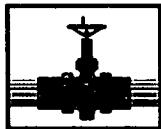


**AP - 052**

**QUARTERLY  
MONITORING  
REPORT**

**11/13/2008**



**PLAINS**  
PIPELINE, L.P.

RECEIVED

2008 NOV 14 PM 1 16

November 13, 2008

Mr. Edward Hansen  
New Mexico Oil Conservation Division  
Environmental Bureau  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

RE: Plains Pipeline, L.P. C. S. Cayler Release Site  
NMOCD Reference # AP-052  
Unit Letter B of Section 6, Township 17 South, Range 37 East  
Lea County, New Mexico

Dear Mr. Hansen:

Plains Pipeline, L.P. is please to submit the attached Quarterly Report, dated November 13, 2008, for the C.S. Cayler release site located in Section 6 of Township 17 South, and Range 37 East of Lea County, New Mexico. This document summarizes the status of recent activities performed during the third quarter of 2008.

Should you have any questions or comments, please contact me at (432) 557-5865.

Sincerely,

Daniel Bryant  
Environmental Specialist  
Office: 432-686-1769  
Cell: 432-557-5865

CC: Larry Johnson, NMOCD, Hobbs Office

Enclosure



November 13, 2008

AMARILLO  
921 North Bivins  
Amarillo, Texas 79107  
Phone 806.467.0607  
Fax 806.467.0622

Mr. Edward Hansen  
New Mexico Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

AUSTIN  
3003 Tom Gary Cove  
Building C-100  
Round Rock, Texas 78664  
Phone 512.989.3428  
Fax 512.989.3487

MIDLAND  
2901 State Highway 349  
Midland, Texas 79706  
Phone 432.522.2133  
Fax 432.522.2180

SAN ANTONIO  
17170 Jordan Road  
Suite 102  
Selma, Texas 78154  
Phone 210.579.0235  
Fax 210.568.2191

TULSA  
9906 East 43<sup>rd</sup> Street  
Suite G  
Tulsa, Oklahoma 74146  
Phone 918.742.0871  
Fax 918.742.0876

HOBBS  
318 East Taylor Street  
Hobbs, New Mexico 88241  
Phone 505.393.4261  
Fax 505.393.4658

TYLER  
719 West Front Street  
Suite 255  
Tyler, Texas 75702  
Phone 903.531.9971  
Fax 903.531.9979

HOUSTON  
3233 West 11th Street  
Suite 400  
Houston, Texas 77008  
Phone 713.861.0081  
Fax 713.868.3208

Re: Plains Pipeline, L.P. C.S. Cayler (Plains SRS#2002-10250)  
Third Quarter Summary  
NMOCD Reference # AP-052 (OLD 1R-0382)  
UL-B (NW $\frac{1}{4}$  of the NE $\frac{1}{4}$ ) of Section 6, T17S, R37E  
Latitude: 32° 52' 2.45"N and Longitude: 103° 17' 17.73"W  
Landowner: Robert C. Rice  
Lea County, New Mexico

Dear Mr. Hansen:

Talon/LPE, on behalf of Plains Pipeline, L.P. (Plains), submits this letter summarizing the third quarter activities.

#### Remediation Activities

Five skimmer pumps were utilized to recover phase separated hydrocarbons (PSH). The system is maintained weekly to optimize recovery rates. A poly tank is utilized to contain purge water and PSH. The poly tank is gauged weekly to monitor PSH recovery. Approximately 686 gallons of PSH has been recovered during the third quarter. Twenty-seven barrels of crude oil were evacuated from the poly tank via vacuum truck, and were subsequently reintroduced into the Plains pipeline system. Skimmer pumps are located in monitor wells MW-2 through MW-5, and MW-7. A summary of the historical groundwater gauging data is provided in Table 1.

Plains has completed a contract with Three Forks for water disposal access at the Apollo SWD that is located approximately 1.5 miles west of the site. Plains is currently in the process of obtaining right-of-way access in order to lay poly pipe to the disposal facility. Upon receiving right-of-way access, a 4-inch poly line will be placed to connect the remediation site to the disposal facility.

#### Quarterly Sampling Event

The Third Quarter 2008 groundwater sampling event occurred on August 13, 2008. During the sampling event, monitor wells MW-6, MW-9 through MW-18 were sampled and groundwater samples from each monitor well were submitted for quantification of benzene, toluene, ethylbenzene, and total xylenes (BTEX) using SW-846 Method 8021B and poly-aromatic hydrocarbons (PAH) using SW-846 Method 8270C. Groundwater monitor wells MW-2 through MW-5, MW-7, and MW-8 were not sampled due to the presence of phase separated hydrocarbons (PSH). Monitor well MW-1 was not sampled because the well was dry.

ENVIRONMENTAL CONSULTING  
ENGINEERING  
DRILLING  
CONSTRUCTION  
EMERGENCY RESPONSE

Analytical results from the August 13, 2008, sampling event indicate that BTEX constituents were detected above the laboratory reporting limits in monitor wells MW-6, MW-9, MW-12, MW-13, MW-15, MW-16, and MW-17. Benzene concentrations exceeded the New Mexico Water Quality Control Commission (NMWQCC) groundwater standard of 0.010 mg/L in monitor wells MW-6 (0.4540 mg/L), MW-9 (0.130 mg/L), MW-13 (0.0231 mg/L), and MW-16 (0.117 mg/L). All BTEX constituents exceeded NMWQCC groundwater standards in monitor well MW-12 (benzene 30.20 mg/L, toluene 8.44 mg/L, ethylbenzene 1.25 mg/L, and xylenes 2.22 mg/L). Analytical results for the third quarter sampling event are summarized in Table 2 and Figure 3c. A groundwater gradient map is presented in Figure 2c.

The August 2008 sampling event indicated the PAH constituents were below laboratory reporting limits for monitor wells MW-6, MW-9, MW-11, and MW-13 through MW-18. Monitor well MW-10 contained dibenzofuran (0.000406 mg/L). Monitor well MW-12 contained dibenzofuran (0.00264 mg/L), fluorene (0.00190 mg/L), 1-Methylnaphthalene (0.0378 mg/L), 2-Methylnaphthalene (0.0421 mg/L), naphthalene (0.0698 mg/L), and phenanthrene (0.00158 mg/L). The NMQCC does not list an action level for dibenzofuran, fluorene, 1-Methylnaphthalene, 2-Methylnaphthalene, or phenanthrene. Naphthalene concentrations exceeded the NMWQCC standard of 0.030 mg/L in monitor well MW-12. PAH analytical results are summarized in Table 3.

#### Monitor Well Installation

On September 18, 2008, Plains installed monitor well MW-1A to replace the dry monitor well MW-1, as approved by the New Mexico Oil Conservation Division (NMOCD). Monitor well MW-1 was plugged and abandoned in accordance with the New Mexico Office of the State Engineer regulations.

#### NMOCD Requested Sampling Event

In addition to the regular quarterly sampling, the NMOCD requested that the wells containing PSH be sampled on an annual basis. On September 23, 2008, Talon sampled the groundwater beneath the PSH from monitor wells MW-1A, MW-3, MW-4, and MW-5. Monitor wells MW-2, MW-7, and MW-8 did not contain enough water to sample. The groundwater samples were submitted for quantification benzene, toluene, ethylbenzene, and total xylenes (BTEX) using SW-846 Method 8021B, total petroleum hydrocarbon (TPH) using Method 8015M/GRO-DRO, and PAH using SW-846 Method 8270C. During the sampling event, general chemistry, metal parameters, and Method 8260B were sampled from monitor well MW-1A. Analytical results for monitor well MW-1A are presented in Table 5 and 6.

The September sampling event indicated that BTEX concentrations exceeded the NMWQCC remedial limits in monitor wells MW-1A, MW-3, MW-4, and MW-5. Benzene concentrations ranged from 11.9 mg/L to 31.2 mg/L. Toluene concentrations ranged from 5.8 mg/L to 31.1 mg/L. Ethylbenzene concentrations ranged from 1.08 mg/L to 8.39 mg/L. Xylene concentrations ranged from 1.92 mg/L to 18.9 mg/L. The NMWQCC does not list an action level for total petroleum hydrocarbons (TPH). Analytical results for the third quarter sampling event are summarized in Table 2 and Figure 4.

The monitor wells that contain PSH exhibited PAH constituents above laboratory reporting limits. One constituent, naphthalene, was present at concentrations of up to 7.27 mg/L in monitor well MW-4. PAH analytical results, for monitor wells that contain PSH, are summarized in Table 4.

If you have any questions or require further information, please contact me at (432) 522-2133 or Mr. Jeff Dann at (713) 646-4657.

Sincerely,



Shanna L. Smith  
Project Manager

Enclosures

Figure 1 – Site Plan

Figure 2c – Groundwater Gradient Map (8/13/2008)

Figure 3c – PSH Thickness & Groundwater Concentration Map (8/13/2008)

Figure 4 – Groundwater Concentration in Wells with PSH Map (9/23/2008)

Table 1 – Groundwater Elevations and Phase Separated Hydrocarbon (PSH) Thickness

Table 2 – Summary of Groundwater Analytical Results

Table 3 – Summary of Groundwater Poly-Aromatic Hydrocarbon Analytical Results

Table 4 – Summary of PSH Monitor Wells Groundwater Poly-Aromatic Hydrocarbon Analytical Results

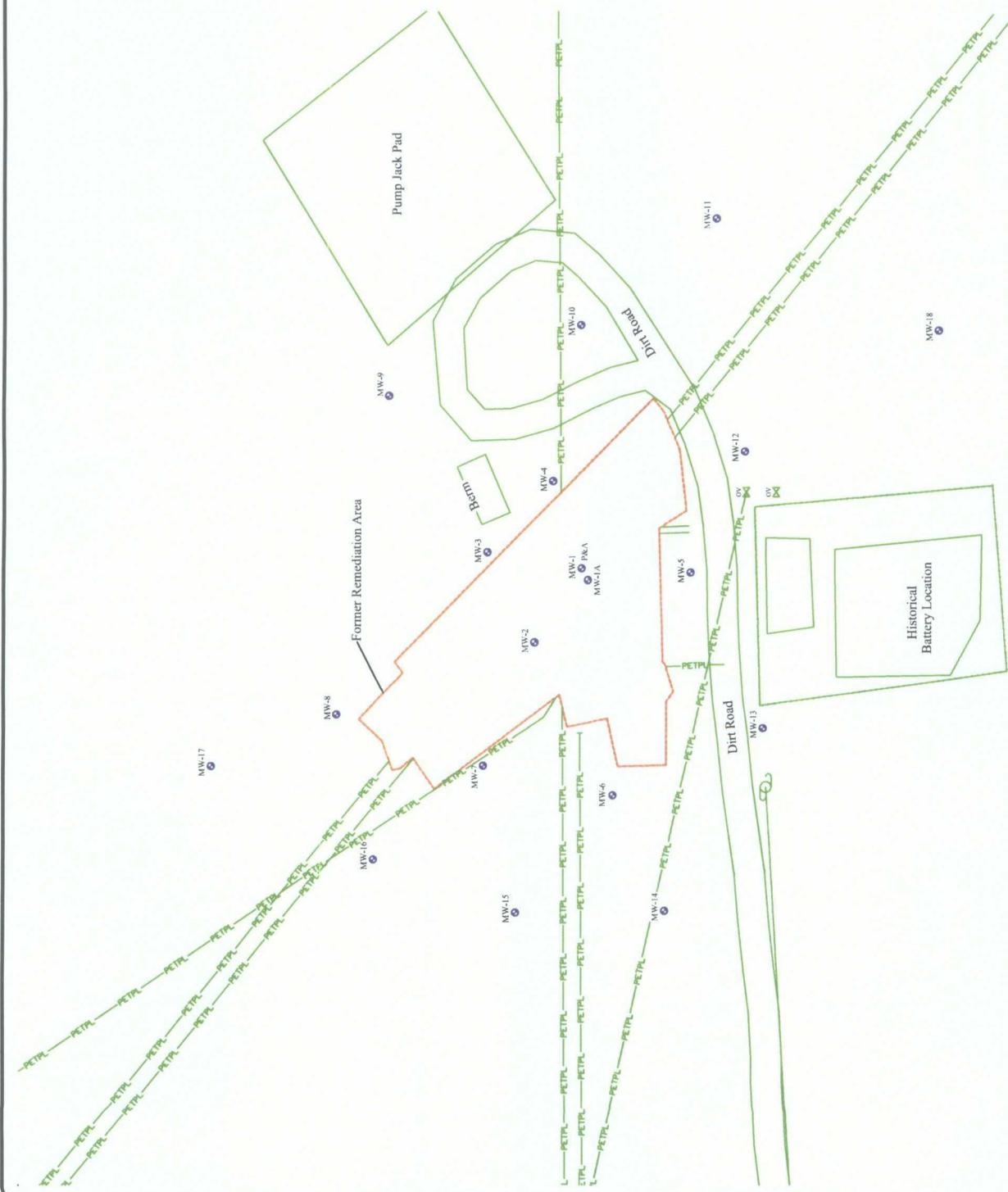
Table 5 – Summary of Semi-Volatile and Volatile Groundwater Analytical Results

Table 6 – Summary of General Chemistry and Metals Groundwater Analytical Results

Laboratory Analytical Data Sheets and Chain of Custody Documentation



Scale in Feet  
0 50 100



Legend  
• - Monitor Well  
— PETPL  
— Valve  
— Fence line

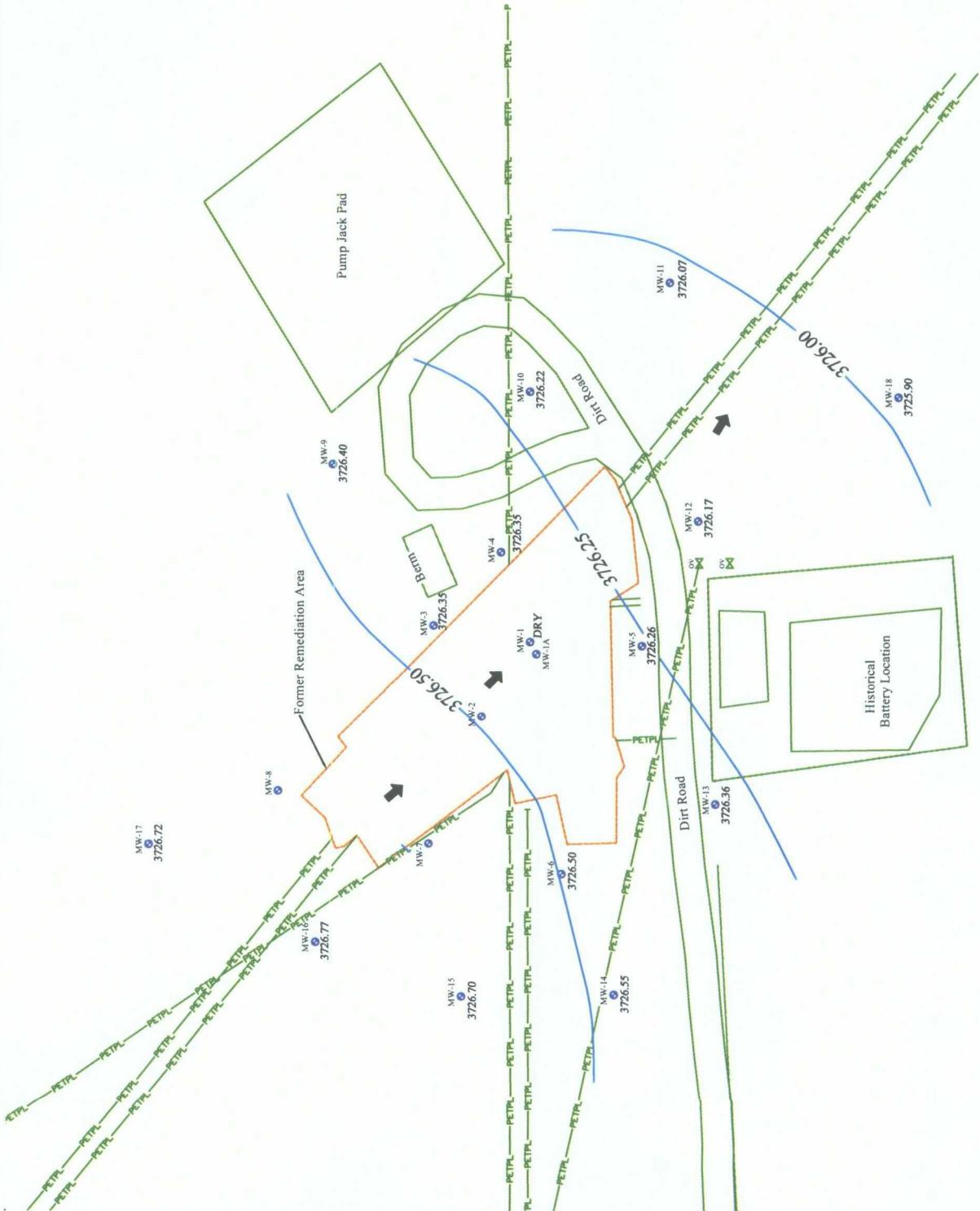
**TAIL-ON**  
**LPE**

Date: 11/07/2008  
Scale: 1" = 100'  
Drawn By: SJA

C.S. Cayler (PLAINS044SPL)  
SRS # 2002-10250, NMOCD REF. # AP-052 (OLD 1R-0382)  
Lea County, New Mexico  
Figure 1 - Site Plan



Scale in Feet  
0 50 100

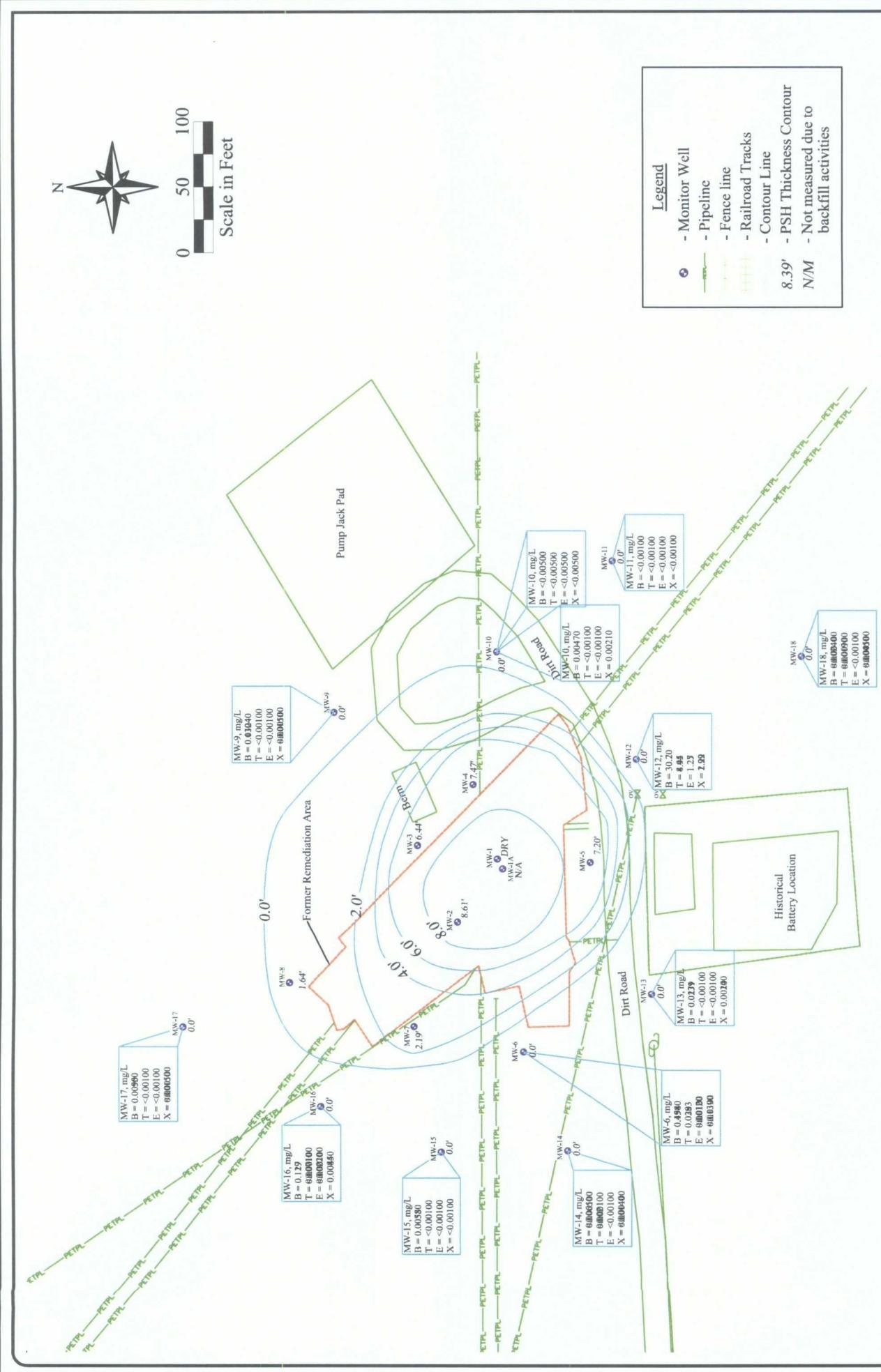


Note: Data on MW-2, MW-7 and MW-8 wells were not used to contour the groundwater flow direction

**TALON**  
**LPE**

Date: 10/30/2008
Scale: 1" = 100'
Drawn By: SJA

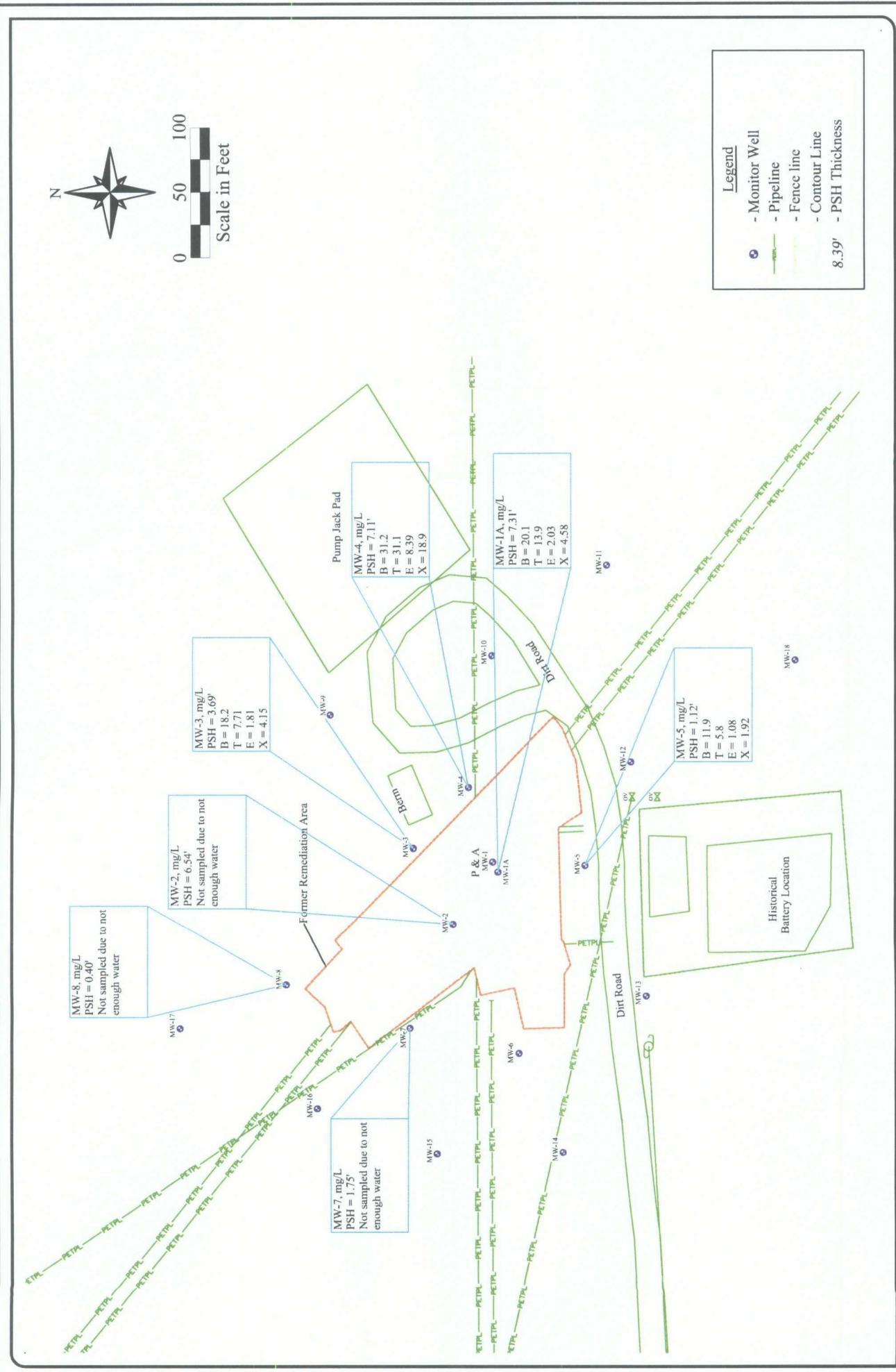
C.S. Cayler (PLAINS044SPL)  
SRS # 2002-10250, NMOCD REF. # AP-052 (OLD 1R-0382)  
Lea County, New Mexico  
Figure 2c - Groundwater Gradient Map, (08/13/2008)



C.S. Cayler (PLAIN044SPL)  
SRS # 2002-10250, NMOCRD REF. # AP-052 (OLD 1R-0382)  
Lea County, New Mexico

Date: 11/07/2008  
Scale: 1" = 100'  
Drawn By: SJA

**TALON LPE**



Date: 10/10/20  
Scale: 1" = 10  
Drawn By: SJ

TALLON-LPE

C.S. Cayler (PLAINS044SPL)  
 SRS # 2002-10250, NMOCD REF. # AP-052 (OLD 1R-0382)  
 Lea County, New Mexico  
 Figure 4 - Groundwater Concentration in Wells with PSH Map, (09/



Table 1  
Groundwater Elevations and  
Phase Separated Hydrocarbon (PSH) Thicknesses  
Plains Pipeline, L.P.  
C. S. Cayler  
NMOC REF. # AP-052 (OLD 1R-0382)  
Lea County, NM SRS# 2002-10250  
Talon/LPE Project Number PLAINS044SPL

Monitoring Well	Date Gauged	Surveyed Top of Casing Elevation	Depth to PSH	Depth to Water	Corrected Groundwater Elevation	PSH Thickness
		(feet)	BTOC (feet)*	BTOC (feet)*	(feet)*	(feet)
<b>WELL INSTALLED 17-Oct-02</b>						
MW-1	10/17/02					
MW-1	3/7/03	3,803.97	72.28	84.20	3,730.50	11.92
MW-1	3/11/03		72.30	84.19	3,730.48	11.89
MW-1	3/17/03		72.33	84.25	3,730.45	11.92
MW-1	3/22/03		72.35	84.24	3,730.43	11.89
MW-1	5/6/03		71.55	83.11	3,731.26	11.56
MW-1	5/7/03		71.58	83.05	3,731.24	11.47
MW-1	5/8/03		71.55	83.03	3,731.27	11.48
MW-1	5/9/03		71.53	83.00	3,731.29	11.47
MW-1	5/15/03		71.57	83.01	3,731.26	11.44
MW-1	5/16/03		71.59	82.90	3,731.25	11.31
MW-1	5/28/03		71.65	82.50	3,731.24	10.85
MW-1	6/11/03		71.75	82.57	3,731.14	10.82
MW-1	8/14/03		63.45	73.41	3,739.52	9.96
MW-1	1/2/04		64.31	73.63	3,738.73	9.32
MW-1	4/12/04		64.74	73.74	3,738.33	9.00
MW-1	6/1/04		64.87	73.52	3,738.24	8.65
MW-1	6/21/04		65.04	73.49	3,738.09	8.45
MW-1	7/14/04		67.52	75.92	3,735.61	8.40
MW-1	10/17/04		68.38	73.28	3,735.10	4.90
MW-1	10/29/04		68.53	73.45	3,734.95	4.92
MW-1	3/31/05		68.23	73.00	3,735.26	4.77
MW-1	4/25/05		68.56	72.68	3,735.00	4.12
MW-1	5/31/05		68.57	72.61	3,735.00	4.04
MW-1	6/29/05		68.88	73.72	3,734.61	4.84
MW-1	9/15/05		69.79	73.63	3,733.80	3.84
MW-1	11/14/05		70.44	73.26	3,733.25	2.82
MW-1	1/23/06		70.72	73.80	3,732.94	3.08
MW-1	3/1/06		70.41	73.59	3,733.24	3.18
MW-1	5/25/06		71.05	73.20	3,732.71	2.15
MW-1	8/14/06		72.46	73.76	3,731.38	1.30
MW-1	11/29/06		73.31	73.69	3,730.62	0.38
MW-1	1/11/07		73.31	73.69	3,730.62	0.38
MW-1	2/8/07		73.38	73.73	3,730.56	0.35
MW-1	4/3/07		73.86	82.21	3,729.28	8.35
MW-1	4/11/07		74.06	82.27	3,729.09	8.21
MW-1	4/17/07		74.21	82.63	3,728.92	8.42
MW-1	5/14/07		74.06	82.00	3,729.12	7.94
MW-1	6/26/07		73.80	NA	NA	NA
MW-1	6/28/07		DRY			
MW-1	9/14/07		DRY			
MW-1	9/26/07		DRY			
MW-1	10/5/07		DRY			
MW-1	10/9/07		DRY			
MW-1	10/19/07		DRY			
MW-1	10/24/07		DRY			
MW-1	10/31/07		DRY			
MW-1	11/28/07		DRY			
MW-1	12/3/07		DRY			
MW-1	1/3/08		DRY			
MW-1	1/8/08		DRY			
MW-1	1/14/08		DRY			
MW-1	1/23/08		DRY			
MW-1	1/28/08		DRY			
MW-1	2/11/08		DRY			
MW-1	3/12/08		DRY			
MW-1	3/26/08		DRY			
MW-1	4/1/08		DRY			
MW-1	8/13/08		DRY			
MW-1	9/18/08					
WELL PLUGGED 9/18/08						



Table 1  
Groundwater Elevations and  
Phase Separated Hydrocarbon (PSH) Thicknesses  
Plains Pipeline, L.P.  
C. S. Cayler  
NMOC REF. # AP-052 (OLD 1R-0382)  
Lea County, NM SRS# 2002-10250  
Talon/LPE Project Number PLAINS044SPL

Monitoring Well	Date Gauged	Surveyed Top of Casing Elevation	Depth to PSH	Depth to Water	Corrected Groundwater Elevation	PSH Thickness
		(feet)	BTOC (feet)*	BTOC (feet)*	(feet)*	(feet)
MW-1A	9/18/08	<b>WELL INSTALLED 9/18/08</b>				
MW-1A	9/23/08	3,810.02	82.40	89.71	3,726.89	7.31
<b>WELL INSTALLED 5/28/04</b>						
MW-2	5/28/04	3,803.93	67.17	77.76	3,735.70	10.59
MW-2	6/1/04		67.27	77.93	3,735.59	10.66
MW-2	6/21/04		67.38	78.09	3,735.48	10.71
MW-2	7/14/04		68.79	74.04	3,734.62	5.25
MW-2	10/16/04		67.97	77.70	3,734.99	9.73
MW-2	10/29/04		68.23	78.50	3,734.67	10.27
MW-2	3/31/05		68.37	77.03	3,734.69	8.66
MW-2	4/25/05		68.46	76.97	3,734.62	8.51
MW-2	5/31/05		69.09	76.12	3,734.14	7.03
MW-2	6/29/05		69.75	79.14	3,733.24	9.39
MW-2	9/15/05		70.66	78.44	3,732.49	7.78
MW-2	1/23/06		70.95	78.27	3,732.25	7.32
MW-2	3/1/06		70.53	77.41	3,732.71	6.88
MW-2	5/25/06		72.19	75.49	3,731.41	3.30
MW-2	8/14/06		73.08	78.31	3,730.33	5.23
MW-2	11/29/06		74.09	78.20	3,729.43	4.11
MW-2	12/12/06		74.53	77.57	3,729.10	3.04
MW-2	1/11/07		74.22	78.81	3,729.25	4.59
MW-2	2/8/07		75.11	75.18	3,728.81	0.07
MW-2	4/3/07		73.95	82.11	3,729.16	8.16
MW-2	4/11/07		74.02	82.30	3,729.08	8.28
MW-2	4/17/07		74.02	82.41	3,729.07	8.39
MW-2	5/14/07		74.03	82.55	3,729.05	8.52
MW-2	6/26/07		74.20	82.64	3,728.89	8.44
MW-2	6/28/07		74.36	82.48	3,728.76	8.12
MW-2	8/13/07		74.71	81.91	3,728.50	7.20
MW-2	8/17/07		75.66	79.30	3,727.91	3.64
MW-2	8/21/07	NA	76.19	NA	NA	
MW-2	8/28/07		75.84	78.91	3,727.78	3.07
MW-2	9/14/07		75.63	79.29	3,727.93	3.66
MW-2	9/26/07		74.88	82.41	3,728.30	7.53
MW-2	10/5/07		74.85	82.70	3,728.30	7.85
MW-2	10/8/07		74.87	82.71	3,728.28	7.84
MW-2	10/19/07		74.87	82.96	3,728.25	8.09
MW-2	10/24/07		74.87	83.04	3,728.24	8.17
MW-2	10/31/07		74.88	83.11	3,728.23	8.23
MW-2	11/12/07		74.82	83.19	3,728.27	8.37
MW-2	11/28/07		74.89	83.27	3,728.20	8.38
MW-2	12/3/07		74.83	83.20	3,728.26	8.37
MW-2	1/3/08		75.32	83.50	3,727.79	8.18
MW-2	1/8/08		74.76	82.25	3,728.42	7.49
MW-2	1/14/08		75.49	83.23	3,727.67	7.74
MW-2	1/23/08		75.45	83.43	3,727.68	7.98
MW-2	1/28/08		75.38	83.47	3,727.74	8.09
MW-2	2/11/08		74.94	83.02	3,728.18	8.08
MW-2	3/12/08		75.40	83.54	3,727.72	8.14
MW-2	3/26/08		75.14	83.99	3,727.91	8.85
MW-2	4/1/08		76.19	83.34	3,727.03	7.15
MW-2	4/11/08		76.73	80.62	3,726.81	3.89
MW-2	4/15/08		76.33	79.08	3,727.33	2.75
MW-2	4/22/08		75.66	79.07	3,727.93	3.41
MW-2	4/28/08		76.00	83.17	3,727.21	7.17
MW-2	5/6/08		75.68	79.12	3,727.91	3.44
MW-2	5/16/08		75.40	83.02	3,727.77	7.62
MW-2	5/22/08		75.61	82.32	3,727.65	6.71
MW-2	7/25/08		79.90	87.72		7.82
MW-2	8/13/08		80.21	88.82		8.61
MW-2	9/23/08	3,807.67	79.34	85.88	3,727.68	6.54



**Table 1**  
**Groundwater Elevations and**  
**Phase Separated Hydrocarbon (PSH) Thicknesses**  
**Plains Pipeline, L.P.**  
**C. S. Cayler**  
**NMOC REF. # AP-052 (OLD 1R-0382)**  
**Lea County, NM SRS# 2002-10250**  
**Talon/LPE Project Number PLAINS044SPL**

Monitoring Well	Date Gauged	Surveyed Top of Casing Elevation	Depth to PSH	Depth to Water	Corrected Groundwater Elevation	PSH Thickness
		(feet)	BTOC (feet)*	BTOC (feet)*	(feet)*	(feet)
<b>WELL INSTALLED 31-May-04</b>						
MW-3	5/31/04					
MW-3	6/21/04	3,810.20	75.51	75.51	3,734.69	
MW-3	7/14/04		74.39	81.31	3,735.12	6.92
MW-3	8/26/04		74.75	84.31	3,734.49	9.56
MW-3	10/16/04		75.53	77.55	3,734.47	2.02
MW-3	10/29/04		75.45	79.00	3,734.40	3.55
MW-3	3/31/05		74.65	83.60	3,734.66	8.95
MW-3	4/25/05		74.81	82.74	3,734.60	7.93
MW-3	5/31/05		75.00	82.16	3,734.48	7.16
MW-3	6/29/05		75.83	80.44	3,733.91	4.61
MW-3	9/15/05		76.09	85.47	3,733.17	9.38
MW-3	11/14/05		77.81	81.11	3,732.06	3.30
MW-3	1/23/06		77.78	81.74	3,732.02	3.96
MW-3	3/1/06		77.43	81.49	3,732.36	4.06
MW-3	5/25/06		78.49	81.15	3,731.44	2.66
MW-3	8/14/06		79.51	84.36	3,730.21	4.85
MW-3	1/11/07		80.78	84.05	3,729.09	3.27
MW-3	2/8/07		83.65	83.66	3,726.55	0.01
MW-3	4/3/07		80.25	88.51	3,729.12	8.26
MW-3	4/11/07		80.69	88.97	3,728.68	8.28
MW-3	4/17/07		80.38	88.78	3,728.98	8.40
MW-3	5/14/07		80.43	89.56	3,728.86	9.13
MW-3	6/26/07		81.74	89.12	3,727.72	7.38
MW-3	6/28/07		80.69	89.05	3,728.67	8.36
MW-3	8/13/07		81.08	89.43	3,728.29	8.35
MW-3	8/17/07		82.05	83.50	3,728.01	1.45
MW-3	8/21/07		82.65	82.68	3,727.55	0.03
MW-3	8/28/07		81.51	88.44	3,728.00	6.93
MW-3	9/14/07		81.42	86.89	3,728.23	5.47
MW-3	9/26/07		81.22	88.92	3,728.21	7.70
MW-3	10/5/07		81.14	88.99	3,728.28	7.85
MW-3	10/8/07		81.14	89.00	3,728.27	7.86
MW-3	10/19/07		81.23	89.39	3,728.15	8.16
MW-3	10/24/07		81.24	89.35	3,728.15	8.11
MW-3	10/31/07		81.24	89.47	3,728.14	8.23
MW-3	11/12/07		81.25	89.39	3,728.14	8.14
MW-3	11/28/07		81.26	89.44	3,728.12	8.18
MW-3	12/3/07		81.26	89.36	3,728.13	8.10
MW-3	1/3/08		81.17	89.41	3,728.21	8.24
MW-3	1/8/08		81.11	89.05	3,728.30	7.94
MW-3	1/14/08		81.62	88.39	3,727.90	6.77
MW-3	1/23/08		80.84	87.89	3,728.66	7.05
MW-3	1/28/08		80.31	88.20	3,729.10	7.89
MW-3	2/11/08		81.92	88.49	3,727.62	6.57
MW-3	3/12/08		81.43	87.43	3,728.17	6.00
MW-3	3/26/08		80.57	88.54	3,728.83	7.97
MW-3	4/1/08		82.06	87.81	3,727.57	5.75
MW-3	4/11/08		81.90	87.81	3,727.71	5.91
MW-3	4/15/08		82.04	87.85	3,727.58	5.81
MW-3	4/22/08		82.01	87.90	3,727.60	5.89
MW-3	4/28/08		82.11	87.24	3,727.58	5.13
MW-3	5/6/08		82.00	87.94	3,727.61	5.94
MW-3	5/16/08		82.24	88.07	3,727.38	5.83
MW-3	5/22/08		82.94	89.22	3,726.63	6.28
MW-3	6/19/08		83.09	85.71	3,726.85	2.62
MW-3	7/25/08		83.35	88.33	3,726.35	4.98
MW-3	8/13/08		83.21	89.65	3,726.35	6.44
MW-3	9/23/08	3,810.35	83.28	86.97	3,726.70	3.69



**Table 1**  
**Groundwater Elevations and**  
**Phase Separated Hydrocarbon (PSH) Thicknesses**  
**Plains Pipeline, L.P.**  
**C. S. Cayler**  
**NMOCD REF. # AP-052 (OLD 1R-0382)**  
**Lea County, NM SRS# 2002-10250**  
**Talon/LPE Project Number PLAINS044SPL**

