

AP - 52

**QUARTERLY
MONITORING
REPORT**

Third/2009



PLAINS
PIPELINE, L.P.

October 8, 2009

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

RECEIVED
OCT 23 2009
Environmental Bureau
Oil Conservation Division

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 pleased to submit the attached Quarterly Report, dated October 8, 2009, 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 2009.

Should you have any questions or comments, please contact me at (575) 441-1099.

Sincerely,

Jason Henry
Remediation Coordinator
Plains All American

CC: Larry Johnson, NMOCD, Hobbs Office

Enclosure



October 8, 2009

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

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

TYLER
719 West Front, Ste. 255
Tyler, Texas 75702
Phone 903.531.9971
Fax 903.531.9979

MIDLAND
2901 S. State Hwy 349
Midland, Texas 79706
Phone 432.522.2133
Fax 432.522.2180

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

TULSA
9906 East 43rd Street, Ste. G
Tulsa, Oklahoma 74146
Phone 918.742.0871
Fax 918.742.0876

HOBBS
318 East Taylor Street
Hobbs, New Mexico 88240
Phone 575.393.4261
Fax 575.393.4658

ARTESIA
104 West Hermosa, Ste. E
Artesia, New Mexico 88210
Phone 575.746.8768
Fax 575.746.8905

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

RECEIVED
OCT 23 2009
Environmental Bureau
Oil Conservation Division

Re: Plains Pipeline, L.P. C.S. Cayler (Plains SRS #2002-10250)
Third Quarter 2009 Summary
NMOCD Reference # AP-052 (Old IR-0382)
UL-M (NW¼ of the NE¼) of Section 6, T17S, R37E
Latitude: 32° 52' 2.45"N and Longitude: 103° 17' 17.73"W
Landowner: Robert Rice
Lea County, New Mexico

Dear Mr. Hansen:

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

Remediation Activities

During the third quarter of 2009, six skimmer pumps located in monitoring wells; MW-2 through MW-5, MW-7, and MW-12, and one total fluid pump located in monitoring well MW-1A, were utilized to recover phase separated hydrocarbons (PSH) and inhibit migration of the PSH plume. The system is maintained weekly to optimize recovery rates. A site layout map with monitor well locations is illustrated in Figure - 1 in Appendix A. A summary of the historical groundwater gauging data is provided in Table 1 in Appendix B.

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. A poly pipe has been installed from the project site to the Apollo SWD. On September 16, 2009 the system became operational and a total of 15 barrels of water was disposed at the Apollo SWD.

Quarterly Sampling Event

August 25 and 26, 2009, the third quarter groundwater sampling event was conducted at the site. During the sampling event, all monitor wells were measured to determine static water levels and the presence and/or absence of PSH (with the exception of monitor well MW-1A, which was obstructed due to the total fluid pump). Groundwater samples from monitor wells MW-2, MW-3, MW-5, MW-6, and MW-9 through MW-18 were submitted to the laboratory for quantification of benzene, toluene, ethylbenzene, and xylene (BTEX) using EPA

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SW-846 Method 8021B, poly-aromatic hydrocarbons (PAH) using SW-846 Method 8270C, and for total petroleum hydrocarbons (TPH) DRO and GRO Method 8015B. Groundwater samples were not collected from monitor wells MW-1A (obstructed), MW-4, MW-7, and MW-8 (insufficient water). Pursuant to a request from the New Mexico Oil Conservation Division (NMOCD), one time per year all wells are analyzed for PAH's and one time per year those wells exhibiting PSH are also analyzed for TPH.

Groundwater Sampling Results (Monitor Wells Not Containing PSH)

During the August 2009 sampling event, a total of ten monitor wells not containing PSH (MW-6, MW-9 through MW-11, and MW-13 through MW-18) were sampled. Groundwater samples collected from these monitor wells exhibited the following analytical results:

- Benzene concentrations ranged from <0.00100 mg/L to 0.269 mg/L. Benzene concentrations exceeded the New Mexico Water Quality Control Commission (NMWQCC) remediation threshold of 0.010 mg/L in groundwater samples collected from monitor wells MW-6, MW-9, MW-10, MW-13, and MW-16.
- Toluene concentrations ranged from <0.00100 mg/L to 0.0273 mg/L. All toluene concentrations were below the NMWQCC remediation threshold of 0.750 mg/L in groundwater samples collected from monitor wells not contain PSH.
- Ethylbenzene concentrations were <0.00100. All ethylbenzene concentrations were below the NMWQCC remediation threshold of 0.750 mg/L in groundwater samples collected from monitor wells not containing PSH.
- Xylene concentrations ranged from <0.00100 mg/L to 0.0528 mg/L. All xylene concentrations were below the NMWQCC remediation threshold of 0.620 mg/L in groundwater samples collected from monitor wells not containing PSH.
- TPH concentrations ranged from <5.00 mg/L to 1.14 mg/L. The NMWQCC does not have a remediation threshold set-forth for TPH.
- PAH concentrations are summarized in Table - 3 of Appendix B.

Groundwater Sampling Results (Monitor Wells Containing PSH)

During the August 2009 sampling event, a total of four monitor wells containing PSH (MW-2, MW-3, MW-5, and MW-12) were sampled. Monitor wells MW-4 and MW-7 contained PSH, but contained an insufficient amount of water, thus no groundwater analytical is available for these monitor wells. Groundwater samples collected from these monitor wells exhibited the following analytical results:

- Benzene concentrations ranged from 15.9 mg/L to 43.0 mg/L. Benzene concentrations exceeded the NMWQCC remediation threshold of 0.010 mg/L in groundwater samples collected from monitor wells MW-2, MW-3, MW-5, and MW-12.
- Toluene concentrations ranged from 9.17 mg/L to 48.4 mg/L. Toluene concentrations exceeded the NMWQCC remediation threshold of 0.750 mg/L in groundwater samples

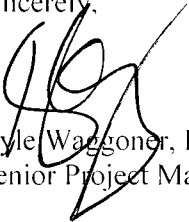
collected from monitor wells MW-2, MW-3, MW-5, and MW-12.

- Ethylbenzene concentrations ranged from 2.05 mg/L to 17.2 mg/L. Ethylbenzene concentrations exceeded the NMWQCC remediation threshold of 0.750 mg/L in groundwater samples collected from monitor wells MW-2, MW-3, MW-5, and MW-12.
- Xylene concentrations ranged from 4.87 mg/L to 39.8 mg/L. Xylene concentrations exceeded the NMWQCC remediation threshold of 0.620 mg/L in groundwater samples collected from monitor wells MW-2, MW-3, MW-5, and MW-12.
- TPH concentration ranged from 243.6 mg/L to 1,078 mg/L. The NMWQCC does not have a remediation threshold set-forth for TPH.
- PAH concentrations are summarized in Table - 4 of Appendix B. Of the PAH concentrations, Naphthalene exceeded the NMWQCC remediation threshold of 0.030 mg/L in groundwater samples collected from monitor wells MW-2, MW-3, MW-5, and MW-12.

Groundwater analytical results are summarized in Tables 1 through 4 of Appendix B. Laboratory analytical data reports and chain of custody documentation are provided in Appendix C.

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,



Kyle Waggoner, P.G.
Senior Project Manager

Cc: Mr. Jeffery P. Dann, Plains Pipeline, L.P.

