
2,4-Dimethylphenol	25.0	14.0	56.0	25.0	15.1	60.4	7.6	50	32	140
2,4-Dinitrophenol	25.0	16.0	64.0	25.0	18.3	73.2	13.4	50	10	160
2,4-Dinitrotoluene	25.0	16.4	65.6	25.0	17.7	70.8	7.6	50	30	150
2,6-Dinitrotoluene	25.0	15.5	62.0	25.0	16.8	67.2	8.0	50	30	150
2-Chloronaphthalene	25.0	14.8	59.2	25.0	15.6	62.4	5.3	50	30	150
2-Chlorophenol	25.0	14.6	58.4	25.0	15.6	62.4	6.6	40	23	134
2-Methylnaphthalene	25.0	15.5	62.0	25.0	16.5	66.0	6.3	50	20	170
2-Nitroaniline	25.0	10.7	42.8	25.0	11.5	46.0	7.2	50	20	160
2-Nitrophenol	25.0	15.3	61.2	25.0	17.0	68.0	10.5	50	29	182
3,3'-Dichlorobenzidine	25.0	12.6	50.4	25.0	13.6	54.4	7.6	50	30	200
3-Nitroaniline	25.0	14.7	58.8	25.0	15.5	62.0	5.3	50	20	160
4,6-Dinitro-2-methylphenol	25.0	15.8	63.2	25.0	16.8	67.2	6.1	50	10	160
4-Bromophenyl phenyl ether	25.0	15.8	63.2	25.0	16.7	66.8	5.5	50	30	150
4-Chloro-3-methylphenol	25.0	15.5	62.0	25.0	16.5	66.0	6.3	42	25	160
4-Chloroaniline	25.0	14.7	58.8	25.0	15.9	63.6	7.8	50	20	160
4-Chlorophenyl phenyl ether	25.0	16.4	65.6	25.0	17.6	70.4	7.1	50	25	158
4-Nitroaniline	25.0	14.6	58.4	25.0	15.5	62.0	6.0	50	20	160
4-Nitrophenol	25.0	10.6	42.4	25.0	11.7	46.8	9.9	50	10	132
Acenaphthene	25.0	15.0	60.0	25.0	15.8	63.2	5.2	31	30	150
Acenaphthylene	25.0	15.4	61.6	25.0	16.1	64.4	4.4	50	33	250
Aniline	50.0	23.4	46.8	50.0	24.9	49.8	6.2	50	10	135
Anthracene	25.0	14.7	58.8	25.0	15.5	62.0	5.3	50	27	133
Benz(a)anthracene	25.0	14.9	59.6	25.0	15.9	63.6	6.5	50	33	143
Benzo(a)pyrene	25.0	13.5	54.0	25.0	14.2	56.8	5.1	50	17	163
Benzo(b)fluoranthene	25.0	14.8	59.2	25.0	15.2	60.8	2.7	50	24	159
Benzo(g,h,i)perylene	25.0	16.4	65.6	25.0	17.4	69.6	5.9	50	30	160
Benzo(k)fluoranthene	25.0	14.8	59.2	25.0	16.1	64.4	8.4	50	11	162

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Semivolatile Organics by Method 8270C
Method: SW8270C
WorkOrder: 09060743
Lab Batch ID: 91162

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

RunID: H_090618B-5073114 Units: ug/L
Analysis Date: 06/18/2009 11:39 Analyst: GY
Preparation Date: 06/17/2009 7:29 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
Benzoic acid	25.0	20.4	81.6	25.0	20.8	83.2	1.9	50	10	400
Benzyl alcohol	25.0	13.5	54.0	25.0	14.8	59.2	9.2	50	30	160
Bis(2-chloroethoxy)methane	25.0	12.9	51.6	25.0	13.7	54.8	6.0	50	33	184
Bis(2-chloroethyl)ether	25.0	12.5	50.0	25.0	13.4	53.6	6.9	50	12	158
Bis(2-chloroisopropyl)ether	25.0	9.62	38.5	25.0	10.3	41.2	6.8	50	20	160
Bis(2-ethylhexyl)phthalate	25.0	14.6	58.4	25.0	16.4	65.6	11.6	50	10	158
Butyl benzyl phthalate	25.0	14.2	56.8	25.0	15.5	62.0	8.8	50	30	160
Carbazole	25.0	14.4	57.6	25.0	15.2	60.8	5.4	50	30	150
Chrysene	25.0	15.2	60.8	25.0	16.0	64.0	5.1	50	17	168
Dibenz(a,h)anthracene	25.0	16.8	67.2	25.0	17.6	70.4	4.7	50	30	160
Dibenzofuran	25.0	15.8	63.2	25.0	16.6	66.4	4.9	50	30	150
Diethyl phthalate	25.0	15.4	61.6	25.0	16.3	65.2	5.7	50	30	160
Dimethyl phthalate	25.0	15.4	61.6	25.0	16.5	66.0	6.9	50	30	160
Di-n-butyl phthalate	25.0	14.5	58.0	25.0	15.7	62.8	7.9	50	30	160
Di-n-octyl phthalate	25.0	14.6	58.4	25.0	15.5	62.0	6.0	50	20	150
Fluoranthene	25.0	15.5	62.0	25.0	16.4	65.6	5.6	50	26	137
Fluorene	25.0	15.5	62.0	25.0	16.2	64.8	4.4	50	30	150
Hexachlorobenzene	25.0	16.8	67.2	25.0	17.6	70.4	4.7	50	20	150
Hexachlorobutadiene	25.0	16.5	66.0	25.0	17.6	70.4	6.5	50	20	140
Hexachlorocyclopentadiene	25.0	13.0	52.0	25.0	13.8	55.2	6.0	50	10	150
Hexachloroethane	25.0	12.4	49.6	25.0	13.4	53.6	7.8	50	14	120
Indeno(1,2,3-cd)pyrene	25.0	16.8	67.2	25.0	18.2	72.8	8.0	50	30	160
Isophorone	25.0	14.2	56.8	25.0	15.0	60.0	5.5	50	21	196
Naphthalene	25.0	15.0	60.0	25.0	16.0	64.0	6.5	50	21	133
Nitrobenzene	25.0	11.8	47.2	25.0	12.7	50.8	7.3	50	20	160
N-Nitrosodi-n-propylamine	25.0	10.2	40.8	25.0	11.0	44.0	7.5	38	30	160
N-Nitrosodiphenylamine	50.0	34.6	69.2	50.0	36.2	72.4	4.5	50	30	150
Pentachlorophenol	25.0	15.6	62.4	25.0	15.6	62.4	0.0	50	14	176
Phenanthrene	25.0	14.9	59.6	25.0	15.5	62.0	3.9	50	10	140
Phenol	25.0	13.9	55.6	25.0	14.6	58.4	4.9	42	40	132
Pyrene	25.0	15.8	63.2	25.0	16.5	66.0	4.3	38	30	150
Pyridine	50.0	21.8	43.6	50.0	23.2	46.4	6.2	50	10	150
2-Methylphenol	25.0	13.4	53.6	25.0	14.3	57.2	6.5	50	30	160