Monitoring Well	Date Gauged	Surveyed Top of Casing Elevation	Depth to PSH	Depth to Water	Corrected Groundwater Elevation	PSH Thickness
		(feet)	BTOC (feet)*	BTOC (feet)*	(feet)*	(feet)
<b>WELL INSTALLED 01-Jun-04</b>						
MW-4	6/1/04	3,810.70	76.04	76.04	3,734.66	
MW-4	6/21/04		74.51	83.91	3,735.25	9.40
MW-4	7/14/04		74.21	83.61	3,735.55	9.40
MW-4	8/26/04		75.77	80.56	3,734.45	4.79
MW-4	10/16/04		75.76	80.96	3,734.42	5.20
MW-4	10/29/04		75.56	81.42	3,734.55	5.86
MW-4	3/31/05		73.51	81.95	3,736.35	8.44
MW-4	4/25/05		75.53	82.62	3,734.46	7.09
MW-4	5/31/05		75.55	82.86	3,734.42	7.31
MW-4	6/29/05		75.96	83.51	3,733.99	7.55
MW-4	9/15/05		76.71	86.23	3,733.04	9.52
MW-4	11/14/05		77.64	85.38	3,732.29	7.74
MW-4	1/23/06		77.79	84.93	3,732.20	7.14
MW-4	3/1/06		77.48	84.12	3,732.56	6.64
MW-4	5/25/06		78.28	85.22	3,731.73	6.94
MW-4	8/14/06		79.78	86.67	3,730.23	6.89
MW-4	11/29/06		80.29	85.15	3,729.92	4.86
MW-4	12/12/06		81.71	86.01	3,728.56	4.30
MW-4	1/11/07		80.03	82.77	3,730.40	2.74
MW-4	2/8/07		81.28	82.70	3,729.28	1.42
MW-4	4/3/07		80.78	89.44	3,729.05	8.66
MW-4	4/11/07		80.85	89.55	3,728.98	8.70
MW-4	4/17/07		80.92	89.05	3,728.97	8.13
MW-4	5/14/07		80.96	89.68	3,728.87	8.72
MW-4	6/26/07		81.41	89.82	3,728.45	8.41
MW-4	6/28/07		81.28	89.71	3,728.58	8.43
MW-4	8/13/07		81.76	89.92	3,728.12	8.16
MW-4	8/17/07		80.36	87.55	3,729.62	7.19
MW-4	8/21/07		82.01	89.41	3,727.95	7.40
MW-4	8/28/07		NA	79.50	NA	NA
MW-4	9/14/07		81.76	89.85	3,728.13	8.09
MW-4	9/26/07		81.73	88.89	3,728.25	7.16
MW-4	10/5/07		81.66	89.80	3,728.23	8.14
MW-4	10/8/07		81.65	89.78	3,728.24	8.13
MW-4	10/19/07		81.80	90.05	3,728.08	8.25
MW-4	10/24/07		81.80	89.99	3,728.08	8.19
MW-4	10/31/07		81.82	90.07	3,728.06	8.25
MW-4	11/12/07		82.02	89.84	3,727.90	7.82
MW-4	11/28/07		81.93	89.82	3,727.98	7.89
MW-4	12/3/07		81.91	89.72	3,728.01	7.81
MW-4	1/3/08		81.66	89.19	3,728.29	7.53
MW-4	1/8/08		81.70	89.31	3,728.24	7.61
MW-4	1/14/08		81.98	88.87	3,728.03	6.89
MW-4	1/23/08		82.17	87.76	3,727.97	5.59
MW-4	1/28/08		81.77	89.17	3,728.19	7.40
MW-4	2/11/08		81.29	88.75	3,728.66	7.46
MW-4	3/12/08		81.86	88.79	3,728.15	6.93
MW-4	3/26/08		82.67	86.36	3,727.66	3.69
MW-4	4/1/08		82.56	88.83	3,727.51	6.27
MW-4	4/11/08		82.49	88.94	3,727.57	6.45
MW-4	4/15/08		82.31	89.90	3,727.63	7.59
MW-4	4/22/08		82.36	89.26	3,727.65	6.90
MW-4	5/6/08		83.98	90.27	3,726.09	6.29
MW-4	5/16/08		82.89	90.01	3,727.10	7.12
MW-4	5/22/08		82.39	90.19	3,727.53	7.80
MW-4	6/19/08		82.78	90.45	3,727.15	7.67
MW-4	7/25/08		83.71	91.11	3,726.25	7.40
MW-4	8/13/08		83.60	91.07	3,726.35	7.47
MW-4	9/23/08	3,810.82	83.36	90.47	3,726.75	7.11



**Table 1**  
**Groundwater Elevations and**  
**Phase Separated Hydrocarbon (PSH) Thicknesses**  
**Plains Pipeline, L.P.**  
**C. S. Cayler**  
**NMOCD REF. # AP-052 (OLD 1R-0382)**  
**Lea County, NM SRS# 2002-10250**  
**Talon/LPE Project Number PLAINS044SPL**

Monitoring Well	Date Gauged	Surveyed Top of Casing Elevation	Depth to PSH	Depth to Water	Corrected Groundwater Elevation	PSH Thickness
		(feet)	BTOC (feet)*	BTOC (feet)*	(feet)*	(feet)
<b>WELL INSTALLED 05-Jun-04</b>						
MW-5	6/5/04	3,809.05	--	74.42	3,734.63	ND
MW-5	6/21/04		--	74.53	3,734.52	ND
MW-5	7/14/04		--	75.00	3,734.05	ND
MW-5	10/29/04		--	75.10	3,733.95	ND
MW-5	11/19/04		--	75.18	3,733.87	ND
MW-5	3/31/05		--	75.19	3,733.86	ND
MW-5	4/25/05		--	75.22	3,733.83	ND
MW-5	5/12/05		--	75.25	3,733.80	ND
MW-5	5/31/05		--	75.67	3,733.38	ND
MW-5	6/29/05		--	76.64	3,732.41	ND
MW-5	8/22/05		--	76.75	3,732.30	ND
MW-5	9/15/05		--	77.39	3,731.66	ND
MW-5	11/14/05		77.21	79.19	3,731.64	1.98
MW-5	1/23/06	76.59	79.18		3,732.20	2.59
MW-5	5/25/06	77.41	79.93		3,731.39	2.52
MW-5	8/14/06	78.99	80.63		3,729.90	1.64
MW-5	11/29/06	78.91	85.95		3,729.44	7.04
MW-5	1/11/07	78.85	86.30		3,729.46	7.45
MW-5	2/8/07	78.82	86.29		3,729.48	7.47
MW-5	2/20/07	79.22	85.66		3,729.19	6.44
MW-5	3/6/07	79.15	86.07		3,729.21	6.92
MW-5	3/14/07	78.68	85.60		3,729.68	6.92
MW-5	3/27/07	79.64	86.03		3,728.77	6.39
MW-5	3/29/07	79.36	86.25		3,729.00	6.89
MW-5	4/3/07	79.38	86.71		3,728.94	7.33
MW-5	4/11/07	79.91	87.02		3,728.43	7.11
MW-5	4/17/07	79.52	88.90		3,728.59	9.38
MW-5	5/24/07	79.54	86.90		3,728.77	7.36
MW-5	6/26/07	79.94	87.32		3,728.37	7.38
MW-5	6/28/07	79.84	87.25		3,728.47	7.41
MW-5	8/13/07	80.26	81.66		3,728.65	1.40
MW-5	8/21/07	80.39	87.63		3,727.94	7.24
MW-5	8/28/07	80.49	87.64		3,727.85	7.15
MW-5	9/14/07	80.32	87.59		3,728.00	7.27
MW-5	9/26/07	81.72	87.66		3,726.74	5.94
MW-5	10/5/07	80.22	87.51		3,728.10	7.29
MW-5	10/8/07	80.20	87.52		3,728.12	7.32
MW-5	10/19/07	80.44	87.66		3,727.89	7.22
MW-5	10/24/07	80.36	87.73		3,727.95	7.37
MW-5	10/31/07	80.37	87.85		3,727.93	7.48
MW-5	11/12/07	80.36	87.51		3,727.98	7.15
MW-5	12/28/07	80.83	87.61		3,727.54	6.78
MW-5	12/3/07	80.34	87.35		3,728.01	7.01
MW-5	1/3/08	80.17	86.72		3,728.23	6.55
MW-5	1/8/08	80.17	86.85		3,728.21	6.68
MW-5	1/14/08	80.32	86.74		3,728.09	6.42
MW-5	1/23/08	82.34	85.78		3,726.37	3.44
MW-5	1/28/08	80.25	87.03		3,728.12	6.78
MW-5	2/11/08	80.26	86.34		3,728.18	6.08
MW-5	3/12/08	80.28	86.93		3,728.11	6.65
MW-5	3/26/08	81.23	84.33		3,727.51	3.10
MW-5	4/1/08	81.38	84.40		3,727.37	3.02
MW-5	4/11/08	81.79	83.35		3,727.10	1.56
MW-5	4/15/08	81.77	83.38		3,727.12	1.61
MW-5	4/22/08	81.50	82.54		3,727.45	1.04
MW-5	4/28/08	81.87	82.13		3,727.15	0.26
MW-5	5/6/08	81.51	82.56		3,727.44	1.05
MW-5	5/16/08	82.15	82.56		3,726.86	0.41
MW-5	5/22/08	81.92	83.49		3,726.97	1.57
MW-5	6/19/08	81.24	88.59		3,727.08	7.35
MW-5	7/25/08	81.76	88.92		3,726.57	7.16
MW-5	8/13/08	82.07	89.27		3,726.26	7.20
MW-5	9/23/08	3,809.21	82.61	83.73	3,726.49	1.12



Table 1  
Groundwater Elevations and  
Phase Separated Hydrocarbon (PSH) Thicknesses  
Plains Pipeline, L.P.  
C. S. Cayler  
NMOCD REF. # AP-052 (OLD 1R-0382)  
Lea County, NM SRS# 2002-10250  
Talon/LPE Project Number PLAINS044SPL

Monitoring Well	Date Gauged	Surveyed Top of Casing Elevation	Depth to PSH	Depth to Water	Corrected Groundwater Elevation	PSH Thickness
		(feet)	BTOC (feet)*	BTOC (feet)*	(feet)*	(feet)
<b>WELL INSTALLED 21-Oct-04</b>						
MW-6	10/21/04					
MW-6	10/27/04	3,809.17		75.13	3,734.04	
MW-6	10/29/04			75.13	3,734.04	
MW-6	11/19/04			75.23	3,733.94	
MW-6	3/31/05			75.33	3,733.84	
MW-6	4/25/05			75.27	3,733.90	
MW-6	5/12/05			75.30	3,733.87	
MW-6	5/31/05			75.33	3,733.84	
MW-6	6/29/05			75.68	3,733.49	
MW-6	8/22/05			76.63	3,732.54	
MW-6	9/15/05			76.80	3,732.37	
MW-6	11/14/05			77.41	3,731.76	
MW-6	1/23/06			77.60	3,731.57	
MW-6	3/1/06			77.01	3,732.16	
MW-6	5/25/06			77.92	3,731.25	
MW-6	8/14/06			79.18	3,729.99	
MW-6	11/29/06			80.12	3,729.05	
MW-6	12/12/06			80.19	3,728.98	
MW-6	1/11/07			80.20	3,728.97	
MW-6	2/8/07			79.99	3,729.18	
MW-6	2/20/07			80.36	3,728.81	
MW-6	3/6/07			80.40	3,728.77	
MW-6	3/14/07			79.92	3,729.25	
MW-6	3/27/07			80.62	3,728.55	
MW-6	3/29/07			80.34	3,728.83	
MW-6	4/3/07			80.68	3,728.49	
MW-6	4/11/07			81.03	3,728.14	
MW-6	4/17/07			80.82	3,728.35	
MW-6	6/13/07			80.88	3,728.29	
MW-6	6/26/07			81.04	3,728.13	
MW-6	9/14/07			81.62	3,727.55	
MW-6	10/19/07			81.64	3,727.53	
MW-6	12/3/07			81.56	3,727.61	
MW-6	1/8/08			81.78	3,727.39	
MW-6	1/28/08			81.39	3,727.78	
MW-6	3/12/08			81.39	3,727.78	
MW-6	4/22/08			84.48	3,724.69	
MW-6	6/19/08			82.10	3,727.07	
MW-6	8/13/08			82.67	3,726.50	



**Table 1**  
**Groundwater Elevations and**  
**Phase Separated Hydrocarbon (PSH) Thicknesses**  
**Plains Pipeline, L.P.**  
**C. S. Cayler**  
**NMOCD REF. # AP-052 (OLD 1R-0382)**  
**Lea County, NM SRS# 2002-10250**  
**Talon/LPE Project Number PLAINS044SPL**

Monitoring Well	Date Gauged	Surveyed Top of Casing Elevation	Depth to PSH	Depth to Water	Corrected Groundwater Elevation	PSH Thickness
		(feet)	BTOC (feet)*	BTOC (feet)*	(feet)*	(feet)
<b>WELL INSTALLED 21-Oct-04</b>						
MW-7	10/21/04					
MW-7	10/27/04	3,809.95	75.82	76.05	3,734.11	0.23
MW-7	10/29/04		75.82	76.05	3,734.11	0.23
MW-7	11/19/04		75.21	79.14	3,734.35	3.93
MW-7	3/31/05		75.22	79.18	3,734.33	3.96
MW-7	4/25/05		74.37	82.84	3,734.73	8.47
MW-7	5/31/05		75.41	78.75	3,734.21	3.34
MW-7	6/29/05		74.86	83.31	3,734.25	8.45
MW-7	9/15/05		75.92	83.58	3,733.26	7.66
MW-7	11/14/05		76.75	83.17	3,732.56	6.42
MW-7	1/23/06		77.16	83.54	3,732.15	6.38
MW-7	3/1/06		76.71	82.60	3,732.65	5.89
MW-7	5/25/06		77.71	79.37	3,732.07	1.66
MW-7	8/14/06		78.61	83.34	3,730.87	4.73
MW-7	11/29/06		79.51	83.15	3,730.08	3.64
MW-7	12/12/06		79.95	83.00	3,729.70	3.05
MW-7	1/11/07		79.77	84.41	3,729.72	4.64
MW-7	2/8/07		79.63	84.15	3,729.87	4.52
MW-7	4/3/07		80.09	84.18	3,729.45	4.09
MW-7	4/11/07		80.73	84.91	3,728.80	4.18
MW-7	4/17/07		80.74	84.96	3,728.79	4.22
MW-7	5/14/07		80.30	84.42	3,729.24	4.12
MW-7	6/26/07		80.70	82.68	3,729.05	1.98
MW-7	6/28/07		80.52	83.66	3,729.12	3.14
MW-7	8/13/07		81.22	83.66	3,728.49	2.44
MW-7	8/21/07		81.37	83.44	3,728.37	2.07
MW-7	9/14/07		81.01	84.25	3,728.62	3.24
MW-7	9/26/07		80.97	84.30	3,728.65	3.33
MW-7	10/5/07		80.92	84.33	3,728.69	3.41
MW-7	10/8/07		80.92	84.32	3,728.69	3.40
MW-7	10/19/07		81.04	84.30	3,728.58	3.26
MW-7	10/24/07		81.05	84.30	3,728.58	3.25
MW-7	10/31/07		81.08	84.34	3,728.54	3.26
MW-7	11/12/07		81.02	84.35	3,728.60	3.33
MW-7	11/28/07		80.89	NA	NA	3.46**
MW-7	12/3/07		80.98	NA	NA	3.43**
MW-7	1/3/08		79.83	NA	NA	4.56**
MW-7	1/8/08		80.92	84.40*	NA	3.48
MW-7	1/14/08		81.34	84.37*	NA	3.03
MW-7	3/12/08		81.20	84.39*	NA	3.19
MW-7	3/26/08		81.54	84.45*	NA	2.91
MW-7	4/11/07		81.40	84.49	3,728.24	3.09
MW-7	4/15/07		82.67	83.16	3,727.23	0.49
MW-7	4/22/07		82.66	82.81	3,727.28	0.15
MW-7	4/28/07		82.75	83.14	3,727.16	0.39
MW-7	5/6/07		82.39	83.29	3,727.47	0.90
MW-7	5/16/07		83.03	83.26	3,726.90	0.23
MW-7	5/22/08		81.76	83.84	3,727.98	2.08
MW-7	6/19/08		81.91	84.64	3,727.77	2.73
MW-7	7/25/08		82.67	84.87	3,727.06	2.20
MW-7	8/13/08		82.76	84.95*	NA	2.19
MW-7	9/23/08		82.54	84.29*	NA	1.75



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**Plains Pipeline, L.P.**  
**C. S. Cayler**  
**NMOCD REF. # AP-052 (OLD 1R-0382)**  
**Lea County, NM SRS# 2002-10250**  
**Talon/LPE Project Number PLAINS044SPL**

Monitoring Well	Date Gauged	Surveyed Top of Casing Elevation	Depth to PSH	Depth to Water	Corrected Groundwater Elevation	PSH Thickness
		(feet)	BTOC (feet)*	BTOC (feet)*	(feet)*	(feet)
<b>WELL INSTALLED 20-Oct-04</b>						
MW-8	10/20/04					
MW-8	10/27/04	3,810.29	--	76.20	3,734.09	ND
MW-8	10/29/04		--	76.20	3,734.09	ND
MW-8	11/19/04		--	76.26	3,734.03	ND
MW-8	3/31/05		--	76.30	3,733.99	ND
MW-8	4/25/05		--	76.29	3,734.00	ND
MW-8	5/12/05		--	76.32	3,733.97	ND
MW-8	5/31/05		--	76.34	3,733.95	ND
MW-8	6/29/05		--	76.62	3,733.67	ND
MW-8	8/22/05	77.42		78.08	3,732.80	0.66
MW-8	11/14/05	78.16		79.40	3,732.01	1.24
MW-8	1/23/06	78.25		80.13	3,731.85	1.88
MW-8	3/1/06	77.60		80.55	3,732.40	2.95
MW-8	5/25/06	78.43		81.31	3,731.57	2.88
MW-8	8/14/06	79.63		82.84	3,730.34	3.21
MW-8	11/29/06	80.50		83.79	3,729.46	3.29
MW-8	12/12/06	80.59		83.90	3,729.37	3.31
MW-8	1/11/07	80.63		83.88	3,729.34	3.25
MW-8	2/8/07	80.66		83.94	3,729.30	3.28
MW-8	2/20/07	80.81		84.07	3,729.15	3.26
MW-8	3/6/07	80.88		84.11	3,729.09	3.23
MW-8	3/14/07	80.09		83.26	3,729.88	3.17
MW-8	3/27/07	80.13		83.24	3,729.85	3.11
MW-8	4/3/07	81.10		83.04	3,729.00	1.94
MW-8	4/11/07	81.59		83.49	3,728.51	1.90
MW-8	4/17/07	81.61		83.51	3,728.49	1.90
MW-8	5/24/07	81.33	NA	NA	1.77**	
MW-8	6/26/07	81.62	NA	NA	1.48**	
MW-8	6/28/07	81.52	NA	NA	1.58**	
MW-8	8/13/07	81.86	NA	NA	2.1**	
MW-8	8/21/07	81.96	NA	NA	1.79**	
MW-8	8/28/07	82.02	NA	NA	1.73**	
MW-8	9/14/07	82.35	82.36	3,727.94	0.01	
MW-8	9/26/07	81.99	83.03	3,728.20	1.04	
MW-8	10/5/07	81.97	84.33	3,728.08	2.36	
MW-8	10/8/07	81.96	83.63	3,728.16	1.67	
MW-8	10/19/07	82.04	82.41	3,728.21	0.37	
MW-8	11/12/07	82.04	82.43	3,728.21	0.39	
MW-8	11/28/07	82.04	NA	NA	0.46**	
MW-8	12/3/07	82.11	NA	NA	0.48**	
MW-8	1/3/08	81.84	NA	NA	0.61**	
MW-8	1/8/08	81.85	82.56	3,728.37	0.71	
MW-8	1/14/08	82.13	83.33	3,728.04	1.20	
MW-8	1/23/08	82.12	83.09	3,728.07	0.97	
MW-8	1/28/08	82.04	83.30	3,728.12	1.26	
MW-8	2/11/08	81.97	83.34	3,728.18	1.37	
MW-8	3/12/08	81.93	83.34	3,728.22	1.41	
MW-8	4/1/08	81.95	83.34	3,728.20	1.39	
MW-8	4/11/08	82.37	83.94	3,727.76	1.57	
MW-8	4/15/08	82.36	83.45	3,727.82	1.09	
MW-8	4/22/08	82.33	83.48	3,727.85	1.15	
MW-8	4/28/08	82.32	83.46	3,727.86	1.14	
MW-8	5/6/08	82.67	82.82	3,727.61	0.15	
MW-8	5/16/08	82.47	83.46	3,727.72	0.99	
MW-8	6/19/08	82.61	NA	NA	1.13**	
MW-8	8/13/08	83.32	84.96*	NA	1.64	
MW-8	9/23/08	82.89	83.29*	NA	0.40	



Table 1  
Groundwater Elevations and  
Phase Separated Hydrocarbon (PSH) Thicknesses  
Plains Pipeline, L.P.  
C. S. Cayler  
NMOCD REF. # AP-052 (OLD 1R-0382)  
Lea County, NM SRS# 2002-10250  
Talon/LPE Project Number PLAINS044SPL

Monitoring Well	Date Gauged	Surveyed Top of Casing Elevation	Depth to PSH	Depth to Water	Corrected Groundwater Elevation	PSH Thickness
		(feet)	BTOC (feet)*	BTOC (feet)*	(feet)*	(feet)
<b>WELL INSTALLED 19-Oct-04</b>						
MW-9	10/19/04	3,809.81		75.85	3,733.96	
MW-9	10/27/04			75.85	3,733.96	
MW-9	10/29/04			75.91	3,733.90	
MW-9	11/19/04			76.97	3,732.84	
MW-9	3/31/05			75.91	3,733.90	
MW-9	4/25/05			75.96	3,733.85	
MW-9	5/12/05			75.99	3,733.82	
MW-9	5/31/05			76.34	3,733.47	
MW-9	6/29/05			77.31	3,732.50	
MW-9	8/22/05			77.48	3,732.33	
MW-9	9/15/05			78.15	3,731.66	
MW-9	11/14/05			78.33	3,731.48	
MW-9	1/23/06			77.78	3,732.03	
MW-9	3/1/06			78.67	3,731.14	
MW-9	5/25/06			79.90	3,729.91	
MW-9	8/14/06			80.87	3,728.94	
MW-9	11/29/06			80.93	3,728.88	
MW-9	12/12/06			90.94	3,718.87	
MW-9	1/11/07			80.70	3,729.11	
MW-9	2/8/07			81.09	3,728.72	
MW-9	2/20/07			81.15	3,728.66	
MW-9	3/6/07			80.65	3,729.16	
MW-9	3/14/07			81.34	3,728.47	
MW-9	3/27/07			81.11	3,728.70	
MW-9	3/29/07			81.12	3,728.69	
MW-9	4/3/07			81.50	3,728.31	
MW-9	4/11/07			81.60	3,728.21	
MW-9	4/17/07			81.61	3,728.20	
MW-9	5/21/07			81.65	3,728.16	
MW-9	6/13/07			81.78	3,728.03	
MW-9	6/26/07			82.33	3,727.48	
MW-9	9/14/07			82.37	3,727.44	
MW-9	10/19/07			82.30	3,727.51	
MW-9	12/3/07			82.10	3,727.71	
MW-9	1/8/08			82.12	3,727.69	
MW-9	1/28/08			82.11	3,727.70	
MW-9	3/12/08			82.54	3,727.27	
MW-9	4/22/08			82.66	3,727.15	
MW-9	5/16/08			82.87	3,726.94	
MW-9	6/19/08			83.41	3,726.40	



**Table 1**  
**Groundwater Elevations and**  
**Phase Separated Hydrocarbon (PSH) Thicknesses**  
**Plains Pipeline, L.P.**  
**C. S. Cayler**  
**NMOCD REF. # AP-052 (OLD 1R-0382)**  
**Lea County, NM SRS# 2002-10250**  
**Talon/LPE Project Number PLAINS044SPL**

Monitoring Well	Date Gauged	Surveyed Top of Casing Elevation	Depth to PSH	Depth to Water	Corrected Groundwater Elevation	PSH Thickness
		(feet)	BTOC (feet)*	BTOC (feet)*	(feet)*	(feet)
<b>WELL INSTALLED 20-Oct-04</b>						
MW-10	10/20/04					
MW-10	10/27/04	3,809.64		75.76	3,733.88	
MW-10	10/29/04			75.76	3,733.88	
MW-10	11/19/04			75.84	3,733.80	
MW-10	3/31/05			75.87	3,733.77	
MW-10	4/25/05			75.85	3,733.79	
MW-10	5/12/05			75.96	3,733.68	
MW-10	5/31/05			75.91	3,733.73	
MW-10	6/29/05			76.30	3,733.34	
MW-10	8/22/05			77.32	3,732.32	
MW-10	9/15/05			77.46	3,732.18	
MW-10	11/14/05			78.08	3,731.56	
MW-10	1/23/06			78.22	3,731.42	
MW-10	3/1/06			77.58	3,732.06	
MW-10	5/25/06			78.66	3,730.98	
MW-10	8/14/06			79.96	3,729.68	
MW-10	11/29/06			80.84	3,728.80	
MW-10	12/12/06			80.91	3,728.73	
MW-10	1/11/07			80.84	3,728.80	
MW-10	2/8/07			80.59	3,729.05	
MW-10	2/20/07			81.00	3,728.64	
MW-10	3/6/07			81.08	3,728.56	
MW-10	3/14/07			80.52	3,729.12	
MW-10	3/27/07			81.33	3,728.31	
MW-10	3/29/07			81.07	3,728.57	
MW-10	4/3/07			81.37	3,728.27	
MW-10	4/11/07			81.46	3,728.18	
MW-10	4/17/07			81.53	3,728.11	
MW-10	5/24/07			81.54	3,728.10	
MW-10	6/13/07			81.59	3,728.05	
MW-10	6/26/07			81.78	3,727.86	
MW-10	9/14/07			82.30	3,727.34	
MW-10	10/19/07			82.33	3,727.31	
MW-10	12/3/07			85.26	3,724.38	
MW-10	1/8/08			82.01	3,727.63	
MW-10	1/28/08			82.02	3,727.62	
MW-10	3/12/08			82.04	3,727.60	
MW-10	4/22/08			82.51	3,727.13	
MW-10	5/16/08			82.64	3,727.00	
MW-10	6/19/08			82.88	3,726.76	
MW-10	8/13/08			83.42	3,726.22	



Table 1  
Groundwater Elevations and  
Phase Separated Hydrocarbon (PSH) Thicknesses  
Plains Pipeline, L.P.  
C. S. Cayler  
NMOCD REF. # AP-052 (OLD 1R-0382)  
Lea County, NM SRS# 2002-10250  
Talon/LPE Project Number PLAINS044SPL

Monitoring Well	Date Gauged	Surveyed Top of Casing Elevation	Depth to PSH	Depth to Water	Corrected Groundwater Elevation	PSH Thickness
		(feet)	BTOC (feet)*	BTOC (feet)*	(feet)*	(feet)
<b>WELL INSTALLED 2/21/06</b>						
MW-11	2/21/06					
MW-11	3/1/06	3,808.95		76.95	3,732.00	
MW-11	5/25/06			78.06	3,730.89	
MW-11	8/14/06			79.57	3,729.38	
MW-11	11/29/06			80.26	3,728.69	
MW-11	12/12/06			80.27	3,728.68	
MW-11	1/11/07			80.19	3,728.76	
MW-11	2/8/07			79.91	3,729.04	
MW-11	2/20/07			80.35	3,728.60	
MW-11	3/6/07			80.42	3,728.53	
MW-11	3/14/07			80.01	3,728.94	
MW-11	3/27/07			80.43	3,728.52	
MW-11	3/29/07			80.46	3,728.49	
MW-11	4/3/07			80.96	3,727.99	
MW-11	4/11/07			80.86	3,728.09	
MW-11	4/17/07			80.94	3,728.01	
MW-11	5/24/07			80.89	3,728.06	
MW-11	6/13/07			81.08	3,727.87	
MW-11	6/26/07			81.19	3,727.76	
MW-11	9/14/07			81.68	3,727.27	
MW-11	10/19/07			81.76	3,727.19	
MW-11	12/3/07			81.60	3,727.35	
MW-11	1/8/08			81.35	3,727.60	
MW-11	1/28/08			81.36	3,727.59	
MW-11	3/12/08			81.43	3,727.52	
MW-11	4/22/08			81.91	3,727.04	
MW-11	5/16/08			82.07	3,726.88	
MW-11	6/19/08			82.31	3,726.64	
MW-11	8/13/08			82.88	3,726.07	
<b>WELL INSTALLED 2/23/06</b>						
MW-12	2/23/06					
MW-12	3/1/06	3,809.63		77.60	3,732.03	
MW-12	5/25/06			78.68	3,730.95	
MW-12	8/14/06			79.99	3,729.64	
MW-12	11/29/06			80.86	3,728.77	
MW-12	12/12/06			80.90	3,728.73	
MW-12	1/11/07			80.81	3,728.82	
MW-12	2/8/07			80.55	3,729.08	
MW-12	2/20/07			80.96	3,728.67	
MW-12	3/6/07			81.04	3,728.59	
MW-12	3/14/07			81.15	3,728.48	
MW-12	3/27/07			81.31	3,728.32	
MW-12	3/29/07			81.15	3,728.48	
MW-12	4/3/07			81.35	3,728.28	
MW-12	4/11/07			81.87	3,727.76	
MW-12	4/17/07			81.50	3,728.13	
MW-12	5/24/07			81.45	3,728.18	
MW-12	6/26/07			81.79	3,727.84	
MW-12	9/14/07			82.29	3,727.34	
MW-12	10/19/07			82.36	3,727.27	
MW-12	12/3/07			82.20	3,727.43	
MW-12	1/8/08			81.99	3,727.64	
MW-12	1/28/08			81.98	3,727.65	
MW-12	3/12/08			82.07	3,727.56	
MW-12	4/22/08			82.52	3,727.11	
MW-12	5/16/08			82.07	3,727.56	
MW-12	6/19/08			82.91	3,726.72	
MW-12	8/13/08			83.46	3,726.17	



Table 1  
Groundwater Elevations and  
Phase Separated Hydrocarbon (PSH) Thicknesses  
Plains Pipeline, L.P.  
C. S. Cayler  
NMOCD REF. # AP-052 (OLD 1R-0382)  
Lea County, NM SRS# 2002-10250  
Talon/LPE Project Number PLAINS044SPL

Monitoring Well	Date Gauged	Surveyed Top of Casing Elevation	Depth to PSH	Depth to Water	Corrected Groundwater Elevation	PSH Thickness
		(feet)	BTOC (feet)*	BTOC (feet)*	(feet)*	(feet)
<b>WELL INSTALLED 2/22/06</b>						
MW-13	2/22/06					
MW-13	3/1/06	3,809.42		77.33	3,732.09	
MW-13	5/25/06			78.35	3,731.07	
MW-13	8/14/06			79.59	3,729.83	
MW-13	11/29/06			80.51	3,728.91	
MW-13	12/12/06			80.68	3,728.74	
MW-13	1/11/07			80.48	3,728.94	
MW-13	2/8/07			80.25	3,729.17	
MW-13	2/20/07			80.86	3,728.56	
MW-13	3/6/07			80.71	3,728.71	
MW-13	3/14/07			80.82	3,728.60	
MW-13	3/27/07			79.97	3,729.45	
MW-13	3/29/07			80.70	3,728.72	
MW-13	4/3/07			81.02	3,728.40	
MW-13	4/11/07			81.62	3,727.80	
MW-13	4/17/07			81.17	3,728.25	
MW-13	5/24/07			81.19	3,728.23	
MW-13	6/26/07			81.42	3,728.00	
MW-13	9/14/07			81.99	3,727.43	
MW-13	10/19/07			82.02	3,727.40	
MW-13	12/3/07			81.91	3,727.51	
MW-13	1/8/08			81.71	3,727.71	
MW-13	1/28/08			81.71	3,727.71	
MW-13	3/12/08			81.74	3,727.68	
MW-13	4/22/08			82.17	3,727.25	
MW-13	5/16/08			82.31	3,727.11	
MW-13	6/19/08			82.54	3,726.88	
MW-13	8/13/08			83.06	3,726.36	
<b>WELL INSTALLED 2/21/06</b>						
MW-14	2/21/06					
MW-14	3/1/06	3,809.46		77.31	3,732.15	
MW-14	5/25/06			78.29	3,731.17	
MW-14	8/14/06			79.41	3,730.05	
MW-14	11/29/06			80.37	3,729.09	
MW-14	12/12/06			80.51	3,728.95	
MW-14	1/11/07			80.53	3,728.93	
MW-14	2/8/07			80.20	3,729.26	
MW-14	2/20/07			80.61	3,728.85	
MW-14	3/6/07			80.65	3,728.81	
MW-14	3/14/07			80.02	3,729.44	
MW-14	3/27/07			80.85	3,728.61	
MW-14	3/29/07			80.59	3,728.87	
MW-14	4/3/07			80.91	3,728.55	
MW-14	4/11/07			80.59	3,728.87	
MW-14	4/17/07			81.04	3,728.42	
MW-14	5/24/07			81.10	3,728.36	
MW-14	6/26/07			81.28	3,728.18	
MW-14	9/14/07			81.88	3,727.58	
MW-14	10/19/07			81.89	3,727.57	
MW-14	12/3/07			81.78	3,727.68	
MW-14	1/8/08			81.66	3,727.80	
MW-14	1/28/08			81.68	3,727.78	
MW-14	3/12/08			81.68	3,727.78	
MW-14	4/22/08			82.11	3,727.35	
MW-14	5/16/08			82.19	3,727.27	
MW-14	6/19/08			82.41	3,727.05	
MW-14	8/13/08			82.91	3,726.55	

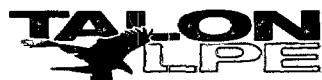


Table 1  
Groundwater Elevations and  
Phase Separated Hydrocarbon (PSH) Thicknesses  
Plains Pipeline, L.P.  
C. S. Cayler  
NMOCD REF. # AP-052 (OLD 1R-0382)  
Lea County, NM SRS# 2002-10250  
Talon/LPE Project Number PLAINS044SPL

Monitoring Well	Date Gauged	Surveyed Top of Casing Elevation	Depth to PSH	Depth to Water	Corrected Groundwater Elevation	PSH Thickness
		(feet)	BTOC (feet)*	BTOC (feet)*	(feet)*	(feet)
<b>WELL INSTALLED 2/22/06</b>						
MW-15	2/22/06					
MW-15	3/1/06	3,810.77		78.50	3,732.27	
MW-15	5/25/06			79.41	3,731.36	
MW-15	8/14/06			80.54	3,730.23	
MW-15	11/29/06			81.54	3,729.23	
MW-15	12/12/06			81.63	3,729.14	
MW-15	1/11/07			81.67	3,729.10	
MW-15	2/8/07			81.43	3,729.34	
MW-15	2/20/07			81.81	3,728.96	
MW-15	3/6/07			81.85	3,728.92	
MW-15	3/14/07			81.16	3,729.61	
MW-15	3/27/07			82.07	3,728.70	
MW-15	3/29/07			81.40	3,729.37	
MW-15	4/3/07			82.11	3,728.66	
MW-15	4/11/07			82.70	3,728.07	
MW-15	4/17/07			82.24	3,728.53	
MW-15	5/24/07			82.30	3,728.47	
MW-15	6/26/07			82.48	3,728.29	
MW-15	9/14/07			83.05	3,727.72	
MW-15	10/19/07			83.06	3,727.71	
MW-15	12/3/07			83.02	3,727.75	
MW-15	1/8/08			82.89	3,727.88	
MW-15	1/28/08			82.81	3,727.96	
MW-15	3/12/08			82.86	3,727.91	
MW-15	4/22/08			83.23	3,727.54	
MW-15	5/16/08			83.31	3,727.46	
MW-15	6/19/08			83.57	3,727.20	
MW-15	8/13/08			84.07	3,726.70	
<b>WELL INSTALLED 2/23/06</b>						
MW-16	2/23/06					
MW-16	3/1/06	3,812.02		79.72	3,732.30	
MW-16	5/25/06			80.58	3,731.44	
MW-16	8/14/06			81.71	3,730.31	
MW-16	11/29/06			82.74	3,729.28	
MW-16	12/12/06			82.84	3,729.18	
MW-16	1/11/07			82.90	3,729.12	
MW-16	2/8/07			82.66	3,729.36	
MW-16	2/20/07			83.06	3,728.96	
MW-16	3/6/07			83.07	3,728.95	
MW-16	3/14/07			82.69	3,729.33	
MW-16	3/27/07			83.27	3,728.75	
MW-16	3/29/07			83.01	3,729.01	
MW-16	4/3/07			83.33	3,728.69	
MW-16	4/11/07			84.02	3,728.00	
MW-16	4/17/07			83.44	3,728.58	
MW-16	5/24/07			83.55	3,728.47	
MW-16	6/26/07			83.69	3,728.33	
MW-16	9/14/07			84.25	3,727.77	
MW-16	10/19/07			84.28	3,727.74	
MW-16	12/3/07			84.24	3,727.78	
MW-16	1/8/08			84.10	3,727.92	
MW-16	1/28/08			84.09	3,727.93	
MW-16	3/12/08			84.07	3,727.95	
MW-16	4/22/08			80.09	3,731.93	
MW-16	5/16/08			85.55	3,726.47	
MW-16	6/19/08			84.76	3,727.26	
MW-16	8/13/08			85.25	3,726.77	



Table 1  
Groundwater Elevations and  
Phase Separated Hydrocarbon (PSH) Thicknesses  
Plains Pipeline, L.P.  
C. S. Cayler  
NMOCD REF. # AP-052 (OLD 1R-0382)  
Lea County, NM SRS# 2002-10250  
Talon/LPE Project Number PLAINS044SPL

Monitoring Well	Date Gauged	Surveyed Top of Casing Elevation	Depth to PSH	Depth to Water	Corrected Groundwater Elevation	PSH Thickness
		(feet)	BTOC (feet)*	BTOC (feet)*	(feet)*	(feet)
<b>WELL INSTALLED 2/23/06</b>						
MW-17	2/23/06			78.07	3,732.33	
MW-17	3/1/06	3,810.40		78.92	3,731.48	
MW-17	5/25/06			80.02	3,730.38	
MW-17	8/14/06			81.10	3,729.30	
MW-17	11/29/06			81.20	3,729.20	
MW-17	12/12/06			81.25	3,729.15	
MW-17	1/11/07			81.06	3,729.34	
MW-17	2/8/07			81.45	3,728.95	
MW-17	2/20/07			81.48	3,728.92	
MW-17	3/6/07			80.89	3,729.51	
MW-17	3/14/07			81.65	3,728.75	
MW-17	3/27/07			81.40	3,729.00	
MW-17	3/29/07			81.70	3,728.70	
MW-17	4/3/07			82.11	3,728.29	
MW-17	4/11/07			81.83	3,728.57	
MW-17	4/17/07			81.92	3,728.48	
MW-17	5/22/07			82.06	3,728.34	
MW-17	6/26/07			82.59	3,727.81	
MW-17	9/14/07			82.60	3,727.80	
MW-17	10/19/07			82.56	3,727.84	
MW-17	12/3/07			82.48	3,727.92	
MW-17	1/8/08			82.47	3,727.93	
MW-17	1/28/08			82.41	3,727.99	
MW-17	3/12/08			80.42	3,729.98	
MW-17	4/22/08			82.89	3,727.51	
MW-17	5/16/08			83.10	3,727.30	
MW-17	6/19/08			83.68	3,726.72	
<b>WELL INSTALLED 3/18/08</b>						
MW-18	3/18/08			82.07	3,727.02	
MW-18	3/25/08	3,809.09		82.19	3,726.90	
MW-18	4/22/08			82.36	3,726.73	
MW-18	5/16/08			82.61	3,726.48	
MW-18	6/19/08			83.19	3,725.90	
MW-18	8/13/08					

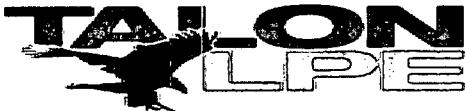
monitoring well MW-3, which was assigned an elevation of 3,760 feet amsl.

\* Corrected Groundwater Elevation = Top of Casing Elevation - (Depth to Water Below Top of Casing - (SG)(PSH Thickness)).

\*\* Estimated Product Thickness using Total Depth of Well as the Depth to Water.