Appendices:

Appendix A Drawings

Appendix B Tables

Appendix C Laboratory Analytical Data Reports and Chain of Custody Documentation

Appendix A

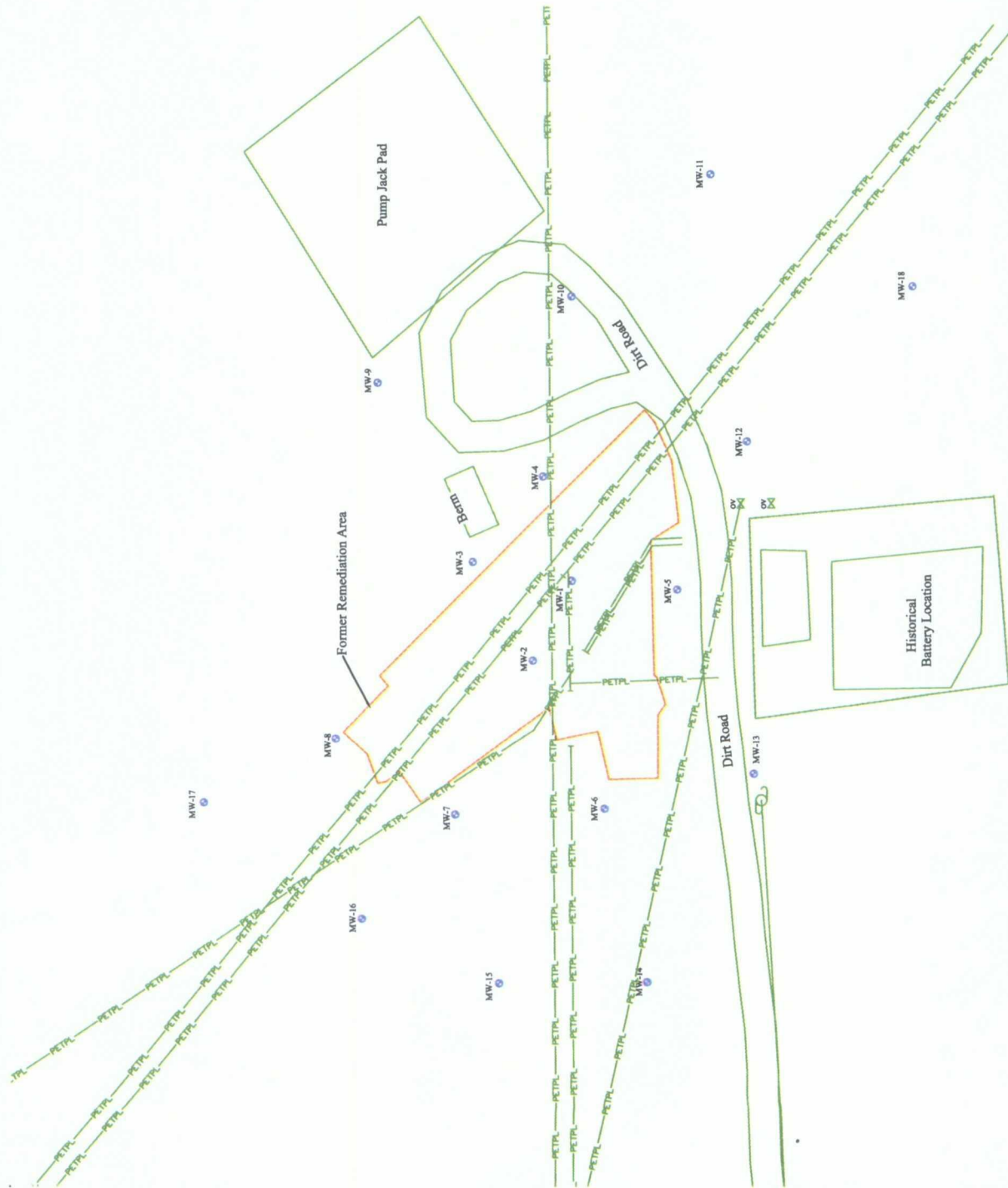
Drawings

Figure 1 - Site Layout and Monitor Well Location Map

Figure 2 - Groundwater Gradient Map - 08/25/2009

Figure 3 - Groundwater Concentration Map - 08/25&26/2009

Figure 4 - PSH Plume Map - 08/25/2009



- Legend**
- Monitor Well
 - Pipeline
 - Valve
 - Fence line

C.S. Cayler (PLAINS044SPL)
 SRS # 2002-10250, NMOCD REF. # AP-052 (OLD IR-0382)
 Lea County, New Mexico
 Figure 1 - Site Layout and Monitor Well Location Map

Date: 06/18/2008

Scale: 1" = 100'

Drawn By: SJA

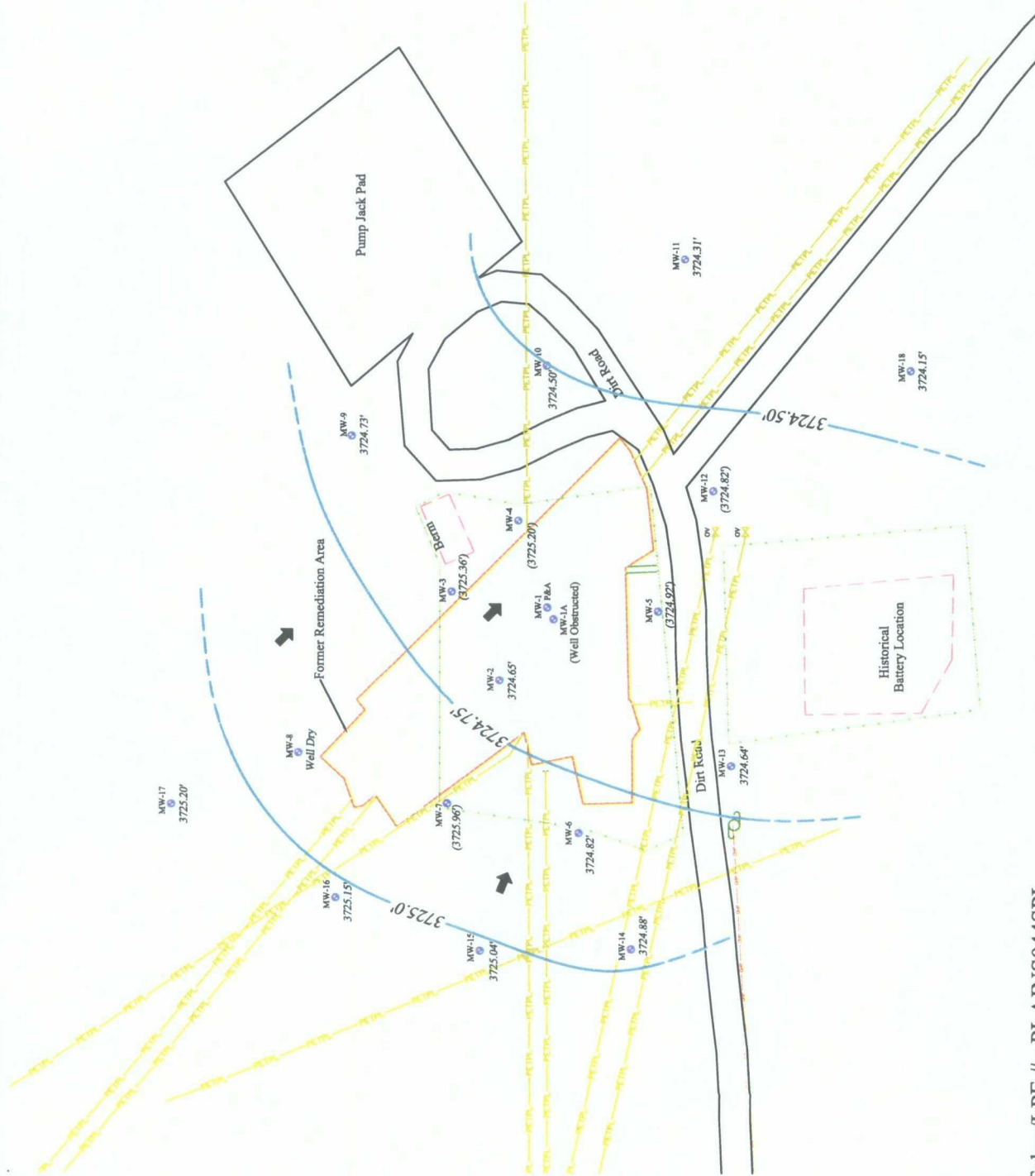




0 50 100
Scale in Feet



- Legend**
- Monitor Well
 - Pipeline
 - Valve
 - Fence line
 - Groundwater Elevation Contour Line
 - Groundwater Contour Elevation
 - Groundwater Flow Direction
 - Data Not Used