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Semivolatile Organics by Method 8270C
Method: SW8270C
WorkOrder: 09060743
Lab Batch ID: 91162

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

RunID: H_090618B-5073114 Units: ug/L
Analysis Date: 06/18/2009 11:39 Analyst: GY
Preparation Date: 06/17/2009 7:29 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
3 & 4-Methylphenol	25.0	12.4	49.6	25.0	13.3	53.2	7.0	50	10	160
Surr: 2,4,6-Tribromophenol	75.0	56.9	75.9	75.0	59.1	78.8	3.8	30	10	123
Surr: 2-Fluorobiphenyl	50.0	29.3	58.6	50.0	29.9	59.8	2.0	30	23	116
Surr: 2-Fluorophenol	75.0	35.8	47.7	75.0	36.6	48.8	2.2	30	16	110
Surr: Nitrobenzene-d5	50.0	24.1	48.2	50.0	25.2	50.4	4.5	30	21	114
Surr: Phenol-d5	75.0	28.7	38.3	75.0	29.2	38.9	1.7	30	10	110
Surr: Terphenyl-d14	50.0	30.6	61.2	50.0	31.3	62.6	2.3	30	22	141

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 09060743
Lab Batch ID: R276016

Method Blank

RunID: K_090620B-5076476 Units: ug/L
Analysis Date: 06/20/2009 11:32 Analyst: LU_L

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	20
Acrylonitrile	ND	10
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

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09060743-01A	MW-3
09060743-02A	MW-2
09060743-04A	MW-4
09060743-06A	Trip Blank
09060743-07A	Duplicate

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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Volatile Organics by Method 8260B
Method: SW8260B
WorkOrder: 09060743
Lab Batch ID: R276016

Method Blank

RunID: K_090620B-5076476 Units: ug/L
Analysis Date: 06/20/2009 11:32 Analyst: LU_L

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	2.0
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	94.4	78-116
Surr: 4-Bromofluorobenzene	96.8	74-125
Surr: Toluene-d8	117.7	82-118

Laboratory Control Sample (LCS)

RunID: K_090620B-5076475 Units: ug/L
Analysis Date: 06/20/2009 10:46 Analyst: LU_L

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,1,1,2-Tetrachloroethane	20.0	21.6	108	71	128
1,1,1-Trichloroethane	20.0	21.8	109	61	135
1,1,2,2-Tetrachloroethane	20.0	20.2	101	60	133
1,1,2-Trichloroethane	20.0	23.7	119	77	127
1,1-Dichloroethane	20.0	19.4	97.2	68	132

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Volatile Organics by Method 8260B
Method: SW8260B
WorkOrder: 09060743
Lab Batch ID: R276016

Laboratory Control Sample (LCS)

RunID: K_090620B-5076475 Units: ug/L
Analysis Date: 06/20/2009 10:46 Analyst: LU_L

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,1-Dichloroethene	20.0	19.6	97.8	65	134
1,1-Dichloropropene	20.0	21.3	107	68	126
1,2,3-Trichlorobenzene	20.0	23.3	116	36	154
1,2,3-Trichloropropane	20.0	20.4	102	38	153
1,2,4-Trichlorobenzene	20.0	22.0	110	69	144
1,2,4-Trimethylbenzene	20.0	21.3	106	64	128
1,2-Dibromo-3-chloropropane	20.0	21.2	106	44	141
1,2-Dibromoethane	20.0	20.7	103	75	124
1,2-Dichlorobenzene	20.0	21.3	106	68	124
1,2-Dichloroethane	20.0	19.1	95.5	61	138
1,2-Dichloropropane	20.0	22.0	110	76	123
1,3,5-Trimethylbenzene	20.0	21.4	107	61	127
1,3-Dichlorobenzene	20.0	21.2	106	68	127
1,3-Dichloropropane	20.0	23.1	115	76	125
1,4-Dichlorobenzene	20.0	21.4	107	68	124
2,2-Dichloropropane	20.0	22.2	111	42	142
2-Butanone	20.0	20.0	99.8	22	183
2-Chloroethyl vinyl ether	20.0	18.2	91.1	10	179
2-Chlorotoluene	20.0	21.8	109	64	132
2-Hexanone	20.0	29.7	149	31	178
4-Chlorotoluene	20.0	21.5	107	61	132
4-Isopropyltoluene	20.0	23.5	118	63	136
4-Methyl-2-pentanone	20.0	21.8	109	10	159
Acetone	20.0	30.9	154	10	200
Acrylonitrile	20.0	18.7	93.3	54	155
Benzene	20.0	21.1	106	74	123
Bromobenzene	20.0	19.5	97.3	68	125
Bromochloromethane	20.0	20.1	101	71	124
Bromodichloromethane	20.0	21.4	107	72	128
Bromoform	20.0	20.2	101	73	143
Bromomethane	20.0	15.6	78.1	53	130
Carbon disulfide	20.0	18.8	93.9	41	143
Carbon tetrachloride	20.0	23.2	116	59	142
Chlorobenzene	20.0	21.3	107	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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips
Randleman #1

Analysis: Volatile Organics by Method 8260B
Method: SW8260B
WorkOrder: 09060743
Lab Batch ID: R276016

Laboratory Control Sample (LCS)

RunID: K_090620B-5076475 Units: ug/L
Analysis Date: 06/20/2009 10:46 Analyst: LU_L