-- = Not Detected

OC = Below Top of Casing



**TABLE 2**  
**SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**  
**PLAINS PIPELINE, L.P.**  
**CS CAYLER**  
**NMOCD REF. # AP-052 (OLD 1R-0382)**  
**LEA COUNTY, NEW MEXICO - SRS# 2002-10250**  
**Talon/LPE Project Number PLAINS044SPL**

*All concentrations are in mg/L*

Sample Location	Sample Date	Benzene	Toluene	Ethyl Benzene	Xylene
MW-1	03/12/08			Not sampled Due to Dry Well	
	06/19/08			Not sampled Due to Dry Well	
	08/13/08			Not sampled Due to Dry Well	
	09/18/08			Well Plugged	
MW-1A	09/18/08			Well Installed	
	09/23/08	20.1	13.9	2.03	4.58
MW-2	03/12/08			Not sampled Due to Presence of Phase Separated Hydrocarbons	
	06/19/08			Not sampled Due to Presence of Phase Separated Hydrocarbons	
	08/13/08			Not sampled Due to Not Enough Water	
MW-3	03/12/08			Not sampled Due to Presence of Phase Separated Hydrocarbons	
	06/19/08			Not sampled Due to Presence of Phase Separated Hydrocarbons	
	09/23/08	18.2	7.71	1.81	4.15
MW-4	03/12/08			Not sampled Due to Presence of Phase Separated Hydrocarbons	
	06/19/08			Not sampled Due to Presence of Phase Separated Hydrocarbons	
	09/23/08	31.2	31.1	8.39	18.9
MW-5	03/12/08			Not sampled Due to Presence of Phase Separated Hydrocarbons	
	06/19/08			Not sampled Due to Presence of Phase Separated Hydrocarbons	
	09/23/08	11.9	5.8	1.08	1.92
MW-6	03/12/08	0.138	0.03010	<0.001	0.01880
	06/19/08	0.198	0.0293	0.00120	0.01390
	08/13/08	0.4540	0.0383	<0.0100	<0.0100
MW-7	03/12/08			Not sampled Due to Presence of Phase Separated Hydrocarbons	
	06/19/08			Not sampled Due to Presence of Phase Separated Hydrocarbons	
	08/13/08			Not sampled Due to Not Enough Water	
MW-8	03/12/08			Not sampled Due to Presence of Phase Separated Hydrocarbons	
	06/19/08			Not sampled Due to Presence of Phase Separated Hydrocarbons	
	08/13/08			Not sampled Due to Not Enough Water	
MW-9	03/12/08	0.0070	<0.001	<0.001	0.0102
	06/19/08	0.01240	<0.00100	<0.00100	0.00150
	08/13/08	0.130	<0.00100	<0.00100	<0.00100



**TABLE 2**  
**SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**  
**PLAINS PIPELINE, L.P.**  
**CS CAYLER**

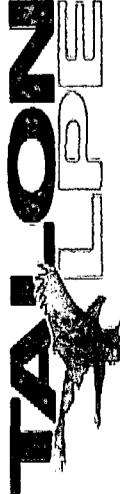
**NMOCD REF. # AP-052 (OLD 1R-0382)**  
**LEA COUNTY, NEW MEXICO - SRS# 2002-10250**  
**Talon/LPE Project Number PLAINS044SPL**

*All concentrations are in mg/L*

Sample Location	Sample Date	Benzene	Toluene	Ethyl Benzene	Xylene
MW-10	03/12/08	<b>0.17900</b>	0.030	0.00890	0.0389
	06/19/08	0.00470	<0.00100	<0.00100	0.00210
	08/13/08	<0.00500	<0.00500	<0.00500	<0.00500
MW-11	03/12/08	<0.001	<0.001	<0.001	<0.001
	06/19/08	<0.00100	<0.00100	<0.00100	<0.00100
	08/13/08	<0.00100	<0.00100	<0.00100	<0.00100
MW-12	03/12/08	<b>31.5</b>	<b>1.12</b>	<b>0.875</b>	<b>1.090</b>
	06/19/08	<b>30.7</b>	<b>4.95</b>	<b>1.27</b>	<b>1.99</b>
	08/13/08	<b>30.20</b>	<b>8.44</b>	<b>1.25</b>	<b>2.22</b>
MW-13	03/12/08	<b>0.0210</b>	<0.001	<0.001	0.00310
	06/19/08	<b>0.0179</b>	<0.00100	<0.00100	0.00200
	08/13/08	<b>0.0231</b>	<0.00100	<0.00100	0.00140
MW-14	03/12/08	0.00100	<0.001	<0.001	<0.001
	06/19/08	0.00650	0.002	<0.00100	0.00140
	08/13/08	<0.00100	<0.00100	<0.00100	<0.00100
MW-15	03/12/08	0.00260	<0.001	<0.001	<0.001
	06/19/08	0.00580	<0.00100	<0.00100	<0.00100
	08/13/08	0.00350	<0.00100	<0.00100	<0.00100
MW-16	03/12/08	<b>0.165</b>	0.0113	0.00270	0.0174
	06/19/08	<b>0.129</b>	0.00710	0.00220	0.00850
	08/13/08	<b>0.117</b>	<0.00100	<0.00100	0.00440
MW-17	03/12/08	0.00310	<0.001	<0.001	<0.001
	06/19/08	0.00950	<0.00100	<0.00100	0.00150
	08/13/08	0.00500	<0.00100	<0.00100	<0.00100
MW-18	03/28/08	<0.001	<0.001	<0.001	<0.001
	06/19/08	0.00240	0.00190	<0.00100	0.00450
	08/13/08	<0.00100	<0.00100	<0.00100	<0.00100
<b>NMWQCC Remedial Limits</b>		0.010	0.750	0.750	0.620

*Bolded values are in excess of the NMWQCC Remediation Thresholds*

*Monitor wells MW-1A, MW-3, MW-4, and MW-5 were sampled at the request of the NMOCD even though they contain PSH.*



**TABLE 3**  
**SUMMARY OF GROUNDWATER POLY-AROMATIC  
 HYDROCARBON (PAH) ANALYTICAL RESULTS**  
**PLAINS PIPELINE, L.P.**  
**CS CAYLER**  
**NMOCD REF. # AP-052 (OLD 1R-0382)**  
**LEA COUNTY, NEW MEXICO - SRS# 2002-10250**  
**Talon/LPE Project Number PLAINS044SPL**

All concentrations are in mg/L

Sample Location	Sample Date	Acenaphthene	Acenaphthylene	Benzol[a]-anthracene	Benzol[b]-anthracene	Benzol[k]-fluoranthene	Chrysene	Dibenzofuran	Fluoranthene	Indeno[1,2,3-cd]pyrene	2-Methylimaphthalene	1-Methylimaphthalene	Naphthalene	Phenanthrene	Pyrene	
MW-6	08/14/08	<0.00200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
MW-9	08/13/08	<0.00200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
MW-10	08/13/08	<0.00200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
MW-11	08/13/08	<0.00200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
MW-12	08/14/08	<0.00200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<b>0.0378</b>	<b>0.0698</b>
MW-13	08/14/08	<0.00200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
MW-14	08/13/08	<0.00200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
MW-15	08/13/08	<0.00200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
MW-16	08/14/08	<0.00200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
MW-17	08/14/08	<0.00200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
MW-18	08/14/08	<0.00200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
NMWQCC Remedial Limits																0.030

*Bolded values are in excess of the NMWQCC Remediation Thresholds*

**PSH**

TABLE 4  
SUMMARY OF PSH MONITOR WELLS GROUNDWATER POLY-AROMATIC  
HYDROCARBON (PAH) ANALYTICAL RESULTS  
PLAINS PIPELINE, L.P.  
CS CAYLER  
NMOCD REF. # AP-052 (Old 1R-0382)  
LEA COUNTY, NEW MEXICO - SRS# 2002-10250  
Talon/LPE Project Number PLAINS044SPL

All concentrations are in mg/L

Sample Location	Sample Date	Benzene	Toluene	Xyline	Total TPH	TPH DRO	TPH GRO	Acenaphthene	Acenaphthylene	Anthracene	Benzol[a]anthracene	Benzol[a]pyrene	Benzol[b]fluoranthene	Benzol[k]fluoranthene	Benzol[g,h,i]-perylene	Chrysene	Dibenzofuran	Fluorene	Indeno[1,2,3-cd]pyrene	1-Methylimaphthalene	2-Methylimaphthalene	Naphthalene	Phenanthrene	Pyrene				
MW-1A	09/23/08	20.1	13.9	2.03	4.58	16.7	136	152.7	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	0.0292	<0.00100	0.118	0.003080	0.1350	<0.00100	1.13	1.34	0.587	0.182	0.0134		
MW-3	09/23/08	18.2	7.7	1.81	4.15	10.5	68.6	79.1	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.00149	<0.000200	0.00892	0.000399	0.0107	<0.000200	0.0940	0.111	0.1020	0.01140	0.000820		
MW-4	09/23/08	31.2	31.1	8.39	18.9	343	363	706	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0326	<0.0100	0.259	<0.0100	1.28	0.0689	1.56	<0.0100	15.1	17.8	7.27	2.03	0.124
MW-5	09/23/08	11.9	5.8	1.08	1.92	70.8	57.4	128.2	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.00616	<0.000200	0.00678	<0.000200	0.0690	0.0698	0.00683	0.000314	0.000314	
NMWQCC Remedial Limits		0.01	0.01	0.75	0.75	0.62																			0.030			

*Bolded values are in excess of the NMWQCC Remediation Thresholds  
BTTEX, TPH and PAH analysis per the NMOCD in monitor wells that contain PSH*



**Table 5**  
**Summary of Semi-Volatile and**  
**Volatile Groundwater Analytical Results**  
**Plains Pipeline, L.P.**  
**C.S. Cayler**  
**NMOCD REF. # AP-052 (OLD 1R-0382)**  
**Lea County, New Mexico - SRS# 2002-10257**  
**Talon/LPE Project Number PLAINS044SPL**

Parameter	MW-18 3/25/08	MW-1A 9/23/08	Units
Pyridine	<0.00500	<0.0250	mg/L
N-Nitrosodimethylamine	<0.00500	<0.0250	mg/L
2-Picoline	<0.00500	<0.0250	mg/L
Methyl methanesulfonate	<0.00500	<0.0250	mg/L
Ethyl methanesulfonate	<0.00500	<0.0250	mg/L
Phenol	<0.00500	<0.0250	mg/L
Aniline	<0.00500	<0.0250	mg/L
bis(2-chloroethyl)ether	<0.00500	<0.0250	mg/L
2-Chlorophenol	<0.00500	<0.0250	mg/L
1,3-Dichlorobenzene (meta)	<0.00500	<0.0250	mg/L
1,4-Dichlorobenzene (para)	<0.00500	<0.0250	mg/L
Benzyl alcohol	<0.00500	<0.0250	mg/L
1,2-Dichlorobenzene (ortho)	<0.00500	<0.0250	mg/L
2-Methylphenol	<0.00500	0.126	mg/L
bis(2-chloroisopropyl)ether	<0.00500	<0.0250	mg/L
4-Methylphenol / 3-Methylphenol	<0.00500	0.0990	mg/L
N-Nitrosodi-n-propylamine	<0.00500	<0.0250	mg/L
Hexachloroethane	<0.00500	<0.0250	mg/L
Acetophenone	<0.00500	<0.0250	mg/L
Nitrobenzene	<0.00500	<0.0250	mg/L
N-Nitrosopiperidine	<0.00500	<0.0250	mg/L
Isophorone	<0.00500	<0.0250	mg/L
2-Nitrophenol	<0.00500	<0.0250	mg/L
2,4-Dimethylphenol	<0.00500	0.0710	mg/L
bis(2-chloroethoxy)methane	<0.00500	<0.0250	mg/L
2,4-Dichlorophenol	<0.00500	<0.0250	mg/L
1,2,4-Trichlorobenzene	<0.00500	<0.0250	mg/L
Benzoic acid	<0.00500	<0.0250	mg/L
Naphthalene	<0.00500	1.01	mg/L
a,a-Dimethylphenethylamine	<0.00500	<0.0250	mg/L



**Table 5**  
**Summary of Semi-Volatile and**  
**Volatile Groundwater Analytical Results**  
**Plains Pipeline, L.P.**  
**C.S. Cayler**  
**NMOCD REF. # AP-052 (OLD 1R-0382)**  
**Lea County, New Mexico - SRS# 2002-10257**  
**Talon/LPE Project Number PLAINS044SPL**

Parameter	MW-18 3/25/08	MW-1A 9/23/08	Units
4-Chloroaniline	<0.00500	<0.0250	mg/L
2,6-Dichlorophenol	<0.0100	<0.0500	mg/L
Hexachlorobutadiene	<0.00500	<0.0250	mg/L
N-Nitroso-di-n-butylamine	<0.00500	<0.0250	mg/L
4-Chloro-3-methylphenol	<0.00500	<0.0250	mg/L
2-Methylnaphthalene	<0.00500	2.37	mg/L
1-Methylnaphthalene	<0.00500	2.00	mg/L
1,2,4,5-Tetrachlorobenzene	<0.00500	<0.0250	mg/L
Hexachlorocyclopentadiene	<0.00500	<0.0250	mg/L
2,4,6-Trichlorophenol	<0.0100	<0.0500	mg/L
2,4,5-Trichlorophenol	<0.00500	<0.0250	mg/L
2-Chloroaphthalene	<0.00500	<0.0250	mg/L
1-Chloronaphthalene	<0.00500	<0.0250	mg/L
2-Nitroaniline	<0.00500	<0.0250	mg/L
Dimethylphthalate	<0.00500	<0.0250	mg/L
Acenaphthylene	<0.00500	<0.0250	mg/L
2,6-Dinitrotoluene	<0.00500	<0.0250	mg/L
3-Nitroaniline	<0.00500	<0.0250	mg/L
Aceaphthene	<0.00500	<0.0250	mg/L
2,4-Dinitrophenol	<0.00500	<0.0250	mg/L
Dibenzofuran	<0.00500	0.175	mg/L
Pentachlorobenzene	<0.00500	<0.0250	mg/L
4-Nitrophenol	<0.0250	<0.125	mg/L



**Table 5**  
**Summary of Semi-Volatile and**  
**Volatile Groundwater Analytical Results**  
**Plains Pipeline, L.P.**  
**C.S. Cayler**  
**NMOCD REF. # AP-052 (OLD 1R-0382)**  
**Lea County, New Mexico - SRS# 2002-10257**  
**Talon/LPE Project Number PLAINS044SPL**

Parameter	MW-18 3/25/08	MW-1A 9/23/08	Units
2,4-Dinitrotoluene	<0.00500	<0.0250	mg/L
1-Naphthylamine	<0.00500	<0.0250	mg/L
2,3,4,6-Tetrachlorophenol	<0.0100	<0.0250	mg/L
2-Naphthylamine	<0.00500	<0.0250	mg/L
Fluorene	<0.00500	0.201	mg/L
4-chlorophenyl-phenylether	<0.00500	<0.0250	mg/L
Diethylphthalate	<0.00500	<0.0250	mg/L
4-Nitroaniline	<0.00500	<0.0250	mg/L
diphenylhydrazine	<0.00500	<0.0250	mg/L
4,6-Dinitro-2-methylphenol	<0.00500	<0.0250	mg/L
diphenylhydrazine	<0.00500	<0.0250	mg/L
4,6-Dinitro-2-methylphenol	<0.00500	<0.0250	mg/L
Diphenylamine	<0.00500	<0.0250	mg/L
4-Bromophenyl-phenylether	<0.00500	<0.0250	mg/L
Phenacetin	<0.00500	<0.0250	mg/L
Hexachlorobenzene	<0.00500	<0.0250	mg/L
4-Aminobiphenyl	<0.00500	0.122	mg/L
Pentachlorophenol	<0.0100	<0.0500	mg/L
Anthracene	<0.00500	<0.0250	mg/L
Pentachloronitrobenzene	<0.00500	<0.0250	mg/L
Pronamide	<0.00500	<0.0250	mg/L
Phenanthrene	<0.00500	0.298	mg/L
Di-n-butylphthalate	<0.00500	<0.0250	mg/L
Fluoranthene	<0.00500	<0.0250	mg/L
Benzidine	<0.0250	<0.125	mg/L
Pyrene	<0.00500	<0.0250	mg/L



**Table 5**  
**Summary of Semi-Volatile and**  
**Volatile Groundwater Analytical Results**  
**Plains Pipeline, L.P.**  
**C.S. Cayler**  
**NMOCD REF. # AP-052 (OLD 1R-0382)**  
**Lea County, New Mexico - SRS# 2002-10257**  
**Talon/LPE Project Number PLAINS044SPL**

Parameter	MW-18 3/25/08	MW-1A 9/23/08	Units
p-Dimethylaminoazobenzene	<0.00500	<0.0250	mg/L
Butylebenzylphthalate	<0.00500	<0.0250	mg/L
Benzo(a)anthracene	<0.00500	<0.0250	mg/L
3,3-Dichlorobenzidine	<0.00500	<0.0250	mg/L
Chrysene	<0.00500	0.0380	mg/L
bis(2-ethylhexyl)phthalate	<0.00500	4.83	mg/L
Di-n-octylphthalate	<0.00500	<0.0250	mg/L
Benzo(b)fluoranthene	<0.00500	<0.0250	mg/L
Benzo(k)fluoranthene	<0.00500	<0.0250	mg/L
7,12-Dimethylbenz(a)anthracene	<0.00500	<0.0250	mg/L
Benzo(a)pyrene	<0.00500	<0.0250	mg/L
3-Methylcholanthrene	<0.00500	<0.0250	mg/L
Dibenzo(a,j)acridine	<0.00500	<0.0250	mg/L
Indeno(1,2,3-cd)pyrene	<0.00500	<0.0250	mg/L
Dibenzo(a,h)anthracene	<0.00500	<0.0250	mg/L
Benzo(g,h,i)perylene	<0.00500	<0.0250	mg/L
Bromochloromethane	<0.001	<0.500	mg/L
Dichlorodifluoromethane	<0.001	<0.500	mg/L
Chloroethane (methyl chloride)	<0.001	<0.500	mg/L
Vinyl Chloride	<0.001	<0.500	mg/L
Bromomethane (methyl iodide)	<0.005	<2.500	mg/L
Chloroethane	<0.001	<0.500	mg/L
Trichlorofluoromethane	<0.001	<0.500	mg/L
Acetone	<0.010	5.570	mg/L
Iodomethane (methyl iodide)	<0.005	<2.500	mg/L
Carbon Disulfide	<0.001	<0.500	mg/L
Acrylonitrile	<0.001	<0.500	mg/L
2-Butanone (MEK)	<0.005	<2.500	mg/L
4-Methyl-2-pentanone (MIBK)	<0.005	<2.500	mg/L



**Table 5**  
**Summary of Semi-Volatile and**  
**Volatile Groundwater Analytical Results**  
**Plains Pipeline, L.P.**  
**C.S. Cayler**  
**NMOCD REF. # AP-052 (OLD 1R-0382)**  
**Lea County, New Mexico - SRS# 2002-10257**  
**Talon/LPE Project Number PLAINS044SPL**

Parameter	MW-18 3/25/08	MW-1A 9/23/08	Units
2-Hexanone	<0.005	<2.500	mg/L
trans 1,4-Dichloro-2-butene	<0.010	<5.000	mg/L
1,1-Dichloroethene	<0.001	<0.500	mg/L
Methylene chloride	<0.005	<2.500	mg/L
MTBE	<0.001	<0.500	mg/L
trans-1,2-Dichloroethene	<0.001	<0.500	mg/L
1,1-Dichloroethane	<0.001	<0.500	mg/L
cis-1,2-Dichloroethene	<0.001	<0.500	mg/L
2,2-Dichloropropane	<0.001	<0.500	mg/L
1,2-Dichloroethane (EDC)	<0.001	<0.500	mg/L
Chloroform	<0.001	<0.500	mg/L
1,1,1-Trichloroethane	<0.001	<0.500	mg/L
1,1-Dichloropropene	<0.001	<0.500	mg/L
Benzene	<0.001	26.600	mg/L
Carbon Tetrachloride	<0.001	<0.500	mg/L
1,2-Dichloropropane	<0.001	<0.500	mg/L
Trichloroethene (TCE)	<0.001	<0.500	mg/L
Dibromomethane (methylene bromide)	<0.001	<0.500	mg/L
Bromodichloromethane	<0.001	<0.500	mg/L
2-Chloroethyl vinyl ether	<0.005	<2.500	mg/L
cis-1,3-Dichloropropene	<0.001	<0.500	mg/L
trans-1,3-Dichloropropene	<0.001	<0.500	mg/L
Toluene	<0.001	18.300	mg/L
1,1,2-Trichloroethane	<0.001	<0.500	mg/L
1,3-Dichloropropane	<0.001	<0.500	mg/L
Dibromochloromethane	<0.001	<0.500	mg/L
1,2-Dibromoethane (EDB)	<0.001	<0.500	mg/L



**Table 5**  
**Summary of Semi-Volatile and**  
**Volatile Groundwater Analytical Results**  
**Plains Pipeline, L.P.**  
**C.S. Cayler**

**NMOCD REF. # AP-052 (OLD 1R-0382)**  
**Lea County, New Mexico - SRS# 2002-10257**  
**Talon/LPE Project Number PLAINS044SPL**

Parameter	MW-18 3/25/08	MW-1A 9/23/08	Units
Tetrachloroethene (PCE)	<0.001	<0.500	mg/L
Chlorobenzene	<0.001	<0.500	mg/L
1,1,1,2-Tetrachloroethane	<0.001	<0.500	mg/L
Ethylbenzene	<0.001	2.360	mg/L
m,p-Xylene	<0.001	3.540	mg/L
Bromoform	<0.001	<0.500	mg/L
Styrene	<0.001	<0.500	mg/L
o-Xylene	<0.001	1.200	mg/L
1,1,2,2-Tetrachloroethane	<0.001	<0.500	mg/L
2-Chlorotoluene	<0.001	<0.500	mg/L
1,2,3-Trichloropropane	<0.001	<0.500	mg/L
Isopropylbenzene	2.10	<0.500	mg/L
Bromobenzene	<0.001	<0.500	mg/L
n-Propylbenzene	<0.001	<0.500	mg/L
1,3,5-Trimethylebenzene	<0.001	<0.500	mg/L
tert-Butylbenzene	<0.001	<0.500	mg/L
1,2,4-Trimethylbenzene	<0.001	0.537	mg/L
1,4-Dichlorobenzene (para)	<0.001	<0.500	mg/L
sec-Butylbenzene	<0.001	<0.500	mg/L
1,3-Dichlorobenzene (meta)	<0.001	<0.500	mg/L
p-Isopropyltoluene	<0.001	<0.500	mg/L
4-Chlorotoluene	<0.001	<0.500	mg/L
1,2-Dichlorobenzene (ortho)	<0.001	<0.500	mg/L
n-Butylbenzene	<0.001	<0.500	mg/L
1,2-Dibromo-3-chloropropane	<0.005	<2.500	mg/L
1,2,3-Trichlorobenzene	<0.005	<2.500	mg/L
1,2,4-Trichlorobenzene	<0.005	<2.500	mg/L
Naphthalene	<0.005	<2.500	mg/L
Hexachlorobutadiene	<0.005	<2.500	mg/L



**Table 6**  
**Summary of General Chemistry and Metals Groundwater Analytical Results**  
**Plains Pipeline, L.P.**  
**CS Cayler**  
**NMOCD REF. # AP-052 (Old 1R-0382)**  
**Lea County, New Mexico - SRS# 2002-10250**  
**Talon/LPE Project Number PLAINS044SPL**

Parameter	MW-18 6/19/08	MW-1A 9/23/08	Units	NMWQCC MCL
Total Aluminum	2.53	<b>51.80</b>	mg/L	5.0
Hydroxide Alkalinity	<1.00	<1.00	mg/L	
Carbonate Alkalinity	<1.00	<1.00	mg/L	
Bicarbonate Alkalinity	376	234	mg/L	
Total Alkalinity	376	234	mg/L	
Total Boron	0.265	0.194	mg/L	0.75
Dissolved Calcium	87.8	169.0	mg/L	
Dissolved Potassium	4.16	6.70	mg/L	
Dissolved Magnesium	11.0	36.1	mg/L	
Dissolved Sodium	96.5	146.0	mg/L	
Total Cobalt	<0.00200	0.0180	mg/L	0.05
Total Copper	<0.00500	0.0290	mg/L	1.0
Total Iron	<b>1.34</b>	<b>32.10</b>	mg/L	1.0
Chloride	45.5	203.0	mg/L	250
Flouride	<b>2.26</b>	<b>1.80</b>	mg/L	1.6
Nitrate - N	2.07	4.59	mg/L	
PO4 - P	<2.50	<2.50	mg/L	600
Sulfate	48.9	<b>117.0</b>	mg/L	0.2
Total Manganese	0.0430	<b>1.73</b>	mg/L	1.0
Total Molybdenum	<0.0100	<0.0100	mg/L	0.2
Total Nickel	<0.00500	0.0340	mg/L	0.05
Total Silver	<0.00500	<0.00500	mg/L	0.1
Total Arsenic	<0.00500	<0.0100	mg/L	1.0
Total Barium	<b>0.176</b>	<b>1.37</b>	mg/L	0.1
Total Cadmium	<0.00100	<0.00200	mg/L	0.05
Total Chromium	<0.00100	<b>0.0860</b>	mg/L	0.002
Total Mercury	<0.000200	<0.000400	mg/L	0.05
Total Lead	<0.00500	<0.00500	mg/L	0.05
Total Selenium	<0.0100	<0.0200	mg/L	10.0
Total Zinc	0.0330	0.6130	mg/L	10.0

# TRACEANALYSIS, INC.

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## NELAP Certifications

Lubbock: T104704219-08-TX  
LELAP-02003  
Kansas E-10317

El Paso: T104704221-08-TX  
LELAP-02002

Midland: T104704392-08-TX

## Analytical and Quality Control Report

Shanna Smith  
Talon LPE-Amarillo  
921 North Bivins  
Amarillo, TX, 79107

Report Date: August 25, 2008

Work Order: 8081408



Project Location: Lea County, NM  
Project Name: C.S. Caylor  
Project Number: PLAINS044 SPL  
SRS #: SRS 2002-10250

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
170581	MW-6	water	2008-08-13	12:02	2008-08-14
170582	MW-9	water	2008-08-13	10:50	2008-08-14
170583	MW-10	water	2008-08-13	10:57	2008-08-14
170584	MW-11	water	2008-08-13	11:05	2008-08-14
170585	MW-12	water	2008-08-13	11:39	2008-08-14
170586	MW-13	water	2008-08-13	11:45	2008-08-14
170587	MW-14	water	2008-08-13	11:33	2008-08-14
170588	MW-15	water	2008-08-13	12:16	2008-08-14
170589	MW-16	water	2008-08-13	11:05	2008-08-14

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
170590	MW-17	water	2008-08-13	11:49	2008-08-14
170591	MW-18	water	2008-08-13	11:28	2008-08-14

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 20 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director

#### Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

## Case Narrative

Samples for project C.S. Caylor were received by TraceAnalysis, Inc. on 2008-08-14 and assigned to work order 8081408. Samples for work order 8081408 were received intact without headspace and at a temperature of 3.0 deg. C.

Samples were analyzed for the following tests using their respective methods.

Test	Method
BTEX	S 8021B
PAH	S 8270C

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 8081408 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Report Date: August 25, 2008  
PLAINS044 SPL

Work Order: 8081408  
C.S. Caylor

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## Analytical Report

### Sample: 170581 - MW-6

Laboratory: Lubbock	Analytical Method: S 8021B	Prep Method: S 5030B
Analysis: BTEX	Date Analyzed: 2008-08-21	Analyzed By: MT
QC Batch: 51676	Sample Preparation: 2008-08-21	Prepared By: MT
Prep Batch: 44308		

Parameter	Flag	Result	Units	Dilution	RL
Benzene		0.454	mg/L	10	0.00100
Toluene		0.0383	mg/L	10	0.00100
Ethylbenzene		<0.0100	mg/L	10	0.00100
Xylene		<0.0100	mg/L	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.860	mg/L	10	1.00	86	55.6 - 121.3
4-Bromofluorobenzene (4-BFB)		0.770	mg/L	10	1.00	77	58.1 - 118.4

### Sample: 170582 - MW-9

Laboratory: Lubbock	Analytical Method: S 8021B	Prep Method: S 5030B
Analysis: BTEX	Date Analyzed: 2008-08-21	Analyzed By: MT
QC Batch: 51676	Sample Preparation: 2008-08-21	Prepared By: MT
Prep Batch: 44308		

Parameter	Flag	Result	Units	Dilution	RL
Benzene		0.130	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0845	mg/L	1	0.100	84	55.6 - 121.3
4-Bromofluorobenzene (4-BFB)		0.0767	mg/L	1	0.100	77	58.1 - 118.4

### Sample: 170582 - MW-9

Laboratory: Lubbock	Analytical Method: S 8270C	Prep Method: S 3510C
Analysis: PAH	Date Analyzed: 2008-08-22	Analyzed By: DS
QC Batch: 51723	Sample Preparation: 2008-08-20	Prepared By: DS
Prep Batch: 44352		

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Parameter	Flag	Result	Units	Dilution	RL
Naphthalene		<0.000200	mg/L	1	0.000200
2-Methylnaphthalene		<0.000200	mg/L	1	0.000200
1-Methylnaphthalene		<0.000200	mg/L	1	0.000200
Acenaphthylene		<0.000200	mg/L	1	0.000200
Acenaphthene		<0.000200	mg/L	1	0.000200
Dibenzofuran		<0.000200	mg/L	1	0.000200
Fluorene		<0.000200	mg/L	1	0.000200
Anthracene		<0.000200	mg/L	1	0.000200
Phenanthrene		<0.000200	mg/L	1	0.000200
Fluoranthene		<0.000200	mg/L	1	0.000200
Pyrene		<0.000200	mg/L	1	0.000200
Benzo(a)anthracene		<0.000200	mg/L	1	0.000200
Chrysene		<0.000200	mg/L	1	0.000200
Benzo(b)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(k)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(a)pyrene		<0.000200	mg/L	1	0.000200
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	1	0.000200
Dibenzo(a,h)anthracene		<0.000200	mg/L	1	0.000200
Benzo(g,h,i)perylene		<0.000200	mg/L	1	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0457	mg/L	1	0.0800	57	37.4 - 123
2-Fluorobiphenyl		0.0481	mg/L	1	0.0800	60	34.3 - 130
Terphenyl-d14		0.0769	mg/L	1	0.0800	96	10 - 252

**Sample: 170583 - MW-10**

Laboratory: Lubbock

Analysis: BTEX

QC Batch: 51583

Prep Batch: 44231

Analytical Method: S 8021B

Date Analyzed: 2008-08-19

Sample Preparation: 2008-08-19

Prep Method: S 5030B

Analyzed By: ER

Prepared By: ER

Parameter	Flag	Result	Units	Dilution	RL
Benzene	1	<0.00500	mg/L	5	0.00100
Toluene		<0.00500	mg/L	5	0.00100
Ethylbenzene		<0.00500	mg/L	5	0.00100
Xylene		<0.00500	mg/L	5	0.00100

<sup>1</sup> Sample ran at a dilution due to soil in VOA.

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.428	mg/L	5	0.500	86	61.9 - 136.3
4-Bromofluorobenzene (4-BFB)		0.406	mg/L	5	0.500	81	53.2 - 129.7

**Sample: 170583 - MW-10**

Laboratory: Lubbock

Analysis: PAH

Analytical Method: S 8270C

Prep Method: S 3510C

QC Batch: 51723

Date Analyzed: 2008-08-22

Analyzed By: DS

Prep Batch: 44352

Sample Preparation: 2008-08-20

Prepared By: DS

Parameter	Flag	Result	Units	Dilution	RL
Naphthalene		<0.000200	mg/L	1	0.000200
2-Methylnaphthalene		<0.000200	mg/L	1	0.000200
1-Methylnaphthalene		<0.000200	mg/L	1	0.000200
Acenaphthylene		<0.000200	mg/L	1	0.000200
Acenaphthene		<0.000200	mg/L	1	0.000200
Dibenzofuran		0.000406	mg/L	1	0.000200
Fluorene		<0.000200	mg/L	1	0.000200
Anthracene		<0.000200	mg/L	1	0.000200
Phenanthrene		<0.000200	mg/L	1	0.000200
Fluoranthene		<0.000200	mg/L	1	0.000200
Pyrene		<0.000200	mg/L	1	0.000200
Benzo(a)anthracene		<0.000200	mg/L	1	0.000200
Chrysene		<0.000200	mg/L	1	0.000200
Benzo(b)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(k)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(a)pyrene		<0.000200	mg/L	1	0.000200
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	1	0.000200
Dibenzo(a,h)anthracene		<0.000200	mg/L	1	0.000200
Benzo(g,h,i)perylene		<0.000200	mg/L	1	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0397	mg/L	1	0.0800	50	37.4 - 123
2-Fluorobiphenyl		0.0427	mg/L	1	0.0800	53	34.3 - 130
Terphenyl-d14		0.0679	mg/L	1	0.0800	85	10 - 252

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**Sample: 170584 - MW-11**

Laboratory: Lubbock

Analysis: BTEX

QC Batch: 51583

Prep Batch: 44231

Analytical Method: S 8021B

Date Analyzed: 2008-08-19

Sample Preparation: 2008-08-19

Prep Method: S 5030B

Analyzed By: ER

Prepared By: ER

Parameter	Flag	Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0881	mg/L	1	0.100	88	61.9 - 136.3
4-Bromofluorobenzene (4-BFB)		0.0872	mg/L	1	0.100	87	53.2 - 129.7

**Sample: 170584 - MW-11**

Laboratory: Lubbock

Analysis: PAH

QC Batch: 51723

Prep Batch: 44352

Analytical Method: S 8270C

Date Analyzed: 2008-08-22

Sample Preparation: 2008-08-20

Prep Method: S 3510C

Analyzed By: DS

Prepared By: DS

Parameter	Flag	Result	Units	Dilution	RL
Naphthalene		<0.000200	mg/L	1	0.000200
2-Methylnaphthalene		<0.000200	mg/L	1	0.000200
1-Methylnaphthalene		<0.000200	mg/L	1	0.000200
Acenaphthylene		<0.000200	mg/L	1	0.000200
Acenaphthene		<0.000200	mg/L	1	0.000200
Dibenzofuran		<0.000200	mg/L	1	0.000200
Fluorene		<0.000200	mg/L	1	0.000200
Anthracene		<0.000200	mg/L	1	0.000200
Phenanthrene		<0.000200	mg/L	1	0.000200
Fluoranthene		<0.000200	mg/L	1	0.000200
Pyrene		<0.000200	mg/L	1	0.000200
Benzo(a)anthracene		<0.000200	mg/L	1	0.000200
Chrysene		<0.000200	mg/L	1	0.000200
Benzo(b)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(k)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(a)pyrene		<0.000200	mg/L	1	0.000200
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	1	0.000200
Dibenzo(a,h)anthracene		<0.000200	mg/L	1	0.000200

*continued . . .*

Report Date: August 25, 2008  
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sample 170584 continued . . .

Parameter	Flag	Result	Units	Dilution	RL		
Benzo(g,h,i)perylene		<0.000200	mg/L	1	0.000200		
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0583	mg/L	1	0.0800	73	37.4 - 123
2-Fluorobiphenyl		0.0605	mg/L	1	0.0800	76	34.3 - 130
Terphenyl-d14		0.0722	mg/L	1	0.0800	90	10 - 252

**Sample: 170585 - MW-12**

Laboratory: Lubbock  
Analysis: BTEX  
QC Batch: 51583  
Prep Batch: 44231

Analytical Method: S 8021B  
Date Analyzed: 2008-08-19  
Sample Preparation: 2008-08-19

Prep Method: S 5030B  
Analyzed By: ER  
Prepared By: ER

Parameter	Flag	Result	Units	Dilution	RL
Benzene		30.2	mg/L	200	0.00100
Toluene		8.44	mg/L	200	0.00100
Ethylbenzene		1.25	mg/L	200	0.00100
Xylene		2.22	mg/L	200	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		16.3	mg/L	200	20.0	82	61.9 - 136.3
4-Bromofluorobenzene (4-BFB)		16.1	mg/L	200	20.0	80	53.2 - 129.7

**Sample: 170586 - MW-13**

Laboratory: Lubbock  
Analysis: BTEX  
QC Batch: 51583  
Prep Batch: 44231

Analytical Method: S 8021B  
Date Analyzed: 2008-08-19  
Sample Preparation: 2008-08-19

Prep Method: S 5030B  
Analyzed By: ER  
Prepared By: ER

Parameter	Flag	Result	Units	Dilution	RL
Benzene		0.0231	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		0.00140	mg/L	1	0.00100

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0946	mg/L	1	0.100	95	61.9 - 136.3
4-Bromofluorobenzene (4-BFB)		0.0840	mg/L	1	0.100	84	53.2 - 129.7

**Sample: 170587 - MW-14**

Laboratory: Lubbock  
Analysis: BTEX  
QC Batch: 51583  
Prep Batch: 44231

Analytical Method: S 8021B  
Date Analyzed: 2008-08-19  
Sample Preparation: 2008-08-19

Prep Method: S 5030B  
Analyzed By: ER  
Prepared By: ER

Parameter	Flag	Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0858	mg/L	1	0.100	86	61.9 - 136.3
4-Bromofluorobenzene (4-BFB)		0.0814	mg/L	1	0.100	81	53.2 - 129.7

**Sample: 170587 - MW-14**

Laboratory: Lubbock  
Analysis: PAH  
QC Batch: 51723  
Prep Batch: 44352

Analytical Method: S 8270C  
Date Analyzed: 2008-08-22  
Sample Preparation: 2008-08-20

Prep Method: S 3510C  
Analyzed By: DS  
Prepared By: DS

Parameter	Flag	Result	Units	Dilution	RL
Naphthalene		<0.000200	mg/L	1	0.000200
2-Methylnaphthalene		<0.000200	mg/L	1	0.000200
1-Methylnaphthalene		<0.000200	mg/L	1	0.000200
Acenaphthylene		<0.000200	mg/L	1	0.000200
Acenaphthene		<0.000200	mg/L	1	0.000200
Dibenzofuran		<0.000200	mg/L	1	0.000200
Fluorene		<0.000200	mg/L	1	0.000200
Anthracene		<0.000200	mg/L	1	0.000200
Phenanthrene		<0.000200	mg/L	1	0.000200
Fluoranthene		<0.000200	mg/L	1	0.000200
Pyrene		<0.000200	mg/L	1	0.000200
Benzo(a)anthracene		<0.000200	mg/L	1	0.000200

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Parameter	Flag	Result	Units	Dilution	RL
Chrysene		<0.000200	mg/L	1	0.000200
Benzo(b)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(k)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(a)pyrene		<0.000200	mg/L	1	0.000200
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	1	0.000200
Dibenzo(a,h)anthracene		<0.000200	mg/L	1	0.000200
Benzo(g,h,i)perylene		<0.000200	mg/L	1	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0587	mg/L	1	0.0800	73	37.4 - 123
2-Fluorobiphenyl		0.0606	mg/L	1	0.0800	76	34.3 - 130
Terphenyl-d14		0.0759	mg/L	1	0.0800	95	10 - 252

Sample: 170588 - MW-15

Laboratory: Lubbock

### Analysis: BTEX

Analytical Method: S 8021B

Prep Method: S 5030B

QC Batch: 51583

Date Analyzed: 2008-08-19

Analyzed By: ER

Prep Batch: 44231

Sample Preparation: 2008-08-19

Prepared By: ER

Parameter	Flag	RL		Dilution	RL
		Result	Units		
Benzene		0.00350	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike	Percent Recovery	Recovery Limits
					Amount		
Trifluorotoluene (TFT)		0.0890	mg/L	1	0.100	89	61.9 - 136.3
1-Bromo-4-fluorobenzene (4-BFB)		0.0814	mg/L	1	0.100	81	53.2 - 129.7

Sample: 170588 - MW-15

### Laboratory: Lubbock

### Laboratory: Bass Analysis: PAH

Analytical Method: S 8270C

Prep Method: S 3510C

QC Batch: 51723

Date Analyzed: 2008-08-22

Analyzed By: DS

Prep Batch: 44352

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Parameter	Flag	Result	Units	Dilution	RL
Naphthalene		<0.000200	mg/L	1	0.000200
2-Methylnaphthalene		<0.000200	mg/L	1	0.000200
1-Methylnaphthalene		<0.000200	mg/L	1	0.000200
Acenaphthylene		<0.000200	mg/L	1	0.000200
Acenaphthene		<0.000200	mg/L	1	0.000200
Dibenzofuran		<0.000200	mg/L	1	0.000200
Fluorene		<0.000200	mg/L	1	0.000200
Anthracene		<0.000200	mg/L	1	0.000200
Phenanthrene		<0.000200	mg/L	1	0.000200
Fluoranthene		<0.000200	mg/L	1	0.000200
Pyrene		<0.000200	mg/L	1	0.000200
Benzo(a)anthracene		<0.000200	mg/L	1	0.000200
Chrysene		<0.000200	mg/L	1	0.000200
Benzo(b)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(k)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(a)pyrene		<0.000200	mg/L	1	0.000200
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	1	0.000200
Dibenzo(a,h)anthracene		<0.000200	mg/L	1	0.000200
Benzo(g,h,i)perylene		<0.000200	mg/L	1	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0602	mg/L	1	0.0800	75	37.4 - 123
2-Fluorobiphenyl		0.0606	mg/L	1	0.0800	76	34.3 - 130
Terphenyl-d14		0.0776	mg/L	1	0.0800	97	10 - 252

### Sample: 170589 - MW-16

Laboratory: Lubbock  
Analysis: BTEX  
QC Batch: 51583  
Prep Batch: 44231

Analytical Method: S 8021B  
Date Analyzed: 2008-08-19  
Sample Preparation: 2008-08-19

Prep Method: S 5030B  
Analyzed By: ER  
Prepared By: ER

Parameter	Flag	Result	Units	Dilution	RL
Benzene		0.117	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		0.00440	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0728	mg/L	1	0.100	73	61.9 - 136.3
4-Bromofluorobenzene (4-BFB)		0.0813	mg/L	1	0.100	81	53.2 - 129.7

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**Sample: 170590 - MW-17**

Laboratory:	Lubbock	Analytical Method:	S 8021B	Prep Method:	S 5030B
Analysis:	BTEX	Date Analyzed:	2008-08-19	Analyzed By:	ER
QC Batch:	51583	Sample Preparation:	2008-08-19	Prepared By:	ER
Prep Batch:	44231				

Parameter	Flag	Result	Units	Dilution	RL
Benzene		0.00500	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0909	mg/L	1	0.100	91	61.9 - 136.3
4-Bromofluorobenzene (4-BFB)		0.0813	mg/L	1	0.100	81	53.2 - 129.7

**Sample: 170591 - MW-18**

Laboratory:	Lubbock	Analytical Method:	S 8021B	Prep Method:	S 5030B
Analysis:	BTEX	Date Analyzed:	2008-08-19	Analyzed By:	ER
QC Batch:	51583	Sample Preparation:	2008-08-19	Prepared By:	ER
Prep Batch:	44231				

Parameter	Flag	Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0856	mg/L	1	0.100	86	61.9 - 136.3
4-Bromofluorobenzene (4-BFB)		0.0813	mg/L	1	0.100	81	53.2 - 129.7

**Method Blank (1)      QC Batch: 51583**

QC Batch:	51583	Date Analyzed:	2008-08-19	Analyzed By:	ER
Prep Batch:	44231	QC Preparation:	2008-08-19	Prepared By:	ER

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Parameter	Flag	MDL Result	Units	RL
Benzene		<0.000208	mg/L	0.001
Toluene		<0.000199	mg/L	0.001
Ethylbenzene		<0.000347	mg/L	0.001
Xylene		<0.000468	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0865	mg/L	1	0.100	86	70.5 - 111.5
4-Bromofluorobenzene (4-BFB)		0.0823	mg/L	1	0.100	82	56.5 - 109.3