Talon/LPE #: PLAINS044SPL



Date: 9/23/2009

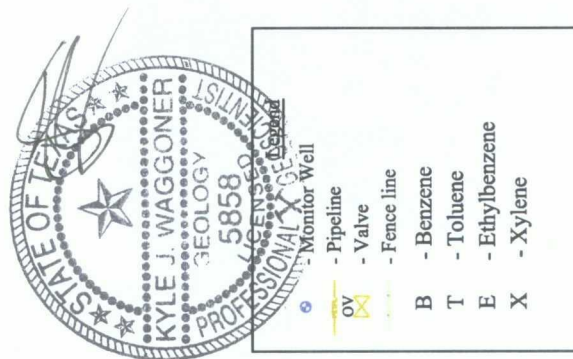
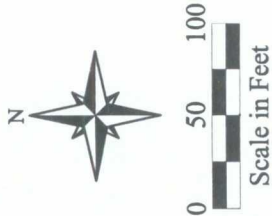
Scale: 1" = 100'

Drawn By: HDJ

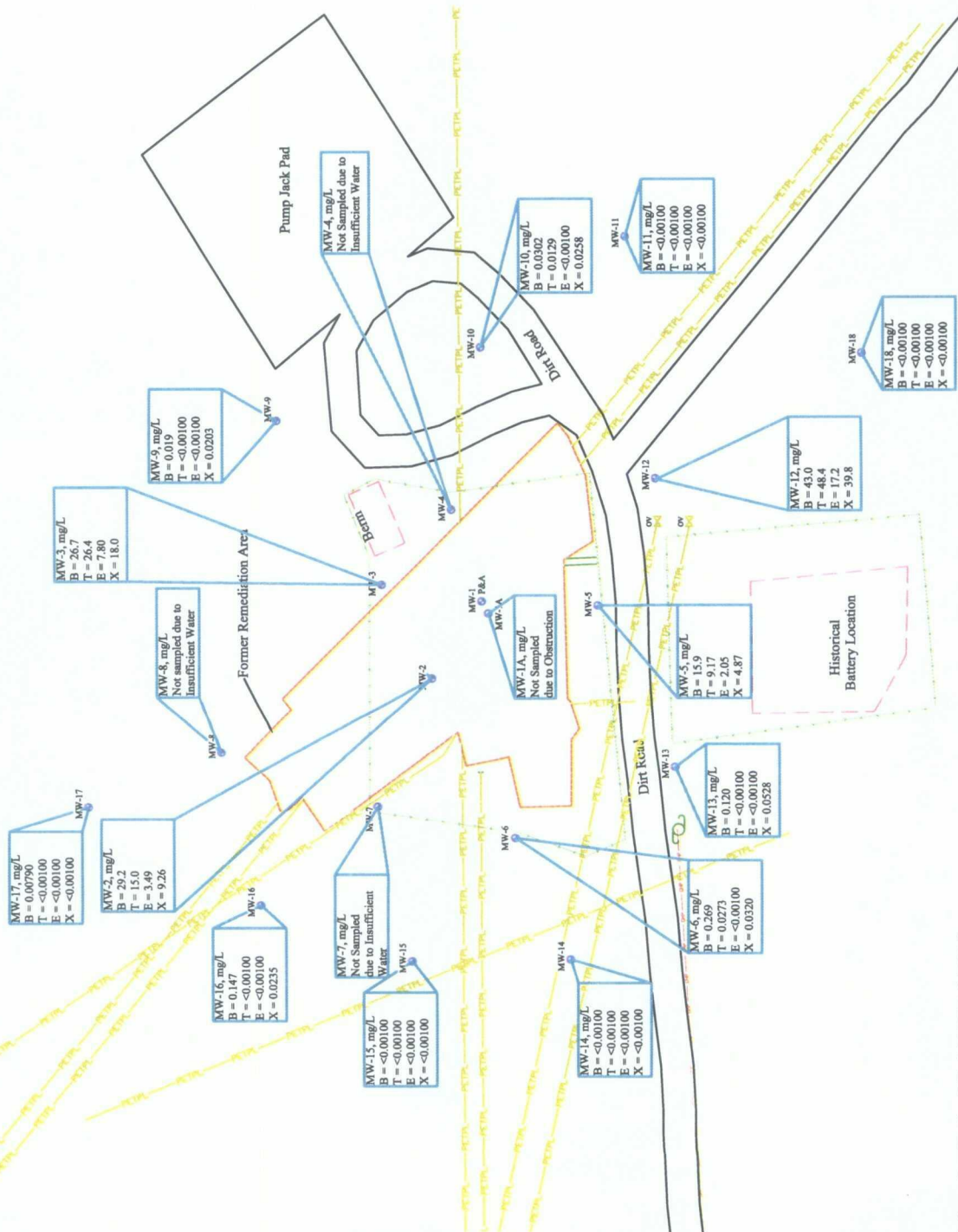
C.S. Cayler

SRS # 2002-10250, NMOCD REF. # AP-052 (OLD 1R-0382)
Lea County, New Mexico

Figure 2 - Groundwater Gradient Map - 08/25/2009



- Monitor Well
- Pipeline
- Valve
- Fence line
- B - Benzene
- T - Toluene
- E - Ethylbenzene
- X - Xylene



Talon/LPE # : PLAINS044SPL



Date: 9/23/2009

Scale: 1" = 100'