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Chloroethane	20.0	19.4	97.0	60	134
Chloroform	20.0	20.2	101	71	127
Chloromethane	20.0	16.3	81.5	50	139
Dibromochloromethane	20.0	24.4	122	65	130
Dibromomethane	20.0	21.7	109	79	124
Dichlorodifluoromethane	20.0	16.8	84.0	22	162
Ethylbenzene	20.0	20.3	102	72	127
Hexachlorobutadiene	20.0	24.6	123	45	152
Isopropylbenzene	20.0	19.3	96.3	58	130
Methyl tert-butyl ether	40.0	37.8	94.5	63	123
Methylene chloride	20.0	19.3	96.4	61	135
Naphthalene	20.0	21.6	108	33	148
n-Butylbenzene	20.0	25.5	127	62	136
n-Propylbenzene	20.0	20.3	102	57	131
sec-Butylbenzene	20.0	23.5	118	63	131
Styrene	20.0	20.8	104	69	120
tert-Butylbenzene	20.0	22.6	113	59	131
Tetrachloroethene	20.0	21.3	106	45	173
Toluene	20.0	23.6	118	74	126
Trichloroethene	20.0	22.0	110	79	131
Trichlorofluoromethane	20.0	20.5	103	49	153
Vinyl acetate	20.0	13.7	68.6	10	167
Vinyl chloride	20.0	19.8	99.0	51	148
cis-1,2-Dichloroethene	20.0	20.1	101	71	128
cis-1,3-Dichloropropene	20.0	23.6	118	67	128
m,p-Xylene	40.0	43.0	108	71	129
o-Xylene	20.0	21.9	110	74	130
trans-1,2-Dichloroethene	20.0	19.7	98.4	66	128
trans-1,3-Dichloropropene	20.0	24.1	121	60	128
1,2-Dichloroethene (total)	40.0	39.8	99.5	66	128
Xylenes,Total	60.0	64.9	108	71	130
Surr: 1,2-Dichloroethane-d4	50.0	48.6	97.2	78	116
Surr: 4-Bromofluorobenzene	50.0	51.7	103	74	125
Surr: Toluene-d8	50.0	58.6	117	82	118

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

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 09060743
Lab Batch ID: R276016

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

Sample Spiked: 09060870-02
RunID: K_090620B-5076478 Units: ug/L
Analysis Date: 06/20/2009 12:54 Analyst: LU_L

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	19.2	96.0	20	19.3	96.3	0.333	20	68	124
1,1,1-Trichloroethane	ND	20	18.9	94.5	20	20.5	103	8.32	20	69	123
1,1,2,2-Tetrachloroethane	ND	20	19.6	97.8	20	19.1	95.5	2.34	20	69	130
1,1,2-Trichloroethane	ND	20	17.1	85.7	20	16.5	82.4	4.00	20	75	126
1,1-Dichloroethane	ND	20	17.9	89.7	20	19.0	94.9	5.57	20	65	129
1,1-Dichloroethene	ND	20	17.5	87.3	20	18.4	92.1	5.34	22	61	139
1,1-Dichloropropene	ND	20	19.2	96.0	20	19.0	95.1	0.984	20	69	121
1,2,3-Trichlorobenzene	ND	20	18.1	90.4	20	18.9	94.5	4.53	20	53	127
1,2,3-Trichloropropane	ND	20	19.3	96.3	20	19.5	97.4	1.13	20	79	124
1,2,4-Trichlorobenzene	ND	20	17.2	86.1	20	17.5	87.4	1.48	20	58	118
1,2,4-Trimethylbenzene	ND	20	17.9	89.5	20	17.6	88.0	1.70	20	43	132
1,2-Dibromo-3-chloropropane	ND	20	19.0	95.0	20	18.5	92.4	2.74	20	46	131
1,2-Dibromoethane	ND	20	18.7	93.3	20	19.0	94.8	1.70	20	76	122
1,2-Dichlorobenzene	ND	20	19.0	94.8	20	17.8	88.9	6.44	20	74	110
1,2-Dichloroethane	ND	20	17.5	87.5	20	19.6	98.1	11.4	20	60	129
1,2-Dichloropropane	ND	20	19.2	96.0	20	18.9	94.5	1.60	20	76	116
1,3,5-Trimethylbenzene	ND	20	17.8	89.1	20	17.4	87.0	2.43	20	51	121
1,3-Dichlorobenzene	ND	20	18.0	90.0	20	17.3	86.5	3.99	20	71	110
1,3-Dichloropropane	ND	20	17.8	89.0	20	17.8	89.1	0.135	20	80	119
1,4-Dichlorobenzene	ND	20	20.3	101	20	19.5	97.3	4.25	20	69	110
2,2-Dichloropropane	ND	20	19.5	97.3	20	20.7	103	6.21	20	52	122
2-Butanone	ND	20	15.3	76.3	20	15.6	78.1	2.32	20	10	133
2-Chloroethyl vinyl ether	ND	20	0	0 *	20	0	0 *	0	20	10	182
2-Chlorotoluene	ND	20	18.5	92.7	20	18.5	92.6	0.167	20	69	112
2-Hexanone	ND	20	18.5	92.3	20	19.2	96.0	3.89	20	10	163
4-Chlorotoluene	ND	20	19.1	95.7	20	17.6	88.2	8.11	20	37	110
4-Isopropyltoluene	ND	20	18.5	92.6	20	17.2	86.2	7.17	20	65	116
4-Methyl-2-pentanone	ND	20	17.4	87.2	20	21.3	107 *	20.2 *	20	10	103
Acetone	ND	20	23.2	78.6	20	23.8	81.5	2.49	20	10	160
Acrylonitrile	ND	20	17.4	87.1	20	17.9	89.3	2.51	20	45	155

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips
Randleman #1

Analysis: Volatile Organics by Method 8260B
Method: SW8260B
WorkOrder: 09060743
Lab Batch ID: R276016

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

Sample Spiked: 09060870-02
RunID: K_090620B-5076478 Units: ug/L
Analysis Date: 06/20/2009 12:54 Analyst: LU_L