**Method Blank (1)** QC Batch: 51676

QC Batch: 51676  
Prep Batch: 44308

Date Analyzed: 2008-08-21  
QC Preparation: 2008-08-21

Analyzed By: MT  
Prepared By: MT

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.000119	mg/L	0.001
Toluene		<0.000146	mg/L	0.001
Ethylbenzene		<0.000119	mg/L	0.001
Xylene		<0.0000970	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0859	mg/L	1	0.100	86	69.3 - 105.6
4-Bromofluorobenzene (4-BFB)		0.0794	mg/L	1	0.100	79	66.8 - 110.2

**Method Blank (1)** QC Batch: 51723

QC Batch: 51723  
Prep Batch: 44352

Date Analyzed: 2008-08-22  
QC Preparation: 2008-08-20

Analyzed By: DS  
Prepared By: DS

Parameter	Flag	MDL Result	Units	RL
Naphthalene		<0.0000730	mg/L	0.0002
2-Methylnaphthalene		<0.0000509	mg/L	0.0002
1-Methylnaphthalene		<0.0000748	mg/L	0.0002
Acenaphthylene		<0.0000767	mg/L	0.0002
Acenaphthene		<0.000142	mg/L	0.0002
Dibenzofuran		<0.0000470	mg/L	0.0002
Fluorene		<0.0000569	mg/L	0.0002
Anthracene		<0.0000876	mg/L	0.0002

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Parameter	Flag	MDL	Units	RL
		Result		
Phenanthrene		<0.0000552	mg/L	0.0002
Fluoranthene		<0.0000954	mg/L	0.0002
Pyrene		<0.0000497	mg/L	0.0002
Benzo(a)anthracene		<0.0000328	mg/L	0.0002
Chrysene		<0.0000990	mg/L	0.0002
Benzo(b)fluoranthene		<0.0000684	mg/L	0.0002
Benzo(k)fluoranthene		<0.0000830	mg/L	0.0002
Benzo(a)pyrene		<0.0000549	mg/L	0.0002
Indeno(1,2,3-cd)pyrene		<0.0000869	mg/L	0.0002
Dibenzo(a,h)anthracene		<0.0000605	mg/L	0.0002
Benzo(g,h,i)perylene		<0.0000681	mg/L	0.0002

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0432	mg/L	1	0.0800	54	10 - 146
2-Fluorobiphenyl		0.0423	mg/L	1	0.0800	53	10 - 141
Terphenyl-d14		0.0718	mg/L	1	0.0800	90	10 - 266

### **Laboratory Control Spike (LCS-1)**

QC Batch: 51583  
Prep Batch: 44231

Date Analyzed: 2008-08-19  
QC Preparation: 2008-08-19

Analyzed By: ER  
Prepared By: ER

Param	LCS	Spike	Matrix	Rec.			
	Result						
Benzene	0.0862	mg/L	1	0.100	<0.000208	86	79.4 - 113.7
Toluene	0.0866	mg/L	1	0.100	<0.000199	87	80.3 - 114.6
Ethylbenzene	0.0903	mg/L	1	0.100	<0.000347	90	82.2 - 116.2
Xylene	0.260	mg/L	1	0.300	<0.000468	87	84.2 - 117.8

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD		Spike		Matrix		Rec.		RPD
	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene	0.0850	mg/L	1	0.100	<0.000208	85	79.4 - 113.7	1	20
Toluene	0.0854	mg/L	1	0.100	<0.000199	85	80.3 - 114.6	1	20
Ethylbenzene	0.0889	mg/L	1	0.100	<0.000347	89	82.2 - 116.2	2	20
Xylene	0.256	mg/L	1	0.300	<0.000468	85	84.2 - 117.8	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0816	0.0814	mg/L	1	0.100	82	81	72.3 - 115.2

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Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
4-Bromofluorobenzene (4-BFB)	0.0789	0.0787	mg/L	1	0.100	79	79	79 - 121.8

### Laboratory Control Spike (LCS-1)

QC Batch: 51676  
Prep Batch: 44308

Date Analyzed: 2008-08-21  
QC Preparation: 2008-08-21

Analyzed By: MT  
Prepared By: MT

Param	LCS	Units	Dil.	Spike	Matrix	Rec.	
	Result			Amount	Result	Rec.	Limit
Benzene	0.0986	mg/L	1	0.100	<0.000119	99	81.5 - 108.2
Toluene	0.0988	mg/L	1	0.100	<0.000146	99	80.8 - 109
Ethylbenzene	0.0981	mg/L	1	0.100	<0.000119	98	80.7 - 109.2
Xylene	0.300	mg/L	1	0.300	<0.0000970	100	80 - 109.3

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit	RPD RPD	RPD Limit
Benzene	0.0952	mg/L	1	0.100	<0.000119	95	81.5 - 108.2	4	20
Toluene	0.0948	mg/L	1	0.100	<0.000146	95	80.8 - 109	4	20
Ethylbenzene	0.0946	mg/L	1	0.100	<0.000119	95	80.7 - 109.2	4	20
Xylene	0.289	mg/L	1	0.300	<0.0000970	96	80 - 109.3	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.102	0.0989	mg/L	1	0.100	102	99	79.3 - 114.3
4-Bromofluorobenzene (4-BFB)	0.100	0.0975	mg/L	1	0.100	100	98	76.3 - 119.7

### Laboratory Control Spike (LCS-1)

QC Batch: 51723  
Prep Batch: 44352

Date Analyzed: 2008-08-22  
QC Preparation: 2008-08-20

Analyzed By: DS  
Prepared By: DS

Param	LCS		Dil.	Spike Amount	Matrix Result	Rec.	
	Result	Units				Rec.	Limit
Naphthalene	0.0444	mg/L	1	0.0800	<0.0000730	56	10 - 141
2-Methylnaphthalene	0.0485	mg/L	1	0.0800	<0.0000509	61	50 - 150
1-Methylnaphthalene	0.0527	mg/L	1	0.0800	<0.0000748	66	50 - 150
Acenaphthylene	0.0573	mg/L	1	0.0800	<0.0000767	72	10 - 152
Acenaphthene	0.0544	mg/L	1	0.0800	<0.000142	68	10 - 151
Dibenzofuran	0.0542	mg/L	1	0.0800	<0.0000470	68	10 - 148

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Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Fluorene	0.0580	mg/L	1	0.0800	<0.0000569	72	10 - 172
Anthracene	0.0646	mg/L	1	0.0800	<0.0000876	81	22.5 - 172
Phenanthrene	0.0628	mg/L	1	0.0800	<0.0000552	78	19.6 - 172
Fluoranthene	0.0690	mg/L	1	0.0800	<0.0000954	86	17.3 - 187
Pyrene	0.0682	mg/L	1	0.0800	<0.0000497	85	14.9 - 199
Benzo(a)anthracene	0.0653	mg/L	1	0.0800	<0.0000328	82	19.4 - 185
Chrysene	0.0681	mg/L	1	0.0800	<0.0000990	85	18.4 - 188
Benzo(b)fluoranthene	0.0693	mg/L	1	0.0800	<0.0000684	87	10 - 193
Benzo(k)fluoranthene	0.0789	mg/L	1	0.0800	<0.0000830	99	27.8 - 196
Benzo(a)pyrene	0.0780	mg/L	1	0.0800	<0.0000549	98	12.4 - 205
Indeno(1,2,3-cd)pyrene	0.0814	mg/L	1	0.0800	<0.0000869	102	10 - 198
Dibenz(a,h)anthracene	0.0778	mg/L	1	0.0800	<0.0000605	97	10 - 172
Benzo(g,h,i)perylene	0.0770	mg/L	1	0.0800	<0.0000681	96	10 - 186

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Naphthalene	0.0439	mg/L	1	0.0800	<0.0000730	55	10 - 141	1	20
2-Methylnaphthalene	0.0480	mg/L	1	0.0800	<0.0000509	60	50 - 150	1	20
1-Methylnaphthalene	0.0517	mg/L	1	0.0800	<0.0000748	65	50 - 150	2	20
Acenaphthylene	0.0571	mg/L	1	0.0800	<0.0000767	71	10 - 152	0	20
Acenaphthene	0.0546	mg/L	1	0.0800	<0.000142	68	10 - 151	0	20
Dibenzofuran	0.0539	mg/L	1	0.0800	<0.0000470	67	10 - 148	1	20
Fluorene	0.0578	mg/L	1	0.0800	<0.0000569	72	10 - 172	0	20
Anthracene	0.0637	mg/L	1	0.0800	<0.0000876	80	22.5 - 172	1	20
Phenanthrene	0.0616	mg/L	1	0.0800	<0.0000552	77	19.6 - 172	2	20
Fluoranthene	0.0684	mg/L	1	0.0800	<0.0000954	86	17.3 - 187	1	20
Pyrene	0.0677	mg/L	1	0.0800	<0.0000497	85	14.9 - 199	1	20
Benzo(a)anthracene	0.0652	mg/L	1	0.0800	<0.0000328	82	19.4 - 185	0	20
Chrysene	0.0665	mg/L	1	0.0800	<0.0000990	83	18.4 - 188	2	20
Benzo(b)fluoranthene	0.0708	mg/L	1	0.0800	<0.0000684	88	10 - 193	2	20
Benzo(k)fluoranthene	0.0759	mg/L	1	0.0800	<0.0000830	95	27.8 - 196	4	20
Benzo(a)pyrene	0.0773	mg/L	1	0.0800	<0.0000549	97	12.4 - 205	1	20
Indeno(1,2,3-cd)pyrene	0.0829	mg/L	1	0.0800	<0.0000869	104	10 - 198	2	20
Dibenz(a,h)anthracene	0.0790	mg/L	1	0.0800	<0.0000605	99	10 - 172	2	20
Benzo(g,h,i)perylene	0.0780	mg/L	1	0.0800	<0.0000681	98	10 - 186	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Nitrobenzene-d5	0.0515	0.0512	mg/L	1	0.0800	64	64	10 - 165
2-Fluorobiphenyl	0.0563	0.0557	mg/L	1	0.0800	70	70	10 - 157
Terphenyl-d14	0.0784	0.0781	mg/L	1	0.0800	98	98	10 - 220

Report Date: August 25, 2008  
PLAINS044 SPL

Work Order: 8081408  
C.S. Caylor

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**Matrix Spike (MS-1) Spiked Sample: 170571**

QC Batch: 51583 Date Analyzed: 2008-08-19 Analyzed By: ER  
Prep Batch: 44231 QC Preparation: 2008-08-19 Prepared By: ER

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	<sup>2</sup> 0.0607	mg/L	1	0.100	<0.000208	61	66.8 - 128.4
Toluene	<sup>3</sup> 0.0590	mg/L	1	0.100	<0.000199	59	69 - 125.8
Ethylbenzene	<sup>4</sup> 0.0564	mg/L	1	0.100	<0.000347	56	69.7 - 126.1
Xylene	<sup>5</sup> 0.168	mg/L	1	0.300	<0.000468	56	69.2 - 128.8

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	0.0730	mg/L	1	0.100	<0.000208	73	66.8 - 128.4	18	20
Toluene	0.0720	mg/L	1	0.100	<0.000199	72	69 - 125.8	20	20
Ethylbenzene	<sup>6</sup> 0.0699	mg/L	1	0.100	<0.000347	70	69.7 - 126.1	21	20
Xylene	<sup>7</sup> 0.206	mg/L	1	0.300	<0.000468	69	69.2 - 128.8	20	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0830	0.0834	mg/L	1	0.1	83	83	73.4 - 117.3	
4-Bromofluorobenzene (4-BFB)	0.0830	0.0822	mg/L	1	0.1	83	82	74 - 129.4	

**Matrix Spike (MS-1) Spiked Sample: 171328**

QC Batch: 51676 Date Analyzed: 2008-08-21 Analyzed By: MT  
Prep Batch: 44308 QC Preparation: 2008-08-21 Prepared By: MT

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.0857	mg/L	1	0.100	<0.000119	86	33.8 - 135.2
Toluene	0.0867	mg/L	1	0.100	<0.000146	87	46.1 - 126.8
Ethylbenzene	0.0859	mg/L	1	0.100	<0.000119	86	39.6 - 129.9
Xylene	0.262	mg/L	1	0.300	<0.0000970	87	42.5 - 127.4

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

<sup>2</sup>Matrix spike recovery out of control limits. Use LCS/LCSD to demonstrate analysis is under control.

<sup>3</sup>Matrix spike recovery out of control limits. Use LCS/LCSD to demonstrate analysis is under control.

<sup>4</sup>Matrix spike recovery out of control limits. Use LCS/LCSD to demonstrate analysis is under control.

<sup>5</sup>Matrix spike recovery out of control limits. Use LCS/LCSD to demonstrate analysis is under control.

<sup>6</sup>Matrix spike RPD out of control limits. Use LCS/LCSD to demonstrate analysis is under control.

<sup>7</sup>Matrix spike recovery out of control limits. Use LCS/LCSD to demonstrate analysis is under control.

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Param	MSD		Spike		Matrix		Rec.		RPD
	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene	0.0949	mg/L	1	0.100	<0.000119	95	33.8 - 135.2	10	20
Toluene	0.0945	mg/L	1	0.100	<0.000146	94	46.1 - 126.8	9	20
Ethylbenzene	0.0941	mg/L	1	0.100	<0.000119	94	39.6 - 129.9	9	20
Xylene	0.288	mg/L	1	0.300	<0.0000970	96	42.5 - 127.4	9	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0988	0.103	mg/L	1	0.1	99	103	70.4 - 122.7
4-Bromofluorobenzene (4-BFB)	0.0908	0.104	mg/L	1	0.1	91	104	74.5 - 119.8

### **Standard (ICV-1)**

QC Batch: 51583

Date Analyzed: 2008-08-19

Analyzed By: ER

Param	Flag	Units	ICVs	ICVs	ICVs	Percent	Date
			True	Found	Percent	Recovery	
			Conc.	Conc.	Recovery	Recovery	Analyzed
Benzene		mg/L	0.100	0.0874	87	85 - 115	2008-08-19
Toluene		mg/L	0.100	0.0875	88	85 - 115	2008-08-19
Ethylbenzene		mg/L	0.100	0.0910	91	85 - 115	2008-08-19
Xylene		mg/L	0.300	0.261	87	85 - 115	2008-08-19

### **Standard (CCV-1)**

QC Batch: 51583

Date Analyzed: 2008-08-19

Analyzed By: ER

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date
			True	Found	Percent	Recovery	
Benzene		mg/L	0.100	0.0942	94	85 - 115	2008-08-19
Toluene		mg/L	0.100	0.0905	90	85 - 115	2008-08-19
Ethylbenzene		mg/L	0.100	0.0886	89	85 - 115	2008-08-19
Xylene		mg/L	0.300	0.266	89	85 - 115	2008-08-19

### **Standard (ICV-1)**

QC Batch: 51676

Date Analyzed: 2008-08-21

Analyzed By: MT

Param	Flag	Units	ICVs	ICVs	ICVs	Percent	Date
			True	Found	Percent	Recovery	
Benzene		mg/L	0.100	0.0928	93	85 - 115	2008-08-21

*continued* . . .

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*standard continued . . .*

Param	Flag	Units	ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Conc.	Conc.	Recovery	Limits	Analyzed			
Toluene		mg/L	0.100	0.0929	93	85 - 115	2008-08-21
Ethylbenzene		mg/L	0.100	0.0928	93	85 - 115	2008-08-21
Xylene		mg/L	0.300	0.284	95	85 - 115	2008-08-21

### **Standard (CCV-1)**

QC Batch: 51676

Date Analyzed: 2008-08-21

Analyzed By: MT

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date
			True	Found	Percent	Recovery	
Benzene		mg/L	0.100	0.0951	95	85 - 115	2008-08-21
Toluene		mg/L	0.100	0.0964	96	85 - 115	2008-08-21
Ethylbenzene		mg/L	0.100	0.0950	95	85 - 115	2008-08-21
Xylene		mg/L	0.300	0.293	98	85 - 115	2008-08-21

## Standard (CCV-2)

QC Batch: 51723

Date Analyzed: 2008-08-22

Analyzed By: DS

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date Analyzed
			True Conc.	Found Conc.	Percent Recovery	Recovery Limits	
Naphthalene		mg/L	60.0	55.5	92	80 - 120	2008-08-22
2-Methylnaphthalene		mg/L	60.0	53.4	89	80 - 120	2008-08-22
1-Methylnaphthalene		mg/L	60.0	53.9	90	80 - 120	2008-08-22
Acenaphthylene		mg/L	60.0	58.0	97	80 - 120	2008-08-22
Acenaphthene		mg/L	60.0	57.2	95	80 - 120	2008-08-22
Dibenzofuran		mg/L	60.0	60.0	100	80 - 120	2008-08-22
Fluorene		mg/L	60.0	64.5	108	80 - 120	2008-08-22
Anthracene		mg/L	60.0	58.5	98	80 - 120	2008-08-22
Phenanthrene		mg/L	60.0	56.7	94	80 - 120	2008-08-22
Fluoranthene		mg/L	60.0	55.9	93	80 - 120	2008-08-22
Pyrene		mg/L	60.0	61.2	102	80 - 120	2008-08-22
Benzo(a)anthracene		mg/L	60.0	56.2	94	80 - 120	2008-08-22
Chrysene		mg/L	60.0	57.5	96	80 - 120	2008-08-22
Benzo(b)fluoranthene		mg/L	60.0	59.8	100	80 - 120	2008-08-22
Benzo(k)fluoranthene		mg/L	60.0	62.2	104	80 - 120	2008-08-22
Benzo(a)pyrene		mg/L	60.0	62.8	105	80 - 120	2008-08-22
Indeno(1,2,3-cd)pyrene		mg/L	60.0	68.3	114	80 - 120	2008-08-22
Dibenzo(a,h)anthracene		mg/L	60.0	68.9	115	80 - 120	2008-08-22
Benzo(g,h,i)perylene		mg/L	60.0	65.3	109	80 - 120	2008-08-22

Report Date: August 25, 2008  
PLAINS044 SPL

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C.S. Caylor

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5		57.9	mg/L	1	60.0	96	80 - 120
2-Fluorobiphenyl		57.4	mg/L	1	60.0	96	80 - 120
Terphenyl-d14		60.0	mg/L	1	60.0	100	80 - 120

# TraceAnalysis, Inc.

email: lab@traceanalysis.com

Company Name:

*Calenelle Peck*  
(Street, City, Zip)  
2001 Parkin Hwy.

Address:

City, Zip:

Contact Person:

Shane Smith

Invoice to:

(If different from above) **Carville Reynolds PLAINS**

Project #:

PLAINS0004SPL

Project Location (including state):

Lewiston, N.M.

Project Name:

2002-10250

Sampler Signature:

*C. S. Cayler*

Sampled by:

Lance Reynolds, Carl Vassar

LAB Order ID # **8081408**

Page **1** of **2**

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Fax (817) 560-4336

## ANALYSIS REQUEST (Circle or Specify Method No.)

Phone #: **432-522-2133**  
Fax #:

Turn Around Time if different from standard

Hold

FIELD CODE	MATRIX	# CONTAINERS	VOLUME / AMOUNT	METHOD	SAMPLING	TIME	DATE	ICP	HCl	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	NaOH	ICE	NONE	SLUDGE	WATER	SOIL	AIR	PROJECT NAME:	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/2007	TCLP Volatiles	TCLP Semi-Volatile	TCLP Pesticides	RCI	GCMS Vol. 8260B / 624	GCMS Semivol. 8270C / 625	PCBs 8082 / 608	Pesticides 8081A / 608	BOD, TSS, PH	Moisture Content	Turn Around Time if different from standard
MW-9	MW-6	4	Yea PAH	X	8/13/08 1202	1050	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-10	MW-4	4	X	X	8/13/08 1202	1057	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-11	MW-4	4	X	X	8/13/08 1202	1105	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-12	MW-4	4	X	X	8/13/08 1202	1139	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-13	MW-4	4	X	X	8/13/08 1202	1145	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-14	MW-4	4	X	X	8/13/08 1202	1153	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-15	MW-4	4	X	X	8/13/08 1202	1214	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-16	MW-4	4	X	X	8/13/08 1202	1105	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-17	MW-4	4	X	X	8/13/08 1202	1149	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-18	MW-4	4	X	X	8/13/08 1202	1128	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

REMARKS:	ABUSE	REMARKS:	ABUSE	REMARKS:	REMARKS:
<i>BEST BY Month 15 8/14/08 8:45 AM</i>	<i>Turn Around Time if different from standard</i>	<i>Turn Around Time if different from standard</i>	<i>Turn Around Time if different from standard</i>	<i>Turn Around Time if different from standard</i>	<i>Turn Around Time if different from standard</i>
<i>Received by: <u>John Doe</u> Date: 8/14/08 Temp °C: 25</i>	<i>Received by: <u>John Doe</u> Date: 8/14/08 Temp °C: 25</i>	<i>Received by: <u>John Doe</u> Date: 8/14/08 Temp °C: 25</i>	<i>Received by: <u>John Doe</u> Date: 8/14/08 Temp °C: 25</i>	<i>Received by: <u>John Doe</u> Date: 8/14/08 Temp °C: 25</i>	<i>Received by: <u>John Doe</u> Date: 8/14/08 Temp °C: 25</i>
<input type="checkbox"/> Dry Weight Basis Required	<input type="checkbox"/> TRRP Report Required	<input type="checkbox"/> Check If Special Reporting Limits Are Needed	<input type="checkbox"/> Check If Special Reporting Limits Are Needed	<input type="checkbox"/> Check If Special Reporting Limits Are Needed	<input type="checkbox"/> Check If Special Reporting Limits Are Needed
<i>Carrier # <u>Carrier 10</u></i>					

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

ORIGINAL COPY

# TRACEANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

## NELAP Certifications

Lubbock: T104704219-08-TX  
LELAP-02003  
Kansas E-10317

El Paso: T104704221-08-TX  
LELAP-02002

Midland: T104704392-08-TX

## Analytical and Quality Control Report

Shanna Smith  
Talon LPE-Amarillo  
921 North Bivins  
Amarillo, TX, 79107

Report Date: August 25, 2008

Work Order: 8081436



Project Location: Lovington, NM  
Project Name: C.S. Cayler  
Project Number: PLAINS044SPL  
SRS #: 2002-10250

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
170717	MW-6	water	2008-08-14	09:14	2008-08-14
170718	MW-12	water	2008-08-14	09:26	2008-08-14
170719	MW-13	water	2008-08-14	09:29	2008-08-14
170720	MW-16	water	2008-08-14	09:16	2008-08-14
170721	MW-17	water	2008-08-14	09:01	2008-08-14
170722	MW-18	water	2008-08-14	09:41	2008-08-14

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 11 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



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Dr. Blair Leftwich, Director

**Standard Flags**

**B** - The sample contains less than ten times the concentration found in the method blank.

## Case Narrative

Samples for project C.S. Cayler were received by TraceAnalysis, Inc. on 2008-08-14 and assigned to work order 8081436. Samples for work order 8081436 were received intact at a temperature of 3.3 deg. C.

Samples were analyzed for the following tests using their respective methods.

Test	Method
PAH	S 8270C

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 8081436 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

## Analytical Report

Sample: 170717 - MW-6

Laboratory: Lubbock

Analysis: PAH

QC Batch: 51723

Prep Batch: 44352

Analytical Method: S 8270C

Date Analyzed: 2008-08-22

Sample Preparation: 2008-08-20

Prep Method: S 3510C

Analyzed By: DS

Prepared By: DS

Parameter	Flag	Result	Units	Dilution	RL
Naphthalene		<0.000200	mg/L	1	0.000200
2-Methylnaphthalene		<0.000200	mg/L	1	0.000200
1-Methylnaphthalene		<0.000200	mg/L	1	0.000200
Acenaphthylene		<0.000200	mg/L	1	0.000200
Acenaphthene		<0.000200	mg/L	1	0.000200
Dibenzofuran		<0.000200	mg/L	1	0.000200
Fluorene		<0.000200	mg/L	1	0.000200
Anthracene		<0.000200	mg/L	1	0.000200
Phenanthrene		<0.000200	mg/L	1	0.000200
Fluoranthene		<0.000200	mg/L	1	0.000200
Pyrene		<0.000200	mg/L	1	0.000200
Benzo(a)anthracene		<0.000200	mg/L	1	0.000200
Chrysene		<0.000200	mg/L	1	0.000200
Benzo(b)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(k)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(a)pyrene		<0.000200	mg/L	1	0.000200
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	1	0.000200
Dibenzo(a,h)anthracene		<0.000200	mg/L	1	0.000200
Benzo(g,h,i)perylene		<0.000200	mg/L	1	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0648	mg/L	1	0.0800	81	37.4 - 123
2-Fluorobiphenyl		0.0656	mg/L	1	0.0800	82	34.3 - 130
Terphenyl-d14		0.0782	mg/L	1	0.0800	98	10 - 252

Sample: 170718 - MW-12

Laboratory: Lubbock

Analysis: PAH

QC Batch: 51723

Prep Batch: 44352

Analytical Method: S 8270C

Date Analyzed: 2008-08-22

Sample Preparation: 2008-08-20

Prep Method: S 3510C

Analyzed By: DS

Prepared By: DS

*continued . . .*

Report Date: August 25, 2008  
PLAINS044SPL

Work Order: 8081436  
C.S. Cayler

Page Number: 5 of 11  
Lovington, NM

sample 170718 continued ...

Parameter	Flag	Result	Units	Dilution	RL		
Parameter	Flag	Result	Units	Dilution	RL		
Naphthalene		<b>0.0698</b>	mg/L	1	0.000200		
2-Methylnaphthalene		<b>0.0421</b>	mg/L	1	0.000200		
1-Methylnaphthalene		<b>0.0378</b>	mg/L	1	0.000200		
Acenaphthylene		<0.000200	mg/L	1	0.000200		
Acenaphthene		<0.000200	mg/L	1	0.000200		
Dibenzofuran		<b>0.00264</b>	mg/L	1	0.000200		
Fluorene		<b>0.00190</b>	mg/L	1	0.000200		
Anthracene		<0.000200	mg/L	1	0.000200		
Phenanthrene		<b>0.00158</b>	mg/L	1	0.000200		
Fluoranthene		<0.000200	mg/L	1	0.000200		
Pyrene		<0.000200	mg/L	1	0.000200		
Benzo(a)anthracene		<0.000200	mg/L	1	0.000200		
Chrysene		<0.000200	mg/L	1	0.000200		
Benzo(b)fluoranthene		<0.000200	mg/L	1	0.000200		
Benzo(k)fluoranthene		<0.000200	mg/L	1	0.000200		
Benzo(a)pyrene		<0.000200	mg/L	1	0.000200		
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	1	0.000200		
Dibenzo(a,h)anthracene		<0.000200	mg/L	1	0.000200		
Benzo(g,h,i)perylene		<0.000200	mg/L	1	0.000200		
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0458	mg/L	1	0.0800	57	37.4 - 123
2-Fluorobiphenyl		0.0505	mg/L	1	0.0800	63	34.3 - 130
Terphenyl-d14		0.0680	mg/L	1	0.0800	85	10 - 252

Sample: 170719 - MW-13

Laboratory: Lubbock  
Analysis: PAH  
QC Batch: 51723  
Prep Batch: 44352

Analytical Method: S 8270C  
Date Analyzed: 2008-08-22  
Sample Preparation: 2008-08-20

Prep Method: S 3510C  
Analyzed By: DS  
Prepared By: DS

Parameter	Flag	Result	Units	Dilution	RL
Naphthalene		<0.000200	mg/L	1	0.000200
2-Methylnaphthalene		<0.000200	mg/L	1	0.000200
1-Methylnaphthalene		<0.000200	mg/L	1	0.000200
Acenaphthylene		<0.000200	mg/L	1	0.000200

continued ...

*sample 170719 continued ...*

Parameter	Flag	Result	Units	Dilution	RL
Acenaphthene		<0.000200	mg/L	1	0.000200
Dibenzofuran		<0.000200	mg/L	1	0.000200
Fluorene		<0.000200	mg/L	1	0.000200
Anthracene		<0.000200	mg/L	1	0.000200
Phenanthrene		<0.000200	mg/L	1	0.000200
Fluoranthene		<0.000200	mg/L	1	0.000200
Pyrene		<0.000200	mg/L	1	0.000200
Benzo(a)anthracene		<0.000200	mg/L	1	0.000200
Chrysene		<0.000200	mg/L	1	0.000200
Benzo(b)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(k)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(a)pyrene		<0.000200	mg/L	1	0.000200
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	1	0.000200
Dibenzo(a,h)anthracene		<0.000200	mg/L	1	0.000200
Benzo(g,h,i)perylene		<0.000200	mg/L	1	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0396	mg/L	1	0.0800	50	37.4 - 123
2-Fluorobiphenyl		0.0424	mg/L	1	0.0800	53	34.3 - 130
Terphenyl-d14		0.0814	mg/L	1	0.0800	102	10 - 252

### Sample: 170720 - MW-16

Laboratory: Lubbock	Analysis: PAH	Analytical Method: S 8270C	Prep Method: S 3510C
QC Batch: 51723		Date Analyzed: 2008-08-22	Analyzed By: DS
Prep Batch: 44352		Sample Preparation: 2008-08-20	Prepared By: DS

Parameter	Flag	Result	Units	Dilution	RL
Naphthalene		<0.000200	mg/L	1	0.000200
2-Methylnaphthalene		<0.000200	mg/L	1	0.000200
1-Methylnaphthalene		<0.000200	mg/L	1	0.000200
Acenaphthylene		<0.000200	mg/L	1	0.000200
Acenaphthene		<0.000200	mg/L	1	0.000200
Dibenzofuran		<0.000200	mg/L	1	0.000200
Fluorene		<0.000200	mg/L	1	0.000200
Anthracene		<0.000200	mg/L	1	0.000200
Phenanthrene		<0.000200	mg/L	1	0.000200
Fluoranthene		<0.000200	mg/L	1	0.000200
Pyrene		<0.000200	mg/L	1	0.000200

*continued ...*

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sample 170720 continued . . .

Parameter	Flag	Result	Units	Dilution	RL
Benzo(a)anthracene		<0.000200	mg/L	1	0.000200
Chrysene		<0.000200	mg/L	1	0.000200
Benzo(b)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(k)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(a)pyrene		<0.000200	mg/L	1	0.000200
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	1	0.000200
Dibenzo(a,h)anthracene		<0.000200	mg/L	1	0.000200
Benzo(g,h,i)perylene		<0.000200	mg/L	1	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0423	mg/L	1	0.0800	53	37.4 - 123
2-Fluorobiphenyl		0.0473	mg/L	1	0.0800	59	34.3 - 130
Terphenyl-d14		0.0767	mg/L	1	0.0800	96	10 - 252

Sample: 170721 - MW-17

Laboratory: Lubbock  
Analysis: PAH  
QC Batch: 51723  
Prep Batch: 44352

Analytical Method: S 8270C  
Date Analyzed: 2008-08-22  
Sample Preparation: 2008-08-20

Prep Method: S 3510C  
Analyzed By: DS  
Prepared By: DS

Parameter	Flag	Result	Units	Dilution	RL
Naphthalene		<0.000200	mg/L	1	0.000200
2-Methylnaphthalene		<0.000200	mg/L	1	0.000200
1-Methylnaphthalene		<0.000200	mg/L	1	0.000200
Acenaphthylene		<0.000200	mg/L	1	0.000200
Acenaphthene		<0.000200	mg/L	1	0.000200
Dibenzofuran		<0.000200	mg/L	1	0.000200
Fluorene		<0.000200	mg/L	1	0.000200
Anthracene		<0.000200	mg/L	1	0.000200
Phenanthrene		<0.000200	mg/L	1	0.000200
Fluoranthene		<0.000200	mg/L	1	0.000200
Pyrene		<0.000200	mg/L	1	0.000200
Benzo(a)anthracene		<0.000200	mg/L	1	0.000200
Chrysene		<0.000200	mg/L	1	0.000200
Benzo(b)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(k)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(a)pyrene		<0.000200	mg/L	1	0.000200
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	1	0.000200
Dibenzo(a,h)anthracene		<0.000200	mg/L	1	0.000200

*continued* . . .

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sample 170721 continued ...

Parameter	Flag	Result	Units	Dilution	RL
Benzo(g,h,i)perylene		<0.000200	mg/L	1	0.000200
Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery
Nitrobenzene-d5		0.0897	mg/L	0.0800	112
2-Fluorobiphenyl		0.0963	mg/L	0.0800	120
Terphenyl-d14		0.143	mg/L	0.0800	179

**Sample: 170722 - MW-18**

Laboratory: Lubbock

Analysis: PAH

QC Batch: 51723

Prep Batch: 44352

Analytical Method: S 8270C

Date Analyzed: 2008-08-22

Sample Preparation: 2008-08-20

Prep Method: S 3510C

Analyzed By: DS

Prepared By: DS

Parameter	Flag	Result	Units	Dilution	RL
Naphthalene		<0.000200	mg/L	1	0.000200
2-Methylnaphthalene		<0.000200	mg/L	1	0.000200
1-Methylnaphthalene		<0.000200	mg/L	1	0.000200
Acenaphthylene		<0.000200	mg/L	1	0.000200
Acenaphthene		<0.000200	mg/L	1	0.000200
Dibenzofuran		<0.000200	mg/L	1	0.000200
Fluorene		<0.000200	mg/L	1	0.000200
Anthracene		<0.000200	mg/L	1	0.000200
Phenanthrene		<0.000200	mg/L	1	0.000200
Fluoranthene		<0.000200	mg/L	1	0.000200
Pyrene		<0.000200	mg/L	1	0.000200
Benzo(a)anthracene		<0.000200	mg/L	1	0.000200
Chrysene		<0.000200	mg/L	1	0.000200
Benzo(b)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(k)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(a)pyrene		<0.000200	mg/L	1	0.000200
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	1	0.000200
Dibenzo(a,h)anthracene		<0.000200	mg/L	1	0.000200
Benzo(g,h,i)perylene		<0.000200	mg/L	1	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0340	mg/L	1	0.0800	42	37.4 - 123
2-Fluorobiphenyl		0.0403	mg/L	1	0.0800	50	34.3 - 130
Terphenyl-d14		0.0638	mg/L	1	0.0800	80	10 - 252

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**Method Blank (1) QC Batch: 51723**

QC Batch: 51723                          Date Analyzed: 2008-08-22                          Analyzed By: DS  
Prep Batch: 44352                          QC Preparation: 2008-08-20                          Prepared By: DS

Parameter	Flag	MDL	Result	Units	RL
Naphthalene		<0.0000730		mg/L	0.0002
2-Methylnaphthalene		<0.0000509		mg/L	0.0002
1-Methylnaphthalene		<0.0000748		mg/L	0.0002
Acenaphthylene		<0.0000767		mg/L	0.0002
Acenaphthene		<0.000142		mg/L	0.0002
Dibenzofuran		<0.0000470		mg/L	0.0002
Fluorene		<0.0000569		mg/L	0.0002
Anthracene		<0.0000876		mg/L	0.0002
Phenanthrene		<0.0000552		mg/L	0.0002
Fluoranthene		<0.0000954		mg/L	0.0002
Pyrene		<0.0000497		mg/L	0.0002
Benzo(a)anthracene		<0.0000328		mg/L	0.0002
Chrysene		<0.0000990		mg/L	0.0002
Benzo(b)fluoranthene		<0.0000684		mg/L	0.0002
Benzo(k)fluoranthene		<0.0000830		mg/L	0.0002
Benzo(a)pyrene		<0.0000549		mg/L	0.0002
Indeno(1,2,3-cd)pyrene		<0.0000869		mg/L	0.0002
Dibenzo(a,h)anthracene		<0.0000605		mg/L	0.0002
Benzo(g,h,i)perylene		<0.0000681		mg/L	0.0002

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0432	mg/L	1	0.0800	54	10 - 146
2-Fluorobiphenyl		0.0423	mg/L	1	0.0800	53	10 - 141
Terphenyl-d14		0.0718	mg/L	1	0.0800	90	10 - 266

**Laboratory Control Spike (LCS-1)**

QC Batch: 51723                          Date Analyzed: 2008-08-22                          Analyzed By: DS  
Prep Batch: 44352                          QC Preparation: 2008-08-20                          Prepared By: DS

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Naphthalene	0.0444	mg/L	1	0.0800	<0.0000730	56	10 - 141
2-Methylnaphthalene	0.0485	mg/L	1	0.0800	<0.0000509	61	50 - 150
1-Methylnaphthalene	0.0527	mg/L	1	0.0800	<0.0000748	66	50 - 150
Acenaphthylene	0.0573	mg/L	1	0.0800	<0.0000767	72	10 - 152
Acenaphthene	0.0544	mg/L	1	0.0800	<0.000142	68	10 - 151

*continued ...*

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*control spikes continued . . .*

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Dibenzofuran	0.0542	mg/L	1	0.0800	<0.0000470	68	10 - 148
Fluorene	0.0580	mg/L	1	0.0800	<0.0000569	72	10 - 172
Anthracene	0.0646	mg/L	1	0.0800	<0.0000876	81	22.5 - 172
Phenanthrene	0.0628	mg/L	1	0.0800	<0.0000552	78	19.6 - 172
Fluoranthene	0.0690	mg/L	1	0.0800	<0.0000954	86	17.3 - 187
Pyrene	0.0682	mg/L	1	0.0800	<0.0000497	85	14.9 - 199
Benzo(a)anthracene	0.0653	mg/L	1	0.0800	<0.0000328	82	19.4 - 185
Chrysene	0.0681	mg/L	1	0.0800	<0.0000990	85	18.4 - 188
Benzo(b)fluoranthene	0.0693	mg/L	1	0.0800	<0.0000684	87	10 - 193
Benzo(k)fluoranthene	0.0789	mg/L	1	0.0800	<0.0000830	99	27.8 - 196
Benzo(a)pyrene	0.0780	mg/L	1	0.0800	<0.0000549	98	12.4 - 205
Indeno(1,2,3-cd)pyrene	0.0814	mg/L	1	0.0800	<0.0000869	102	10 - 198
Dibenzo(a,h)anthracene	0.0778	mg/L	1	0.0800	<0.0000605	97	10 - 172
Benzo(g,h,i)perylene	0.0770	mg/L	1	0.0800	<0.0000681	96	10 - 186

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Limit	RPD Limit
Naphthalene	0.0439	mg/L	1	0.0800	<0.0000730	55	10 - 141
2-Methylnaphthalene	0.0480	mg/L	1	0.0800	<0.0000509	60	50 - 150
1-Methylnaphthalene	0.0517	mg/L	1	0.0800	<0.0000748	65	50 - 150
Acenaphthylene	0.0571	mg/L	1	0.0800	<0.0000767	71	10 - 152
Acenaphthene	0.0546	mg/L	1	0.0800	<0.000142	68	10 - 151
Dibenzofuran	0.0539	mg/L	1	0.0800	<0.0000470	67	10 - 148
Fluorene	0.0578	mg/L	1	0.0800	<0.0000569	72	10 - 172
Anthracene	0.0637	mg/L	1	0.0800	<0.0000876	80	22.5 - 172
Phenanthrene	0.0616	mg/L	1	0.0800	<0.0000552	77	19.6 - 172
Fluoranthene	0.0684	mg/L	1	0.0800	<0.0000954	86	17.3 - 187
Pyrene	0.0677	mg/L	1	0.0800	<0.0000497	85	14.9 - 199
Benzo(a)anthracene	0.0652	mg/L	1	0.0800	<0.0000328	82	19.4 - 185
Chrysene	0.0665	mg/L	1	0.0800	<0.0000990	83	18.4 - 188
Benzo(b)fluoranthene	0.0708	mg/L	1	0.0800	<0.0000684	88	10 - 193
Benzo(k)fluoranthene	0.0759	mg/L	1	0.0800	<0.0000830	95	27.8 - 196
Benzo(a)pyrene	0.0773	mg/L	1	0.0800	<0.0000549	97	12.4 - 205
Indeno(1,2,3-cd)pyrene	0.0829	mg/L	1	0.0800	<0.0000869	104	10 - 198
Dibenzo(a,h)anthracene	0.0790	mg/L	1	0.0800	<0.0000605	99	10 - 172
Benzo(g,h,i)perylene	0.0780	mg/L	1	0.0800	<0.0000681	98	10 - 186

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Nitrobenzene-d5	0.0515	0.0512	mg/L	1	0.0800	64	64	10 - 165
2-Fluorobiphenyl	0.0563	0.0557	mg/L	1	0.0800	70	70	10 - 157
Terphenyl-d14	0.0784	0.0781	mg/L	1	0.0800	98	98	10 - 220

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### Standard (CCV-2)

QC Batch: 51723

Date Analyzed: 2008-08-22

Analyzed By: DS

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		mg/L	60.0	55.5	92	80 - 120	2008-08-22
2-Methylnaphthalene		mg/L	60.0	53.4	89	80 - 120	2008-08-22
1-Methylnaphthalene		mg/L	60.0	53.9	90	80 - 120	2008-08-22
Acenaphthylene		mg/L	60.0	58.0	97	80 - 120	2008-08-22
Acenaphthene		mg/L	60.0	57.2	95	80 - 120	2008-08-22
Dibenzofuran		mg/L	60.0	60.0	100	80 - 120	2008-08-22
Fluorene		mg/L	60.0	64.5	108	80 - 120	2008-08-22
Anthracene		mg/L	60.0	58.5	98	80 - 120	2008-08-22
Phenanthrene		mg/L	60.0	56.7	94	80 - 120	2008-08-22
Fluoranthene		mg/L	60.0	55.9	93	80 - 120	2008-08-22
Pyrene		mg/L	60.0	61.2	102	80 - 120	2008-08-22
Benzo(a)anthracene		mg/L	60.0	56.2	94	80 - 120	2008-08-22
Chrysene		mg/L	60.0	57.5	96	80 - 120	2008-08-22
Benzo(b)fluoranthene		mg/L	60.0	59.8	100	80 - 120	2008-08-22
Benzo(k)fluoranthene		mg/L	60.0	62.2	104	80 - 120	2008-08-22
Benzo(a)pyrene		mg/L	60.0	62.8	105	80 - 120	2008-08-22
Indeno(1,2,3-cd)pyrene		mg/L	60.0	68.3	114	80 - 120	2008-08-22
Dibenzo(a,h)anthracene		mg/L	60.0	68.9	115	80 - 120	2008-08-22
Benzo(g,h,i)perylene		mg/L	60.0	65.3	109	80 - 120	2008-08-22

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5		57.9	mg/L	1	60.0	96	80 - 120
2-Fluorobiphenyl		57.4	mg/L	1	60.0	96	80 - 120
Terphenyl-d14		60.0	mg/L	1	60.0	100	80 - 120



# TRACEANALYSIS, INC.

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6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260

E-Mail: lab@traceanalysis.com

## Certifications

WBENC: 237019

HUB: 1752439743100-86536  
NCTRCA WFWB38444Y0909

DBE: VN 20657

## NELAP Certifications

Lubbock: T104704219-08-TX  
LELAP-02003  
Kansas E-10317

El Paso: T104704221-08-TX  
LELAP-02002

Midland: T104704392-08-TX

## Analytical and Quality Control Report

Shanna Smith  
Talon LPE-Amarillo  
921 North Bivins  
Amarillo, TX, 79107

Report Date: October 1, 2008

Work Order: 8092403



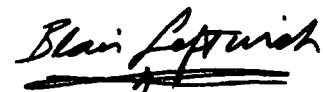
Project Location: Hobbs, NM  
Project Name: C.S. Cayler  
Project Number: PLAINS044SPL  
SRS #: 2002-10250

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
			2008-09-23	16:30	2008-09-24
174432	MW-4	water	2008-09-23	14:15	2008-09-24
174433	MW-5	water	2008-09-23	17:00	2008-09-24
174434	MW-1A	water	2008-09-23	14:40	2008-09-24
174435	MW-3	water			

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 22 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



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Dr. Blair Leftwich, Director

**Standard Flags**

**B** - The sample contains less than ten times the concentration found in the method blank.

## Case Narrative

Samples for project C.S. Cayler were received by TraceAnalysis, Inc. on 2008-09-24 and assigned to work order 8092403. Samples for work order 8092403 were received intact without headspace and at a temperature of 2.0 deg. C.