Drawn By: HDJ

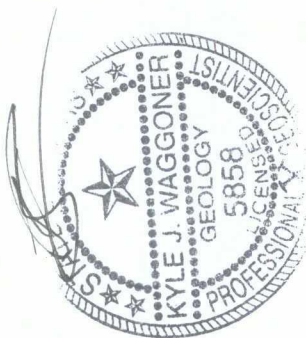
C.S. Cayler

SRS # 2002-10250, NMOCD REF. # AP-052 (OLD 1R-0382)
Lea County, New Mexico

Figure 3 - Groundwater Concentration Map - 08/25&26/2009

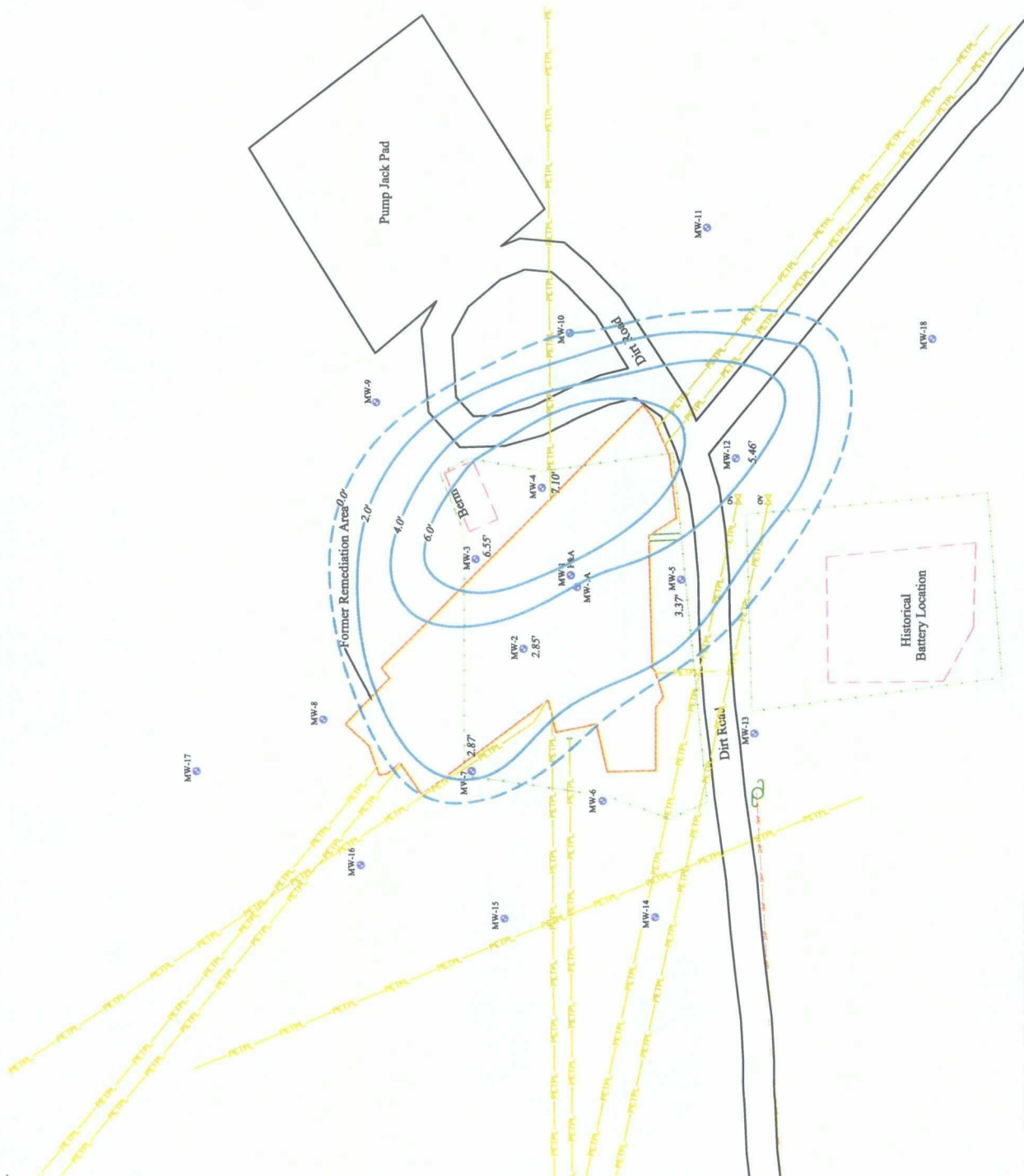


0 50 100
Scale in Feet



Legend

- Monitor Well
- Pipeline
- Valve
- Fence line
- Contour Line
- PSH Plume Thickness



Talon/LPE # : PLAINS044SPL



Date: 9/23/2009
Scale: 1" = 100'
Drawn By: HDJ

C.S. Cayler
SRS # 2002-10250, NMOCD REF. # AP-052 (OLD 1R-0382)
Lea County, New Mexico
Figure 4 - PSH Plume Map - 08/25/2009

Appendix B

Tables

Table 1 - Summary of Historical Fluid Level Measurements

Table 2 - Summary of BTEX Groundwater Analytical

Table 3 - Summary of TPH and PAH (Monitor Wells Not Containing PSH)

Table 4 - Summary of TPH and PAH (Monitor Wells Containing PSH)



TABLE 1
SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS
Plains PIPELINE, L.P. - SRS#2002-10250
C. S. CAYLER
NMOCD REF. # AP-052 (OLD 1R-0382)
LEA COUNTY, NEW MEXICO
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-1	10/17/02	WELL INSTALLED 17-Oct-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



TABLE 1
SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS
Plains PIPELINE, L.P. - SRS#2002-10250
C. S. CAYLER
NMOCD REF. # AP-052 (OLD 1R-0382)
LEA COUNTY, NEW MEXICO
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-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				
MW-1A	9/18/08	WELL INSTALLED 9/18/08				
MW-1A	9/23/08	3,810.02	82.40	89.71	3,726.89	7.31



TABLE 1
SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS
Plains PIPELINE, L.P. - SRS#2002-10250
C. S. CAYLER
NMOCD REF. # AP-052 (OLD 1R-0382)
LEA COUNTY, NEW MEXICO
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	12/4/08		82.50	89.55	3,726.82	7.05
MW-1A	1/21/09		82.11	89.61	3,727.16	7.50
MW-1A	2/18/09	3,810.14	82.34	89.70	3,727.06	7.36
MW-1A	4/6/09		82.76	90.26	3,726.63	7.50
MW-1A	6/10/09		83.22	90.54	3,726.19	7.32
MW-1A	8/25/09	Well Not Gauged Due to Obstruction from Total Fluid Pump				
MW-2	5/28/04	WELL INSTALLED 5/28/04				
MW-2	6/1/04	3,803.93	67.17	77.76	3,735.70	10.59
MW-2	6/21/04		67.27	77.93	3,735.59	10.66
MW-2	7/14/04		67.38	78.09	3,735.48	10.71
MW-2	10/16/04		68.79	74.04	3,734.62	5.25
MW-2	10/29/04		67.97	77.70	3,734.99	9.73
MW-2	3/31/05		68.23	78.50	3,734.67	10.27
MW-2	4/25/05		68.37	77.03	3,734.69	8.66
MW-2	5/31/05		68.46	76.97	3,734.62	8.51
MW-2	6/29/05		69.09	76.12	3,734.14	7.03
MW-2	9/15/05		69.75	79.14	3,733.24	9.39
MW-2	11/14/05		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



TABLE 1
SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS
Plains PIPELINE, L.P. - SRS#2002-10250
C. S. CAYLER
NMOC D REF. # AP-052 (OLD 1R-0382)
LEA COUNTY, NEW MEXICO
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-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



TABLE 1
SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS
Plains PIPELINE, L.P. - SRS#2002-10250
C. S. CAYLER
NMOCD REF. # AP-052 (OLD 1R-0382)
LEA COUNTY, NEW MEXICO
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-2	7/25/08		79.90	87.72	3,723.25	7.82
MW-2	8/13/08		80.21	88.82	3,722.86	8.61
MW-2	9/23/08	3,807.67	79.34	85.88	3,727.68	6.54
MW-2	10/15/08			79.89	3,727.78	
MW-2	12/4/08		79.68	84.90	3,727.47	5.22
MW-2	1/21/09		74.92	79.30	3,732.31	4.38
MW-2	2/18/09	3,807.38	79.99	86.26	3,726.76	6.27
MW-2	4/6/09		80.46	86.28	3,726.34	5.82
MW-2	6/10/09		81.05	85.86	3,725.85	4.81
MW-2	8/25/09		82.45	85.30	3,724.65	2.85
MW-3	5/31/04	WELL INSTALLED 31-May-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



TABLE 1
SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS
Plains PIPELINE, L.P. - SRS#2002-10250
C. S. CAYLER
NMOCD REF. # AP-052 (OLD 1R-0382)
LEA COUNTY, NEW MEXICO
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-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



TABLE 1
SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS
Plains PIPELINE, L.P. - SRS#2002-10250
C. S. CAYLER
NMOCD REF. # AP-052 (OLD 1R-0382)
LEA COUNTY, NEW MEXICO
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-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
MW-3	10/15/08		84.04	84.22	3,726.29	0.18
MW-3	12/4/08		83.61	85.01	3,726.60	1.40
MW-3	1/21/09		82.68	87.80	3,727.16	5.12
MW-3	2/18/09	3,810.36	84.82	88.49	3,725.17	3.67
MW-3	4/6/09		83.33	89.47	3,726.42	6.14
MW-3	6/10/09		83.58	89.41	3,726.20	5.83
MW-3	8/25/09		84.35	90.90	3,725.36	6.55
MW-4	6/1/04	WELL INSTALLED 01-Jun-04				
MW-4	6/21/04	3,810.70	76.04	76.04	3,734.66	
MW-4	7/14/04		74.51	83.91	3,735.25	9.40
MW-4	8/26/04		74.21	83.61	3,735.55	9.40
MW-4	10/16/04		75.77	80.56	3,734.45	4.79
MW-4	10/17/04		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



TABLE 1
SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS
Plains PIPELINE, L.P. - SRS#2002-10250
C. S. CAYLER
NMOCD REF. # AP-052 (OLD 1R-0382)
LEA COUNTY, NEW MEXICO
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-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



TABLE 1
SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS
Plains PIPELINE, L.P. - SRS#2002-10250
C. S. CAYLER
NMOCD REF. # AP-052 (OLD 1R-0382)
LEA COUNTY, NEW MEXICO
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-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
MW-4	10/15/08		83.78	88.43	3,726.58	4.65
MW-4	12/4/08		83.32	89.40	3,726.89	6.08
MW-4	1/21/09		82.79	90.31	3,727.28	7.52
MW-4	2/18/09	3,810.81	83.05	90.35	3,727.03	7.30
MW-4	4/6/09		84.24	91.58	3,725.84	7.34
MW-4	6/10/09		83.88	91.42	3,726.18	7.54
MW-4	8/25/09		84.90	92.00	3,725.20	7.10
MW-5	6/5/04	WELL INSTALLED 05-Jun-04				
MW-5	6/21/04	3,809.05	--	74.42	3,734.63	ND
MW-5	7/14/04		--	74.53	3,734.52	ND
MW-5	10/29/04		--	75.00	3,734.05	ND
MW-5	11/19/04		--	75.10	3,733.95	ND
MW-5	3/31/05		--	75.18	3,733.87	ND
MW-5	4/25/05		--	75.19	3,733.86	ND
MW-5	5/12/05		--	75.22	3,733.83	ND