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	18.7	93.4	1.69	22	70	124
Bromobenzene	ND	20	17.6	88.0	20	17.3	86.7	1.58	20	72	111
Bromochloromethane	ND	20	18.2	91.0	20	17.6	88.2	3.12	20	73	126
Bromodichloromethane	ND	20	17.7	83.7	20	21.5	103	19.4	20	68	125
Bromoform	ND	20	18.6	93.0	20	18.3	91.4	1.68	20	44	132
Bromomethane	ND	20	13.8	68.9	20	15.0	75.1	8.67	20	50	140
Carbon disulfide	ND	20	15.8	79.1	20	17.3	86.6	9.02	20	46	143
Carbon tetrachloride	ND	20	21.1	106	20	23.2	116	9.33	20	66	126
Chlorobenzene	ND	20	19.5	97.3	20	18.4	92.0	5.59	21	68	123
Chloroethane	ND	20	16.3	81.4	20	17.0	85.2	4.58	20	59	134
Chloroform	ND	20	21.8	92.9	20	22.5	96.3	3.14	20	68	127
Chloromethane	ND	20	14.2	70.8	20	15.5	77.3	8.79	20	51	137
Dibromochloromethane	ND	20	19.2	96.2	20	18.5	92.7	3.67	20	58	131
Dibromomethane	ND	20	19.4	96.9	20	20.1	100	3.62	20	82	123
Dichlorodifluoromethane	ND	20	16.5	82.3	20	18.5	92.7	12.0	20	35	143
Ethylbenzene	ND	20	18.7	93.4	20	18.6	92.9	0.499	20	76	122
Hexachlorobutadiene	ND	20	17.5	87.3	20	17.5	87.3	0.0573	20	43	137
Isopropylbenzene	ND	20	17.0	84.9	20	16.1	80.3	5.60	20	57	124
Methyl tert-butyl ether	ND	40	34.6	86.6	40	38.7	96.8	11.1	20	10	200
Methylene chloride	ND	20	17.6	88.2	20	18.6	92.9	5.15	20	70	134
Naphthalene	ND	20	18.0	90.0	20	18.5	92.5	2.72	20	42	140
n-Butylbenzene	ND	20	18.7	93.3	20	18.2	91.2	2.25	20	82	112
n-Propylbenzene	ND	20	17.2	85.8	20	16.0	79.8	7.28	20	73	108
sec-Butylbenzene	ND	20	18.5	92.4	20	18.0	89.8	2.86	20	76	110
Styrene	ND	20	17.5	87.3	20	16.9	84.6	3.15	20	58	152
tert-Butylbenzene	ND	20	19.4	97.1	20	18.5	92.7	4.66	20	66	120
Tetrachloroethene	ND	20	19.7	98.5	20	18.3	91.4	7.44	20	71	130
Toluene	ND	20	17.4	86.9	20	16.7	83.6	3.82	24	80	117
Trichloroethene	ND	20	15.5	77.5 *	20	19.2	96.1	21.3 *	21	82	121
Trichlorofluoromethane	ND	20	18.8	94.1	20	20.1	100	6.57	20	74	138
Vinyl acetate	ND	20	13.7	68.4	20	13.5	67.6	1.20	20	66	135
Vinyl chloride	ND	20	17.4	87.0	20	18.6	93.2	6.96	20	45	143

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips
Randleman #1

Analysis: Volatile Organics by Method 8260B
Method: SW8260B
WorkOrder: 09060743
Lab Batch ID: R276016

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

Sample Spiked: 09060870-02
RunID: K_090620B-5076478 Units: ug/L
Analysis Date: 06/20/2009 12:54 Analyst: LU_L

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	18.7	93.7	20	17.9	89.7	4.39	20	67	132
cis-1,3-Dichloropropene	ND	20	17.1	85.6	20	21.6	108	23.1 *	20	67	116
m,p-Xylene	ND	40	39.0	97.5	40	38.1	95.4	2.22	20	69	127
o-Xylene	ND	20	20.3	101	20	19.4	97.1	4.30	20	84	114
trans-1,2-Dichloroethene	ND	20	17.8	89.1	20	17.7	88.5	0.715	20	68	131
trans-1,3-Dichloropropene	ND	20	18.1	90.6	20	22.4	112	20.9 *	20	56	131
1,2-Dichloroethene (total)	ND	40	36.5	91.4	40	35.6	89.1	2.58	20	67	132
Xylenes,Total	ND	60	59.3	98.8	60	57.5	95.9	2.93	20	69	127
Surr: 1,2-Dichloroethane-d4	ND	50	48.9	97.9	50	48.6	97.2	0.724	30	78	116
Surr: 4-Bromofluorobenzene	ND	50	52.3	105	50	51.9	104	0.758	30	74	125
Surr: Toluene-d8	ND	50	47.2	94.4	50	46.1	92.3	2.33	30	82	118

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

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Volatile Organics by Method 8260B
Method: SW8260B
WorkOrder: 09060743
Lab Batch ID: R276097

Method Blank

RunID: K_090620C-5078041 Units: ug/L
Analysis Date: 06/21/2009 3:59 Analyst: LU_L

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09060743-01A	MW-3
09060743-02A	MW-2
09060743-03A	MW-1
09060743-07A	Duplicate

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	20
Acrylonitrile	ND	10
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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Volatile Organics by Method 8260B
Method: SW8260B
WorkOrder: 09060743
Lab Batch ID: R276097

Method Blank

RunID: K_090620C-5078041 Units: ug/L
Analysis Date: 06/21/2009 3:59 Analyst: LU_L

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	2.0
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	91.9	78-116
Surr: 4-Bromofluorobenzene	100.0	74-125
Surr: Toluene-d8	92.7	82-118

Laboratory Control Sample (LCS)

RunID: K_090620C-5078040 Units: ug/L
Analysis Date: 06/21/2009 3:32 Analyst: LU_L

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,1,1,2-Tetrachloroethane	20.0	20.0	99.8	71	128
1,1,1-Trichloroethane	20.0	22.5	113	61	135
1,1,2,2-Tetrachloroethane	20.0	20.5	103	60	133
1,1,2-Trichloroethane	20.0	18.2	91.2	77	127
1,1-Dichloroethane	20.0	21.3	107	68	132

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Volatile Organics by Method 8260B
Method: SW8260B
WorkOrder: 09060743
Lab Batch ID: R276097

Laboratory Control Sample (LCS)

RunID: K_090620C-5078040 Units: ug/L
Analysis Date: 06/21/2009 3:32 Analyst: LU_L