Samples were analyzed for the following tests using their respective methods.

Test	Method
BTEX	S 8021B
PAH	S 8270C
TPH DRO	Mod. 8015B
TPH GRO	S 8015B

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 8092403 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

## Analytical Report

Sample: 174432 - MW-4

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 52712  
Prep Batch: 45164

Analytical Method: S 8021B  
Date Analyzed: 2008-09-24  
Sample Preparation: 2008-09-23

Prep Method: S 5030B  
Analyzed By: DC  
Prepared By: DC

Parameter	Flag	Result	Units	Dilution	RL
Benzene		31.2	mg/L	200	0.00100
Toluene		31.1	mg/L	200	0.00100
Ethylbenzene		8.39	mg/L	200	0.00100
Xylene		18.9	mg/L	200	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		17.4	mg/L	200	20.0	87	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		19.0	mg/L	200	20.0	95	52 - 124.1

Sample: 174432 - MW-4

Laboratory: Lubbock  
Analysis: PAH  
QC Batch: 52849  
Prep Batch: 45290

Analytical Method: S 8270C  
Date Analyzed: 2008-09-29  
Sample Preparation: 2008-09-26

Prep Method: S 3510C  
Analyzed By: DS  
Prepared By: DS

Parameter	Flag	Result	Units	Dilution	RL
Naphthalene	1	7.27	mg/L	50	0.000200
2-Methylnaphthalene	2	17.8	mg/L	50	0.000200
1-Methylnaphthalene	3	15.1	mg/L	50	0.000200
Acenaphthylene		<0.0100	mg/L	50	0.000200
Acenaphthene		<0.0100	mg/L	50	0.000200
Dibenzofuran		1.28	mg/L	50	0.000200
Fluorene		1.56	mg/L	50	0.000200
Anthracene		<0.0100	mg/L	50	0.000200
Phenanthrene		2.03	mg/L	50	0.000200
Fluoranthene		0.0689	mg/L	50	0.000200
Pyrene		0.124	mg/L	50	0.000200
Benzo(a)anthracene		<0.0100	mg/L	50	0.000200
Chrysene		0.259	mg/L	50	0.000200

continued ...

<sup>1</sup>Estimated concentration value greater than standard range.

<sup>2</sup>Estimated concentration value greater than standard range.

<sup>3</sup>Estimated concentration value greater than standard range.

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*sample 174432 continued . . .*

Parameter	Flag	Result	Units	Dilution	RL
Benzo(b)fluoranthene		<b>0.0326</b>	mg/L	50	0.000200
Benzo(k)fluoranthene		<0.0100	mg/L	50	0.000200
Benzo(a)pyrene		<0.0100	mg/L	50	0.000200
Indeno(1,2,3-cd)pyrene		<0.0100	mg/L	50	0.000200
Dibenzo(a,h)anthracene		<0.0100	mg/L	50	0.000200
Benzo(g,h,i)perylene		<0.0100	mg/L	50	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5	4	0.142	mg/L	50	0.0800	178	37.4 - 123
2-Fluorobiphenyl		0.0581	mg/L	50	0.0800	73	34.3 - 130
Terphenyl-d14		0.0723	mg/L	50	0.0800	90	10 - 252

Sample: 174432 - MW-4

Laboratory: Midland  
Analysis: TPH DRO  
QC Batch: 52764  
Prep Batch: 45205

Analytical Method: Mod. 8015B  
Date Analyzed: 2008-09-27  
Sample Preparation: 2008-09-26

Prep Method: N/A  
Analyzed By: LD  
Prepared By: LD

Parameter	Flag	Result	Units	Dilution	RL
DRO		343	mg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	5	32.0	mg/L	1	10.0	320	70 - 130

Sample: 174432 - MW-4

Laboratory: Midland  
Analysis: TPH GRO  
QC Batch: 52720  
Prep Batch: 45164

Analytical Method: S 8015B  
Date Analyzed: 2008-09-24  
Sample Preparation: 2008-09-23

Prep Method: S 5030B  
Analyzed By: DC  
Prepared By: DC

Parameter	Flag	Result	Units	Dilution	RL
GRO		363	mg/L	200	0.100

<sup>4</sup>8270 Only - One basic surrogate is out of control limits. The other two basic surrogates show extraction was performed properly.

<sup>5</sup> High surrogate recovery due to peak interference.

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		18.5	mg/L	200	20.0	92	70 - 130
4-Bromofluorobenzene (4-BFB)		20.4	mg/L	200	20.0	102	70 - 130

**Sample: 174433 - MW-5**

Laboratory: Midland

Analysis: BTEX

Analytical Method: S 8021B

Prep Method: S 5030B

QC Batch: 52712

Date Analyzed: 2008-09-24

Analyzed By: DC

Prep Batch: 45164

Sample Preparation: 2008-09-23

Prepared By: DC

Parameter	Flag	Result	Units	Dilution	RL
Benzene		11.9	mg/L	50	0.00100
Toluene		5.80	mg/L	50	0.00100
Ethylbenzene		1.08	mg/L	50	0.00100
Xylene		1.92	mg/L	50	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4.22	mg/L	50	5.00	84	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		4.50	mg/L	50	5.00	90	52 - 124.1

**Sample: 174433 - MW-5**

Laboratory: Lubbock

Analysis: PAH

Analytical Method: S 8270C

Prep Method: S 3510C

QC Batch: 52849

Date Analyzed: 2008-09-29

Analyzed By: DS

Prep Batch: 45290

Sample Preparation: 2008-09-26

Prepared By: DS

Parameter	Flag	Result	Units	Dilution	RL
Naphthalene		0.0698	mg/L	1	0.000200
2-Methylnaphthalene		0.0690	mg/L	1	0.000200
1-Methylnaphthalene		0.0613	mg/L	1	0.000200
Acenaphthylene		<0.000200	mg/L	1	0.000200
Acenaphthene		<0.000200	mg/L	1	0.000200
Dibenzofuran		0.00616	mg/L	1	0.000200
Fluorene		0.00678	mg/L	1	0.000200
Anthracene		<0.000200	mg/L	1	0.000200
Phenanthrene		0.00683	mg/L	1	0.000200
Fluoranthene		<0.000200	mg/L	1	0.000200
Pyrene		0.000314	mg/L	1	0.000200
Benzo(a)anthracene		<0.000200	mg/L	1	0.000200

*continued ...*

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sample 174433 continued ...

Parameter	Flag	Result	Units	Dilution	RL
Chrysene		<0.000200	mg/L	1	0.000200
Benzo(b)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(k)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(a)pyrene		<0.000200	mg/L	1	0.000200
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	1	0.000200
Dibenzo(a,h)anthracene		<0.000200	mg/L	1	0.000200
Benzo(g,h,i)perylene		<0.000200	mg/L	1	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0597	mg/L	1	0.0800	75	37.4 - 123
2-Fluorobiphenyl		0.0510	mg/L	1	0.0800	64	34.3 - 130
Terphenyl-d14		0.0752	mg/L	1	0.0800	94	10 - 252

**Sample: 174433 - MW-5**

Laboratory: Midland  
Analysis: TPH DRO  
QC Batch: 52764  
Prep Batch: 45205

Analytical Method: Mod. 8015B  
Date Analyzed: 2008-09-27  
Sample Preparation: 2008-09-26

Prep Method: N/A  
Analyzed By: LD  
Prepared By: LD

Parameter	Flag	Result	Units	Dilution	RL
DRO		70.8	mg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	6	19.3	mg/L	1	10.0	193	70 - 130

**Sample: 174433 - MW-5**

Laboratory: Midland  
Analysis: TPH GRO  
QC Batch: 52720  
Prep Batch: 45164

Analytical Method: S 8015B  
Date Analyzed: 2008-09-24  
Sample Preparation: 2008-09-23

Prep Method: S 5030B  
Analyzed By: DC  
Prepared By: DC

Parameter	Flag	Result	Units	Dilution	RL
GRO		57.4	mg/L	50	0.100

<sup>6</sup>High surrogate recovery due to peak interference.

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4.41	mg/L	50	5.00	88	70 - 130
4-Bromofluorobenzene (4-BFB)		4.57	mg/L	50	5.00	91	70 - 130

**Sample: 174434 - MW-1A**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 52743  
Prep Batch: 45206

Analytical Method: S 8021B  
Date Analyzed: 2008-09-25  
Sample Preparation: 2008-09-25

Prep Method: S 5030B  
Analyzed By: DC  
Prepared By: DC

Parameter	Flag	Result	Units	Dilution	RL
Benzene		20.1	mg/L	100	0.00100
Toluene		13.9	mg/L	100	0.00100
Ethylbenzene		2.03	mg/L	100	0.00100
Xylene		4.58	mg/L	100	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		8.64	mg/L	100	10.0	86	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		8.95	mg/L	100	10.0	90	52 - 124.1

**Sample: 174434 - MW-1A**

Laboratory: Lubbock  
Analysis: PAH  
QC Batch: 52849  
Prep Batch: 45290

Analytical Method: S 8270C  
Date Analyzed: 2008-09-29  
Sample Preparation: 2008-09-26

Prep Method: S 3510C  
Analyzed By: DS  
Prepared By: DS

Parameter	Flag	Result	Units	Dilution	RL
Naphthalene	7	0.587	mg/L	5	0.000200
2-Methylnaphthalene	8	1.34	mg/L	5	0.000200
1-Methylnaphthalene	9	1.13	mg/L	5	0.000200
Acenaphthylene		<0.00100	mg/L	5	0.000200
Acenaphthene		<0.00100	mg/L	5	0.000200
Dibenzofuran		0.118	mg/L	5	0.000200
Fluorene		0.135	mg/L	5	0.000200
Anthracene		<0.00100	mg/L	5	0.000200
Phenanthrene		0.182	mg/L	5	0.000200

*continued ...*

<sup>7</sup>Estimated concentration value greater than standard range.

<sup>8</sup>Estimated concentration value greater than standard range.

<sup>9</sup>Estimated concentration value greater than standard range.

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sample 174434 continued ...

Parameter	Flag	Result	Units	Dilution	RL
Fluoranthene		<b>0.00308</b>	mg/L	5	0.000200
Pyrene		<b>0.0134</b>	mg/L	5	0.000200
Benzo(a)anthracene		<0.00100	mg/L	5	0.000200
Chrysene		<b>0.0292</b>	mg/L	5	0.000200
Benzo(b)fluoranthene		<0.00100	mg/L	5	0.000200
Benzo(k)fluoranthene		<0.00100	mg/L	5	0.000200
Benzo(a)pyrene		<0.00100	mg/L	5	0.000200
Indeno(1,2,3-cd)pyrene		<0.00100	mg/L	5	0.000200
Dibenzo(a,h)anthracene		<0.00100	mg/L	5	0.000200
Benzo(g,h,i)perylene		<0.00100	mg/L	5	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0442	mg/L	5	0.0800	55	37.4 - 123
2-Fluorobiphenyl		0.0360	mg/L	5	0.0800	45	34.3 - 130
Terphenyl-d14		0.0470	mg/L	5	0.0800	59	10 - 252

**Sample: 174434 - MW-1A**

Laboratory: Midland  
Analysis: TPH DRO  
QC Batch: 52764  
Prep Batch: 45205

Analytical Method: Mod. 8015B  
Date Analyzed: 2008-09-27  
Sample Preparation: 2008-09-26

Prep Method: N/A  
Analyzed By: LD  
Prepared By: LD

Parameter	Flag	Result	Units	Dilution	RL
DRO		<b>16.7</b>	mg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	<sup>10</sup>	17.5	mg/L	1	10.0	175	70 - 130

**Sample: 174434 - MW-1A**

Laboratory: Midland  
Analysis: TPH GRO  
QC Batch: 52720  
Prep Batch: 45164

Analytical Method: S 8015B  
Date Analyzed: 2008-09-24  
Sample Preparation: 2008-09-23

Prep Method: S 5030B  
Analyzed By: DC  
Prepared By: DC

*continued ...*

<sup>10</sup>High surrogate recovery. Sample non-detect, result bias high.

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sample 174434 continued ...

Parameter	Flag	Result	Units	Dilution	RL
GRO		136	mg/L	50	0.100
Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery
Trifluorotoluene (TFT)		4.63	mg/L	50	93
4-Bromofluorobenzene (4-BFB)		5.35	mg/L	50	107

**Sample: 174435 - MW-3**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 52743  
Prep Batch: 45206

Analytical Method: S 8021B  
Date Analyzed: 2008-09-25  
Sample Preparation: 2008-09-25

Prep Method: S 5030B  
Analyzed By: DC  
Prepared By: DC

Parameter	Flag	Result	Units	Dilution	RL
Benzene		18.2	mg/L	100	0.00100
Toluene		7.71	mg/L	100	0.00100
Ethylbenzene		1.81	mg/L	100	0.00100
Xylene		4.15	mg/L	100	0.00100
Surrogate	Flag	Result	Units	Dilution	Recovery Limits
Trifluorotoluene (TFT)		8.94	mg/L	100	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		9.27	mg/L	100	52 - 124.1

**Sample: 174435 - MW-3**

Laboratory: Lubbock  
Analysis: PAH  
QC Batch: 52849  
Prep Batch: 45290

Analytical Method: S 8270C  
Date Analyzed: 2008-09-29  
Sample Preparation: 2008-09-26

Prep Method: S 3510C  
Analyzed By: DS  
Prepared By: DS

Parameter	Flag	Result	Units	Dilution	RL
Naphthalene	<sup>11</sup>	0.102	mg/L	1	0.000200

*continued ...*

<sup>11</sup>Estimated concentration value greater than standard range.

*sample 174435 continued ...*

Parameter	Flag	Result	Units	Dilution	RL
2-Methylnaphthalene	<sup>12</sup>	<b>0.111</b>	mg/L	1	0.000200
1-Methylnaphthalene		<b>0.0940</b>	mg/L	1	0.000200
Acenaphthylene		<0.000200	mg/L	1	0.000200
Acenaphthene		<0.000200	mg/L	1	0.000200
Dibenzofuran		<b>0.00892</b>	mg/L	1	0.000200
Fluorene		<b>0.0107</b>	mg/L	1	0.000200
Anthracene		<0.000200	mg/L	1	0.000200
Phenanthrene		<b>0.0114</b>	mg/L	1	0.000200
Fluoranthene		<b>0.000399</b>	mg/L	1	0.000200
Pyrene		<b>0.000820</b>	mg/L	1	0.000200
Benzo(a)anthracene		<0.000200	mg/L	1	0.000200
Chrysene		<b>0.00149</b>	mg/L	1	0.000200
Benzo(b)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(k)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(a)pyrene		<0.000200	mg/L	1	0.000200
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	1	0.000200
Dibenzo(a,h)anthracene		<0.000200	mg/L	1	0.000200
Benzo(g,h,i)perylene		<0.000200	mg/L	1	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0609	mg/L	1	0.0800	76	37.4 - 123
2-Fluorobiphenyl		0.0490	mg/L	1	0.0800	61	34.3 - 130
Terphenyl-d14		0.0735	mg/L	1	0.0800	92	10 - 252

### Sample: 174435 - MW-3

Laboratory:	Midland	Analytical Method:	Mod. 8015B	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2008-09-27	Analyzed By:	LD
QC Batch:	52764	Sample Preparation:	2008-09-26	Prepared By:	LD
Prep Batch:	45205				

Parameter	Flag	Result	Units	Dilution	RL		
DRO		<b>10.5</b>	mg/L	1	5.00		
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		11.0	mg/L	1	10.0	110	70 - 130

<sup>12</sup>Estimated concentration value greater than standard range.

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**Sample: 174435 - MW-3**

Laboratory: Midland  
Analysis: TPH GRO  
QC Batch: 52720  
Prep Batch: 45164

Analytical Method: S 8015B  
Date Analyzed: 2008-09-24  
Sample Preparation: 2008-09-23

Prep Method: S 5030B  
Analyzed By: DC  
Prepared By: DC

Parameter	Flag	Result	Units	Dilution	RL
GRO		<b>68.6</b>	mg/L	20	0.100
Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery
Trifluorotoluene (TFT)		1.76	mg/L	2.00	88
4-Bromofluorobenzene (4-BFB)		1.95	mg/L	2.00	98

**Method Blank (1) QC Batch: 52712**

QC Batch: 52712  
Prep Batch: 45164

Date Analyzed: 2008-09-24  
QC Preparation: 2008-09-23

Analyzed By: DC  
Prepared By: DC

Parameter	Flag	Result	Units	MDL	RL
Benzene		<0.000500	mg/L		0.001
Toluene		<0.000700	mg/L		0.001
Ethylbenzene		<0.000700	mg/L		0.001
Xylene		<0.00180	mg/L		0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0882	mg/L	1	0.100	88	44.6 - 137.4
4-Bromofluorobenzene (4-BFB)		0.0886	mg/L	1	0.100	89	37.1 - 130.9

**Method Blank (1) QC Batch: 52720**

QC Batch: 52720  
Prep Batch: 45164

Date Analyzed: 2008-09-24  
QC Preparation: 2008-09-23

Analyzed By: DC  
Prepared By: DC

Parameter	Flag	Result	Units	MDL	RL		
GRO		0.0899	mg/L		0.1		
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	
Trifluorotoluene (TFT)		0.0903	mg/L	1	0.100	90	70 - 130

*continued ...*

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)		0.0880	mg/L	1	0.100	88	50 - 130

**Method Blank (1) QC Batch: 52743**

QC Batch: 52743 Date Analyzed: 2008-09-25 Analyzed By: DC  
Prep Batch: 45206 QC Preparation: 2008-09-25 Prepared By: DC

Parameter	Flag	MDL		Units	RL
		Result			
Benzene		<0.000500		mg/L	0.001
Toluene		<0.000700		mg/L	0.001
Ethylbenzene		<0.000700		mg/L	0.001
Xylene		<0.00180		mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0883	mg/L	1	0.100	88	44.6 - 137.4
4-Bromofluorobenzene (4-BFB)		0.0895	mg/L	1	0.100	90	37.1 - 130.9

**Method Blank (1) QC Batch: 52764**

QC Batch: 52764 Date Analyzed: 2008-09-27 Analyzed By: LD  
Prep Batch: 45205 QC Preparation: 2008-09-26 Prepared By: LD

Parameter	Flag	MDL		Units	RL
		Result			
DRO		<2.44		mg/L	5

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		12.4	mg/L	1	10.0	124	70 - 130

**Method Blank (1) QC Batch: 52849**

QC Batch: 52849 Date Analyzed: 2008-09-29 Analyzed By: DS  
Prep Batch: 45290 QC Preparation: 2008-09-26 Prepared By: DS

Parameter	Flag	MDL		Units	RL
		Result			
Naphthalene		<0.0000730		mg/L	0.0002

*continued ...*

*method blank continued . . .*

Parameter	Flag	MDL	Units	RL
2-Methylnaphthalene		<0.0000509	mg/L	0.0002
1-Methylnaphthalene		<0.0000748	mg/L	0.0002
Acenaphthylene		<0.0000767	mg/L	0.0002
Acenaphthene		<0.000142	mg/L	0.0002
Dibenzofuran		<0.0000470	mg/L	0.0002
Fluorene		<0.0000569	mg/L	0.0002
Anthracene		<0.0000876	mg/L	0.0002
Phenanthrene		<0.0000552	mg/L	0.0002
Fluoranthene		<0.0000954	mg/L	0.0002
Pyrene		<0.0000497	mg/L	0.0002
Benzo(a)anthracene		<0.0000328	mg/L	0.0002
Chrysene		<0.0000990	mg/L	0.0002
Benzo(b)fluoranthene		<0.0000684	mg/L	0.0002
Benzo(k)fluoranthene		<0.0000830	mg/L	0.0002
Benzo(a)pyrene		<0.0000549	mg/L	0.0002
Indeno(1,2,3-cd)pyrene		<0.0000869	mg/L	0.0002
Dibenzo(a,h)anthracene		<0.0000605	mg/L	0.0002
Benzo(g,h,i)perylene		<0.0000681	mg/L	0.0002

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0582	mg/L	1	0.0800	73	10 - 146
2-Fluorobiphenyl		0.0489	mg/L	1	0.0800	61	10 - 141
Terphenyl-d14		0.0665	mg/L	1	0.0800	83	10 - 266

## Laboratory Control Spike (LCS-1)

QC Batch: 52712  
Prep Batch: 45164

Date Analyzed: 2008-09-24  
QC Preparation: 2008-09-23

Analyzed By: DC  
Prepared By: DC

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Limit
Benzene	0.102	mg/L	1	0.100	<0.000500	102	71.7 - 120.5
Toluene	0.104	mg/L	1	0.100	<0.000700	104	75.4 - 118.8
Ethylbenzene	0.103	mg/L	1	0.100	<0.000700	103	73.5 - 118
Xylene	0.313	mg/L	1	0.300	<0.00180	104	72.9 - 118.2

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD		Spike		Matrix		Rec.		RPD
	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene	0.104	mg/L	1	0.100	<0.000500	104	71.7 - 120.5	2	20
Toluene	0.106	mg/L	1	0.100	<0.000700	106	75.4 - 118.8	2	20

*continued . . .*

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*control spikes continued . . .*

Param	LCSD		Spike		Matrix		Rec.		RPD
	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Ethylbenzene	0.104	mg/L	1	0.100	<0.000700	104	73.5 - 118	1	20
Xylene	0.317	mg/L	1	0.300	<0.00180	106	72.9 - 118.2	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS	LCSD	Units	Dil.	Spike	LCS	LCSD	Rec.
	Result	Result			Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	0.0912	0.0958	mg/L	1	0.100	91	96	38.2 - 131.6
4-Bromofluorobenzene (4-BFB)	0.0957	0.0998	mg/L	1	0.100	96	100	43.9 - 132.4

## Laboratory Control Spike (LCS-1)

QC Batch: 52720  
Prep Batch: 45164

Date Analyzed: 2008-09-24  
QC Preparation: 2008-09-23

Analyzed By: DC  
Prepared By: DC

Param	LCS	Units	Dil.	Spike	Matrix	Rec.	
	Result			Amount			Limit
GRO	0.788	mg/L	1	1.00	0.0899	70	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD		Dil.	Spike Amount	Matrix		Rec.		RPD	RPD Limit
	Result	Units			Result	Rec.	Limit			
GRO	0.790	mg/L	1	1.00	0.0899	70	70 - 130	0	20	

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0969	0.0919	mg/L	1	0.100	97	92	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0957	0.0924	mg/L	1	0.100	96	92	70 - 130

### Laboratory Control Spike (LCS-1)

QC Batch: 52743  
Prep Batch: 45206

Date Analyzed: 2008-09-25  
QC Preparation: 2008-09-25

Analyzed By: DC  
Prepared By: DC

Param	LCS		Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
	Result	Units					
Benzene	0.0961	mg/L	1	0.100	<0.000500	96	71.7 - 120.5
Toluene	0.0979	mg/L	1	0.100	<0.000700	98	75.4 - 118.8
Ethylbenzene	0.0958	mg/L	1	0.100	<0.000700	96	73.5 - 118
Xylene	0.289	mg/L	1	0.300	<0.00180	96	72.9 - 118.2

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

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Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit	RPD RPD	RPD Limit
Benzene	0.0969	mg/L	1	0.100	<0.000500	97	71.7 - 120.5	1	20
Toluene	0.0995	mg/L	1	0.100	<0.000700	100	75.4 - 118.8	2	20
Ethylbenzene	0.0978	mg/L	1	0.100	<0.000700	98	73.5 - 118	2	20
Xylene	0.296	mg/L	1	0.300	<0.00180	98	72.9 - 118.2	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0888	0.0870	mg/L	1	0.100	89	87	38.2 - 131.6
4-Bromofluorobenzene (4-BFB)	0.0921	0.0907	mg/L	1	0.100	92	91	43.9 - 132.4

### Laboratory Control Spike (LCS-1)

QC Batch: 52764 Date Analyzed: 2008-09-27 Analyzed By: LD  
Prep Batch: 45205 QC Preparation: 2008-09-26 Prepared By: LD

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit
DRO	24.9	mg/L	1	25.0	<2.44	100	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD		Spike Amount	Matrix		Rec.		RPD Limit	
	Result	Units		Dil.	Result	Rec.	Limit		
DRO	23.4	mg/L	1	25.0	<2.44	94	70 - 130	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Triacontane	10.5	10.7	mg/L	1	10.0	105	107	70 - 130

### Laboratory Control Spike (LCS-1)

QC Batch: 52849 Date Analyzed: 2008-09-29 Analyzed By: DS  
Prep Batch: 45290 QC Preparation: 2008-09-26 Prepared By: DS

Param	LCS		Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
	Result	Units					
Naphthalene	0.0566	mg/L	1	0.0800	<0.0000730	71	10 - 141
2-Methylnaphthalene	0.0587	mg/L	1	0.0800	<0.0000509	73	50 - 150
1-Methylnaphthalene	0.0582	mg/L	1	0.0800	<0.0000748	73	50 - 150
Acenaphthylene	0.0703	mg/L	1	0.0800	<0.0000767	88	10 - 152
Acenaphthene	0.0666	mg/L	1	0.0800	<0.000142	83	10 - 151

*continued . . .*

*control spikes continued ...*

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Dibenzofuran	0.0663	mg/L	1	0.0800	<0.0000470	83	10 - 148
Fluorene	0.0775	mg/L	1	0.0800	<0.0000569	97	10 - 172
Anthracene	0.0692	mg/L	1	0.0800	<0.0000876	86	22.5 - 172
Phenanthrene	0.0691	mg/L	1	0.0800	<0.0000552	86	19.6 - 172
Fluoranthene	0.0748	mg/L	1	0.0800	<0.0000954	94	17.3 - 187
Pyrene	0.0715	mg/L	1	0.0800	<0.0000497	89	14.9 - 199
Benzo(a)anthracene	0.0690	mg/L	1	0.0800	<0.0000328	86	19.4 - 185
Chrysene	0.0733	mg/L	1	0.0800	<0.0000990	92	18.4 - 188
Benzo(b)fluoranthene	0.0719	mg/L	1	0.0800	<0.0000684	90	10 - 193
Benzo(k)fluoranthene	0.0748	mg/L	1	0.0800	<0.0000830	94	27.8 - 196
Benzo(a)pyrene	0.0812	mg/L	1	0.0800	<0.0000549	102	12.4 - 205
Indeno(1,2,3-cd)pyrene	0.0847	mg/L	1	0.0800	<0.0000869	106	10 - 198
Dibenzo(a,h)anthracene	0.0847	mg/L	1	0.0800	<0.0000605	106	10 - 172
Benzo(g,h,i)perylene	0.0839	mg/L	1	0.0800	<0.0000681	105	10 - 186

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Naphthalene	0.0588	mg/L	1	0.0800	<0.0000730	74	10 - 141	4	20
2-Methylnaphthalene	0.0596	mg/L	1	0.0800	<0.0000509	74	50 - 150	2	20
1-Methylnaphthalene	0.0587	mg/L	1	0.0800	<0.0000748	73	50 - 150	1	20
Acenaphthylene	0.0740	mg/L	1	0.0800	<0.0000767	92	10 - 152	5	20
Acenaphthene	0.0699	mg/L	1	0.0800	<0.000142	87	10 - 151	5	20
Dibenzofuran	0.0698	mg/L	1	0.0800	<0.0000470	87	10 - 148	5	20
Fluorene	0.0800	mg/L	1	0.0800	<0.0000569	100	10 - 172	3	20
Anthracene	0.0713	mg/L	1	0.0800	<0.0000876	89	22.5 - 172	3	20
Phenanthrene	0.0712	mg/L	1	0.0800	<0.0000552	89	19.6 - 172	3	20
Fluoranthene	0.0781	mg/L	1	0.0800	<0.0000954	98	17.3 - 187	4	20
Pyrene	0.0758	mg/L	1	0.0800	<0.0000497	95	14.9 - 199	6	20
Benzo(a)anthracene	0.0726	mg/L	1	0.0800	<0.0000328	91	19.4 - 185	5	20
Chrysene	0.0765	mg/L	1	0.0800	<0.0000990	96	18.4 - 188	4	20
Benzo(b)fluoranthene	0.0755	mg/L	1	0.0800	<0.0000684	94	10 - 193	5	20
Benzo(k)fluoranthene	0.0776	mg/L	1	0.0800	<0.0000830	97	27.8 - 196	4	20
Benzo(a)pyrene	0.0850	mg/L	1	0.0800	<0.0000549	106	12.4 - 205	5	20
Indeno(1,2,3-cd)pyrene	0.0895	mg/L	1	0.0800	<0.0000869	112	10 - 198	6	20
Dibenzo(a,h)anthracene	0.0888	mg/L	1	0.0800	<0.0000605	111	10 - 172	5	20
Benzo(g,h,i)perylene	0.0879	mg/L	1	0.0800	<0.0000681	110	10 - 186	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Surrogate								
Nitrobenzene-d5	0.0675	0.0696	mg/L	1	0.0800	84	87	10 - 165
2-Fluorobiphenyl	0.0618	0.0674	mg/L	1	0.0800	77	84	10 - 157
Terphenyl-d14	0.0754	0.0797	mg/L	1	0.0800	94	100	10 - 220

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**Matrix Spike (MS-1) Spiked Sample: 174136**

QC Batch: 52712 Date Analyzed: 2008-09-24 Analyzed By: DC  
Prep Batch: 45164 QC Preparation: 2008-09-23 Prepared By: DC

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	20.8	mg/L	50	5.00	15.4129	108	10 - 160.8
Toluene	12.5	mg/L	50	5.00	7.2486	105	10 - 160.7
Ethylbenzene	5.88	mg/L	50	5.00	0.9752	98	10 - 158.3
Xylene	17.2	mg/L	50	15.0	2.5159	98	10 - 158

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	20.2	mg/L	50	5.00	15.4129	96	10 - 160.8	3	20
Toluene	12.2	mg/L	50	5.00	7.2486	99	10 - 160.7	2	20
Ethylbenzene	5.84	mg/L	50	5.00	0.9752	97	10 - 158.3	1	20
Xylene	17.0	mg/L	50	15.0	2.5159	96	10 - 158	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec.	Rec. Limit
Trifluorotoluene (TFT)	4.59	4.44	mg/L	50	5	92	89	33.1 - 132.5	
4-Bromofluorobenzene (4-BFB)	4.90	4.68	mg/L	50	5	98	94	37.5 - 136	

**Matrix Spike (MS-1) Spiked Sample: 174151**

QC Batch: 52720 Date Analyzed: 2008-09-24 Analyzed By: DC  
Prep Batch: 45164 QC Preparation: 2008-09-23 Prepared By: DC

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	119	mg/L	50	50.0	73.8192	90	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	114	mg/L	50	50.0	73.8192	80	70 - 130	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec.	Rec. Limit
Trifluorotoluene (TFT)	4.82	4.63	mg/L	50	5	96	93	70 - 130	
4-Bromofluorobenzene (4-BFB)	4.97	4.78	mg/L	50	5	99	96	70 - 130	

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**Matrix Spike (MS-1) Spiked Sample: 174434**

QC Batch: 52743 Date Analyzed: 2008-09-25 Analyzed By: DC  
Prep Batch: 45206 QC Preparation: 2008-09-25 Prepared By: DC

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	31.6	mg/L	100	10.0	20.117	115	10 - 160.8
Toluene	25.3	mg/L	100	10.0	13.8703	114	10 - 160.7
Ethylbenzene	12.1	mg/L	100	10.0	2.0289	101	10 - 158.3
Xylene	34.8	mg/L	100	30.0	4.5755	101	10 - 158

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	RPD Limit	
Benzene	29.7	mg/L	100	10.0	20.117	96	10 - 160.8	6	20
Toluene	23.8	mg/L	100	10.0	13.8703	99	10 - 160.7	6	20
Ethylbenzene	11.6	mg/L	100	10.0	2.0289	96	10 - 158.3	4	20
Xylene	33.5	mg/L	100	30.0	4.5755	96	10 - 158	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	9.32	8.75	mg/L	100	10	93	88	33.1 - 132.5
4-Bromofluorobenzene (4-BFB)	10.0	9.27	mg/L	100	10	100	93	37.5 - 136

**Matrix Spike (MS-1) Spiked Sample: 174147**

QC Batch: 52764 Date Analyzed: 2008-09-27 Analyzed By: LD  
Prep Batch: 45205 QC Preparation: 2008-09-26 Prepared By: LD

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	70.3	mg/L	1	25.0	49.43	83	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	RPD Limit	
DRO	81.1	mg/L	1	25.0	49.43	127	70 - 130	14	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Triacontane	10.0	10.3	mg/L	1	10	100	103	70 - 130

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### Standard (ICV-1)

QC Batch: 52712      Date Analyzed: 2008-09-24      Analyzed By: DC

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.104	104	85 - 115	2008-09-24
Toluene		mg/L	0.100	0.106	106	85 - 115	2008-09-24
Ethylbenzene		mg/L	0.100	0.0998	100	85 - 115	2008-09-24
Xylene		mg/L	0.300	0.306	102	85 - 115	2008-09-24

### Standard (CCV-1)

QC Batch: 52712      Date Analyzed: 2008-09-24      Analyzed By: DC

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.107	107	85 - 115	2008-09-24
Toluene		mg/L	0.100	0.0900	90	85 - 115	2008-09-24
Ethylbenzene		mg/L	0.100	0.0889	89	85 - 115	2008-09-24
Xylene		mg/L	0.300	0.271	90	85 - 115	2008-09-24

### Standard (ICV-1)

QC Batch: 52720      Date Analyzed: 2008-09-24      Analyzed By: DC

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	1.14	114	85 - 115	2008-09-24

### Standard (CCV-1)

QC Batch: 52720      Date Analyzed: 2008-09-24      Analyzed By: DC

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	1.07	107	85 - 115	2008-09-24

### Standard (ICV-1)

QC Batch: 52743      Date Analyzed: 2008-09-25      Analyzed By: DC

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Param	Flag	Units	ICVs	ICVs	ICVs	Percent	Date
			True	Found	Percent	Recovery	
			Conc.	Conc.	Recovery	Limits	
Benzene		mg/L	0.100	0.104	104	85 - 115	2008-09-25
Toluene		mg/L	0.100	0.106	106	85 - 115	2008-09-25
Ethylbenzene		mg/L	0.100	0.105	105	85 - 115	2008-09-25
Xylene		mg/L	0.300	0.318	106	85 - 115	2008-09-25

### Standard (CCV-1)

QC Batch: 52743

Date Analyzed: 2008-09-25

Analyzed By: DC

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date Analyzed
			True Conc.	Found Conc.	Percent Recovery	Recovery Limits	
Benzene		mg/L	0.100	0.0882	88	85 - 115	2008-09-25
Toluene		mg/L	0.100	0.0893	89	85 - 115	2008-09-25
Ethylbenzene		mg/L	0.100	0.0875	88	85 - 115	2008-09-25
Xylene		mg/L	0.300	0.264	88	85 - 115	2008-09-25

### Standard (ICV=1)

QC Batch: 52764

Date Analyzed: 2008-09-27

Analyzed By: LD

Param	Flag	Units	ICVs	ICVs	ICVs	Percent	Date
			True	Found	Percent	Recovery	
Conc.	Conc.	Recovery	Limits		Analyzed		
DRO		mg/L	250	238	95	85 - 115	2008-09-27

### Standard (CCV-1)

QC Batch: 52764

Date Analyzed: 2008-09-27

Analyzed By: LD

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date Analyzed
			True Conc.	Found Conc.	Percent Recovery	Recovery Limits	
DRO		mg/L	250	222	89	85 - 115	2008-09-27

## **Standard (CCV-2)**

QC Batch: 52764

Date Analyzed: 2008-09-27

Analyzed By: LD

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	235	94	85 - 115	2008-09-27

### Standard (CCV-2)

QC Batch: 52849      Date Analyzed: 2008-09-29      Analyzed By: DS

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		mg/L	60.0	56.8	95	80 - 120	2008-09-29
2-Methylnaphthalene		mg/L	60.0	52.9	88	80 - 120	2008-09-29
1-Methylnaphthalene		mg/L	60.0	54.2	90	80 - 120	2008-09-29
Acenaphthylene		mg/L	60.0	59.2	99	80 - 120	2008-09-29
Acenaphthene		mg/L	60.0	58.6	98	80 - 120	2008-09-29
Dibenzofuran		mg/L	60.0	62.5	104	80 - 120	2008-09-29
Fluorene		mg/L	60.0	69.8	116	80 - 120	2008-09-29
Anthracene		mg/L	60.0	59.0	98	80 - 120	2008-09-29
Phenanthrene		mg/L	60.0	57.2	95	80 - 120	2008-09-29
Fluoranthene		mg/L	60.0	56.6	94	80 - 120	2008-09-29
Pyrene		mg/L	60.0	59.7	100	80 - 120	2008-09-29
Benzo(a)anthracene		mg/L	60.0	55.4	92	80 - 120	2008-09-29
Chrysene		mg/L	60.0	58.0	97	80 - 120	2008-09-29
Benzo(b)fluoranthene		mg/L	60.0	60.3	100	80 - 120	2008-09-29
Benzo(k)fluoranthene		mg/L	60.0	60.4	101	80 - 120	2008-09-29
Benzo(a)pyrene		mg/L	60.0	63.9	106	80 - 120	2008-09-29
Indeno(1,2,3-cd)pyrene		mg/L	60.0	69.6	116	80 - 120	2008-09-29
Dibenzo(a,h)anthracene		mg/L	60.0	69.2	115	80 - 120	2008-09-29
Benzo(g,h,i)perylene		mg/L	60.0	68.5	114	80 - 120	2008-09-29

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5		61.8	mg/L	1	60.0	103	80 - 120
2-Fluorobiphenyl		54.3	mg/L	1	60.0	90	80 - 120
Terphenyl-d14		59.1	mg/L	1	60.0	98	80 - 120



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## Certifications

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HUB: 1752439743100-86536  
NCTRCA WFWB38444Y0909

DBE: VN 20657

Lubbock: T104704219-08-TX  
LELAP-02003  
Kansas E-10317

## NELAP Certifications

El Paso: T104704221-08-TX  
LELAP-02002

Midland: T104704392-08-TX

## Analytical and Quality Control Report

Shanna Smith  
Talon LPE-Amarillo  
921 North Bivins  
Amarillo, TX, 79107

Report Date: October 7, 2008

Work Order: 8092404



Project Location: Hobbs, NM  
Project Name: C.S. Cayler  
Project Number: PLAINS044SPL  
SRS #: 2002-10250

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
174436	MW-1A	water	2008-09-23	17:00	2008-09-24

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 53 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



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Dr. Blair Leftwich, Director

**Standard Flags**

**B** - The sample contains less than ten times the concentration found in the method blank.

## Case Narrative

Samples for project C.S. Cayler were received by TraceAnalysis, Inc. on 2008-09-24 and assigned to work order 8092404. Samples for work order 8092404 were received intact without headspace and at a temperature of 2.0 deg. C.

Samples were analyzed for the following tests using their respective methods.