TABLE 1
SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS
Plains PIPELINE, L.P. - SRS#2002-10250
C. S. CAYLER
NMOCD REF. # AP-052 (OLD 1R-0382)
LEA COUNTY, NEW MEXICO
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-5	5/31/05		--	75.25	3,733.80	ND
MW-5	6/29/05		--	75.67	3,733.38	ND
MW-5	8/22/05		--	76.64	3,732.41	ND
MW-5	9/15/05		--	76.75	3,732.30	ND
MW-5	11/14/05		--	77.39	3,731.66	ND
MW-5	1/23/06		77.21	79.19	3,731.64	1.98
MW-5	3/1/06		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



TABLE 1
SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS
Plains PIPELINE, L.P. - SRS#2002-10250
C. S. CAYLER
NMOCD REF. # AP-052 (OLD 1R-0382)
LEA COUNTY, NEW MEXICO
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-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
MW-5	10/15/08		82.98	83.20	3,726.21	0.22
MW-5	12/4/08		82.77	83.31	3,726.39	0.54
MW-5	1/21/09		81.48	87.40	3,727.14	5.92
MW-5	2/18/09	3,809.29	81.90	86.67	3,726.91	4.77



TABLE 1
SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS
Plains PIPELINE, L.P. - SRS#2002-10250
C. S. CAYLER
NMOCD REF. # AP-052 (OLD 1R-0382)
LEA COUNTY, NEW MEXICO
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-5	4/6/09		82.40	86.98	3,726.43	4.58
MW-5	6/10/09		83.41	84.72	3,725.75	1.31
MW-5	8/25/09		84.03	87.40	3,724.92	3.37
MW-6	10/21/04	WELL INSTALLED 21-Oct-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	



TABLE 1
SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS
Plains PIPELINE, L.P. - SRS#2002-10250
C. S. CAYLER
NMOCD REF. # AP-052 (OLD 1R-0382)
LEA COUNTY, NEW MEXICO
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-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	
MW-6	10/15/08			82.99	3,726.18	
MW-6	12/4/08			82.88	3,726.29	
MW-6	1/21/09			82.59	3,726.58	
MW-6	2/18/09	3,809.33		82.78	3,726.55	
MW-6	4/6/09			83.17	3,726.16	
MW-6	6/10/09			83.64	3,725.69	
MW-6	8/25/09			84.51	3,724.82	
MW-7	10/21/04	WELL INSTALLED 21-Oct-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



TABLE 1
SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS
Plains PIPELINE, L.P. - SRS#2002-10250
C. S. CAYLER
NMOCD REF. # AP-052 (OLD 1R-0382)
LEA COUNTY, NEW MEXICO
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-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



TABLE 1
SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS
Plains PIPELINE, L.P. - SRS#2002-10250
C. S. CAYLER
NMOCD REF. # AP-052 (OLD 1R-0382)
LEA COUNTY, NEW MEXICO
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-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
MW-7	10/15/08		83.48	84.29	3,726.39	0.81
MW-7	12/4/08		82.77	84.29	3,727.03	1.52
MW-7	1/21/09		82.59	84.27	3,727.19	1.68
MW-7	2/18/09	3,810.08	82.41	84.29	3,727.48	1.88
MW-7	4/6/09		82.92	84.29	3,727.02	1.37
MW-7	6/10/09		83.00	*84.15		
MW-7	8/25/09		83.83	86.70	3,725.96	2.87
MW-8	10/20/04	WELL INSTALLED 20-Oct-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



TABLE 1
SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS
Plains PIPELINE, L.P. - SRS#2002-10250
C. S. CAYLER
NMOCD REF. # AP-052 (OLD 1R-0382)
LEA COUNTY, NEW MEXICO
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-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



TABLE 1
SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS
Plains PIPELINE, L.P. - SRS#2002-10250
C. S. CAYLER
NMOCD REF. # AP-052 (OLD 1R-0382)
LEA COUNTY, NEW MEXICO
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-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
MW-8	10/15/08			DRY		
MW-8	12/4/08		82.95	83.21*	NA	0.26
MW-8	1/21/09		82.66	83.21*	NA	0.55
MW-8	2/18/09	3,810.41	82.76	83.28	3,727.60	0.52
MW-8	4/6/09		83.09	83.25	3,727.30	0.16
MW-8	6/10/09			DRY		
MW-8	8/25/09			DRY		
MW-9	10/19/04	WELL INSTALLED 19-Oct-04				
MW-9	10/27/04	3,809.81		75.85	3,733.96	
MW-9	10/29/04			75.85	3,733.96	
MW-9	11/19/04			75.91	3,733.90	
MW-9	3/31/05			76.97	3,732.84	
MW-9	4/25/05			75.91	3,733.90	
MW-9	5/12/05			75.96	3,733.85	
MW-9	5/31/05			75.99	3,733.82	



TABLE 1
SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS
Plains PIPELINE, L.P. - SRS#2002-10250
C. S. CAYLER
NMOCD REF. # AP-052 (OLD 1R-0382)
LEA COUNTY, NEW MEXICO
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-9	6/29/05			76.34	3,733.47	
MW-9	8/22/05			77.31	3,732.50	
MW-9	9/15/05			77.48	3,732.33	
MW-9	11/14/05			78.15	3,731.66	
MW-9	1/23/06			78.33	3,731.48	
MW-9	3/1/06			77.78	3,732.03	
MW-9	5/25/06			78.67	3,731.14	
MW-9	8/14/06			79.90	3,729.91	
MW-9	11/29/06			80.87	3,728.94	
MW-9	12/12/06			80.93	3,728.88	
MW-9	1/11/07			90.94	3,718.87	
MW-9	2/8/07			80.70	3,729.11	
MW-9	2/20/07			81.09	3,728.72	
MW-9	3/6/07			81.15	3,728.66	
MW-9	3/14/07			80.65	3,729.16	
MW-9	3/27/07			81.34	3,728.47	
MW-9	3/29/07			81.11	3,728.70	
MW-9	4/3/07			81.12	3,728.69	
MW-9	4/11/07			81.50	3,728.31	
MW-9	4/17/07			81.60	3,728.21	
MW-9	5/21/07			81.61	3,728.20	
MW-9	6/13/07			81.65	3,728.16	
MW-9	6/26/07			81.78	3,728.03	
MW-9	9/14/07			82.33	3,727.48	
MW-9	10/19/07			82.37	3,727.44	
MW-9	12/3/07			82.30	3,727.51	
MW-9	1/8/08			82.10	3,727.71	
MW-9	1/28/08			82.12	3,727.69	
MW-9	3/12/08			82.11	3,727.70	
MW-9	4/22/08			82.54	3,727.27	



TABLE 1
SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS
Plains PIPELINE, L.P. - SRS#2002-10250
C. S. CAYLER
NMOCDF REF. # AP-052 (OLD 1R-0382)
LEA COUNTY, NEW MEXICO
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-9	5/16/08			82.66	3,727.15	
MW-9	6/19/08			82.87	3,726.94	
MW-9	8/13/08			83.41	3,726.40	
MW-9	10/15/08			83.72	3,726.09	
MW-9	12/4/08			83.59	3,726.22	
MW-9	1/21/09			83.29	3,726.52	
MW-9	2/18/09	3,809.98		86.94	3,723.04	
MW-9	4/6/09			83.88	3,726.10	
MW-9	6/10/09			85.35	3,724.63	
MW-9	8/25/09			85.25	3,724.73	
MW-10	10/20/04	WELL INSTALLED 20-Oct-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	



TABLE 1
SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS
Plains PIPELINE, L.P. - SRS#2002-10250
C. S. CAYLER
NMOCD REF. # AP-052 (OLD 1R-0382)
LEA COUNTY, NEW MEXICO
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-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	
MW-10	10/15/08			83.73	3,725.91	
MW-10	12/4/08			83.51	3,726.13	
MW-10	1/21/09			83.19	3,726.45	
MW-10	2/18/09	3809.79		86.72	3,723.07	
MW-10	4/6/09			83.87	3,725.92	
MW-10	6/10/09			84.23	3,725.56	
MW-10	8/25/09			85.29	3,724.50	
MW-11	2/21/06	WELL INSTALLED 2/21/06				
MW-11	3/1/06	3,808.95		76.95	3,732.00	