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
1,1-Dichloroethene	20.0	21.4	107	65	134
1,1-Dichloropropene	20.0	21.3	106	68	126
1,2,3-Trichlorobenzene	20.0	21.1	105	36	154
1,2,3-Trichloropropane	20.0	21.0	105	38	153
1,2,4-Trichlorobenzene	20.0	20.2	101	69	144
1,2,4-Trimethylbenzene	20.0	20.4	102	64	128
1,2-Dibromo-3-chloropropane	20.0	19.3	96.5	44	141
1,2-Dibromoethane	20.0	19.4	97.0	75	124
1,2-Dichlorobenzene	20.0	20.8	104	68	124
1,2-Dichloroethane	20.0	22.0	110	61	138
1,2-Dichloropropane	20.0	22.2	111	76	123
1,3,5-Trimethylbenzene	20.0	19.9	99.5	61	127
1,3-Dichlorobenzene	20.0	20.8	104	68	127
1,3-Dichloropropane	20.0	19.0	95.1	76	125
1,4-Dichlorobenzene	20.0	20.2	101	68	124
2,2-Dichloropropane	20.0	18.3	91.3	42	142
2-Butanone	20.0	16.2	81.0	22	183
2-Chloroethyl vinyl ether	20.0	17.2	86.0	10	179
2-Chlorotoluene	20.0	20.9	104	64	132
2-Hexanone	20.0	18.9	94.7	31	178
4-Chlorotoluene	20.0	20.4	102	61	132
4-Isopropyltoluene	20.0	20.4	102	63	136
4-Methyl-2-pentanone	20.0	22.3	112	10	159
Acetone	20.0	20.7	104	10	200
Acrylonitrile	20.0	20.6	103	54	155
Benzene	20.0	20.6	103	74	123
Bromobenzene	20.0	19.4	96.8	68	125
Bromochloromethane	20.0	20.7	103	71	124
Bromodichloromethane	20.0	22.9	114	72	128
Bromoform	20.0	16.3	81.3	73	143
Bromomethane	20.0	17.5	87.4	53	130
Carbon disulfide	20.0	19.8	98.9	41	143
Carbon tetrachloride	20.0	23.1	115	59	142
Chlorobenzene	20.0	20.7	104	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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Volatile Organics by Method 8260B **WorkOrder:** 09060743
Method: SW8260B **Lab Batch ID:** R276097

Laboratory Control Sample (LCS)

RunID: K_090620C-5078040 Units: ug/L
Analysis Date: 06/21/2009 3:32 Analyst: LU_L

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Chloroethane	20.0	20.1	100	60	134
Chloroform	20.0	22.5	112	71	127
Chloromethane	20.0	18.7	93.3	50	139
Dibromochloromethane	20.0	18.5	92.7	65	130
Dibromomethane	20.0	22.0	110	79	124
Dichlorodifluoromethane	20.0	17.5	87.4	22	162
Ethylbenzene	20.0	20.0	100	72	127
Hexachlorobutadiene	20.0	22.5	112	45	152
Isopropylbenzene	20.0	18.2	90.8	58	130
Methyl tert-butyl ether	40.0	43.2	108	63	123
Methylene chloride	20.0	21.0	105	61	135
Naphthalene	20.0	20.9	104	33	148
n-Butylbenzene	20.0	22.6	113	62	136
n-Propylbenzene	20.0	18.7	93.4	57	131
sec-Butylbenzene	20.0	21.2	106	63	131
Styrene	20.0	18.5	92.4	69	120
tert-Butylbenzene	20.0	21.8	109	59	131
Tetrachloroethene	20.0	21.7	108	45	173
Toluene	20.0	18.5	92.3	74	126
Trichloroethene	20.0	22.5	112	79	131
Trichlorofluoromethane	20.0	21.6	108	49	153
Vinyl acetate	20.0	13.7	68.5	10	167
Vinyl chloride	20.0	22.1	111	51	148
cis-1,2-Dichloroethene	20.0	20.7	103	71	128
cis-1,3-Dichloropropene	20.0	22.7	113	67	128
m,p-Xylene	40.0	41.4	104	71	129
o-Xylene	20.0	21.4	107	74	130
trans-1,2-Dichloroethene	20.0	20.9	105	66	128
trans-1,3-Dichloropropene	20.0	23.7	119	60	128
1,2-Dichloroethene (total)	40.0	41.6	104	66	128
Xylenes,Total	60.0	62.8	105	71	130
Surr: 1,2-Dichloroethane-d4	50.0	49.3	98.7	78	116
Surr: 4-Bromofluorobenzene	50.0	50.9	102	74	125
Surr: Toluene-d8	50.0	46.4	92.9	82	118

Qualifiers:

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

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Volatile Organics by Method 8260B
Method: SW8260B
WorkOrder: 09060743
Lab Batch ID: R276097

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

Sample Spiked: 09060979-02
RunID: K_090620C-5078043 Units: ug/L
Analysis Date: 06/21/2009 4:53 Analyst: LU_L

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	18.4	92.0	20	20.1	100	8.59	20	68	124
1,1,1-Trichloroethane	ND	20	23.1	115	20	23.1	115	0.0997	20	69	123
1,1,2,2-Tetrachloroethane	ND	20	20.9	105	20	22.0	110	4.95	20	69	130
1,1,2-Trichloroethane	ND	20	17.9	89.5	20	18.3	91.4	2.03	20	75	126
1,1-Dichloroethane	ND	20	22.2	111	20	22.7	114	2.52	20	65	129
1,1-Dichloroethene	ND	20	20.5	102	20	21.5	107	4.87	22	61	139
1,1-Dichloropropene	ND	20	21.3	106	20	21.7	109	1.91	20	69	121
1,2,3-Trichlorobenzene	ND	20	18.2	90.9	20	19.2	96.1	5.50	20	53	127
1,2,3-Trichloropropane	ND	20	20.0	99.8	20	20.9	105	4.70	20	79	124
1,2,4-Trichlorobenzene	ND	20	17.1	85.5	20	17.4	86.8	1.52	20	58	118
1,2,4-Trimethylbenzene	ND	20	19.2	96.0	20	19.3	96.4	0.426	20	43	132
1,2-Dibromo-3-chloropropane	ND	20	20.8	104	20	20.8	104	0.168	20	46	131
1,2-Dibromoethane	ND	20	19.0	95.0	20	20.3	101	6.49	20	76	122
1,2-Dichlorobenzene	ND	20	19.0	94.8	20	18.9	94.6	0.153	20	74	110
1,2-Dichloroethane	ND	20	21.9	110	20	23.5	118	6.90	20	60	129
1,2-Dichloropropane	ND	20	21.6	108	20	22.7	114	5.00	20	76	116
1,3,5-Trimethylbenzene	ND	20	18.2	90.9	20	18.7	93.3	2.68	20	51	121
1,3-Dichlorobenzene	ND	20	17.6	88.2	20	17.8	88.9	0.802	20	71	110
1,3-Dichloropropane	ND	20	18.2	90.9	20	19.1	95.4	4.79	20	80	119
1,4-Dichlorobenzene	ND	20	20.1	101	20	20.2	101	0.486	20	69	110
2,2-Dichloropropane	ND	20	18.2	91.0	20	19.2	96.2	5.51	20	52	122
2-Butanone	ND	20	17.3	86.3	20	18.8	94.2	8.73	20	10	133
2-Chloroethyl vinyl ether	ND	20	0	0 *	20	0	0 *	0	20	10	182
2-Chlorotoluene	ND	20	19.5	97.5	20	19.2	96.2	1.32	20	69	112
2-Hexanone	ND	20	20.4	102	20	20.5	102	0.396	20	10	163
4-Chlorotoluene	ND	20	18.2	90.9	20	18.4	92.2	1.49	20	37	110
4-Isopropyltoluene	ND	20	17.8	89.1	20	17.5	87.7	1.55	20	65	116
4-Methyl-2-pentanone	ND	20	23.7	119	20	23.9	120	0.780	20	10	159
Acetone	ND	20	18.6	93.2	20	22.8	114	20.0 *	20	10	160
Acrylonitrile	ND	20	21.3	106	20	23.6	118	10.4	20	45	155