Test	Method
Ag, Total	S 6010B
Alkalinity	SM 2320B
Al, Total	S 6010B
As, Total	S 6010B
Ba, Total	S 6010B
B, Total	S 6010B
Ca, Dissolved	S 6010B
Cd, Total	S 6010B
Chloride (IC)	E 300.0
Co, Total	S 6010B
Cr, Total	S 6010B
Cu, Total	S 6010B
Fe, Total	S 6010B
Fluoride (IC)	E 300.0
Hg, Total	S 7470A
K, Dissolved	S 6010B
Mg, Dissolved	S 6010B
Mn, Total	S 6010B
Mo, Total	S 6010B
Na, Dissolved	S 6010B
Ni, Total	S 6010B
NO <sub>3</sub> (IC)	E 300.0
Pb, Total	S 6010B
PO <sub>4</sub> (IC)	E 300.0
Semivolatiles	S 8270C
Se, Total	S 6010B
SO <sub>4</sub> (IC)	E 300.0
Volatiles	S 8260B
Zn, Total	S 6010B

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 8092404 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

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## Analytical Report

### Sample: 174436 - MW-1A

Laboratory: Lubbock  
Analysis: Al, Total  
QC Batch: 52862  
Prep Batch: 45207

Analytical Method: S 6010B  
Date Analyzed: 2008-09-30  
Sample Preparation: 2008-09-26

Prep Method: S 3010A  
Analyzed By: RR  
Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Total Aluminum		51.8	mg/L	1	0.0500

### Sample: 174436 - MW-1A

Laboratory: Midland  
Analysis: Alkalinity  
QC Batch: 52658  
Prep Batch: 45140

Analytical Method: SM 2320B  
Date Analyzed: 2008-09-24  
Sample Preparation: 2008-09-24

Prep Method: N/A  
Analyzed By: AR  
Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		234	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		234	mg/L as CaCO <sub>3</sub>	1	4.00

### Sample: 174436 - MW-1A

Laboratory: Lubbock  
Analysis: B, Total  
QC Batch: 52862  
Prep Batch: 45207

Analytical Method: S 6010B  
Date Analyzed: 2008-09-30  
Sample Preparation: 2008-09-26

Prep Method: S 3010A  
Analyzed By: RR  
Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Total Boron		0.194	mg/L	1	0.00500

### Sample: 174436 - MW-1A

Laboratory: Lubbock  
Analysis: Co, Total  
QC Batch: 52862  
Prep Batch: 45207

Analytical Method: S 6010B  
Date Analyzed: 2008-09-30  
Sample Preparation: 2008-09-26

Prep Method: S 3010A  
Analyzed By: RR  
Prepared By: KV

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Parameter	Flag	Result	Units	Dilution	RL
Total Cobalt		0.0180	mg/L	1	0.00200

**Sample: 174436 - MW-1A**

Laboratory: Lubbock  
Analysis: Cu, Total  
QC Batch: 52862  
Prep Batch: 45207

Analytical Method: S 6010B  
Date Analyzed: 2008-09-30  
Sample Preparation: 2008-09-26

Prep Method: S 3010A  
Analyzed By: RR  
Prepared By: KV

Parameter	Flag	Result	Units	Dilution	RL
Total Copper		0.0290	mg/L	1	0.00500

**Sample: 174436 - MW-1A**

Laboratory: Lubbock  
Analysis: Fe, Total  
QC Batch: 52862  
Prep Batch: 45207

Analytical Method: S 6010B  
Date Analyzed: 2008-09-30  
Sample Preparation: 2008-09-26

Prep Method: S 3010A  
Analyzed By: RR  
Prepared By: KV

Parameter	Flag	Result	Units	Dilution	RL
Total Iron		32.1	mg/L	1	0.0100

**Sample: 174436 - MW-1A**

Laboratory: Midland  
Analysis: Ion Chromatography  
QC Batch: 52657  
Prep Batch: 45139

Analytical Method: E 300.0  
Date Analyzed: 2008-09-24  
Sample Preparation: 2008-09-24

Prep Method: N/A  
Analyzed By: AR  
Prepared By: AR

Parameter	Flag	Result	Units	Dilution	RL
Chloride		203	mg/L	10	0.500
Fluoride		1.80	mg/L	5	0.200
Sulfate		117	mg/L	5	0.500

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**Sample: 174436 - MW-1A**

Laboratory: Lubbock  
Analysis: Mn, Total  
QC Batch: 52862  
Prep Batch: 45207

Analytical Method: S 6010B  
Date Analyzed: 2008-09-30  
Sample Preparation: 2008-09-26

Prep Method: S 3010A  
Analyzed By: RR  
Prepared By: KV

Parameter	Flag	Result	Units	Dilution	RL
Total Manganese		1.73	mg/L	1	0.00250

**Sample: 174436 - MW-1A**

Laboratory: Lubbock  
Analysis: Mo, Total  
QC Batch: 52862  
Prep Batch: 45207

Analytical Method: S 6010B  
Date Analyzed: 2008-09-30  
Sample Preparation: 2008-09-26

Prep Method: S 3010A  
Analyzed By: RR  
Prepared By: KV

Parameter	Flag	Result	Units	Dilution	RL
Total Molybdenum		<0.0100	mg/L	1	0.0100

**Sample: 174436 - MW-1A**

Laboratory: Lubbock  
Analysis: Ni, Total  
QC Batch: 52862  
Prep Batch: 45207

Analytical Method: S 6010B  
Date Analyzed: 2008-09-30  
Sample Preparation: 2008-09-26

Prep Method: S 3010A  
Analyzed By: RR  
Prepared By: KV

Parameter	Flag	Result	Units	Dilution	RL
Total Nickel		0.0340	mg/L	1	0.00500

**Sample: 174436 - MW-1A**

Laboratory: Midland  
Analysis: NO3 (IC)  
QC Batch: 52657  
Prep Batch: 45139

Analytical Method: E 300.0  
Date Analyzed: 2008-09-24  
Sample Preparation: 2008-09-24

Prep Method: N/A  
Analyzed By: AR  
Prepared By: AR

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		4.59	mg/L	5	0.200

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**Sample: 174436 - MW-1A**

Laboratory: Midland  
Analysis: PO4 (IC)  
QC Batch: 52657  
Prep Batch: 45139

Analytical Method: E 300.0  
Date Analyzed: 2008-09-24  
Sample Preparation: 2008-09-24

Prep Method: N/A  
Analyzed By: AR  
Prepared By: AR

Parameter	Flag	Result	Units	Dilution	RL
PO4-P		<2.50	mg/L	5	0.500

**Sample: 174436 - MW-1A**

Laboratory: Lubbock  
Analysis: Salts, Dissolved  
QC Batch: 53041  
Prep Batch: 45388

Analytical Method: S 6010B  
Date Analyzed: 2008-10-06  
Sample Preparation: 2008-10-03

Prep Method: S 3005A  
Analyzed By: TP  
Prepared By: KV

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		169	mg/L	1	1.00
Dissolved Magnesium		36.1	mg/L	1	1.00
Dissolved Potassium		6.70	mg/L	1	1.00
Dissolved Sodium		146	mg/L	1	1.00

**Sample: 174436 - MW-1A**

Laboratory: Lubbock  
Analysis: Semivolatiles  
QC Batch: 52872  
Prep Batch: 45305

Analytical Method: S 8270C  
Date Analyzed: 2008-09-30  
Sample Preparation: 2008-09-26

Prep Method: S 3510C  
Analyzed By: DS  
Prepared By: DS

Parameter	Flag	Result	Units	Dilution	RL
Pyridine		<0.0250	mg/L	5	0.00500
N-Nitrosodimethylamine		<0.0250	mg/L	5	0.00500
2-Picoline		<0.0250	mg/L	5	0.00500
Methyl methanesulfonate		<0.0250	mg/L	5	0.00500
Ethyl methanesulfonate		<0.0250	mg/L	5	0.00500
Phenol		<0.0250	mg/L	5	0.00500
Aniline		<0.0250	mg/L	5	0.00500
bis(2-chloroethyl)ether		<0.0250	mg/L	5	0.00500
2-Chlorophenol		<0.0250	mg/L	5	0.00500
1,3-Dichlorobenzene (meta)		<0.0250	mg/L	5	0.00500
1,4-Dichlorobenzene (para)		<0.0250	mg/L	5	0.00500

*continued ...*

sample 174436 continued ...

Parameter	Flag	Result	Units	Dilution	RL
Benzyl alcohol		<0.0250	mg/L	5	0.00500
1,2-Dichlorobenzene (ortho)		<0.0250	mg/L	5	0.00500
2-Methylphenol		<b>0.126</b>	mg/L	5	0.00500
bis(2-chloroisopropyl)ether		<0.0250	mg/L	5	0.00500
4-Methylphenol / 3-Methylphenol		<b>0.0990</b>	mg/L	5	0.00500
N-Nitrosodi-n-propylamine		<0.0250	mg/L	5	0.00500
Hexachloroethane		<0.0250	mg/L	5	0.00500
Acetophenone		<0.0250	mg/L	5	0.00500
Nitrobenzene		<0.0250	mg/L	5	0.00500
N-Nitrosopiperidine		<0.0250	mg/L	5	0.00500
Isophorone		<0.0250	mg/L	5	0.00500
2-Nitrophenol		<0.0250	mg/L	5	0.00500
2,4-Dimethylphenol		<b>0.0710</b>	mg/L	5	0.00500
bis(2-chloroethoxy)methane		<0.0250	mg/L	5	0.00500
2,4-Dichlorophenol		<0.0250	mg/L	5	0.00500
1,2,4-Trichlorobenzene		<0.0250	mg/L	5	0.00500
Benzoic acid		<0.0250	mg/L	5	0.00500
Naphthalene	1	<b>1.01</b>	mg/L	5	0.00500
a,a-Dimethylphenethylamine		<0.0250	mg/L	5	0.00500
4-Chloroaniline		<0.0250	mg/L	5	0.00500
2,6-Dichlorophenol		<0.0500	mg/L	5	0.0100
Hexachlorobutadiene		<0.0250	mg/L	5	0.00500
N-Nitroso-di-n-butylamine		<0.0250	mg/L	5	0.00500
4-Chloro-3-methylphenol		<0.0250	mg/L	5	0.00500
2-Methylnaphthalene	2	<b>2.37</b>	mg/L	5	0.00500
1-Methylnaphthalene	3	<b>2.00</b>	mg/L	5	0.00500
1,2,4,5-Tetrachlorobenzene		<0.0250	mg/L	5	0.00500
Hexachlorocyclopentadiene		<0.0250	mg/L	5	0.00500
2,4,6-Trichlorophenol		<0.0500	mg/L	5	0.0100
2,4,5-Trichlorophenol		<0.0250	mg/L	5	0.00500
2-Chloronaphthalene		<0.0250	mg/L	5	0.00500
1-Chloronaphthalene		<0.0250	mg/L	5	0.00500
2-Nitroaniline		<0.0250	mg/L	5	0.00500
Dimethylphthalate		<0.0250	mg/L	5	0.00500
Acenaphthylene		<0.0250	mg/L	5	0.00500
2,6-Dinitrotoluene		<0.0250	mg/L	5	0.00500
3-Nitroaniline		<0.0250	mg/L	5	0.00500
Acenaphthene		<0.0250	mg/L	5	0.00500
2,4-Dinitrophenol		<0.0250	mg/L	5	0.00500
Dibenzofuran		<b>0.175</b>	mg/L	5	0.00500

continued ...

<sup>1</sup>Estimated concentration value greater than standard range.<sup>2</sup>Estimated concentration value greater than standard range.<sup>3</sup>Estimated concentration value greater than standard range.

sample 174436 continued . . .

Parameter	Flag	Result	Units	Dilution	RL
Pentachlorobenzene		<0.0250	mg/L	5	0.00500
4-Nitrophenol		<0.125	mg/L	5	0.0250
2,4-Dinitrotoluene		<0.0250	mg/L	5	0.00500
1-Naphthylamine		<0.0250	mg/L	5	0.00500
2,3,4,6-Tetrachlorophenol		<0.0500	mg/L	5	0.0100
2-Naphthylamine		<0.0250	mg/L	5	0.00500
Fluorene		<b>0.201</b>	mg/L	5	0.00500
4-Chlorophenyl-phenylether		<0.0250	mg/L	5	0.00500
Diethylphthalate		<0.0250	mg/L	5	0.00500
4-Nitroaniline		<0.0250	mg/L	5	0.00500
Diphenylhydrazine		<0.0250	mg/L	5	0.00500
4,6-Dinitro-2-methylphenol		<0.0250	mg/L	5	0.00500
Diphenylamine		<0.0250	mg/L	5	0.00500
4-Bromophenyl-phenylether		<0.0250	mg/L	5	0.00500
Phenacetin		<0.0250	mg/L	5	0.00500
Hexachlorobenzene		<0.0250	mg/L	5	0.00500
4-Aminobiphenyl		<b>0.122</b>	mg/L	5	0.00500
Pentachlorophenol		<0.0500	mg/L	5	0.0100
Anthracene		<0.0250	mg/L	5	0.00500
Pentachloronitrobenzene		<0.0250	mg/L	5	0.00500
Pronamide		<0.0250	mg/L	5	0.00500
Phenanthrene		<b>0.298</b>	mg/L	5	0.00500
Di-n-butylphthalate		<0.0250	mg/L	5	0.00500
Fluoranthene		<0.0250	mg/L	5	0.00500
Benzidine		<0.125	mg/L	5	0.0250
Pyrene		<0.0250	mg/L	5	0.00500
p-Dimethylaminoazobenzene		<0.0250	mg/L	5	0.00500
Butylbenzylphthalate		<0.0250	mg/L	5	0.00500
Benzo(a)anthracene		<0.0250	mg/L	5	0.00500
3,3-Dichlorobenzidine		<0.0250	mg/L	5	0.00500
Chrysene		<b>0.0380</b>	mg/L	5	0.00500
bis(2-ethylhexyl)phthalate	<sup>4</sup>	<b>4.83</b>	mg/L	5	0.00500
Di-n-octylphthalate		<0.0250	mg/L	5	0.00500
Benzo(b)fluoranthene		<0.0250	mg/L	5	0.00500
Benzo(k)fluoranthene		<0.0250	mg/L	5	0.00500
7,12-Dimethylbenz(a)anthracene		<0.0250	mg/L	5	0.00500
Benzo(a)pyrene		<0.0250	mg/L	5	0.00500
3-Methylcholanthrene		<0.0250	mg/L	5	0.00500
Dibenzo(a,j)acridine		<0.0250	mg/L	5	0.00500
Indeno(1,2,3-cd)pyrene		<0.0250	mg/L	5	0.00500
Dibenzo(a,h)anthracene		<0.0250	mg/L	5	0.00500
Benzo(g,h,i)perylene		<0.0250	mg/L	5	0.00500

<sup>4</sup>Estimated concentration value greater than standard range.

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
2-Fluorophenol		0.0203	mg/L	5	0.0800	25	10 - 84.7
Phenol-d5		0.0172	mg/L	5	0.0800	22	10 - 54.9
Nitrobenzene-d5		0.0474	mg/L	5	0.0800	59	10 - 202
2-Fluorobiphenyl		0.0348	mg/L	5	0.0800	44	10 - 199
2,4,6-Tribromophenol		0.0502	mg/L	5	0.0800	63	10 - 141
Terphenyl-d14		0.0402	mg/L	5	0.0800	50	10 - 160

**Sample: 174436 - MW-1A**

Laboratory:	Lubbock				
Analysis:	Total 8 Metals	Analytical Method:	S 7470A	Prep Method:	N/A
QC Batch:	52761	Date Analyzed:	2008-09-26	Analyzed By:	TP
Prep Batch:	45227	Sample Preparation:	2008-09-26	Prepared By:	TP
Laboratory:	Lubbock				
Analysis:	Total 8 Metals	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	52862	Date Analyzed:	2008-09-30	Analyzed By:	RR
Prep Batch:	45207	Sample Preparation:	2008-09-26	Prepared By:	KV

Parameter	Flag	Result	Units	Dilution	RL
Total Silver		<0.00500	mg/L	1	0.00500
Total Arsenic		<0.0100	mg/L	1	0.0100
Total Barium		1.37	mg/L	1	0.00500
Total Cadmium		<0.00200	mg/L	1	0.00200
Total Chromium		0.0860	mg/L	1	0.00500
Total Mercury		<0.000400	mg/L	2	0.000200
Total Lead		<0.00500	mg/L	1	0.00500
Total Selenium		<0.0200	mg/L	1	0.0200

**Sample: 174436 - MW-1A**

Laboratory:	Lubbock				
Analysis:	Volatiles	Analytical Method:	S 8260B	Prep Method:	S 5030B
QC Batch:	52856	Date Analyzed:	2008-09-29	Analyzed By:	KB
Prep Batch:	45298	Sample Preparation:	2008-09-29	Prepared By:	KB

Parameter	Flag	Result	Units	Dilution	RL
Bromochloromethane		<500	µg/L	500	1.00
Dichlorodifluoromethane		<500	µg/L	500	1.00
Chloromethane (methyl chloride)		<500	µg/L	500	1.00
Vinyl Chloride		<500	µg/L	500	1.00
Bromomethane (methyl bromide)		<2500	µg/L	500	5.00

*continued ...*

*sample 174436 continued ...*

Parameter	Flag	Result	RL Units	Dilution	RL
Chloroethane		<500	µg/L	500	1.00
Trichlorofluoromethane		<500	µg/L	500	1.00
Acetone		<b>5570</b>	µg/L	500	10.0
Iodomethane (methyl iodide)		<2500	µg/L	500	5.00
Carbon Disulfide		<500	µg/L	500	1.00
Acrylonitrile		<500	µg/L	500	1.00
2-Butanone (MEK)		<2500	µg/L	500	5.00
4-Methyl-2-pentanone (MIBK)		<2500	µg/L	500	5.00
2-Hexanone		<2500	µg/L	500	5.00
trans 1,4-Dichloro-2-butene		<5000	µg/L	500	10.0
1,1-Dichloroethene		<500	µg/L	500	1.00
Methylene chloride		<2500	µg/L	500	5.00
MTBE		<500	µg/L	500	1.00
trans-1,2-Dichloroethene		<500	µg/L	500	1.00
1,1-Dichloroethane		<500	µg/L	500	1.00
cis-1,2-Dichloroethene		<500	µg/L	500	1.00
2,2-Dichloropropane		<500	µg/L	500	1.00
1,2-Dichloroethane (EDC)		<500	µg/L	500	1.00
Chloroform		<500	µg/L	500	1.00
1,1,1-Trichloroethane		<500	µg/L	500	1.00
1,1-Dichloropropene		<500	µg/L	500	1.00
Benzene		<b>26600</b>	µg/L	500	1.00
Carbon Tetrachloride		<500	µg/L	500	1.00
1,2-Dichloropropane		<500	µg/L	500	1.00
Trichloroethene (TCE)		<500	µg/L	500	1.00
Dibromomethane (methylene bromide)		<500	µg/L	500	1.00
Bromodichloromethane		<500	µg/L	500	1.00
2-Chloroethyl vinyl ether		<2500	µg/L	500	5.00
cis-1,3-Dichloropropene		<500	µg/L	500	1.00
trans-1,3-Dichloropropene		<500	µg/L	500	1.00
Toluene		<b>18300</b>	µg/L	500	1.00
1,1,2-Trichloroethane		<500	µg/L	500	1.00
1,3-Dichloropropane		<500	µg/L	500	1.00
Dibromochloromethane		<500	µg/L	500	1.00
1,2-Dibromoethane (EDB)		<500	µg/L	500	1.00
Tetrachloroethene (PCE)		<500	µg/L	500	1.00
Chlorobenzene		<500	µg/L	500	1.00
1,1,1,2-Tetrachloroethane		<500	µg/L	500	1.00
Ethylbenzene		<b>2360</b>	µg/L	500	1.00
m,p-Xylene		<b>3540</b>	µg/L	500	1.00
Bromoform		<500	µg/L	500	1.00
Styrene		<500	µg/L	500	1.00
o-Xylene		<b>1200</b>	µg/L	500	1.00

*continued ...*

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sample 174436 continued ...

Parameter	Flag	Result	Units	Dilution	RL
1,1,2,2-Tetrachloroethane		<500	µg/L	500	1.00
2-Chlorotoluene		<500	µg/L	500	1.00
1,2,3-Trichloropropane		<500	µg/L	500	1.00
Isopropylbenzene		<500	µg/L	500	1.00
Bromobenzene		<500	µg/L	500	1.00
n-Propylbenzene		<500	µg/L	500	1.00
1,3,5-Trimethylbenzene		<500	µg/L	500	1.00
tert-Butylbenzene		<500	µg/L	500	1.00
1,2,4-Trimethylbenzene		537	µg/L	500	1.00
1,4-Dichlorobenzene (para)		<500	µg/L	500	1.00
sec-Butylbenzene		<500	µg/L	500	1.00
1,3-Dichlorobenzene (meta)		<500	µg/L	500	1.00
p-Isopropyltoluene		<500	µg/L	500	1.00
4-Chlorotoluene		<500	µg/L	500	1.00
1,2-Dichlorobenzene (ortho)		<500	µg/L	500	1.00
n-Butylbenzene		<500	µg/L	500	1.00
1,2-Dibromo-3-chloropropane		<2500	µg/L	500	5.00
1,2,3-Trichlorobenzene		<2500	µg/L	500	5.00
1,2,4-Trichlorobenzene		<2500	µg/L	500	5.00
Naphthalene		<2500	µg/L	500	5.00
Hexachlorobutadiene		<2500	µg/L	500	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		29100	µg/L	500	25000	116	83.6 - 120
Toluene-d8		25700	µg/L	500	25000	103	85.1 - 120
4-Bromofluorobenzene (4-BFB)		23300	µg/L	500	25000	93	73.7 - 111

**Sample: 174436 - MW-1A**

Laboratory: Lubbock  
Analysis: Zn, Total  
QC Batch: 52862  
Prep Batch: 45207

Analytical Method: S 6010B  
Date Analyzed: 2008-09-30  
Sample Preparation: 2008-09-26

Prep Method: S 3010A  
Analyzed By: RR  
Prepared By: KV

Parameter	Flag	Result	Units	Dilution	RL
Total Zinc		0.613	mg/L	1	0.00500

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**Method Blank (1)** QC Batch: 52657

QC Batch: 52657 Date Analyzed: 2008-09-24 Analyzed By: AR  
Prep Batch: 45139 QC Preparation: 2008-09-24 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Nitrate-N		<0.0120	mg/L	0.2

**Method Blank (1)** QC Batch: 52657

QC Batch: 52657 Date Analyzed: 2008-09-24 Analyzed By: AR  
Prep Batch: 45139 QC Preparation: 2008-09-24 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
PO4-P		<0.0270	mg/L	0.5

**Method Blank (1)** QC Batch: 52657

QC Batch: 52657 Date Analyzed: 2008-09-24 Analyzed By: AR  
Prep Batch: 45139 QC Preparation: 2008-09-24 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<0.172	mg/L	0.5
Fluoride		<0.199	mg/L	0.2
Sulfate		<0.0320	mg/L	0.5

**Method Blank (1)** QC Batch: 52658

QC Batch: 52658 Date Analyzed: 2008-09-24 Analyzed By: AR  
Prep Batch: 45140 QC Preparation: 2008-09-24 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1
Bicarbonate Alkalinity		<4.00	mg/L as CaCO <sub>3</sub>	4
Total Alkalinity		<4.00	mg/L as CaCO <sub>3</sub>	4

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**Method Blank (1)** QC Batch: 52761

QC Batch: 52761  
Prep Batch: 45227

Date Analyzed: 2008-09-26  
QC Preparation: 2008-09-26

Analyzed By: TP  
Prepared By: TP

Parameter	Flag	MDL Result	Units	RL
Total Mercury		<0.0000251	mg/L	0.0002

**Method Blank (1)** QC Batch: 52856

QC Batch: 52856  
Prep Batch: 45298

Date Analyzed: 2008-09-29  
QC Preparation: 2008-09-29

Analyzed By: KB  
Prepared By: KB

Parameter	Flag	MDL Result	Units	RL
Bromochloromethane		<0.197	µg/L	1
Dichlorodifluoromethane		<0.672	µg/L	1
Chloromethane (methyl chloride)		<0.542	µg/L	1
Vinyl Chloride		<0.516	µg/L	1
Bromomethane (methyl bromide)		<0.446	µg/L	5
Chloroethane		<0.656	µg/L	1
Trichlorofluoromethane		<0.538	µg/L	1
Acetone		<1.10	µg/L	10
Iodomethane (methyl iodide)		<0.214	µg/L	5
Carbon Disulfide		<0.294	µg/L	1
Acrylonitrile		<0.442	µg/L	1
2-Butanone (MEK)		<0.420	µg/L	5
4-Methyl-2-pentanone (MIBK)		<0.407	µg/L	5
2-Hexanone		<0.486	µg/L	5
trans 1,4-Dichloro-2-butene		<0.463	µg/L	10
1,1-Dichloroethene		<0.237	µg/L	1
Methylene chloride		<0.312	µg/L	5
MTBE		<0.318	µg/L	1
trans-1,2-Dichloroethene		<0.217	µg/L	1
1,1-Dichloroethane		<0.202	µg/L	1
cis-1,2-Dichloroethene		<0.309	µg/L	1
2,2-Dichloropropane		<0.318	µg/L	1
1,2-Dichloroethane (EDC)		<0.292	µg/L	1
Chloroform		<0.234	µg/L	1
1,1,1-Trichloroethane		<0.257	µg/L	1
1,1-Dichloropropene		<0.286	µg/L	1
Benzene		<0.319	µg/L	1
Carbon Tetrachloride		<0.223	µg/L	1

*continued ...*

*method blank continued ...*

Parameter	Flag	MDL Result	Units	RL
1,2-Dichloropropane		<0.266	µg/L	1
Trichloroethene (TCE)		<0.235	µg/L	1
Dibromomethane (methylene bromide)		<0.341	µg/L	1
Bromodichloromethane		<0.291	µg/L	1
2-Chloroethyl vinyl ether		<0.293	µg/L	5
cis-1,3-Dichloropropene		<0.207	µg/L	1
trans-1,3-Dichloropropene		<0.293	µg/L	1
Toluene		<0.268	µg/L	1
1,1,2-Trichloroethane		<0.329	µg/L	1
1,3-Dichloropropane		<0.316	µg/L	1
Dibromochloromethane		<0.290	µg/L	1
1,2-Dibromoethane (EDB)		<0.229	µg/L	1
Tetrachloroethene (PCE)		<0.233	µg/L	1
Chlorobenzene		<0.276	µg/L	1
1,1,1,2-Tetrachloroethane		<0.226	µg/L	1
Ethylbenzene		<0.245	µg/L	1
m,p-Xylene		<0.517	µg/L	1
Bromoform		<0.175	µg/L	1
Styrene		<0.239	µg/L	1
o-Xylene		<0.247	µg/L	1
1,1,2,2-Tetrachloroethane		<0.223	µg/L	1
2-Chlorotoluene		<0.235	µg/L	1
1,2,3-Trichloropropane		<0.230	µg/L	1
Isopropylbenzene		<0.226	µg/L	1
Bromobenzene		<0.245	µg/L	1
n-Propylbenzene		<0.234	µg/L	1
1,3,5-Trimethylbenzene		<0.261	µg/L	1
tert-Butylbenzene		<0.281	µg/L	1
1,2,4-Trimethylbenzene		<0.285	µg/L	1
1,4-Dichlorobenzene (para)		<0.307	µg/L	1
sec-Butylbenzene		<0.312	µg/L	1
1,3-Dichlorobenzene (meta)		<0.284	µg/L	1
p-Isopropyltoluene		<0.244	µg/L	1
4-Chlorotoluene		<0.257	µg/L	1
1,2-Dichlorobenzene (ortho)		<0.294	µg/L	1
n-Butylbenzene		<0.339	µg/L	1
1,2-Dibromo-3-chloropropane		<0.780	µg/L	5
1,2,3-Trichlorobenzene		<0.736	µg/L	5
1,2,4-Trichlorobenzene		<0.432	µg/L	5
Naphthalene		<0.475	µg/L	5
Hexachlorobutadiene		<1.02	µg/L	5

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		58.4	µg/L	1	50.0	117	83.6 - 120
Toluene-d8		51.1	µg/L	1	50.0	102	85 - 120
4-Bromofluorobenzene (4-BFB)		45.6	µg/L	1	50.0	91	73.7 - 111

**Method Blank (1)** QC Batch: 52862

QC Batch: 52862 Date Analyzed: 2008-09-30 Analyzed By: RR  
Prep Batch: 45207 QC Preparation: 2008-09-26 Prepared By: KV

Parameter	Flag	MDL Result	Units	RL
Total Aluminum		<0.00540	mg/L	0.05

**Method Blank (1)** QC Batch: 52862

QC Batch: 52862 Date Analyzed: 2008-09-30 Analyzed By: RR  
Prep Batch: 45207 QC Preparation: 2008-09-26 Prepared By: KV

Parameter	Flag	MDL Result	Units	RL
Total Boron		<0.00210	mg/L	0.005

**Method Blank (1)** QC Batch: 52862

QC Batch: 52862 Date Analyzed: 2008-09-30 Analyzed By: RR  
Prep Batch: 45207 QC Preparation: 2008-09-26 Prepared By: KV

Parameter	Flag	MDL Result	Units	RL
Total Cobalt		<0.00170	mg/L	0.002

**Method Blank (1)** QC Batch: 52862

QC Batch: 52862 Date Analyzed: 2008-09-30 Analyzed By: RR  
Prep Batch: 45207 QC Preparation: 2008-09-26 Prepared By: KV

Parameter	Flag	MDL Result	Units	RL
Total Copper		<0.00129	mg/L	0.005

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**Method Blank (1)** QC Batch: 52862

QC Batch: 52862 Date Analyzed: 2008-09-30 Analyzed By: RR  
Prep Batch: 45207 QC Preparation: 2008-09-26 Prepared By: KV

Parameter	Flag	MDL Result	Units	RL
Total Iron		<0.00146	mg/L	0.01

**Method Blank (1)** QC Batch: 52862

QC Batch: 52862 Date Analyzed: 2008-09-30 Analyzed By: RR  
Prep Batch: 45207 QC Preparation: 2008-09-26 Prepared By: KV

Parameter	Flag	MDL Result	Units	RL
Total Manganese		<0.000414	mg/L	0.0025

**Method Blank (1)** QC Batch: 52862

QC Batch: 52862 Date Analyzed: 2008-09-30 Analyzed By: RR  
Prep Batch: 45207 QC Preparation: 2008-09-26 Prepared By: KV

Parameter	Flag	MDL Result	Units	RL
Total Molybdenum		<0.00613	mg/L	0.01

**Method Blank (1)** QC Batch: 52862

QC Batch: 52862 Date Analyzed: 2008-09-30 Analyzed By: RR  
Prep Batch: 45207 QC Preparation: 2008-09-26 Prepared By: KV

Parameter	Flag	MDL Result	Units	RL
Total Nickel		<0.00271	mg/L	0.005

**Method Blank (1)** QC Batch: 52862

QC Batch: 52862 Date Analyzed: 2008-09-30 Analyzed By: RR  
Prep Batch: 45207 QC Preparation: 2008-09-26 Prepared By: KV

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Parameter	Flag	MDL Result	Units	RL
Total Zinc		<0.000679	mg/L	0.005

**Method Blank (1)** QC Batch: 52862

QC Batch: 52862                          Date Analyzed: 2008-09-30                          Analyzed By: RR  
Prep Batch: 45207                          QC Preparation: 2008-09-26                          Prepared By: KV

Parameter	Flag	MDL Result	Units	RL
Total Silver		<0.000700	mg/L	0.005
Total Arsenic		<0.00850	mg/L	0.01
Total Barium		<0.00180	mg/L	0.005
Total Cadmium		<0.00110	mg/L	0.002
Total Chromium		<0.00201	mg/L	0.005
Total Lead		<0.00460	mg/L	0.005
Total Selenium		<0.0106	mg/L	0.02

**Method Blank (1)** QC Batch: 52872

QC Batch: 52872                          Date Analyzed: 2008-09-30                          Analyzed By: DS  
Prep Batch: 45305                          QC Preparation: 2008-09-26                          Prepared By: DS

Parameter	Flag	MDL Result	Units	RL
Pyridine		<0.00128	mg/L	0.005
N-Nitrosodimethylamine		<0.00192	mg/L	0.005
2-Picoline		<0.00132	mg/L	0.005
Methyl methanesulfonate		<0.00175	mg/L	0.005
Ethyl methanesulfonate		<0.00122	mg/L	0.005
Phenol		<0.00165	mg/L	0.005
Aniline		<0.00138	mg/L	0.005
bis(2-chloroethyl)ether		<0.00217	mg/L	0.005
2-Chlorophenol		<0.00150	mg/L	0.005
1,3-Dichlorobenzene (meta)		<0.00166	mg/L	0.005
1,4-Dichlorobenzene (para)		<0.00156	mg/L	0.005
Benzyl alcohol		<0.00100	mg/L	0.005
1,2-Dichlorobenzene (ortho)		<0.00164	mg/L	0.005
2-Methylphenol		<0.00158	mg/L	0.005
bis(2-chloroisopropyl)ether		<0.000828	mg/L	0.005
4-Methylphenol / 3-Methylphenol		<0.00124	mg/L	0.005
N-Nitrosodi-n-propylamine		<0.00127	mg/L	0.005
Hexachloroethane		<0.00198	mg/L	0.005

*continued ...*

*method blank continued ...*

Parameter	Flag	MDL Result	Units	RL
Acetophenone		<0.00127	mg/L	0.005
Nitrobenzene		<0.00193	mg/L	0.005
N-Nitrosopiperidine		<0.00120	mg/L	0.005
Isophorone		<0.00194	mg/L	0.005
2-Nitrophenol		<0.00140	mg/L	0.005
2,4-Dimethylphenol		<0.00109	mg/L	0.005
bis(2-chloroethoxy)methane		<0.00124	mg/L	0.005
2,4-Dichlorophenol		<0.00134	mg/L	0.005
1,2,4-Trichlorobenzene		<0.00193	mg/L	0.005
Benzoic acid		<0.00304	mg/L	0.005
Naphthalene		<0.00165	mg/L	0.005
a,a-Dimethylphenethylamine		<0.000758	mg/L	0.005
4-Chloroaniline		<0.00115	mg/L	0.005
2,6-Dichlorophenol		<0.00120	mg/L	0.01
Hexachlorobutadiene		<0.00184	mg/L	0.005
N-Nitroso-di-n-butylamine		<0.00169	mg/L	0.005
4-Chloro-3-methylphenol		<0.00120	mg/L	0.005
2-Methylnaphthalene		<0.00145	mg/L	0.005
1-Methylnaphthalene		<0.00155	mg/L	0.005
1,2,4,5-Tetrachlorobenzene		<0.00205	mg/L	0.005
Hexachlorocyclopentadiene		<0.00385	mg/L	0.005
2,4,6-Trichlorophenol		<0.00152	mg/L	0.01
2,4,5-Trichlorophenol		<0.00320	mg/L	0.005
2-Chloronaphthalene		<0.00168	mg/L	0.005
1-Chloronaphthalene		<0.00181	mg/L	0.005
2-Nitroaniline		<0.00169	mg/L	0.005
Dimethylphthalate		<0.00178	mg/L	0.005
Acenaphthylene		<0.00136	mg/L	0.005
2,6-Dinitrotoluene		<0.00139	mg/L	0.005
3-Nitroaniline		<0.00124	mg/L	0.005
Acenaphthene		<0.00132	mg/L	0.005
2,4-Dinitrophenol		<0.00392	mg/L	0.005
Dibenzofuran		<0.00161	mg/L	0.005
Pentachlorobenzene		<0.00242	mg/L	0.005
4-Nitrophenol		<0.00127	mg/L	0.025
2,4-Dinitrotoluene		<0.00139	mg/L	0.005
1-Naphthylamine		<0.00128	mg/L	0.005
2,3,4,6-Tetrachlorophenol		<0.00130	mg/L	0.01
2-Naphthylamine		<0.00154	mg/L	0.005
Fluorene		<0.00130	mg/L	0.005
4-Chlorophenyl-phenylether		<0.00173	mg/L	0.005
Diethylphthalate		<0.00161	mg/L	0.005
4-Nitroaniline		<0.00101	mg/L	0.005
Diphenylhydrazine		<0.00125	mg/L	0.005

*continued ...*

*method blank continued . . .*

Parameter	Flag	MDL	Result	Units	RL
4,6-Dinitro-2-methylphenol		<0.00135		mg/L	0.005
Diphenylamine		<0.00159		mg/L	0.005
4-Bromophenyl-phenylether		<0.00187		mg/L	0.005
Phenacetin		<0.00139		mg/L	0.005
Hexachlorobenzene		<0.00238		mg/L	0.005
4-Aminobiphenyl		<0.00134		mg/L	0.005
Pentachlorophenol		<0.000632		mg/L	0.01
Anthracene		<0.00152		mg/L	0.005
Pentachloronitrobenzene		<0.00307		mg/L	0.005
Pronamide		<0.00159		mg/L	0.005
Phenanthrene		<0.00144		mg/L	0.005
Di-n-butylphthalate		<0.00125		mg/L	0.005
Fluoranthene		<0.00159		mg/L	0.005
Benzidine		<0.000845		mg/L	0.025
Pyrene		<0.00135		mg/L	0.005
p-Dimethylaminoazobenzene		<0.000969		mg/L	0.005
Butylbenzylphthalate		<0.00110		mg/L	0.005
Benzo(a)anthracene		<0.00138		mg/L	0.005
3,3-Dichlorobenzidine		<0.00130		mg/L	0.005
Chrysene		<0.00146		mg/L	0.005
bis(2-ethylhexyl)phthalate		0.00130		mg/L	0.005
Di-n-octylphthalate		<0.000892		mg/L	0.005
Benzo(b)fluoranthene		<0.00126		mg/L	0.005
Benzo(k)fluoranthene		<0.00149		mg/L	0.005
7,12-Dimethylbenz(a)anthracene		<0.00134		mg/L	0.005
Benzo(a)pyrene		<0.00155		mg/L	0.005
3-Methylcholanthrene		<0.00166		mg/L	0.005
Dibenzo(a,j)acridine		<0.00201		mg/L	0.005
Indeno(1,2,3-cd)pyrene		<0.00195		mg/L	0.005
Dibenzo(a,h)anthracene		<0.00210		mg/L	0.005
Benzo(g,h,i)perylene		<0.00207		mg/L	0.005

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
2-Fluorophenol		0.0335	mg/L	1	0.0800	42	10 - 66.9
Phenol-d5		0.0236	mg/L	1	0.0800	30	10 - 50.7
Nitrobenzene-d5		0.0657	mg/L	1	0.0800	82	10 - 124
2-Fluorobiphenyl		0.0606	mg/L	1	0.0800	76	10 - 127
2,4,6-Tribromophenol		0.0540	mg/L	1	0.0800	68	10 - 138
Terphenyl-d14		0.0729	mg/L	1	0.0800	91	10 - 143

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**Method Blank (1)** QC Batch: 53041

QC Batch: 53041 Date Analyzed: 2008-10-06 Analyzed By: TP  
Prep Batch: 45388 QC Preparation: 2008-10-03 Prepared By: KV

Parameter	Flag	MDL	Result	Units	RL
Dissolved Calcium		<0.175		mg/L	1
Dissolved Magnesium		<0.148		mg/L	1
Dissolved Potassium		0.642		mg/L	1
Dissolved Sodium		<0.244		mg/L	1

**Duplicates (1)** Duplicated Sample: 174436

QC Batch: 52658 Date Analyzed: 2008-09-24 Analyzed By: AR  
Prep Batch: 45140 QC Preparation: 2008-09-24 Prepared By: AR

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity	<1.00	<1.00	mg/L as CaCO <sub>3</sub>	1	0	20
Carbonate Alkalinity	<1.00	<1.00	mg/L as CaCO <sub>3</sub>	1	0	20
Bicarbonate Alkalinity	241	234	mg/L as CaCO <sub>3</sub>	1	3	20
Total Alkalinity	241	234	mg/L as CaCO <sub>3</sub>	1	3	20

**Laboratory Control Spike (LCS-1)**

QC Batch: 52657 Date Analyzed: 2008-09-24 Analyzed By: AR  
Prep Batch: 45139 QC Preparation: 2008-09-24 Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Nitrate-N	2.50	mg/L	1	2.50	<0.0120	100	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Nitrate-N	2.50	mg/L	1	2.50	<0.0120	100	90 - 110	0	

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Laboratory Control Spike (LCS-1)**

QC Batch: 52657 Date Analyzed: 2008-09-24 Analyzed By: AR  
Prep Batch: 45139 QC Preparation: 2008-09-24 Prepared By: AR

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Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec. .	Rec. Limit
PO4-P	12.4	mg/L	1	12.5	<0.0270	99	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD		Spike Amount	Matrix		Rec.		RPD Limit
	Result	Units		Dil.	Result	Rec.	Limit	
PQ4-P	12.3	mg/L	1	12.5	<0.0270	98	90 - 110	1

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

### **Laboratory Control Spike (LCS-1)**

QC Batch: 52657  
Prep Batch: 45139

Date Analyzed: 2008-09-24  
QC Preparation: 2008-09-24

Analyzed By: AR  
Prepared By: AR

Param	LCS	Units	Dil.	Spike	Matrix	Rec.	Rec.
	Result			Amount			
Chloride	11.8	mg/L	1	12.5	<0.172	94	90 - 110
Fluoride	2.36	mg/L	1	2.50	<0.199	94	90 - 110
Sulfate	12.2	mg/L	1	12.5	<0.0320	98	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD		Spike		Matrix		Rec.		RPD
	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	11.4	mg/L	1	12.5	<0.172	91	90 - 110	3	
Fluoride	2.58	mg/L	1	2.50	<0.199	103	90 - 110	9	
Sulfate	12.2	mg/L	1	12.5	<0.0320	98	90 - 110	0	