TABLE 1
SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS
Plains PIPELINE, L.P. - SRS#2002-10250
C. S. CAYLER
NMOCD REF. # AP-052 (OLD 1R-0382)
LEA COUNTY, NEW MEXICO
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-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	3/27/09			80.43	3,728.52	
MW-11	3/29/09			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	
MW-11	10/15/08			83.15	3,725.80	
MW-11	12/4/08			82.88	3,726.07	
MW-11	1/21/09			82.53	3,726.42	



TABLE 1
SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS
Plains PIPELINE, L.P. - SRS#2002-10250
C. S. CAYLER
NMOCD REF. # AP-052 (OLD 1R-0382)
LEA COUNTY, NEW MEXICO
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-11	2/18/09	3,809.12		82.77	3,726.35	
MW-11	4/6/09			83.28	3,725.84	
MW-11	6/10/09			83.76	3,725.36	
MW-11	8/25/09			84.81	3,724.31	
MW-12	2/23/06	WELL INSTALLED 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	



TABLE 1
SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS
Plains PIPELINE, L.P. - SRS#2002-10250
C. S. CAYLER
NMOCD REF. # AP-052 (OLD 1R-0382)
LEA COUNTY, NEW MEXICO
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-12	6/19/08			82.91	3,726.72	
MW-12	8/13/08			83.46	3,726.17	
MW-12	10/15/08			83.74	3,725.89	
MW-12	12/4/08		83.38	84.10	3,726.18	0.72
MW-12	1/21/09		83.08	83.71	3,726.49	0.63
MW-12	2/18/09	3809.81	83.20	84.42	3,726.49	1.22
MW-12	4/6/09		83.51	85.66	3,726.09	2.15
MW-12	6/10/09		83.62	87.94	3,725.76	4.32
MW-12	8/25/09		84.44	89.90	3,724.82	5.46
MW-13	2/22/06	WELL INSTALLED 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	



TABLE 1
SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS
Plains PIPELINE, L.P. - SRS#2002-10250
C. S. CAYLER
NMOCD REF. # AP-052 (OLD 1R-0382)
LEA COUNTY, NEW MEXICO
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-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	
MW-13	10/15/08			83.37	3,726.05	
MW-13	12/4/08			83.21	3,726.21	
MW-13	1/21/09			82.91	3,726.51	
MW-13	2/18/09	3,809.59		83.10	3,726.49	
MW-13	4/6/09			83.54	3,726.05	
MW-13	6/10/09			84.02	3,725.57	
MW-13	8/25/09			84.95	3,724.64	
MW-14	2/21/06	WELL INSTALLED 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	



TABLE 1
SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS
Plains PIPELINE, L.P. - SRS#2002-10250
C. S. CAYLER
NMOCD REF. # AP-052 (OLD 1R-0382)
LEA COUNTY, NEW MEXICO
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-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	
MW-14	10/15/08			83.23	3,726.23	
MW-14	12/4/08			83.15	3,726.31	
MW-14	1/21/09			82.08	3,727.38	
MW-14	2/18/09	3,809.63		83.05	3,726.58	
MW-14	4/6/09			83.43	3,726.20	
MW-14	6/10/09			83.91	3,725.72	
MW-14	8/25/09			84.75	3,724.88	
MW-15	2/22/06		WELL INSTALLED 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	



TABLE 1
SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS
Plains PIPELINE, L.P. - SRS#2002-10250
C. S. CAYLER
NMOCD REF. # AP-052 (OLD 1R-0382)
LEA COUNTY, NEW MEXICO
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-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	
MW-15	10/15/08			84.41	3,726.36	
MW-15	12/4/08			84.34	3,726.43	
MW-15	1/21/09			84.07	3,726.70	
MW-15	2/18/09	3,810.93		84.26	3,726.67	
MW-15	4/6/09			84.61	3,726.32	
MW-15	6/10/09			85.07	3,725.86	
MW-15	8/25/09			85.89	3,725.04	
MW-16	2/23/06		WELL INSTALLED 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	



TABLE 1
SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS
Plains PIPELINE, L.P. - SRS#2002-10250
C. S. CAYLER
NMOCD REF. # AP-052 (OLD 1R-0382)
LEA COUNTY, NEW MEXICO
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-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	
MW-16	10/15/08			85.63	3,726.39	
MW-16	12/4/08			85.58	3,726.44	
MW-16	1/21/09			85.32	3,726.70	
MW-16	2/18/09	3,812.23		85.53	3,726.70	
MW-16	4/6/09			85.80	3,726.43	
MW-16	6/10/09			86.26	3,725.97	
MW-16	8/25/09			87.08	3,725.15	
MW-17	2/23/06	WELL INSTALLED 2/23/06				



TABLE 1
SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS
Plains PIPELINE, L.P. - SRS#2002-10250
C. S. CAYLER
NMOCD REF. # AP-052 (OLD 1R-0382)
LEA COUNTY, NEW MEXICO
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-17	3/1/06	3,810.40		78.07	3,732.33	
MW-17	5/25/06			78.92	3,731.48	
MW-17	8/14/06			80.02	3,730.38	
MW-17	11/29/06			81.10	3,729.30	
MW-17	12/12/06			81.20	3,729.20	
MW-17	1/11/07			81.25	3,729.15	
MW-17	2/8/07			81.06	3,729.34	
MW-17	2/20/07			81.45	3,728.95	
MW-17	3/6/07			81.48	3,728.92	
MW-17	3/14/07			80.89	3,729.51	
MW-17	3/27/07			81.65	3,728.75	
MW-17	3/29/07			81.40	3,729.00	
MW-17	4/3/07			81.70	3,728.70	
MW-17	4/11/07			82.11	3,728.29	
MW-17	4/17/07			81.83	3,728.57	
MW-17	5/22/07			81.92	3,728.48	
MW-17	6/26/07			82.06	3,728.34	
MW-17	9/14/07			82.59	3,727.81	
MW-17	10/19/07			82.60	3,727.80	
MW-17	12/3/07			82.56	3,727.84	
MW-17	1/8/08			82.48	3,727.92	
MW-17	1/28/08			82.47	3,727.93	
MW-17	3/12/08			82.41	3,727.99	
MW-17	4/22/08			80.42	3,729.98	
MW-17	5/16/08			82.89	3,727.51	
MW-17	6/19/08			83.10	3,727.30	
MW-17	8/13/08			83.68	3,726.72	
MW-17	10/15/08			83.98	3,726.42	
MW-17	12/4/08			83.92	3,726.48	
MW-17	1/21/09			83.66	3,726.74	



TABLE 1
SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS
Plains PIPELINE, L.P. - SRS#2002-10250
C. S. CAYLER
NMOCD REF. # AP-052 (OLD 1R-0382)
LEA COUNTY, NEW MEXICO
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-17	2/18/09	3,810.57		83.85	3,726.72	
MW-17	4/6/09			84.17	3,726.40	
MW-17	6/10/09			84.59	3,725.98	
MW-17	8/25/09			85.37	3,725.20	
MW-18	3/18/08	WELL INSTALLED 3/18/08				
MW-18	3/25/08	3,809.09		82.07	3,727.02	
MW-18	4/22/08			82.19	3,726.90	
MW-18	5/16/08			82.36	3,726.73	
MW-18	6/19/08			82.61	3,726.48	
MW-18	8/13/08			83.19	3,725.90	
MW-18	10/15/08			83.45	3,725.64	
MW-18	12/4/08			83.11	3,725.98	
MW-18	1/21/09			82.78	3,726.31	
MW-18	2/18/09	3,809.28		83.01	3,726.27	
MW-18	4/6/09			83.60	3,725.68	
MW-18	6/10/09			84.06	3,725.22	
MW-18	8/25/09			85.13	3,724.15	

* 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

BTOC = Below Top of Casing



TABLE 2
SUMMARY OF BTEX GROUNDWATER ANALYTICAL
PLAINS PIPELINE, L.P. - SRS# 2002-10250
C.S. CAYLER
NMOCD REF. # AP-052 (OLD 1R-0382)
LEA COUNTY, NEW MEXICO
TALON/LPE PROJECT NUMBER PLAINS044SPL