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Volatile Organics by Method 8260B
Method: SW8260B
WorkOrder: 09060743
Lab Batch ID: R276097

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

Sample Spiked: 09060979-02
RunID: K_090620C-5078043 Units: ug/L
Analysis Date: 06/21/2009 4:53 Analyst: LU_L

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	23.3	104	20	24.0	107	2.74	22	70	124
Bromobenzene	ND	20	18.1	90.4	20	18.2	90.9	0.507	20	72	111
Bromochloromethane	ND	20	20.3	101	20	20.2	101	0.643	20	73	126
Bromodichloromethane	ND	20	21.9	109	20	22.7	113	3.50	20	68	125
Bromoform	ND	20	14.9	74.5	20	15.2	75.9	1.97	20	44	132
Bromomethane	ND	20	15.8	79.2	20	16.3	81.6	3.04	20	50	140
Carbon disulfide	ND	20	20.0	100	20	20.5	103	2.38	20	46	143
Carbon tetrachloride	ND	20	22.0	110	20	22.6	113	2.46	20	66	126
Chlorobenzene	ND	20	19.5	97.5	20	20.5	102	4.87	21	68	123
Chloroethane	ND	20	19.8	99.1	20	22.0	110	10.4	20	59	134
Chloroform	ND	20	21.9	109	20	22.5	112	2.79	20	68	127
Chloromethane	ND	20	16.3	81.5	20	17.0	84.9	4.12	20	51	137
Dibromochloromethane	ND	20	17.4	86.8	20	18.2	90.8	4.47	20	58	131
Dibromomethane	ND	20	21.8	109	20	22.5	113	3.35	20	82	123
Dichlorodifluoromethane	ND	20	19.0	95.0	20	17.2	86.1	9.79	20	35	143
Ethylbenzene	ND	20	21.5	98.4	20	22.4	103	4.22	20	76	122
Hexachlorobutadiene	ND	20	15.4	76.9	20	15.1	75.3	2.18	20	43	137
Isopropylbenzene	ND	20	17.9	89.7	20	18.8	93.9	4.67	20	57	124
Methyl tert-butyl ether	ND	40	44.3	111	40	46.7	117	5.16	20	10	200
Methylene chloride	ND	20	21.6	108	20	22.1	110	2.05	20	70	134
Naphthalene	ND	20	20.1	100	20	20.7	104	3.22	20	42	140
n-Butylbenzene	ND	20	17.7	88.6	20	17.3	86.3	2.63	20	82	112
n-Propylbenzene	ND	20	18.4	91.8	20	18.1	90.4	1.48	20	73	108
sec-Butylbenzene	ND	20	18.7	93.3	20	18.8	93.9	0.647	20	76	110
Styrene	ND	20	18.7	93.3	20	19.3	96.6	3.42	20	58	152
tert-Butylbenzene	ND	20	19.5	97.7	20	20.0	99.8	2.13	20	66	120
Tetrachloroethene	ND	20	19.2	96.0	20	18.6	93.2	2.98	20	71	130
Toluene	ND	20	17.6	87.8	20	18.3	91.5	4.13	24	80	117
Trichloroethene	ND	20	21.9	110	20	21.7	109	1.07	21	82	121
Trichlorofluoromethane	ND	20	21.7	108	20	22.6	113	4.14	20	74	138
Vinyl acetate	ND	20	11.9	59.6 *	20	12.5	62.7 *	4.95	20	66	135
Vinyl chloride	ND	20	21.1	105	20	22.2	111	5.38	20	45	143

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 09060743
Lab Batch ID: R276097

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

Sample Spiked: 09060979-02
RunID: K_090620C-5078043 Units: ug/L
Analysis Date: 06/21/2009 4:53 Analyst: LU_L

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	20.3	102	20	20.8	104	2.41	20	67	132
cis-1,3-Dichloropropene	ND	20	18.3	91.5	20	18.7	93.7	2.40	20	67	116
m,p-Xylene	5.06	40	44.5	98.5	40	46.2	103	3.88	20	69	127
o-Xylene	ND	20	20.6	103	20	21.3	106	3.37	20	84	114
trans-1,2-Dichloroethene	ND	20	21.2	106	20	21.1	105	0.469	20	68	131
trans-1,3-Dichloropropene	ND	20	16.5	82.3	20	17.3	86.3	4.71	20	56	131
1,2-Dichloroethene (total)	ND	40	41.5	104	40	41.9	105	0.954	20	67	132
Xylenes,Total	5.06	60	65.1	100	60	67.5	104	3.72	20	69	127
Surr: 1,2-Dichloroethane-d4	ND	50	46.7	93.3	50	49.7	99.3	6.22	30	78	116
Surr: 4-Bromofluorobenzene	ND	50	50.2	100	50	51.6	103	2.76	30	74	125
Surr: Toluene-d8	ND	50	45.3	90.5	50	46.7	93.3	3.05	30	82	118

Qualifiers:

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

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Alkalinity (as CaCO3), Total
Method: E310.1
WorkOrder: 09060743
Lab Batch ID: R275389

Method Blank

RunID: WET_090614H-5065989 Units: mg/L
Analysis Date: 06/14/2009 12:15 Analyst: PAC