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

### **Laboratory Control Spike (LCS-1)**

QC Batch: 52761  
Prep Batch: 45227

Date Analyzed: 2008-09-26  
QC Preparation: 2008-09-26

Analyzed By: TP  
Prepared By: TP

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Mercury	0.000953	mg/L	1	0.00100	<0.0000251	95	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD		Dil.	Spike Amount	Matrix		Rec.	Rec. Limit	RPD	RPD Limit
	Result	Units			Result	Rec.				
Total Mercury	0.000973	mg/L	1	0.00100	<0.0000251	97	85 - 115	2	20	

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Laboratory Control Spike (LCS-1)**

QC Batch: 52856      Date Analyzed: 2008-09-29      Analyzed By: KB  
 Prep Batch: 45298      QC Preparation: 2008-09-29      Prepared By: KB

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Bromochloromethane	56.2	µg/L	1	50.0	<0.197	112	88.2 - 114.5
Dichlorodifluoromethane	57.3	µg/L	1	50.0	<0.672	115	60.6 - 132.1
Chloromethane (methyl chloride)	54.7	µg/L	1	50.0	<0.542	109	55.7 - 127.9
Vinyl Chloride	60.3	µg/L	1	50.0	<0.516	121	47.6 - 142.9
Bromomethane (methyl bromide)	46.3	µg/L	1	50.0	<0.446	93	40.2 - 153.4
Chloroethane	46.3	µg/L	1	50.0	<0.656	93	44.5 - 145.8
Trichlorofluoromethane	58.3	µg/L	1	50.0	<0.538	117	55.9 - 152
Acetone	64.4	µg/L	1	50.0	<1.10	129	10 - 177.1
Iodomethane (methyl iodide)	58.8	µg/L	1	50.0	<0.214	118	76.6 - 128.8
Carbon Disulfide	59.5	µg/L	1	50.0	<0.294	119	66.1 - 137.3
Acrylonitrile	55.5	µg/L	1	50.0	<0.442	111	72.6 - 136.6
2-Butanone (MEK)	56.5	µg/L	1	50.0	<0.420	113	19.8 - 180.1
4-Methyl-2-pentanone (MIBK)	50.6	µg/L	1	50.0	<0.407	101	79.8 - 129.5
2-Hexanone	57.6	µg/L	1	50.0	<0.486	115	26.2 - 189.3
trans 1,4-Dichloro-2-butene	48.5	µg/L	1	50.0	<0.463	97	68 - 140.3
1,1-Dichloroethene	61.0	µg/L	1	50.0	<0.237	122	79 - 122.1
Methylene chloride	58.8	µg/L	1	50.0	<0.312	118	59.5 - 134.6
MTBE	<sup>5</sup> 80.4	µg/L	1	50.0	<0.318	161	69.8 - 137.1
trans-1,2-Dichloroethene	<sup>6</sup> 60.3	µg/L	1	50.0	<0.217	121	81.4 - 118.7
1,1-Dichloroethane	59.1	µg/L	1	50.0	<0.202	118	79.7 - 119.2
cis-1,2-Dichloroethene	58.8	µg/L	1	50.0	<0.309	118	86 - 120.2
2,2-Dichloropropane	60.6	µg/L	1	50.0	<0.318	121	48 - 145.8
1,2-Dichloroethane (EDC)	57.0	µg/L	1	50.0	<0.292	114	76.2 - 126.4
Chloroform	57.8	µg/L	1	50.0	<0.234	116	80.2 - 120.9
1,1,1-Trichloroethane	58.5	µg/L	1	50.0	<0.257	117	66 - 139.6
1,1-Dichloropropene	56.0	µg/L	1	50.0	<0.286	112	89.3 - 116.5
Benzene	54.7	µg/L	1	50.0	<0.319	109	89.5 - 113.9
Carbon Tetrachloride	55.4	µg/L	1	50.0	<0.223	111	78 - 128.2
1,2-Dichloropropane	56.3	µg/L	1	50.0	<0.266	113	88.5 - 115.5
Trichloroethene (TCE)	54.0	µg/L	1	50.0	<0.235	108	87.1 - 118.1
Dibromomethane (methylene bromide)	52.7	µg/L	1	50.0	<0.341	105	89.8 - 117.7
Bromodichloromethane	54.9	µg/L	1	50.0	<0.291	110	90.4 - 120.5
2-Chloroethyl vinyl ether	49.7	µg/L	1	50.0	<0.293	99	74.2 - 129.9
cis-1,3-Dichloropropene	57.9	µg/L	1	50.0	<0.207	116	88.8 - 124.1
trans-1,3-Dichloropropene	58.0	µg/L	1	50.0	<0.293	116	82 - 131.4
Toluene	54.3	µg/L	1	50.0	<0.268	109	91.1 - 113.8
1,1,2-Trichloroethane	51.8	µg/L	1	50.0	<0.329	104	91.5 - 113.9
1,3-Dichloropropane	54.0	µg/L	1	50.0	<0.316	108	89.6 - 115.8

*continued ...*<sup>5</sup>Spike recovery outside control limits. Majority of analytes have recoveries within limits showing the analysis to be in control. •<sup>6</sup>Spike recovery outside control limits. Majority of analytes have recoveries within limits showing the analysis to be in control. •

*control spikes continued . . .*

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	
Dibromochloromethane	52.5	µg/L	1	50.0	<0.290	105	95.1 - 119.8	
1,2-Dibromoethane (EDB)	50.6	µg/L	1	50.0	<0.229	101	93.8 - 117.4	
Tetrachloroethene (PCE)	54.8	µg/L	1	50.0	<0.233	110	60.6 - 131.5	
Chlorobenzene	51.6	µg/L	1	50.0	<0.276	103	91.3 - 108.8	
1,1,1,2-Tetrachloroethane	51.6	µg/L	1	50.0	<0.226	103	92 - 114.9	
Ethylbenzene	54.2	µg/L	1	50.0	<0.245	108	91.8 - 117.4	
m,p-Xylene	109	µg/L	1	100	<0.517	109	91.4 - 120	
Bromoform	7	41.1	µg/L	1	50.0	<0.175	82	84 - 133.8
Styrene	50.0	µg/L	1	50.0	<0.239	100	87 - 128.3	
o-Xylene	55.6	µg/L	1	50.0	<0.247	111	89.3 - 122.4	
1,1,2,2-Tetrachloroethane	46.7	µg/L	1	50.0	<0.223	93	79.7 - 129.4	
2-Chlorotoluene	53.9	µg/L	1	50.0	<0.235	108	90.5 - 114.9	
1,2,3-Trichloropropane	54.4	µg/L	1	50.0	<0.230	109	88.3 - 121	
Isopropylbenzene	55.6	µg/L	1	50.0	<0.226	111	93.5 - 114.9	
Bromobenzene	53.8	µg/L	1	50.0	<0.245	108	89.7 - 114	
n-Propylbenzene	54.6	µg/L	1	50.0	<0.234	109	83.8 - 119	
1,3,5-Trimethylbenzene	53.9	µg/L	1	50.0	<0.261	108	88.9 - 116.7	
tert-Butylbenzene	53.1	µg/L	1	50.0	<0.281	106	89.6 - 115.9	
1,2,4-Trimethylbenzene	53.5	µg/L	1	50.0	<0.285	107	92.2 - 114.6	
1,4-Dichlorobenzene (para)	50.0	µg/L	1	50.0	<0.307	100	90.4 - 107	
sec-Butylbenzene	53.3	µg/L	1	50.0	<0.312	107	87.7 - 116.6	
1,3-Dichlorobenzene (meta)	51.0	µg/L	1	50.0	<0.284	102	91.3 - 110.9	
p-Isopropyltoluene	52.9	µg/L	1	50.0	<0.244	106	89.9 - 116.6	
4-Chlorotoluene	54.0	µg/L	1	50.0	<0.257	108	91 - 116	
1,2-Dichlorobenzene (ortho)	50.1	µg/L	1	50.0	<0.294	100	92.9 - 113.3	
n-Butylbenzene	52.4	µg/L	1	50.0	<0.339	105	87.1 - 120	
1,2-Dibromo-3-chloropropane	43.7	µg/L	1	50.0	<0.780	87	72.5 - 129.8	
1,2,3-Trichlorobenzene	44.3	µg/L	1	50.0	<0.736	89	10 - 218.8	
1,2,4-Trichlorobenzene	44.1	µg/L	1	50.0	<0.432	88	53.2 - 146.6	
Naphthalene	45.1	µg/L	1	50.0	<0.475	90	26.6 - 177.2	
Hexachlorobutadiene	45.2	µg/L	1	50.0	<1.02	90	73.6 - 134.8	

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Bromochloromethane	55.7	µg/L	1	50.0	<0.197	111	88.2 - 114.5	1	20
Dichlorodifluoromethane	51.5	µg/L	1	50.0	<0.672	103	60.6 - 132.1	11	20
Chloromethane (methyl chloride)	51.8	µg/L	1	50.0	<0.542	104	55.7 - 127.9	5	20
Vinyl Chloride	56.6	µg/L	1	50.0	<0.516	113	47.6 - 142.9	6	20
Bromomethane (methyl bromide)	49.4	µg/L	1	50.0	<0.446	99	40.2 - 153.4	6	20
Chloroethane	53.7	µg/L	1	50.0	<0.656	107	44.5 - 145.8	15	20
Trichlorofluoromethane	52.0	µg/L	1	50.0	<0.538	104	55.9 - 152	11	20
Acetone	64.8	µg/L	1	50.0	<1.10	130	10 - 177.1	1	20

*continued . . .*<sup>7</sup>Spike recovery outside control limits. Majority of analytes have recoveries within limits showing the analysis to be in control. •

*control spikes continued ...*

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit	RPD RPD	RPD Limit
Iodomethane (methyl iodide)	57.6	µg/L	1	50.0	<0.214	115	76.6 - 128.8	2	20
Carbon Disulfide	58.6	µg/L	1	50.0	<0.294	117	66.1 - 137.3	2	20
Acrylonitrile	57.9	µg/L	1	50.0	<0.442	116	72.6 - 136.6	4	20
2-Butanone (MEK)	57.5	µg/L	1	50.0	<0.420	115	19.8 - 180.1	2	20
4-Methyl-2-pentanone (MIBK)	54.2	µg/L	1	50.0	<0.407	108	79.8 - 129.5	7	20
2-Hexanone	59.9	µg/L	1	50.0	<0.486	120	26.2 - 189.3	4	20
trans 1,4-Dichloro-2-butene	50.4	µg/L	1	50.0	<0.463	101	68 - 140.3	4	20
1,1-Dichloroethene	58.6	µg/L	1	50.0	<0.237	117	79 - 122.1	4	20
Methylene chloride	57.9	µg/L	1	50.0	<0.312	116	59.5 - 134.6	2	20
MTBE	<sup>8</sup> 75.6	µg/L	1	50.0	<0.318	151	69.8 - 137.1	6	20
trans-1,2-Dichloroethene	<sup>9</sup> 59.7	µg/L	1	50.0	<0.217	119	81.4 - 118.7	1	20
1,1-Dichloroethane	58.0	µg/L	1	50.0	<0.202	116	79.7 - 119.2	2	20
cis-1,2-Dichloroethene	58.4	µg/L	1	50.0	<0.309	117	86 - 120.2	1	20
2,2-Dichloropropane	59.7	µg/L	1	50.0	<0.318	119	48 - 145.8	2	20
1,2-Dichloroethane (EDC)	57.3	µg/L	1	50.0	<0.292	115	76.2 - 126.4	0	20
Chloroform	57.5	µg/L	1	50.0	<0.234	115	80.2 - 120.9	0	20
1,1,1-Trichloroethane	58.9	µg/L	1	50.0	<0.257	118	66 - 139.6	1	20
1,1-Dichloropropene	56.4	µg/L	1	50.0	<0.286	113	89.3 - 116.5	1	20
Benzene	55.4	µg/L	1	50.0	<0.319	111	89.5 - 113.9	1	20
Carbon Tetrachloride	56.3	µg/L	1	50.0	<0.223	113	78 - 128.2	2	20
1,2-Dichloropropane	57.4	µg/L	1	50.0	<0.266	115	88.5 - 115.5	2	20
Trichloroethene (TCE)	56.6	µg/L	1	50.0	<0.235	113	87.1 - 118.1	5	20
Dibromomethane (methylene bromide)	53.9	µg/L	1	50.0	<0.341	108	89.8 - 117.7	2	20
Bromodichloromethane	55.8	µg/L	1	50.0	<0.291	112	90.4 - 120.5	2	20
2-Chloroethyl vinyl ether	50.0	µg/L	1	50.0	<0.293	100	74.2 - 129.9	1	20
cis-1,3-Dichloropropene	58.6	µg/L	1	50.0	<0.207	117	88.8 - 124.1	1	20
trans-1,3-Dichloropropene	58.8	µg/L	1	50.0	<0.293	118	82 - 131.4	1	20
Toluene	55.0	µg/L	1	50.0	<0.268	110	91.1 - 113.8	1	20
1,1,2-Trichloroethane	52.4	µg/L	1	50.0	<0.329	105	91.5 - 113.9	1	20
1,3-Dichloropropane	54.7	µg/L	1	50.0	<0.316	109	89.6 - 115.8	1	20
Dibromochloromethane	53.8	µg/L	1	50.0	<0.290	108	95.1 - 119.8	2	20
1,2-Dibromoethane (EDB)	52.4	µg/L	1	50.0	<0.229	105	93.8 - 117.4	4	20
Tetrachloroethene (PCE)	56.2	µg/L	1	50.0	<0.233	112	60.6 - 131.5	2	20
Chlorobenzene	52.0	µg/L	1	50.0	<0.276	104	91.3 - 108.8	1	20
1,1,1,2-Tetrachloroethane	52.2	µg/L	1	50.0	<0.226	104	92 - 114.9	1	20
Ethylbenzene	54.6	µg/L	1	50.0	<0.245	109	91.8 - 117.4	1	20
m,p-Xylene	109	µg/L	1	100	<0.517	109	91.4 - 120	0	20
Bromoform	43.3	µg/L	1	50.0	<0.175	87	84 - 133.8	5	20
Styrene	50.8	µg/L	1	50.0	<0.239	102	87 - 128.3	2	20
o-Xylene	56.2	µg/L	1	50.0	<0.247	112	89.3 - 122.4	1	20

*continued ...*

<sup>8</sup>Spike recovery outside control limits. Majority of analytes have recoveries within limits showing the analysis to be in control. RPD within RPD limits.

<sup>9</sup>Spike recovery outside control limits. Majority of analytes have recoveries within limits showing the analysis to be in control. RPD within RPD limits.

*control spikes continued . . .*

Param	LCSD		Spike		Matrix		Rec.		RPD
	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
1,1,2,2-Tetrachloroethane	46.9	µg/L	1	50.0	<0.223	94	79.7 - 129.4	0	20
2-Chlorotoluene	53.8	µg/L	1	50.0	<0.235	108	90.5 - 114.9	0	20
1,2,3-Trichloropropane	56.0	µg/L	1	50.0	<0.230	112	88.3 - 121	3	20
Isopropylbenzene	56.5	µg/L	1	50.0	<0.226	113	93.5 - 114.9	2	20
Bromobenzene	54.1	µg/L	1	50.0	<0.245	108	89.7 - 114	1	20
n-Propylbenzene	54.8	µg/L	1	50.0	<0.234	110	83.8 - 119	0	20
1,3,5-Trimethylbenzene	54.2	µg/L	1	50.0	<0.261	108	88.9 - 116.7	1	20
tert-Butylbenzene	53.7	µg/L	1	50.0	<0.281	107	89.6 - 115.9	1	20
1,2,4-Trimethylbenzene	54.0	µg/L	1	50.0	<0.285	108	92.2 - 114.6	1	20
1,4-Dichlorobenzene (para)	50.4	µg/L	1	50.0	<0.307	101	90.4 - 107	1	20
sec-Butylbenzene	53.7	µg/L	1	50.0	<0.312	107	87.7 - 116.6	1	20
1,3-Dichlorobenzene (meta)	51.5	µg/L	1	50.0	<0.284	103	91.3 - 110.9	1	20
p-Isopropyltoluene	53.0	µg/L	1	50.0	<0.244	106	89.9 - 116.6	0	20
4-Chlorotoluene	54.4	µg/L	1	50.0	<0.257	109	91 - 116	1	20
1,2-Dichlorobenzene (ortho)	50.8	µg/L	1	50.0	<0.294	102	92.9 - 113.3	1	20
n-Butylbenzene	52.4	µg/L	1	50.0	<0.339	105	87.1 - 120	0	20
1,2-Dibromo-3-chloropropane	46.6	µg/L	1	50.0	<0.780	93	72.5 - 129.8	6	20
1,2,3-Trichlorobenzene	45.7	µg/L	1	50.0	<0.736	91	10 - 218.8	3	20
1,2,4-Trichlorobenzene	45.3	µg/L	1	50.0	<0.432	91	53.2 - 146.6	3	20
Naphthalene	47.1	µg/L	1	50.0	<0.475	94	26.6 - 177.2	4	20
Hexachlorobutadiene	44.4	µg/L	1	50.0	<1.02	89	73.6 - 134.8	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Dibromofluoromethane	53.2	52.7	µg/L	1	50.0	106	105	85.4 - 110.5
Toluene-d8	50.3	49.4	µg/L	1	50.0	101	99	87 - 108.6
4-Bromofluorobenzene (4-BFB)	48.5	48.5	µg/L	1	50.0	97	97	83.3 - 113

### Laboratory Control Spike (LCS-1)

QC Batch: 52862  
Prep Batch: 45207

Date Analyzed: 2008-09-30  
QC Preparation: 2008-09-26

Analyzed By: RR  
Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit
Total Aluminum	0.953	mg/L	1	1.00	<0.00540	95	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD		Spike		Matrix		Rec.		RPD
	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Total Aluminum	0.949	mg/L	1	1.00	<0.00540	95	85 - 115	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

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PLAIN044SPL

Work Order: 8092404  
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### Laboratory Control Spike (LCS-1)

QC Batch: 52862                          Date Analyzed: 2008-09-30                          Analyzed By: RR  
Prep Batch: 45207                          QC Preparation: 2008-09-26                          Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Boron	0.0480	mg/L	1	0.0500	<0.00210	96	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Boron	0.0480	mg/L	1	0.0500	<0.00210	96	85 - 115	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

### Laboratory Control Spike (LCS-1)

QC Batch: 52862                          Date Analyzed: 2008-09-30                          Analyzed By: RR  
Prep Batch: 45207                          QC Preparation: 2008-09-26                          Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Cobalt	0.249	mg/L	1	0.250	<0.00170	100	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Cobalt	0.249	mg/L	1	0.250	<0.00170	100	85 - 115	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

### Laboratory Control Spike (LCS-1)

QC Batch: 52862                          Date Analyzed: 2008-09-30                          Analyzed By: RR  
Prep Batch: 45207                          QC Preparation: 2008-09-26                          Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Copper	0.124	mg/L	1	0.125	<0.00129	99	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Copper	0.123	mg/L	1	0.125	<0.00129	98	85 - 115	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

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### Laboratory Control Spike (LCS-1)

QC Batch: 52862                          Date Analyzed: 2008-09-30                          Analyzed By: RR  
Prep Batch: 45207                          QC Preparation: 2008-09-26                          Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Iron	0.523	mg/L	1	0.500	<0.00146	105	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Iron	0.521	mg/L	1	0.500	<0.00146	104	85 - 115	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

### Laboratory Control Spike (LCS-1)

QC Batch: 52862                          Date Analyzed: 2008-09-30                          Analyzed By: RR  
Prep Batch: 45207                          QC Preparation: 2008-09-26                          Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Manganese	0.252	mg/L	1	0.250	<0.000414	101	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Manganese	0.252	mg/L	1	0.250	<0.000414	101	85 - 115	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

### Laboratory Control Spike (LCS-1)

QC Batch: 52862                          Date Analyzed: 2008-09-30                          Analyzed By: RR  
Prep Batch: 45207                          QC Preparation: 2008-09-26                          Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Molybdenum	0.505	mg/L	1	0.500	<0.00613	101	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Molybdenum	0.514	mg/L	1	0.500	<0.00613	103	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

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### Laboratory Control Spike (LCS-1)

QC Batch: 52862                          Date Analyzed: 2008-09-30                          Analyzed By: RR  
Prep Batch: 45207                          QC Preparation: 2008-09-26                          Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Nickel	0.238	mg/L	1	0.250	<0.00271	95	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Nickel	0.235	mg/L	1	0.250	<0.00271	94	85 - 115	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

### Laboratory Control Spike (LCS-1)

QC Batch: 52862                          Date Analyzed: 2008-09-30                          Analyzed By: RR  
Prep Batch: 45207                          QC Preparation: 2008-09-26                          Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Zinc	0.244	mg/L	1	0.250	<0.000679	98	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Zinc	0.242	mg/L	1	0.250	<0.000679	97	85 - 115	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

### Laboratory Control Spike (LCS-1)

QC Batch: 52862                          Date Analyzed: 2008-09-30                          Analyzed By: RR  
Prep Batch: 45207                          QC Preparation: 2008-09-26                          Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Silver	0.125	mg/L	1	0.125	<0.000700	100	85 - 115
Total Arsenic	0.491	mg/L	1	0.500	<0.00850	98	85 - 115
Total Barium	1.06	mg/L	1	1.00	<0.00180	106	85 - 115
Total Cadmium	0.260	mg/L	1	0.250	<0.00110	104	85 - 115
Total Chromium	0.0990	mg/L	1	0.100	<0.00201	99	85 - 115
Total Lead	0.529	mg/L	1	0.500	<0.00460	106	85 - 115

*continued ...*

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*control spikes continued . . .*

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit
Total Selenium	0.442	mg/L	1	0.500	<0.0106	88	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD		Spike Amount	Matrix Result	Rec.		RPD Limit		
	Result	Units			Dil.	Rec.			
Total Silver	0.124	mg/L	1	0.125	<0.000700	99	85 - 115	1	20
Total Arsenic	0.490	mg/L	1	0.500	<0.00850	98	85 - 115	0	20
Total Barium	1.06	mg/L	1	1.00	<0.00180	106	85 - 115	0	20
Total Cadmium	0.259	mg/L	1	0.250	<0.00110	104	85 - 115	0	20
Total Chromium	0.0980	mg/L	1	0.100	<0.00201	98	85 - 115	1	20
Total Lead	0.529	mg/L	1	0.500	<0.00460	106	85 - 115	0	20
Total Selenium	0.439	mg/L	1	0.500	<0.0106	88	85 - 115	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

## Laboratory Control Spike (LCS-1)

QC Batch: 52872  
Prep Batch: 45305

Date Analyzed: 2008-09-30  
QC Preparation: 2008-09-26

Analyzed By: DS  
Prepared By: DS

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit	
Phenol	0.0199	mg/L	1	0.0800	<0.00165	25	10 - 46.1	
2-Chlorophenol	0.0542	mg/L	1	0.0800	<0.00150	68	10 - 123	
1,4-Dichlorobenzene (para)	0.0544	mg/L	1	0.0800	<0.00156	68	10 - 118	
N-Nitrosodi-n-propylamine	0.0580	mg/L	1	0.0800	<0.00127	72	10 - 132	
1,2,4-Trichlorobenzene	0.0567	mg/L	1	0.0800	<0.00193	71	10 - 130	
Naphthalene	0.0579	mg/L	1	0.0800	<0.00165	72	20.3 - 121	
4-Chloro-3-methylphenol	0.0642	mg/L	1	0.0800	<0.00120	80	10 - 140	
Acenaphthylene	0.0706	mg/L	1	0.0800	<0.00136	88	22.3 - 124	
Acenaphthene	0.0684	mg/L	1	0.0800	<0.00132	86	18.8 - 134	
4-Nitrophenol	0.0143	mg/L	1	0.0800	<0.00127	18	10 - 135	
2,4-Dinitrotoluene	0.0706	mg/L	1	0.0800	<0.00139	88	13.6 - 152	
Fluorene	0.0764	mg/L	1	0.0800	<0.00130	96	29.7 - 114	
Pentachlorophenol	0.0157	mg/L	1	0.0800	<0.000632	20	10 - 144	
Anthracene	0.0710	mg/L	1	0.0800	<0.00152	89	48.2 - 118	
Phenanthrene	0.0731	mg/L	1	0.0800	<0.00144	91	45.5 - 121	
Fluoranthene	0.0756	mg/L	1	0.0800	<0.00159	94	42.7 - 126	
Pyrene	0.0741	mg/L	1	0.0800	<0.00135	93	26.8 - 155	
Benzo(a)anthracene	0.0760	mg/L	1	0.0800	<0.00138	95	60.2 - 97.3	
Chrysene	10	0.0777	mg/L	1	0.0800	<0.00146	97	56 - 92.4
Benzo(b)fluoranthene		0.0709	mg/L	1	0.0800	<0.00126	89	73.9 - 102

*continued . . .*

<sup>10</sup>Chrysene out of control chart limits for LCS/LCSD. Majority of analytes within range show process is within control. •

*control spikes continued . . .*

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzo(k)fluoranthene	0.0746	mg/L	1	0.0800	<0.00149	93	45.6 - 143
Benzo(a)pyrene	0.0794	mg/L	1	0.0800	<0.00155	99	54.8 - 122
Indeno(1,2,3-cd)pyrene	0.0815	mg/L	1	0.0800	<0.00195	102	61.4 - 118
Dibenz(a,h)anthracene	0.0806	mg/L	1	0.0800	<0.0210	101	64.9 - 118
Benzo(g,h,i)perylene	0.0820	mg/L	1	0.0800	<0.00207	102	46.8 - 129

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Limit	RPD Limit
Phenol	0.0202	mg/L	1	0.0800	<0.00165	25	10 - 46.1
2-Chlorophenol	0.0540	mg/L	1	0.0800	<0.00150	68	10 - 123
1,4-Dichlorobenzene (para)	0.0542	mg/L	1	0.0800	<0.00156	68	10 - 118
N-Nitrosodi-n-propylamine	0.0558	mg/L	1	0.0800	<0.00127	70	10 - 132
1,2,4-Trichlorobenzene	0.0583	mg/L	1	0.0800	<0.00193	73	10 - 130
Naphthalene	0.0595	mg/L	1	0.0800	<0.00165	74	20.3 - 121
4-Chloro-3-methylphenol	0.0628	mg/L	1	0.0800	<0.00120	78	10 - 140
Acenaphthylene	0.0718	mg/L	1	0.0800	<0.00136	90	22.3 - 124
Acenaphthene	0.0695	mg/L	1	0.0800	<0.00132	87	18.8 - 134
4-Nitrophenol	0.0145	mg/L	1	0.0800	<0.00127	18	10 - 135
2,4-Dinitrotoluene	0.0696	mg/L	1	0.0800	<0.00139	87	13.6 - 152
Fluorene	0.0748	mg/L	1	0.0800	<0.00130	94	29.7 - 114
Pentachlorophenol	0.0197	mg/L	1	0.0800	<0.000632	25	10 - 144
Anthracene	0.0722	mg/L	1	0.0800	<0.00152	90	48.2 - 118
Phenanthrene	0.0734	mg/L	1	0.0800	<0.00144	92	45.5 - 121
Fluoranthene	0.0788	mg/L	1	0.0800	<0.00159	98	42.7 - 126
Pyrene	0.0734	mg/L	1	0.0800	<0.00135	92	26.8 - 155
Benzo(a)anthracene	0.0768	mg/L	1	0.0800	<0.00138	96	60.2 - 97.3
Chrysene	11 0.0774	mg/L	1	0.0800	<0.00146	97	56 - 92.4
Benzo(b)fluoranthene	0.0716	mg/L	1	0.0800	<0.00126	90	73.9 - 102
Benzo(k)fluoranthene	0.0780	mg/L	1	0.0800	<0.00149	98	45.6 - 143
Benzo(a)pyrene	0.0806	mg/L	1	0.0800	<0.00155	101	54.8 - 122
Indeno(1,2,3-cd)pyrene	0.0813	mg/L	1	0.0800	<0.00195	102	61.4 - 118
Dibenz(a,h)anthracene	0.0812	mg/L	1	0.0800	<0.0210	102	64.9 - 118
Benzo(g,h,i)perylene	0.0820	mg/L	1	0.0800	<0.00207	102	46.8 - 129

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
2-Fluorophenol	0.0340	0.0345	mg/L	1	0.0800	42	43	10 - 109
Phenol-d5	0.0232	0.0235	mg/L	1	0.0800	29	29	10 - 61.5
Nitrobenzene-d5	0.0703	0.0723	mg/L	1	0.0800	88	90	10 - 139
2-Fluorobiphenyl	0.0690	0.0726	mg/L	1	0.0800	86	91	10 - 139

*continued . . .*

<sup>11</sup>Chrysene out of control chart limits for LCS/LCSD. Majority of analytes within range show process is within control. •

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*control spikes continued . . .*

	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Surrogate								
2,4,6-Tribromophenol	0.0721	0.0712	mg/L	1	0.0800	90	89	10 - 161
Terphenyl-d14	0.0831	0.0830	mg/L	1	0.0800	104	104	10 - 144

## Laboratory Control Spike (LCS-1)

QC Batch: 53041  
Prep Batch: 45388

Date Analyzed: 2008-10-06  
QC Preparation: 2008-10-03

Analyzed By: TP  
Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Dissolved Calcium	48.6	mg/L	1	50.0	<0.175	97	85 - 115
Dissolved Magnesium	47.7	mg/L	1	50.0	<0.148	95	85 - 115
Dissolved Potassium	48.9	mg/L	1	50.0	0.642	96	85 - 115
Dissolved Sodium	49.2	mg/L	1	50.0	<0.244	98	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD		Dil.	Spike Amount	Matrix		Rec.	Rec. Limit	RPD	RPD Limit
	Result	Units			Result	Rec.				
Dissolved Calcium	47.7	mg/L	1	50.0	<0.175	95	85 - 115	2	20	
Dissolved Magnesium	46.8	mg/L	1	50.0	<0.148	94	85 - 115	2	20	
Dissolved Potassium	48.6	mg/L	1	50.0	0.642	96	85 - 115	1	20	
Dissolved Sodium	48.8	mg/L	1	50.0	<0.244	98	85 - 115	1	20	

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

## Matrix Spike (MS-1) Spiked Sample: 174436

QC Batch: 52657  
Prep Batch: 45139

Date Analyzed: 2008-09-24  
QC Preparation: 2008-09-24

Analyzed By: AR  
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit
Nitrate-N	16.5	mg/L	5	12.5	4.59	95	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD	Spike	Matrix	Rec.	RPD			
	Result							
Nitrate-N	16.6	mg/L	5	12.5	4.59	96	90 - 110	1

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

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**Matrix Spike (MS-1) Spiked Sample: 174436**

QC Batch: 52657 Date Analyzed: 2008-09-24 Analyzed By: AR  
Prep Batch: 45139 QC Preparation: 2008-09-24 Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
PO4-P	61.1	mg/L	5	62.5	<0.135	98	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
PO4-P	61.8	mg/L	5	62.5	<0.135	99	90 - 110	1	

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Matrix Spike (MS-1) Spiked Sample: 174436**

QC Batch: 52657 Date Analyzed: 2008-09-24 Analyzed By: AR  
Prep Batch: 45139 QC Preparation: 2008-09-24 Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	274	mg/L	5	62.5	211	101	90 - 110
Fluoride	<sup>12</sup> 17.8	mg/L	5	12.5	1.8	128	90 - 110
Sulfate	<sup>13</sup> 268	mg/L	5	62.5	117	242	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	272	mg/L	5	62.5	211	98	90 - 110	1	
Fluoride	<sup>14</sup> 14.0	mg/L	5	12.5	1.8	98	90 - 110	24	
Sulfate	<sup>15</sup> 206	mg/L	5	62.5	117	142	90 - 110	26	

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Matrix Spike (MS-1) Spiked Sample: 174273**

QC Batch: 52761 Date Analyzed: 2008-09-26 Analyzed By: TP  
Prep Batch: 45227 QC Preparation: 2008-09-26 Prepared By: TP

<sup>12</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>13</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>14</sup>MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.

<sup>15</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

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Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Mercury	<sup>16</sup> 0.000407	mg/L	1	0.00100	<0.0000251	41	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Mercury	<sup>17</sup> 0.000407	mg/L	1	0.00100	<0.0000251	41	75 - 125	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

### Matrix Spike (MS-1) Spiked Sample: 174886

QC Batch: 52856 Date Analyzed: 2008-09-29 Analyzed By: KB  
Prep Batch: 45298 QC Preparation: 2008-09-29 Prepared By: KB

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Bromochloromethane	59.5	µg/L	1	50.0	<0.197	119	83.9 - 123
Dichlorodifluoromethane	51.0	µg/L	1	50.0	<0.672	102	38.4 - 157.1
Chloromethane (methyl chloride)	57.8	µg/L	1	50.0	<0.542	116	54.1 - 145.8
Vinyl Chloride	61.6	µg/L	1	50.0	<0.516	123	48 - 153.9
Bromomethane (methyl bromide)	68.5	µg/L	1	50.0	<0.446	137	29.9 - 175.7
Chloroethane	67.0	µg/L	1	50.0	<0.656	134	10 - 240.3
Trichlorofluoromethane	51.8	µg/L	1	50.0	<0.538	104	49.5 - 169.4
Acetone	47.3	µg/L	1	50.0	<1.10	95	10 - 186
Iodomethane (methyl iodide)	54.5	µg/L	1	50.0	<0.214	109	71.9 - 127.7
Carbon Disulfide	65.0	µg/L	1	50.0	<0.294	130	75.1 - 130.9
Acrylonitrile	66.5	µg/L	1	50.0	<0.442	133	62.6 - 149.5
2-Butanone (MEK)	56.9	µg/L	1	50.0	<0.420	114	19.8 - 138.2
4-Methyl-2-pentanone (MIBK)	56.3	µg/L	1	50.0	<0.407	113	50.4 - 160.5
2-Hexanone	67.2	µg/L	1	50.0	<0.486	134	20.8 - 171.5
trans 1,4-Dichloro-2-butene	57.0	µg/L	1	50.0	<0.463	114	45.7 - 136.4
1,1-Dichloroethene	62.0	µg/L	1	50.0	<0.237	124	75.2 - 127.4
Methylene chloride	62.4	µg/L	1	50.0	<0.312	125	61.5 - 137.2
MTBE	<sup>18</sup> 77.5	µg/L	1	50.0	<0.318	155	60 - 149.2
trans-1,2-Dichloroethene	<sup>19</sup> 63.8	µg/L	1	50.0	<0.217	128	78.2 - 125.1
1,1-Dichloroethane	<sup>20</sup> 64.9	µg/L	1	50.0	<0.202	130	79 - 126.5
cis-1,2-Dichloroethene	62.2	µg/L	1	50.0	<0.309	124	82.5 - 127.1
2,2-Dichloropropane	55.9	µg/L	1	50.0	<0.318	112	13.7 - 121.7
1,2-Dichloroethane (EDC)	64.5	µg/L	1	50.0	<0.292	129	73.7 - 141
Chloroform	63.3	µg/L	1	50.0	<0.234	127	78.1 - 129.7

*continued ...*

<sup>16</sup> Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>17</sup> Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>18</sup> Matrix spike recovery out of control limits due to matrix interference.

<sup>19</sup> Matrix spike recovery out of control limits due to matrix interference.

<sup>20</sup> Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

*matrix spikes continued ...*

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
1,1,1-Trichloroethane	63.7	µg/L	1	50.0	<0.257	127	70 - 140.3
1,1-Dichloropropene	58.9	µg/L	1	50.0	<0.286	118	83 - 122
Benzene	58.1	µg/L	1	50.0	<0.319	116	63.3 - 136.4
Carbon Tetrachloride	57.5	µg/L	1	50.0	<0.223	115	75.8 - 128.8
1,2-Dichloropropane	61.4	µg/L	1	50.0	<0.266	123	84 - 124.5
Trichloroethene (TCE)	49.9	µg/L	1	50.0	<0.235	100	83.7 - 109.8
Dibromomethane (methylene bromide)	56.3	µg/L	1	50.0	<0.341	113	84.6 - 124.7
Bromodichloromethane	59.1	µg/L	1	50.0	<0.291	118	87.2 - 125.3
2-Chloroethyl vinyl ether	21 <0.293	µg/L	1	50.0	<0.293	0	10 - 174.1
cis-1,3-Dichloropropene		µg/L	1	50.0	<0.207	118	82.3 - 118.5
trans-1,3-Dichloropropene	61.3	µg/L	1	50.0	<0.293	123	75.9 - 126
Toluene	57.6	µg/L	1	50.0	<0.268	115	10 - 205.6
1,1,2-Trichloroethane	55.4	µg/L	1	50.0	<0.329	111	84 - 125.8
1,3-Dichloropropane	57.5	µg/L	1	50.0	<0.316	115	83 - 126.6
Dibromochloromethane	54.2	µg/L	1	50.0	<0.290	108	91.4 - 119.1
1,2-Dibromoethane (EDB)	53.0	µg/L	1	50.0	<0.229	106	88.8 - 118.8
Tetrachloroethene (PCE)	28.5	µg/L	1	50.0	<0.233	57	46.8 - 74.2
Chlorobenzene	53.2	µg/L	1	50.0	<0.276	106	86.6 - 111.7
1,1,1,2-Tetrachloroethane	52.8	µg/L	1	50.0	<0.226	106	87.2 - 118.6
Ethylbenzene	57.1	µg/L	1	50.0	<0.245	114	81.8 - 123.6
m,p-Xylene	116	µg/L	1	100	<0.517	116	36 - 162.4
Bromoform	41.6	µg/L	1	50.0	<0.175	83	74.1 - 133
Styrene	22 1.09	µg/L	1	50.0	<0.239	2	10 - 187.2
o-Xylene		µg/L	1	50.0	<0.247	114	40.7 - 160.6
1,1,2,2-Tetrachloroethane	59.4	µg/L	1	50.0	<0.223	119	74.8 - 154.8
2-Chlorotoluene	54.6	µg/L	1	50.0	<0.235	109	86.3 - 117
1,2,3-Trichloropropene	57.6	µg/L	1	50.0	<0.230	115	73.2 - 125.2
Isopropylbenzene	55.0	µg/L	1	50.0	<0.226	110	87.8 - 114.2
Bromobenzene	55.3	µg/L	1	50.0	<0.245	111	84.8 - 116
n-Propylbenzene	56.2	µg/L	1	50.0	<0.234	112	79.4 - 117.1
1,3,5-Trimethylbenzene	54.3	µg/L	1	50.0	<0.261	109	82.6 - 115.9
tert-Butylbenzene	53.2	µg/L	1	50.0	<0.281	106	83 - 115.2
1,2,4-Trimethylbenzene	55.8	µg/L	1	50.0	<0.285	112	86.2 - 116.1
1,4-Dichlorobenzene (para)	51.0	µg/L	1	50.0	<0.307	102	86 - 106.4
sec-Butylbenzene	53.7	µg/L	1	50.0	<0.312	107	79.7 - 116.6
1,3-Dichlorobenzene (meta)	51.5	µg/L	1	50.0	<0.284	103	86.7 - 109.5
p-Isopropyltoluene	53.2	µg/L	1	50.0	<0.244	106	81.6 - 114.7
4-Chlorotoluene	55.0	µg/L	1	50.0	<0.257	110	87.1 - 115.4
1,2-Dichlorobenzene (ortho)	51.5	µg/L	1	50.0	<0.294	103	88.4 - 112.8
n-Butylbenzene	53.7	µg/L	1	50.0	<0.339	107	79.7 - 117.1
1,2-Dibromo-3-chloropropane	51.0	µg/L	1	50.0	<0.780	102	61.6 - 136.2
1,2,3-Trichlorobenzene	45.0	µg/L	1	50.0	<0.736	90	22.9 - 143.5

*continued ...*<sup>21</sup> Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.<sup>22</sup> Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

*matrix spikes continued ...*

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
1,2,4-Trichlorobenzene	43.8	µg/L	1	50.0	<0.432	88	55.2 - 123.7
Naphthalene	48.6	µg/L	1	50.0	<0.475	97	37.2 - 147
Hexachlorobutadiene	39.8	µg/L	1	50.0	<1.02	80	74.3 - 107.4

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Bromochloromethane	59.4	µg/L	1	50.0	<0.197	119	83.9 - 123	0	20
Dichlorodifluoromethane	53.2	µg/L	1	50.0	<0.672	106	38.4 - 157.1	4	20
Chloromethane (methyl chloride)	60.3	µg/L	1	50.0	<0.542	121	54.1 - 145.8	4	20
Vinyl Chloride	62.5	µg/L	1	50.0	<0.516	125	48 - 153.9	1	20
Bromomethane (methyl bromide)	67.2	µg/L	1	50.0	<0.446	134	29.9 - 175.7	2	20
Chloroethane	66.6	µg/L	1	50.0	<0.656	133	10 - 240.3	1	20
Trichlorofluoromethane	51.6	µg/L	1	50.0	<0.538	103	49.5 - 169.4	0	20
Acetone	48.7	µg/L	1	50.0	<1.10	97	10 - 186	3	20
Iodomethane (methyl iodide)	57.0	µg/L	1	50.0	<0.214	114	71.9 - 127.7	4	20
Carbon Disulfide	63.7	µg/L	1	50.0	<0.294	127	75.1 - 130.9	2	20
Acrylonitrile	65.6	µg/L	1	50.0	<0.442	131	62.6 - 149.5	1	20
2-Butanone (MEK)	56.3	µg/L	1	50.0	<0.420	113	19.8 - 138.2	1	20
4-Methyl-2-pentanone (MIBK)	58.4	µg/L	1	50.0	<0.407	117	50.4 - 160.5	4	20
2-Hexanone	66.5	µg/L	1	50.0	<0.486	133	20.8 - 171.5	1	20
trans-1,4-Dichloro-2-butene	55.1	µg/L	1	50.0	<0.463	110	45.7 - 136.4	3	20
1,1-Dichloroethene	61.8	µg/L	1	50.0	<0.237	124	75.2 - 127.4	0	20
Methylene chloride	62.0	µg/L	1	50.0	<0.312	124	61.5 - 137.2	1	20
MTBE	23	µg/L	1	50.0	<0.318	166	60 - 149.2	7	20
trans-1,2-Dichloroethene	24	µg/L	1	50.0	<0.217	129	78.2 - 125.1	1	20
1,1-Dichloroethane	25	µg/L	1	50.0	<0.202	130	79 - 126.5	0	20
cis-1,2-Dichloroethene	63.1	µg/L	1	50.0	<0.309	126	82.5 - 127.1	1	20
2,2-Dichloropropane	55.8	µg/L	1	50.0	<0.318	112	13.7 - 121.7	0	20
1,2-Dichloroethane (EDC)	64.4	µg/L	1	50.0	<0.292	129	73.7 - 141	0	20
Chloroform	62.4	µg/L	1	50.0	<0.234	125	78.1 - 129.7	1	20
1,1,1-Trichloroethane	63.2	µg/L	1	50.0	<0.257	126	70 - 140.3	1	20
1,1-Dichloropropene	59.1	µg/L	1	50.0	<0.286	118	83 - 122	0	20
Benzene	58.5	µg/L	1	50.0	<0.319	117	63.3 - 136.4	1	20
Carbon Tetrachloride	58.4	µg/L	1	50.0	<0.223	117	75.8 - 128.8	2	20
1,2-Dichloropropene	26	µg/L	1	50.0	<0.266	125	84 - 124.5	1	20
Trichloroethene (TCE)	51.4	µg/L	1	50.0	<0.235	103	83.7 - 109.8	3	20
Dibromomethane (methylene bromide)	56.2	µg/L	1	50.0	<0.341	112	84.6 - 124.7	0	20
Bromodichloromethane	59.7	µg/L	1	50.0	<0.291	119	87.2 - 125.3	1	20

*continued ...*

<sup>23</sup>Matrix spike recovery out of control limits due to matrix interference. RPD within RPD limits.