All concentrations are in mg/L

Sample Location	Sample Date	Benzene	Toluene	Ethyl Benzene	Xylene
MW-1A	02/19/09	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
	06/10/09	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
	08/25/09	Not Sampled Due to Obstruction from Total Fluid Pump			
MW-2	02/19/09	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
	06/10/09	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
	08/26/09	29.2	15.0	3.49	9.26
MW-3	02/19/09	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
	06/10/09	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
	08/26/09	26.7	26.4	7.80	18.0
MW-4	02/19/09	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
	06/10/09	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
	8/25/209	Not Sampled Due to Insufficient Water			
MW-5	02/19/09	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
	06/10/09	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
	08/26/09	15.9	9.17	2.05	4.87
MW-6	02/19/09	0.116	0.00910	<0.00100	0.00250
	06/10/09	0.229	0.0242	<0.00100	0.0172
	08/25/09	0.2690	0.0270	<0.00100	0.0320
MW-7	02/19/09	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
	06/10/09	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
	08/25/09	Not Sampled Due to Insufficient Water			
MW-8	02/19/09	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
	06/10/09	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
	08/25/09	Not Sampled Due to Insufficient Water			
MW-9	02/19/09	0.00290	<0.00100	<0.00100	<0.00100
	06/10/09	0.0125	<0.00100	<0.00100	0.00550
	08/25/09	0.019	<0.00100	<0.00100	0.0203
MW-10	02/19/09	0.00310	<0.00100	<0.00100	<0.00100
	06/10/09	0.0114	0.00470	<0.00100	0.00900
	08/25/09	0.0302	0.0129	<0.00100	0.0258



TABLE 2
SUMMARY OF BTEX GROUNDWATER ANALYTICAL
PLAINS PIPELINE, L.P. - SRS# 2002-10250
C.S. CAYLER
NMOCD REF. # AP-052 (OLD 1R-0382)
LEA COUNTY, NEW MEXICO
TALON/LPE PROJECT NUMBER PLAINS044SPL

All concentrations are in mg/L

Sample Location	Sample Date	Benzene	Toluene	Ethyl Benzene	Xylene
MW-11	02/19/09	<0.00100	<0.00100	<0.00100	<0.00100
	06/10/09	<0.00100	<0.00100	<0.00100	<0.00100
	08/25/09	<0.00100	<0.00100	<0.00100	<0.00100
MW-12	02/19/09	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
	06/10/09	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
	08/26/09	43.00	48.40	17.20	39.80
MW-13	02/19/09	0.0634	<0.00100	<0.00100	0.00400
	06/10/09	0.0621	<0.00100	<0.00100	0.0282
	08/25/09	0.1200	<0.00100	<0.00100	0.05280
MW-14	02/19/09	<0.00100	<0.00100	<0.00100	<0.00100
	06/10/09	<0.00100	<0.00100	<0.00100	<0.00100
	08/25/09	<0.00100	<0.00100	<0.00100	<0.00100
MW-15	02/19/09	<0.00100	<0.00100	<0.00100	<0.00100
	06/10/09	0.00680	<0.00100	<0.00100	<0.00100
	08/25/09	<0.00100	<0.00100	<0.00100	<0.00100
MW-16	02/19/09	0.00280	<0.00100	<0.00100	<0.00100
	06/10/09	0.0156	<0.00100	<0.00100	<0.00100
	08/25/09	0.147	<0.00100	<0.00100	0.02350
MW-17	02/19/09	<0.00100	<0.00100	<0.00100	<0.00100
	06/10/09	<0.00100	<0.00100	<0.00100	<0.00100
	08/25/09	0.00790	<0.00100	<0.00100	<0.00100
MW-18	02/19/09	<0.00100	<0.00100	<0.00100	<0.00100
	06/10/09	<0.00100	<0.00100	<0.00100	<0.00100
	08/25/09	<0.00100	<0.00100	<0.00100	<0.00100
NMWQCC Remedial Limits		0.010	0.750	0.750	0.620

Bolded values are in excess of the NMWQCC Remediation Thresholds



TABLE 3
SUMMARY OF TPH AND PAH (MONITOR WELLS NOT CONTAINING PSH)
TOTAL PETROLEUM HYDROCARBONS (TPH)
POLY-AROMATIC HYDROCARBON (PAH)
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	TPH DRO	TPH GRO	Total TPH	Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]-anthracene	Benzo[a]-pyrene	Benzo[b]-fluoranthene	Benzo[g,h,i]-perylene	Benzo[k]-fluoranthene	Chrysene	Dibenz[a,h]-anthracene	Dibenzofuran	Fluoranthene	Fluorene	Indeno[1,2,3-cd]-pyrene	2-Methylnaphthalene	1-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene
MW-6	08/25/09	<5.00	1.14	1.14	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186
MW-9	08/25/09	<5.00	0.156	0.156	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185
MW-10	08/25/09	<5.00	0.234	0.234	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184
MW-11	08/25/09	<5.00	<0.100	<5.00	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186
MW-13	08/25/09	<5.00	0.608	0.608	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183
MW-14	08/25/09	<5.00	<0.100	<5.00	<0.000926	<0.000926	<0.000926	<0.000926	<0.000926	<0.000926	<0.000926	<0.000926	<0.000926	<0.000926	<0.000926	<0.000926	<0.000926	<0.000926	<0.000926	<0.000926	<0.000926	<0.000926	<0.000926
MW-15	08/25/09	<5.00	<0.100	<5.00	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184
MW-16	08/25/09	<5.00	0.428	0.428	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922
MW-17	08/25/09	<5.00	<0.100	<5.00	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183
MW-18	08/25/09	<5.00	<0.100	<5.00	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	0.000212	<0.000184	<0.000184
NMWQCC Remedial Limits									0.007												0.030		

¹ **Bolded** values are in excess of the NMWQCC Remediation Thresholds



TABLE 4
SUMMARY OF TPH AND PAH (MONITOR WELLS CONTAINING PSH)
TOTAL PETROLEUM HYDROCARBONS (TPH)
POLY-AROMATIC HYDROCARBON (PAH)
PLAINS PIPELINE, L.P.
CS CAYLER
NMOCDF. # 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	TPH DRO	TPH GRO	Total TPH	Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]-anthracene	Benzo[a]-pyrene	Benzo[b]-fluoranthene	Benzo[e,h,i]-perylene	Benzo[k]-fluoranthene	Chrysene	Dibenz[a,h]-anthracene	Dibenzofuran	Fluoranthene	Fluorene	Indeno[1,2,3-cd]-pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene
MW-1A	08/25/09																						
MW-2	08/26/09	123	163	286	<0.00184	<0.00184	<0.00184	<0.00184	<0.00184	<0.00184	<0.00184	<0.00184	0.143	<0.00184	0.882	<0.00184	1.24	<0.00184	11.1	13.3	5.77	1.27	0.0743
MW-3	08/26/09	735	338	1073	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	0.338	<0.00459	1.51	<0.00459	2.04	<0.00459	27.1	31.7	14.1	3.01	0.184
MW-4	08/25/09																						
MW-5	08/26/09	162	81.6	243.6	<0.00184	<0.00184	<0.00184	<0.00184	<0.00184	<0.00184	<0.00184	<0.00184	0.0703	<0.00184	0.318	<0.00184	0.420	<0.00184	4.38	5.28	2.30	0.576	0.0406
MW-7	08/25/09																						
MW8	08/25/09																						
MW-12	08/26/09	502	576	1078	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	0.410	<0.00459	2.88	<0.00459	3.86	<0.00459	46.1	52.8	21.6	4.09	<0.00459
NMWWCC Remedial Limits									0.0007												0.030		

* Bolded values are in excess of the NMWWCC Remediation Thresholds

Appendix C

Laboratory Analytical Data Reports and Chain of Custody Documentation



6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1296
200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
5015 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-Midland
2901 State Highway 349
Midland, TX, 79706