Analyte	Result	Rep Limit
Alkalinity, Total (As CaCO3)	ND	2.0

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09060743-01E	MW-3
09060743-02E	MW-2
09060743-03E	MW-1
09060743-04E	MW-4

Laboratory Control Sample (LCS)

RunID: WET_090614H-5065991 Units: mg/L
Analysis Date: 06/14/2009 12:15 Analyst: PAC

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Alkalinity, Total (As CaCO3)	38.70	38.00	98.19	90	110

Sample Duplicate

Original Sample: 09060743-04
RunID: WET_090614H-5065995 Units: mg/L
Analysis Date: 06/14/2009 12:15 Analyst: PAC

Analyte	Sample Result	DUP Result	RPD	RPD Limit
Alkalinity, Total (As CaCO3)	200	200	0	20

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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Nitrite Nitrogen (as N), Total
Method: SM4500-NO2 B
WorkOrder: 09060743
Lab Batch ID: R275563

Method Blank

RunID: WET_090613Q-5068986 Units: mg/L
Analysis Date: 06/13/2009 14:15 Analyst: ESK

Analyte	Result	Rep Limit
Nitrogen,Nitrite	ND	0.50

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09060743-01E	MW-3
09060743-02E	MW-2
09060743-03E	MW-1
09060743-04E	MW-4

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

Sample Spiked: 09060743-01
RunID: WET_090613Q-5068990 Units: mg/L
Analysis Date: 06/13/2009 14:15 Analyst: ESK

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,Nitrite	ND	5	4.584	88.34 *	5	4.853	93.71	5.692	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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Nitrate Nitrogen (as N), Total
Method: SM4500-NO3 F

WorkOrder: 09060743
Lab Batch ID: R275568

Method Blank

RunID: WET_090613R-5069042 Units: mg/L
Analysis Date: 06/13/2009 16:00 Analyst: ESK

Analyte	Result	Rep Limit
Nitrogen, Nitrate (As N)	ND	0.50

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09060743-01E	MW-3
09060743-02E	MW-2
09060743-03E	MW-1
09060743-04E	MW-4

Laboratory Control Sample (LCS)

RunID: WET_090613R-5069043 Units: mg/L
Analysis Date: 06/13/2009 16:00 Analyst: ESK

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Nitrogen, Nitrate (As N)	5.00	4.83	96.5	90	110

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

Sample Spiked: 09060743-01
RunID: WET_090613R-5069047 Units: mg/L
Analysis Date: 06/13/2009 16:00 Analyst: ESK

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	4.80	90.5	5	5.13	97.0	6.61	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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips

Randleman #1

Analysis: Ion Chromatography
Method: E300.0
WorkOrder: 09060743
Lab Batch ID: R276029A

Method Blank

RunID: IC2_090619A-5076621 Units: mg/L
Analysis Date: 06/19/2009 12:35 Analyst: BDG

Analyte	Result	Rep Limit
Bromide	ND	0.50
Chloride	ND	0.50
Fluoride	ND	0.50
Ortho-phosphate (As P)	ND	0.50
Sulfate	ND	0.50

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09060743-01E	MW-3
09060743-02E	MW-2
09060743-03E	MW-1
09060743-04E	MW-4

Laboratory Control Sample (LCS)

RunID: IC2_090619A-5076622 Units: mg/L
Analysis Date: 06/19/2009 12:54 Analyst: BDG

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Bromide	10.00	9.983	99.83	85	115
Chloride	10.00	9.436	94.36	85	115
Fluoride	10.00	9.855	98.55	85	115
Ortho-phosphate (As P)	10.00	10.30	103.0	85	115
Sulfate	10.00	10.26	102.6	85	115

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

Sample Spiked: 09060875-01
RunID: IC2_090619A-5076655 Units: mg/L
Analysis Date: 06/20/2009 6:12 Analyst: BDG

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Bromide	ND	10	9.088	89.56	10	10.22	100.8	11.68	20	80	120
Chloride	18.33	10	30.23	119.0	10	30.20	118.8	0.08273	20	80	120
Fluoride	0.6210	10	11.30	106.8	10	11.42	108.0	1.048	20	80	120
Ortho-phosphate (As P)	ND	10	17.42	174.2 *	10	20.57	205.7 *	16.61	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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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.

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

Quality Control Report

Conoco Phillips
Randleman #1

Analysis: Ion Chromatography
Method: E300.0
WorkOrder: 09060743
Lab Batch ID: R276029A

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

Sample Spiked: 09060875-01
RunID: IC2_090619A-5076655 Units: mg/L
Analysis Date: 06/20/2009 6:12 Analyst: BDG

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Sulfate	24.10	10	36.49	123.9 *	10	35.75	116.6	2.043	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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

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

Sample Receipt Checklist

And

Chain of Custody

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

Sample Receipt Checklist

Workorder:	09060743	Received By:	CAW
Date and Time Received:	6/13/2009 10:00:00 AM	Carrier name:	Fedex-Priority
Temperature:	1.0°C	Chilled by:	Water Ice

1.	Shipping container/cooler in good condition?	Yes	☑	No	☐	Not Present ☐
2.	Custody seals intact on shippping 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?	Yes	☑	No	☐	
11.	Container/Temp Blank temperature in compliance?	Yes	☑	No	☐	
12.	Water - VOA vials have zero headspace?	Yes	☑	No	☐	VOA Vials Not Present ☐
13.	Water - Preservation checked upon receipt (except VOA*)?	Yes	☑	No	☐	Not Applicable ☐

*VOA Preservation Checked After Sample Analysis

SPL Representative: _____ Contact Date & Time: _____

Client Name Contacted: _____

Non Conformance Issues: _____

Client Instructions: _____

SPL, Inc.
Analysis Request & Chain of Custody Record

SPL Workorder No.: 09060743 | 327653 | page 1 of 3

Client Name:	Tetra Tech / Conoco Phillips
Address:	6121 Indian School Rd NE Ste 200
City	Albuquerque State NM Zip 87110
Phone/Fax:	505-237-8440 505-237-8656
Client Contact:	Kelly Blanchard Email: kelly.blanchard@tetratech.com
Project Name/No.:	Randleman #1
Site Name:	
Site Location:	Aztec, San Juan Co., NM
Invoice To:	ConocoPhillips Ph:

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

SAMPLE ID	DATE	TIME	comp	grab	matrix	bottle	size	pres.	# Containers	VOCs	TPH GRO	TPH DRO	Total Metals	Gen Chemistry	SVOCs			
MW-3	6.12.09	1045		X	W	V	40	1	3	X								
MW-3	6.12.09	1045		X	W	V	40	1	3		X							
MW-3	6.12.09	1045		X	W	A	1	1	2			X						
MW-3	6.12.09	1045		X	W	P	16	2	1				X					
MW-3	6.12.09	1045		X	W	P	1	NONE	2					X				
MW-3	6.12.09	1045		X	W	A	1	NONE	2						X			
MW-2	6.12.09	1035		X	W	V	40	1	3	X								
MW-2	6.12.09	1035		X	W	V	40	1	3		X							
MW-2	6.12.09	1035		X	W	A	1	1	2			X						
MW-2	6.12.09	1035		X	W	P	16	2	1				X					

Client/Consultant Remarks:

Laboratory remarks:

Intact? Y N
Ice? Y N
Temp: 1.0°C, 3.0°C

Requested TAT
- 1 Business Day
- 2 Business Days
- 3 Business Days
- Contract
- Standard
- Other
- Rush TAT requires prior notice

Special Reporting Requirements Results: Fax Email PDF
Standard QC Level 3 QC Level 4 QC TX TRRP LA RECAP

Special Detection Limits (specify):

PM review (initial): 2.0°C, 2.0°C

	date	time	
1. Relinquished by Sampler:	6.12.09	1500	2. Received by:
3. Relinquished by:	date	time	4. Received by:
5. Relinquished by:	date 6/13/09	time 1000	6. Received by Laboratory:

8880 Interchange Drive
Houston, TX 77054 (713) 660-0901

500 Ambassador Caffery Parkway
Scott, LA 70583 (337) 237-4775

459 Hughes Drive
Traverse City, MI 49686 (231) 947-5777

SPL, Inc.
Analysis Request & Chain of Custody Record

SPL Workorder No.: 09060743 | 327829 | page 2 of 3

Client Name: Tetra Tech / ConocoPhillips
Address: 6121 Indian School Rd NE 87110
City: Albuquerque State: NM Zip: 87110
Phone/Fax: 505.237.8440 505.237.8656
Client Contact: Kelly Blanchard Email: kelly.Blanchard@tetratech.com
Project Name/No.: Randleman #1
Site Name:
Site Location: Aztec, San Juan Co, NM
Invoice To: ConocoPhillips Ph:

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

SAMPLE ID	DATE	TIME	comp	grab	matrix	bottle	size	pres.	Number of Containers	Requested Analysis: VOCs	TPH GRO	TPH DRO	Total Metals	Gen Chemistry	SVOCs
MW-2	6.12.09	1035		X	W	P	1	None	2					X	
MW-2	6.12.09	1035		X	W	A	1	None	2						X
MW-1	6.12.09	1100		X	W	V	40	1	3	X					
MW-1	6.12.09	1100		X	W	V	40	1	3		X				
MW-1	6.12.09	1100		X	W	A	1	1	2			X			
MW-1	6.12.09	1100		X	W	P	16	2	1				X		
MW-1	6.12.09	1100		X	W	P	1	None	2					X	
MW-1	6.12.09	1100		X	W	P	1	None	2						X
MW-4	6.12.09	1130		X	W	V	40	1	3	X					
MW-4	6.12.09	1130		X	W	V	40	1	3		X				

Client/Consultant Remarks:

Laboratory remarks:

Intact? Y N
Ice? Y N
Temp: 1.0, 3.0°C, 2.0°

Requested TAT
- 1 Business Day
- 2 Business Days
- 3 Business Days
- Contract
- Standard
- Other
- Rush TAT requires prior notice

Special Reporting Requirements Results: Fax Email PDF
Standard QC Level 3 QC Level 4 QC TX TRRP LA RECAP

Special Detection Limits (specify):

PM review (initial):

	date	time	
1. Relinquished by Sampler:	6.12.09	1500	2. Received by:
3. Relinquished by:	date	time	4. Received by:
5. Relinquished by:	6/13/09	1000	6. Received by Laboratory:

8880 Interchange Drive
Houston, TX 77054 (713) 660-0901

500 Ambassador Caffery Parkway
Scott, LA 70583 (337) 237-4775

459 Hughes Drive
Traverse City, MI 49686 (231) 947-5777

SPL, Inc.
Analysis Request & Chain of Custody Record

SPL Workorder No.: 327818
0906060743
page 3 of 3

Client Name: TetraTech/ConocoPhillips
Address: 6121 Indian School Rd NE Ste 200
City: Albuquerque State: NM Zip: 87110
Phone/Fax: 505.237.8440 505.237.8656
Client Contact: Kelly Blanchard Email: Kelly.Blanchard@tetratech.com
Project Name/No.:
Site Name:
Site Location: Aztec, San Juan Co, NM
Invoice To: ConocoPhillips Ph:

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

SAMPLE ID	DATE	TIME	comp	grab	matrix	bottle	size	pres.	Number of Containers	VOCs	TPH GRO	TPH DRO	Total Metals	Gen Chemistry	SVOCs	BTEX ONLY
MW-4	6.12.09	1130		X	W	A	1	1	2			X				
MW-4	6.12.09	1130		X	W	P	16	2	1				X			
MW-4	6.12.09	1130		X	W	P	1	NONE	2					X		
MW-4	6.12.09	1130		X	W	A or V	1	NONE	2						X	
Duplicate	6.12.09	1130		X	W	V	40	1	3							X
Trip Blank	6.12.09	1100			W	V	40	1	2							X

Client/Consultant Remarks:

Laboratory remarks:

Intact? Y N
Ice? Y N
Temp: 1.0°C 3.0°C

Requested TAT
- 1 Business Day
- 2 Business Days
- 3 Business Days
- Contract
- Standard
- Other
- Rush TAT requires prior notice

Special Reporting Requirements Results: Fax Email X PDF X
Standard QC Level 3 QC Level 4 QC TX TRRP LA RECAP

Special Detection Limits (specify):

PM review (initial): 1.0°C, 2.0°C

	date	time	
1. Relinquished by Sampler:	6.12.09	1500	2. Received by:
3. Relinquished by:	date	time	4. Received by:
5. Relinquished by:	date 6/13/09	time 1000	6. Received by Laboratory:

8880 Interchange Drive
Houston, TX 77054 (713) 660-0901

500 Ambassador Caffery Parkway
Scott, LA 70583 (337) 237-4775

459 Hughes Drive
Traverse City, MI 49686 (231) 947-5777