<sup>24</sup>Matrix spike recovery out of control limits due to matrix interference. RPD within RPD limits.

<sup>25</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control. RPD within RPD limits.

<sup>26</sup>MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

*matrix spikes continued . . .*

Param	MSD Result	MSD Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
2-Chloroethyl vinyl ether	<sup>27</sup> <0.293	µg/L	1	50.0	<0.293	0	10 - 174.1	0	20
cis-1,3-Dichloropropene	<sup>28</sup> 59.5	µg/L	1	50.0	<0.207	119	82.3 - 118.5	1	20
trans-1,3-Dichloropropene	61.1	µg/L	1	50.0	<0.293	122	75.9 - 126	0	20
Toluene	57.9	µg/L	1	50.0	<0.268	116	10 - 205.6	0	20
1,1,2-Trichloroethane	55.4	µg/L	1	50.0	<0.329	111	84 - 125.8	0	20
1,3-Dichloropropane	57.7	µg/L	1	50.0	<0.316	115	83 - 126.6	0	20
Dibromochloromethane	54.7	µg/L	1	50.0	<0.290	109	91.4 - 119.1	1	20
1,2-Dibromoethane (EDB)	53.4	µg/L	1	50.0	<0.229	107	88.8 - 118.8	1	20
Tetrachloroethene (PCE)	29.5	µg/L	1	50.0	<0.233	59	46.8 - 74.2	3	20
Chlorobenzene	53.1	µg/L	1	50.0	<0.276	106	86.6 - 111.7	0	20
1,1,1,2-Tetrachloroethane	53.1	µg/L	1	50.0	<0.226	106	87.2 - 118.6	1	20
Ethylbenzene	56.7	µg/L	1	50.0	<0.245	113	81.8 - 123.6	1	20
m,p-Xylene	114	µg/L	1	100	<0.517	114	36 - 162.4	2	20
Bromoform	42.6	µg/L	1	50.0	<0.175	85	74.1 - 133	2	20
Styrene	<sup>29</sup> 1.09	µg/L	1	50.0	<0.239	2	10 - 187.2	0	20
o-Xylene	56.6	µg/L	1	50.0	<0.247	113	40.7 - 160.6	0	20
1,1,2,2-Tetrachloroethane	58.0	µg/L	1	50.0	<0.223	116	74.8 - 154.8	2	20
2-Chlorotoluene	56.0	µg/L	1	50.0	<0.235	112	86.3 - 117	2	20
1,2,3-Trichloropropane	57.8	µg/L	1	50.0	<0.230	116	73.2 - 125.2	0	20
Isopropylbenzene	56.4	µg/L	1	50.0	<0.226	113	87.8 - 114.2	2	20
Bromobenzene	55.7	µg/L	1	50.0	<0.245	111	84.8 - 116	1	20
n-Propylbenzene	56.6	µg/L	1	50.0	<0.234	113	79.4 - 117.1	1	20
1,3,5-Trimethylbenzene	55.1	µg/L	1	50.0	<0.261	110	82.6 - 115.9	2	20
tert-Butylbenzene	54.6	µg/L	1	50.0	<0.281	109	83 - 115.2	3	20
1,2,4-Trimethylbenzene	56.7	µg/L	1	50.0	<0.285	113	86.2 - 116.1	2	20
1,4-Dichlorobenzene (para)	51.6	µg/L	1	50.0	<0.307	103	86 - 106.4	1	20
sec-Butylbenzene	55.0	µg/L	1	50.0	<0.312	110	79.7 - 116.6	2	20
1,3-Dichlorobenzene (meta)	52.4	µg/L	1	50.0	<0.284	105	86.7 - 109.5	2	20
p-Isopropyltoluene	54.1	µg/L	1	50.0	<0.244	108	81.6 - 114.7	2	20
4-Chlorotoluene	55.6	µg/L	1	50.0	<0.257	111	87.1 - 115.4	1	20
1,2-Dichlorobenzene (ortho)	52.0	µg/L	1	50.0	<0.294	104	88.4 - 112.8	1	20
n-Butylbenzene	54.4	µg/L	1	50.0	<0.339	109	79.7 - 117.1	1	20
1,2-Dibromo-3-chloropropane	49.8	µg/L	1	50.0	<0.780	100	61.6 - 136.2	2	20
1,2,3-Trichlorobenzene	46.4	µg/L	1	50.0	<0.736	93	22.9 - 143.5	3	20
1,2,4-Trichlorobenzene	45.1	µg/L	1	50.0	<0.432	90	55.2 - 123.7	3	20
Naphthalene	49.4	µg/L	1	50.0	<0.475	99	37.2 - 147	2	20
Hexachlorobutadiene	42.0	µg/L	1	50.0	<1.02	84	74.3 - 107.4	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

<sup>27</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control. RPD within RPD limits.

<sup>28</sup>MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

<sup>29</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control. RPD within RPD limits.

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Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Dibromofluoromethane	<sup>30</sup> 56.7	55.5	µg/L	1	50	113	111	89 - 112.8
Toluene-d8	50.3	49.7	µg/L	1	50	101	99	86.2 - 109.5
4-Bromofluorobenzene (4-BFB)	49.2	47.9	µg/L	1	50	98	96	81.3 - 115.4

**Matrix Spike (MS-1) Spiked Sample: 174273**

QC Batch: 52862 Date Analyzed: 2008-09-30 Analyzed By: RR  
Prep Batch: 45207 QC Preparation: 2008-09-26 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Aluminum	10.7	mg/L	1	10.0	0.166	105	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Aluminum	10.7	mg/L	1	10.0	0.166	105	75 - 125	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Matrix Spike (MS-1) Spiked Sample: 174273**

QC Batch: 52862 Date Analyzed: 2008-09-30 Analyzed By: RR  
Prep Batch: 45207 QC Preparation: 2008-09-26 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Boron	<sup>31</sup> 20.9	mg/L	10	0.500	20.9	0	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Boron	<sup>32</sup> 20.9	mg/L	10	0.500	20.9	0	75 - 125	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Matrix Spike (MS-1) Spiked Sample: 174273**

QC Batch: 52862 Date Analyzed: 2008-09-30 Analyzed By: RR  
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<sup>30</sup>8260 Only - One surrogate is out of control limits. The other two surrogates show the sample preparation was performed properly.

<sup>31</sup>Matrix spike recoveries out of control limits due to matrix spike being diluted out. Use LCS/LCSD to demonstrate analysis is under control.

<sup>32</sup>Matrix spike recoveries out of control limits due to matrix spike being diluted out. Use LCS/LCSD to demonstrate analysis is under control.

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Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Cobalt	1.96	mg/L	1	2.50	<0.00170	78	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Limit	RPD	RPD Limit
Total Cobalt	1.94	mg/L	1	2.50	<0.00170	78	75 - 125	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Matrix Spike (MS-1)** Spiked Sample: 174273

QC Batch: 52862 Date Analyzed: 2008-09-30 Analyzed By: RR  
Prep Batch: 45207 QC Preparation: 2008-09-26 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Copper	1.49	mg/L	1	1.25	0.067	114	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Limit	RPD	RPD Limit
Total Copper	1.50	mg/L	1	1.25	0.067	115	75 - 125	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Matrix Spike (MS-1)** Spiked Sample: 174273

QC Batch: 52862 Date Analyzed: 2008-09-30 Analyzed By: RR  
Prep Batch: 45207 QC Preparation: 2008-09-26 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Iron	4.65	mg/L	1	5.00	0.576	81	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Limit	RPD	RPD Limit
Total Iron	4.62	mg/L	1	5.00	0.576	81	75 - 125	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Matrix Spike (MS-1)** Spiked Sample: 174273

QC Batch: 52862 Date Analyzed: 2008-09-30 Analyzed By: RR  
Prep Batch: 45207 QC Preparation: 2008-09-26 Prepared By: KV

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Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Manganese	2.79	mg/L	1	2.50	0.733	82	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Manganese	2.88	mg/L	1	2.50	0.733	86	75 - 125	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Matrix Spike (MS-1) Spiked Sample: 174273**

QC Batch: 52862 Date Analyzed: 2008-09-30 Analyzed By: RR  
Prep Batch: 45207 QC Preparation: 2008-09-26 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Molybdenum	4.59	mg/L	1	5.00	0.132	89	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Molybdenum	4.79	mg/L	1	5.00	0.132	93	75 - 125	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Matrix Spike (MS-1) Spiked Sample: 174273**

QC Batch: 52862 Date Analyzed: 2008-09-30 Analyzed By: RR  
Prep Batch: 45207 QC Preparation: 2008-09-26 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Nickel	1.98	mg/L	1	2.50	<0.00271	79	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Nickel	1.97	mg/L	1	2.50	<0.00271	79	75 - 125	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Matrix Spike (MS-1) Spiked Sample: 174273**

QC Batch: 52862 Date Analyzed: 2008-09-30 Analyzed By: RR  
Prep Batch: 45207 QC Preparation: 2008-09-26 Prepared By: KV

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Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Zinc	2.41	mg/L	1	2.50	0.126	91	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Zinc	2.49	mg/L	1	2.50	0.126	94	75 - 125	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

### Matrix Spike (MS-1) Spiked Sample: 174273

QC Batch: 52862 Date Analyzed: 2008-09-30 Analyzed By: RR  
Prep Batch: 45207 QC Preparation: 2008-09-26 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Silver	1.30	mg/L	1	1.25	<0.000700	104	75 - 125
Total Arsenic	4.59	mg/L	1	5.00	<0.00850	92	75 - 125
Total Barium	10.7	mg/L	1	10.0	0.022	107	75 - 125
Total Cadmium	1.98	mg/L	1	2.50	<0.00110	79	75 - 125
Total Chromium	0.815	mg/L	1	1.00	<0.00201	82	75 - 125
Total Lead	4.57	mg/L	1	5.00	<0.00460	91	75 - 125
Total Selenium	4.31	mg/L	1	5.00	<0.0106	86	75 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Silver	1.32	mg/L	1	1.25	<0.000700	106	75 - 125	2	20
Total Arsenic	4.78	mg/L	1	5.00	<0.00850	96	75 - 125	4	20
Total Barium	10.8	mg/L	1	10.0	0.022	108	75 - 125	1	20
Total Cadmium	1.98	mg/L	1	2.50	<0.00110	79	75 - 125	0	20
Total Chromium	0.833	mg/L	1	1.00	<0.00201	83	75 - 125	2	20
Total Lead	4.76	mg/L	1	5.00	<0.00460	95	75 - 125	4	20
Total Selenium	4.49	mg/L	1	5.00	<0.0106	90	75 - 125	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

### Standard (ICV-1)

QC Batch: 52657 Date Analyzed: 2008-09-24 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.51	100	90 - 110	2008-09-24

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### Standard (ICV-1)

QC Batch: 52657      Date Analyzed: 2008-09-24      Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
PO4-P		mg/L	12.5	12.5	100	90 - 110	2008-09-24

### Standard (ICV-1)

QC Batch: 52657      Date Analyzed: 2008-09-24      Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.2	90	90 - 110	2008-09-24
Fluoride		mg/L	2.50	2.46	98	90 - 110	2008-09-24
Sulfate		mg/L	12.5	12.4	99	90 - 110	2008-09-24

### Standard (CCV-1)

QC Batch: 52657      Date Analyzed: 2008-09-24      Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.48	99	90 - 110	2008-09-24

### Standard (CCV-1)

QC Batch: 52657      Date Analyzed: 2008-09-24      Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
PO4-P		mg/L	12.5	12.4	99	90 - 110	2008-09-24

### Standard (CCV-1)

QC Batch: 52657      Date Analyzed: 2008-09-24      Analyzed By: AR

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Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date
			True	Found	Percent	Recovery	
Conc.	Conc.	Recovery	Limits	Analyzed			
Chloride		mg/L	12.5	11.8	94	90 - 110	2008-09-24
Fluoride		mg/L	2.50	2.36	94	90 - 110	2008-09-24
Sulfate		mg/L	12.5	12.2	98	90 - 110	2008-09-24

### **Standard (ICV-1)**

QC Batch: 52658

Date Analyzed: 2008-09-24

Analyzed By: AR

Param	Flag	Units	ICVs	ICVs	ICVs	Percent	Date
			True Conc.	Found Conc.	Percent Recovery	Recovery Limits	
Hydroxide Alkalinity		mg/L as CaCo3	0.00	<1.00		0 - 200	2008-09-24
Carbonate Alkalinity		mg/L as CaCo3	0.00	236		0 - 200	2008-09-24
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	5.00		0 - 200	2008-09-24
Total Alkalinity		mg/L as CaCo3	250	241	96	90 - 110	2008-09-24

### **Standard (CCV-1)**

QC Batch: 52658

Date Analyzed: 2008-09-24

Analyzed By: AR

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date Analyzed
			True Conc.	Found Conc.	Percent Recovery	Recovery Limits	
Hydroxide Alkalinity		mg/L as CaCo3	0.00	7.00		0 - 200	2008-09-24
Carbonate Alkalinity		mg/L as CaCo3	0.00	246		0 - 200	2008-09-24
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	<4.00		0 - 200	2008-09-24
Total Alkalinity		mg/L as CaCo3	250	253	101	90 - 110	2008-09-24

### Standard (ICV-1)

QC Batch: 52761

Date Analyzed: 2008-09-26

Analyzed By: TP

Param	Flag	Units	ICVs	ICVs	ICVs	Percent	Date Analyzed
			True	Found	Percent	Recovery	
Total Mercury		mg/L	0.00100	0.00101	101	90 - 110	2008-09-26

### Standard (CCV=1)

QC Batch: 52761

Date Analyzed: 2008-09-26

Analyzed By: TP

Report Date: October 7, 2008  
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Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date
			True	Found	Percent	Recovery	
Total Mercury		mg/L	0.00100	0.000990	99	90 - 110	2008-09-26

### Standard (CCV-1)

QC Batch: 52856

Date Analyzed: 2008-09-29

Analyzed By: KB

Param	Flag	Units	CCVs	CCVs	CCVs	Percent
			True Conc.	Found Conc.	Percent Recovery	Recovery Limits
Bromochloromethane		µg/L	50.0	55.5	111	70 - 130
Dichlorodifluoromethane		µg/L	50.0	51.0	102	70 - 130
Chloromethane (methyl chloride)		µg/L	50.0	58.6	117	70 - 130
Vinyl Chloride	33	µg/L	50.0	62.3	125	80 - 120
Bromomethane (methyl bromide)	34	µg/L	50.0	67.3	135	70 - 130
Chloroethane	35	µg/L	50.0	66.5	133	70 - 130
Trichlorofluoromethane		µg/L	50.0	52.4	105	70 - 130
Acetone	36	µg/L	50.0	67.1	134	70 - 130
Iodomethane (methyl iodide)		µg/L	50.0	51.8	104	70 - 130
Carbon Disulfide		µg/L	50.0	61.2	122	70 - 130
Acrylonitrile		µg/L	50.0	61.8	124	70 - 130
2-Butanone (MEK)		µg/L	50.0	59.6	119	70 - 130
4-Methyl-2-pentanone (MIBK)		µg/L	50.0	53.9	108	70 - 130
2-Hexanone	37	µg/L	50.0	69.0	138	70 - 130
trans 1,4-Dichloro-2-butene		µg/L	50.0	56.9	114	70 - 130
1,1-Dichloroethene		µg/L	50.0	57.9	116	80 - 120
Methylene chloride		µg/L	50.0	59.0	118	70 - 130
MTBE	38	µg/L	50.0	79.4	159	70 - 130
trans-1,2-Dichloroethene		µg/L	50.0	60.3	121	70 - 130
1,1-Dichloroethane		µg/L	50.0	60.3	121	70 - 130
cis-1,2-Dichloroethene		µg/L	50.0	58.8	118	70 - 130
2,2-Dichloropropane	39	µg/L	50.0	71.9	144	70 - 130
1,2-Dichloroethane (EDC)		µg/L	50.0	60.0	120	70 - 130

*continued . . .*

<sup>33</sup>Vinyl Chloride outside of control limits on CCV(ICV). CCV(ICV) component average is 111 which is within acceptable range. This is acceptable by Method 8000.

<sup>34</sup>Bromomethane outside of control limits on CCV(ICV). CCV(ICV) component average is 111 which is within acceptable range. This is acceptable by Method 8000.

<sup>35</sup>Chloroethane outside of control limits on CCV(ICV). CCV(ICV) component average is 111 which is within acceptable range. This is acceptable by Method 8000.

<sup>36</sup> Acetone outside of control limits on CCV(ICV). CCV(ICV) component average is 111 which is within acceptable range. This is acceptable by Method 8000.

<sup>37</sup>2-Hexanone outside of control limits on CCV(ICV). CCV(ICV) component average is 111 which is within acceptable range. This is acceptable by Method 8000.

<sup>38</sup>MTBE outside of control limits on CCV(ICV). CCV(ICV) component average is 111 which is within acceptable range. This is acceptable by Method 8000.

<sup>39</sup>2,2-Dichloropropane outside of control limits on CCV(ICV). CCV(ICV) component average is 111 which is within acceptable range. This is acceptable by Method 8000.

*standard continued ...*

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloroform		µg/L	50.0	58.4	117	80 - 120	2008-09-29
1,1,1-Trichloroethane		µg/L	50.0	59.6	119	70 - 130	2008-09-29
1,1-Dichloropropene		µg/L	50.0	55.6	111	70 - 130	2008-09-29
Benzene		µg/L	50.0	54.9	110	70 - 130	2008-09-29
Carbon Tetrachloride		µg/L	50.0	54.7	109	70 - 130	2008-09-29
1,2-Dichloropropane		µg/L	50.0	58.5	117	80 - 120	2008-09-29
Trichloroethene (TCE)		µg/L	50.0	49.0	98	70 - 130	2008-09-29
Dibromomethane (methylene bromide)		µg/L	50.0	53.2	106	70 - 130	2008-09-29
Bromodichloromethane		µg/L	50.0	55.6	111	70 - 130	2008-09-29
2-Chloroethyl vinyl ether		µg/L	50.0	53.2	106	70 - 130	2008-09-29
cis-1,3-Dichloropropene		µg/L	50.0	59.9	120	70 - 130	2008-09-29
trans-1,3-Dichloropropene		µg/L	50.0	60.4	121	70 - 130	2008-09-29
Toluene		µg/L	50.0	54.5	109	80 - 120	2008-09-29
1,1,2-Trichloroethane		µg/L	50.0	52.0	104	70 - 130	2008-09-29
1,3-Dichloropropane		µg/L	50.0	54.6	109	70 - 130	2008-09-29
Dibromochloromethane		µg/L	50.0	51.6	103	70 - 130	2008-09-29
1,2-Dibromoethane (EDB)		µg/L	50.0	50.4	101	70 - 130	2008-09-29
Tetrachloroethene (PCE)		µg/L	50.0	39.4	79	70 - 130	2008-09-29
Chlorobenzene		µg/L	50.0	50.4	101	80 - 120	2008-09-29
1,1,1,2-Tetrachloroethane		µg/L	50.0	50.0	100	70 - 130	2008-09-29
Ethylbenzene		µg/L	50.0	53.9	108	80 - 120	2008-09-29
m,p-Xylene		µg/L	100	109	109	70 - 130	2008-09-29
Bromoform		µg/L	50.0	41.1	82	70 - 130	2008-09-29
Styrene		µg/L	50.0	50.3	101	70 - 130	2008-09-29
o-Xylene		µg/L	50.0	55.9	112	70 - 130	2008-09-29
1,1,2,2-Tetrachloroethane		µg/L	50.0	55.0	110	70 - 130	2008-09-29
2-Chlorotoluene		µg/L	50.0	52.5	105	70 - 130	2008-09-29
1,2,3-Trichloropropane		µg/L	50.0	55.0	110	70 - 130	2008-09-29
Isopropylbenzene		µg/L	50.0	53.8	108	70 - 130	2008-09-29
Bromobenzene		µg/L	50.0	53.1	106	70 - 130	2008-09-29
n-Propylbenzene		µg/L	50.0	53.9	108	70 - 130	2008-09-29
1,3,5-Trimethylbenzene		µg/L	50.0	52.4	105	70 - 130	2008-09-29
tert-Butylbenzene		µg/L	50.0	51.8	104	70 - 130	2008-09-29
1,2,4-Trimethylbenzene		µg/L	50.0	53.4	107	70 - 130	2008-09-29
1,4-Dichlorobenzene (para)		µg/L	50.0	48.8	98	70 - 130	2008-09-29
sec-Butylbenzene		µg/L	50.0	52.7	105	70 - 130	2008-09-29
1,3-Dichlorobenzene (meta)		µg/L	50.0	49.8	100	70 - 130	2008-09-29
p-Isopropyltoluene		µg/L	50.0	51.8	104	70 - 130	2008-09-29
4-Chlorotoluene		µg/L	50.0	52.7	105	70 - 130	2008-09-29
1,2-Dichlorobenzene (ortho)		µg/L	50.0	48.9	98	70 - 130	2008-09-29
n-Butylbenzene		µg/L	50.0	53.6	107	70 - 130	2008-09-29
1,2-Dibromo-3-chloropropane		µg/L	50.0	46.8	94	70 - 130	2008-09-29
1,2,3-Trichlorobenzene		µg/L	50.0	43.6	87	70 - 130	2008-09-29

*continued ...*

*standard continued . . .*

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
1,2,4-Trichlorobenzene		µg/L	50.0	43.2	86	70 - 130	2008-09-29
Naphthalene		µg/L	50.0	45.1	90	70 - 130	2008-09-29
Hexachlorobutadiene		µg/L	50.0	42.8	86	70 - 130	2008-09-29

**Standard (CCV-2)**

QC Batch: 52856

Date Analyzed: 2008-09-29

Analyzed By: KB

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromochloromethane		µg/L	50.0	59.4	119	70 - 130	2008-09-29
Dichlorodifluoromethane		µg/L	50.0	52.4	105	70 - 130	2008-09-29
Chloromethane (methyl chloride)		µg/L	50.0	59.0	118	70 - 130	2008-09-29
Vinyl Chloride	<sup>40</sup>	µg/L	50.0	63.6	127	80 - 120	2008-09-29
Bromomethane (methyl bromide)	<sup>41</sup>	µg/L	50.0	67.3	135	70 - 130	2008-09-29
Chloroethane	<sup>42</sup>	µg/L	50.0	67.2	134	70 - 130	2008-09-29
Trichlorofluoromethane		µg/L	50.0	52.6	105	70 - 130	2008-09-29
Acetone	<sup>43</sup>	µg/L	50.0	77.1	154	70 - 130	2008-09-29
Iodomethane (methyl iodide)		µg/L	50.0	56.0	112	70 - 130	2008-09-29
Carbon Disulfide	<sup>44</sup>	µg/L	50.0	65.3	131	70 - 130	2008-09-29
Acrylonitrile		µg/L	50.0	62.1	124	70 - 130	2008-09-29
2-Butanone (MEK)	<sup>45</sup>	µg/L	50.0	68.8	138	70 - 130	2008-09-29
4-Methyl-2-pentanone (MIBK)		µg/L	50.0	56.3	113	70 - 130	2008-09-29
2-Hexanone	<sup>46</sup>	µg/L	50.0	75.8	152	70 - 130	2008-09-29
trans 1,4-Dichloro-2-butene		µg/L	50.0	54.4	109	70 - 130	2008-09-29
1,1-Dichloroethene	<sup>47</sup>	µg/L	50.0	61.0	122	80 - 120	2008-09-29
Methylene chloride		µg/L	50.0	63.4	127	70 - 130	2008-09-29
MTBE	<sup>48</sup>	µg/L	50.0	79.2	158	70 - 130	2008-09-29

*continued . . .*

<sup>40</sup>Vinyl Chloride outside of control limits on CCV(ICV). CCV(ICV) component average is 115 which is within acceptable range. This is acceptable by Method 8000.

<sup>41</sup>Bromomethane outside of control limits on CCV(ICV). CCV(ICV) component average is 115 which is within acceptable range. This is acceptable by Method 8000.

<sup>42</sup>Chloroethane outside of control limits on CCV(ICV). CCV(ICV) component average is 115 which is within acceptable range. This is acceptable by Method 8000.

<sup>43</sup>Acetone outside of control limits on CCV(ICV). CCV(ICV) component average is 115 which is within acceptable range. This is acceptable by Method 8000.

<sup>44</sup>Carbon Disulfide outside of control limits on CCV(ICV). CCV(ICV) component average is 115 which is within acceptable range. This is acceptable by Method 8000.

<sup>45</sup>2-Butanone outside of control limits on CCV(ICV). CCV(ICV) component average is 115 which is within acceptable range. This is acceptable by Method 8000.

<sup>46</sup>2-Hexanone outside of control limits on CCV(ICV). CCV(ICV) component average is 115 which is within acceptable range. This is acceptable by Method 8000.

<sup>47</sup>1,1-Dichloroethene outside of control limits on CCV(ICV). CCV(ICV) component average is 115 which is within acceptable range. This is acceptable by Method 8000.

<sup>48</sup>MTBE outside of control limits on CCV(ICV). CCV(ICV) component average is 115 which is within acceptable range. This is acceptable by

*standard continued . . .*

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
trans-1,2-Dichloroethene		µg/L	50.0	63.3	127	70 - 130	2008-09-29
1,1-Dichloroethane		µg/L	50.0	64.6	129	70 - 130	2008-09-29
cis-1,2-Dichloroethene		µg/L	50.0	62.3	125	70 - 130	2008-09-29
2,2-Dichloropropane		µg/L	50.0	52.5	105	70 - 130	2008-09-29
1,2-Dichloroethane (EDC)		µg/L	50.0	63.3	127	70 - 130	2008-09-29
Chloroform	49	µg/L	50.0	63.4	127	80 - 120	2008-09-29
1,1,1-Trichloroethane		µg/L	50.0	62.7	125	70 - 130	2008-09-29
1,1-Dichloropropene		µg/L	50.0	58.7	117	70 - 130	2008-09-29
Benzene		µg/L	50.0	57.8	116	70 - 130	2008-09-29
Carbon Tetrachloride		µg/L	50.0	56.8	114	70 - 130	2008-09-29
1,2-Dichloropropane	50	µg/L	50.0	61.6	123	80 - 120	2008-09-29
Trichloroethene (TCE)		µg/L	50.0	59.9	120	70 - 130	2008-09-29
Dibromomethane (methylene bromide)		µg/L	50.0	55.8	112	70 - 130	2008-09-29
Bromodichloromethane		µg/L	50.0	58.7	117	70 - 130	2008-09-29
2-Chloroethyl vinyl ether		µg/L	50.0	55.3	111	70 - 130	2008-09-29
cis-1,3-Dichloropropene		µg/L	50.0	59.4	119	70 - 130	2008-09-29
trans-1,3-Dichloropropene		µg/L	50.0	60.0	120	70 - 130	2008-09-29
Toluene		µg/L	50.0	57.3	115	80 - 120	2008-09-29
1,1,2-Trichloroethane		µg/L	50.0	54.4	109	70 - 130	2008-09-29
1,3-Dichloropropane		µg/L	50.0	56.6	113	70 - 130	2008-09-29
Dibromochloromethane		µg/L	50.0	53.6	107	70 - 130	2008-09-29
1,2-Dibromoethane (EDB)		µg/L	50.0	52.0	104	70 - 130	2008-09-29
Tetrachloroethene (PCE)		µg/L	50.0	54.5	109	70 - 130	2008-09-29
Chlorobenzene		µg/L	50.0	52.4	105	80 - 120	2008-09-29
1,1,1,2-Tetrachloroethane		µg/L	50.0	52.4	105	70 - 130	2008-09-29
Ethylbenzene		µg/L	50.0	56.2	112	80 - 120	2008-09-29
m,p-Xylene		µg/L	100	113	113	70 - 130	2008-09-29
Bromoform		µg/L	50.0	42.1	84	70 - 130	2008-09-29
Styrene		µg/L	50.0	52.4	105	70 - 130	2008-09-29
o-Xylene		µg/L	50.0	57.9	116	70 - 130	2008-09-29
1,1,2,2-Tetrachloroethane		µg/L	50.0	42.8	86	70 - 130	2008-09-29
2-Chlorotoluene		µg/L	50.0	54.5	109	70 - 130	2008-09-29
1,2,3-Trichloropropene		µg/L	50.0	55.0	110	70 - 130	2008-09-29
Isopropylbenzene		µg/L	50.0	55.4	111	70 - 130	2008-09-29
Bromobenzene		µg/L	50.0	54.0	108	70 - 130	2008-09-29
n-Propylbenzene		µg/L	50.0	55.6	111	70 - 130	2008-09-29
1,3,5-Trimethylbenzene		µg/L	50.0	54.4	109	70 - 130	2008-09-29
tert-Butylbenzene		µg/L	50.0	53.6	107	70 - 130	2008-09-29
1,2,4-Trimethylbenzene		µg/L	50.0	55.2	110	70 - 130	2008-09-29

*continued . . .*

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<sup>49</sup>Chloroform outside of control limits on CCV(ICV). CCV(ICV) component average is 115 which is within acceptable range. This is acceptable by Method 8000.

<sup>50</sup>1,2-Dichloropropane outside of control limits on CCV(ICV). CCV(ICV) component average is 115 which is within acceptable range. This is acceptable by Method 8000.

*standard continued . . .*

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date
			True Conc.	Found Conc.	Percent Recovery	Recovery Limits	Analyzed
1,4-Dichlorobenzene (para)		µg/L	50.0	50.6	101	70 - 130	2008-09-29
sec-Butylbenzene		µg/L	50.0	54.7	109	70 - 130	2008-09-29
1,3-Dichlorobenzene (meta)		µg/L	50.0	51.4	103	70 - 130	2008-09-29
p-Isopropyltoluene		µg/L	50.0	53.8	108	70 - 130	2008-09-29
4-Chlorotoluene		µg/L	50.0	54.5	109	70 - 130	2008-09-29
1,2-Dichlorobenzene (ortho)		µg/L	50.0	51.1	102	70 - 130	2008-09-29
n-Butylbenzene		µg/L	50.0	53.7	107	70 - 130	2008-09-29
1,2-Dibromo-3-chloropropane		µg/L	50.0	48.3	97	70 - 130	2008-09-29
1,2,3-Trichlorobenzene		µg/L	50.0	43.9	88	70 - 130	2008-09-29
1,2,4-Trichlorobenzene		µg/L	50.0	43.3	87	70 - 130	2008-09-29
Naphthalene		µg/L	50.0	45.9	92	70 - 130	2008-09-29
Hexachlorobutadiene		µg/L	50.0	42.6	85	70 - 130	2008-09-29

### **Standard (ICV-1)**

QC Batch: 52862

Date Analyzed: 2008-09-30

Analyzed By: RR

Param	Flag	Units	ICVs	ICVs	ICVs	Percent	Date
			True	Found	Percent	Recovery	
Total Aluminum		mg/L	1.00	0.996	100	90 - 110	2008-09-30

### **Standard (ICV-1)**

QC Batch: 52862

Date Analyzed: 2008-09-30

Analyzed By: RR

Param	Flag	Units	ICVs	ICVs	ICVs	Percent	Date Analyzed
			True Conc.	Found Conc.	Percent Recovery	Recovery Limits	
Total Boron		mg/L	1.00	1.02	102	90 - 110	2008-09-30

### **Standard (ICV-1)**

QC Batch: 52862

Date Analyzed: 2008-09-30

Analyzed By: RR

Param	Flag	Units	ICVs	ICVs	ICVs	Percent	Date
			True	Found	Percent	Recovery	
Total Cobalt		mg/L	1.00	1.03	103	90 - 110	2008-09-30

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### Standard (ICV-1)

QC Batch: 52862                          Date Analyzed: 2008-09-30                          Analyzed By: RR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Copper		mg/L	1.00	1.02	102	90 - 110	2008-09-30

### Standard (ICV-1)

QC Batch: 52862                          Date Analyzed: 2008-09-30                          Analyzed By: RR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Iron		mg/L	1.00	1.05	105	90 - 110	2008-09-30

### Standard (ICV-1)

QC Batch: 52862                          Date Analyzed: 2008-09-30                          Analyzed By: RR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Manganese		mg/L	1.00	1.02	102	90 - 110	2008-09-30

### Standard (ICV-1)

QC Batch: 52862                          Date Analyzed: 2008-09-30                          Analyzed By: RR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Molybdenum		mg/L	1.00	1.01	101	90 - 110	2008-09-30

### Standard (ICV-1)

QC Batch: 52862                          Date Analyzed: 2008-09-30                          Analyzed By: RR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Nickel		mg/L	1.00	1.01	101	90 - 110	2008-09-30

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### Standard (ICV-1)

QC Batch: 52862      Date Analyzed: 2008-09-30      Analyzed By: RR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Zinc		mg/L	1.00	1.05	105	90 - 110	2008-09-30

### Standard (ICV-1)

QC Batch: 52862      Date Analyzed: 2008-09-30      Analyzed By: RR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Silver		mg/L	0.125	0.126	101	90 - 110	2008-09-30
Total Arsenic		mg/L	1.00	1.01	101	90 - 110	2008-09-30
Total Barium		mg/L	1.00	1.05	105	90 - 110	2008-09-30
Total Cadmium		mg/L	1.00	1.01	101	90 - 110	2008-09-30
Total Chromium		mg/L	1.00	1.04	104	90 - 110	2008-09-30
Total Lead		mg/L	1.00	0.993	99	90 - 110	2008-09-30
Total Selenium		mg/L	1.00	1.01	101	90 - 110	2008-09-30

### Standard (CCV-1)

QC Batch: 52862      Date Analyzed: 2008-09-30      Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Aluminum		mg/L	1.00	0.996	100	90 - 110	2008-09-30

### Standard (CCV-1)

QC Batch: 52862      Date Analyzed: 2008-09-30      Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Boron		mg/L	1.00	1.04	104	90 - 110	2008-09-30

### Standard (CCV-1)

QC Batch: 52862      Date Analyzed: 2008-09-30      Analyzed By: RR

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Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date
			True	Found	Percent	Recovery	
Total Cobalt		mg/L	1.00	1.04	104	90 - 110	2008-09-30

### **Standard (CCV-1)**

QC Batch: 52862 Date Analyzed: 2008-09-30 Analyzed By: RR

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date
			True	Found	Percent	Recovery	
Total Copper		mg/L	1.00	1.02	102	90 - 110	2008-09-30

### **Standard (CCV-1)**

QC Batch: 52862 Date Analyzed: 2008-09-30 Analyzed By: RR

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date
			True	Found	Percent	Recovery	
Total Iron		mg/L	1.00	1.05	105	90 - 110	2008-09-30

### Standard (CCV-1)

QC Batch: 52862 Date Analyzed: 2008-09-30 Analyzed By: RR

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date
			True	Found	Percent	Recovery	
Total Manganese		mg/L	1.00	1.01	101	90 - 110	2008-09-30

### **Standard (CCV-1)**

QC Batch: 52862 Date Analyzed: 2008-09-30 Analyzed By: RR

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date
			True	Found	Percent	Recovery	
Total Molybdenum		mg/L	1.00	0.995	100	90 - 110	2008-09-30

## Standard (CCV-1)

QC Batch: 52862 Date Analyzed: 2008-09-30 Analyzed By: RR

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Nickel		mg/L	1.00	1.03	103	90 - 110	2008-09-30

### Standard (CCV-1)

QC Batch:	52862	Date Analyzed:	2008-09-30	Analyzed By:	RR		
Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Zinc		mg/L	1.00	1.06	106	90 - 110	2008-09-30

### Standard (CCV-1)

QC Batch:	52862	Date Analyzed:	2008-09-30	Analyzed By:	RR		
Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Silver		mg/L	0.125	0.127	102	90 - 110	2008-09-30
Total Arsenic		mg/L	1.00	1.04	104	90 - 110	2008-09-30
Total Barium		mg/L	1.00	1.03	103	90 - 110	2008-09-30
Total Cadmium		mg/L	1.00	1.04	104	90 - 110	2008-09-30
Total Chromium		mg/L	1.00	1.04	104	90 - 110	2008-09-30
Total Lead		mg/L	1.00	1.02	102	90 - 110	2008-09-30
Total Selenium		mg/L	1.00	1.04	104	90 - 110	2008-09-30

### Standard (CCV-1)

QC Batch:	52872	Date Analyzed:	2008-09-30	Analyzed By:	DS		
Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Phenol		mg/L	60.0	52.4	87	80 - 120	2008-09-30
1,4-Dichlorobenzene (para)		mg/L	60.0	59.8	100	80 - 120	2008-09-30
2-Nitrophenol		mg/L	60.0	64.2	107	80 - 120	2008-09-30
2,4-Dichlorophenol		mg/L	60.0	55.2	92	80 - 120	2008-09-30
Hexachlorobutadiene		mg/L	60.0	65.1	108	80 - 120	2008-09-30
4-Chloro-3-methylphenol		mg/L	60.0	65.2	109	80 - 120	2008-09-30
2,4,6-Trichlorophenol		mg/L	60.0	60.7	101	80 - 120	2008-09-30
Acenaphthene		mg/L	60.0	60.0	100	80 - 120	2008-09-30
Diphenylamine		mg/L	60.0	58.7	98	80 - 120	2008-09-30

*continued ...*

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*standard continued . . .*

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date Analyzed
			True Conc.	Found Conc.	Percent Recovery	Recovery Limits	
Pentachlorophenol		mg/L	60.0	50.4	84	80 - 120	2008-09-30
Fluoranthene		mg/L	60.0	56.2	94	80 - 120	2008-09-30
Di-n-octylphthalate		mg/L	60.0	70.7	118	80 - 120	2008-09-30
Benzo(a)pyrene		mg/L	60.0	61.4	102	80 - 120	2008-09-30

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
2-Fluorophenol		59.3	mg/L	1	60.0	99	80 - 120
Phenol-d5		51.6	mg/L	1	60.0	86	80 - 120
Nitrobenzene-d5		61.2	mg/L	1	60.0	102	80 - 120
2-Fluorobiphenyl		54.4	mg/L	1	60.0	91	80 - 120
2,4,6-Tribromophenol		66.0	mg/L	1	60.0	110	80 - 120
Terphenyl-d14		60.1	mg/L	1	60.0	100	80 - 120

### **Standard (ICV-1)**

QC Batch: 53041

Date Analyzed: 2008-10-06

Analyzed By: TP

Param	Flag	Units	ICVs	ICVs	ICVs	Percent	Date
			True Conc.	Found Conc.	Percent Recovery	Recovery Limits	Analyzed
Dissolved Calcium		mg/L	50.0	49.9	100	90 - 110	2008-10-06
Dissolved Magnesium		mg/L	50.0	50.6	101	90 - 110	2008-10-06
Dissolved Potassium		mg/L	50.0	50.5	101	90 - 110	2008-10-06
Dissolved Sodium		mg/L	50.0	51.1	102	90 - 110	2008-10-06

### **Standard (CCV-1)**

QC Batch: 53041

Date Analyzed: 2008-10-06

Analyzed By: TP

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date Analyzed
			True Conc.	Found Conc.	Percent Recovery	Recovery Limits	
Dissolved Calcium		mg/L	50.0	50.5	101	90 - 110	2008-10-06
Dissolved Magnesium		mg/L	50.0	50.5	101	90 - 110	2008-10-06
Dissolved Potassium		mg/L	50.0	50.4	101	90 - 110	2008-10-06
Dissolved Sodium		mg/L	50.0	51.0	102	90 - 110	2008-10-06