Report Date: September 2, 2009

Work Order: 9082626



Project Location: Lovington, NM
Project Name: C.S. Cayler
Project Number: 700376.015.01
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
207899	MW-6	water	2009-08-25	14:58	2009-08-26
207900	MW-9	water	2009-08-25	13:15	2009-08-26
207901	MW-10	water	2009-08-25	13:35	2009-08-26
207902	MW-11	water	2009-08-25	14:00	2009-08-26
207903	MW-13	water	2009-08-25	14:35	2009-08-26
207904	MW-14	water	2009-08-25	12:10	2009-08-26
207905	MW-15	water	2009-08-25	11:40	2009-08-26
207906	MW-16	water	2009-08-25	12:35	2009-08-26
207907	MW-17	water	2009-08-25	12:55	2009-08-26
207908	MW-18	water	2009-08-25	14:10	2009-08-26

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 32 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

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 2009-08-26 and assigned to work order 9082626. Samples for work order 9082626 were received intact without headspace and at a temperature of 3.8 deg. C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	53815	2009-08-28 at 10:00	63047	2009-08-28 at 23:54
PAH	S 8270C	53918	2009-08-27 at 15:00	63169	2009-09-02 at 11:32
TPH DRO	Mod. 8015B	53718	2009-08-27 at 10:22	62945	2009-08-27 at 10:22
TPH GRO	S 8015B	53815	2009-08-28 at 10:00	63048	2009-08-29 at 00:21

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 9082626 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: September 2, 2009
700376.015.01

Work Order: 9082626
C.S. Caylor

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Analytical Report

Sample: 207899 - MW-6

Laboratory: Midland
Analysis: BTEX
QC Batch: 63047
Prep Batch: 53815

Analytical Method: S 8021B
Date Analyzed: 2009-08-28
Sample Preparation: 2009-08-28

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

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		0.269	mg/L	1	0.00100
Toluene		0.0273	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		0.0320	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0975	mg/L	1	0.100	98	87 - 105.2
4-Bromofluorobenzene (4-BFB)		0.0652	mg/L	1	0.100	65	49.8 - 130.8

Sample: 207899 - MW-6

Laboratory: Lubbock
Analysis: PAH
QC Batch: 63169
Prep Batch: 53918

Analytical Method: S 8270C
Date Analyzed: 2009-09-02
Sample Preparation: 2009-08-27

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

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		<0.000186	mg/L	0.93	0.000200
2-Methylnaphthalene		<0.000186	mg/L	0.93	0.000200
1-Methylnaphthalene		<0.000186	mg/L	0.93	0.000200
Acenaphthylene		<0.000186	mg/L	0.93	0.000200
Acenaphthene		<0.000186	mg/L	0.93	0.000200
Dibenzofuran		<0.000186	mg/L	0.93	0.000200
Fluorene		<0.000186	mg/L	0.93	0.000200
Anthracene		<0.000186	mg/L	0.93	0.000200
Phenanthrene		<0.000186	mg/L	0.93	0.000200
Fluoranthene		<0.000186	mg/L	0.93	0.000200
Pyrene		<0.000186	mg/L	0.93	0.000200
Benzo(a)anthracene		<0.000186	mg/L	0.93	0.000200
Chrysene		<0.000186	mg/L	0.93	0.000200
Benzo(b)fluoranthene		<0.000186	mg/L	0.93	0.000200
Benzo(k)fluoranthene		<0.000186	mg/L	0.93	0.000200
Benzo(a)pyrene		<0.000186	mg/L	0.93	0.000200

continued ...

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sample 207899 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Indeno(1,2,3-cd)pyrene		<0.000186	mg/L	0.93	0.000200
Dibenzo(a,h)anthracene		<0.000186	mg/L	0.93	0.000200
Benzo(g,h,i)perylene		<0.000186	mg/L	0.93	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5	1	0.0134	mg/L	0.93	0.0800	17	25.9 - 97.5
2-Fluorobiphenyl		0.0163	mg/L	0.93	0.0800	20	13.9 - 100
Terphenyl-d14		0.0302	mg/L	0.93	0.0800	38	37.7 - 114

Sample: 207899 - MW-6

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 62945
Prep Batch: 53718

Analytical Method: Mod. 8015B
Date Analyzed: 2009-08-27
Sample Preparation: 2009-08-27

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

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		10.2	mg/L	1	10.0	102	70 - 130

Sample: 207899 - MW-6

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 63048
Prep Batch: 53815

Analytical Method: S 8015B
Date Analyzed: 2009-08-29
Sample Preparation: 2009-08-28

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

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		1.14	mg/L	1	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0942	mg/L	1	0.100	94	70 - 130
4-Bromofluorobenzene (4-BFB)		0.0744	mg/L	1	0.100	74	70 - 130

¹8270 Only - One basic surrogate is out of control limits. The other two basic surrogates show extraction was performed properly.

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Sample: 207900 - MW-9

Laboratory: Midland
Analysis: BTEX
QC Batch: 63047
Prep Batch: 53815

Analytical Method: S 8021B
Date Analyzed: 2009-08-28
Sample Preparation: 2009-08-28

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

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		0.0190	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		0.0203	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0951	mg/L	1	0.100	95	87 - 105.2
4-Bromofluorobenzene (4-BFB)		0.0675	mg/L	1	0.100	68	49.8 - 130.8

Sample: 207900 - MW-9

Laboratory: Lubbock
Analysis: PAH
QC Batch: 63169
Prep Batch: 53918

Analytical Method: S 8270C
Date Analyzed: 2009-09-02
Sample Preparation: 2009-08-27

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

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		<0.000185	mg/L	0.926	0.000200
2-Methylnaphthalene		<0.000185	mg/L	0.926	0.000200
1-Methylnaphthalene		<0.000185	mg/L	0.926	0.000200
Acenaphthylene		<0.000185	mg/L	0.926	0.000200
Acenaphthene		<0.000185	mg/L	0.926	0.000200
Dibenzofuran		<0.000185	mg/L	0.926	0.000200
Fluorene		<0.000185	mg/L	0.926	0.000200
Anthracene		<0.000185	mg/L	0.926	0.000200
Phenanthrene		<0.000185	mg/L	0.926	0.000200
Fluoranthene		<0.000185	mg/L	0.926	0.000200
Pyrene		<0.000185	mg/L	0.926	0.000200
Benzo(a)anthracene		<0.000185	mg/L	0.926	0.000200
Chrysene		<0.000185	mg/L	0.926	0.000200
Benzo(b)fluoranthene		<0.000185	mg/L	0.926	0.000200
Benzo(k)fluoranthene		<0.000185	mg/L	0.926	0.000200
Benzo(a)pyrene		<0.000185	mg/L	0.926	0.000200
Indeno(1,2,3-cd)pyrene		<0.000185	mg/L	0.926	0.000200
Dibenzo(a,h)anthracene		<0.000185	mg/L	0.926	0.000200
Benzo(g,h,i)perylene		<0.000185	mg/L	0.926	0.000200

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0245	mg/L	0.926	0.0800	31	25.9 - 97.5
2-Fluorobiphenyl		0.0252	mg/L	0.926	0.0800	32	13.9 - 100
Terphenyl-d14	²	0.0268	mg/L	0.926	0.0800	34	37.7 - 114

Sample: 207900 - MW-9

Laboratory: Midland	Analytical Method: Mod. 8015B	Prep Method: N/A
Analysis: TPH DRO	Date Analyzed: 2009-08-27	Analyzed By: kg
QC Batch: 62945	Sample Preparation: 2009-08-27	Prepared By: kg
Prep Batch: 53718		

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		9.80	mg/L	1	10.0	98	70 - 130

Sample: 207900 - MW-9

Laboratory: Midland	Analytical Method: S 8015B	Prep Method: S 5030B
Analysis: TPH GRO	Date Analyzed: 2009-08-29	Analyzed By: AG
QC Batch: 63048	Sample Preparation: 2009-08-28	Prepared By: AG
Prep Batch: 53815		

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		0.156	mg/L	1	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0933	mg/L	1	0.100	93	70 - 130
4-Bromofluorobenzene (4-BFB)		0.0765	mg/L	1	0.100	76	70 - 130

Sample: 207901 - MW-10

Laboratory: Midland	Analytical Method: S 8021B	Prep Method: S 5030B
Analysis: BTEX	Date Analyzed: 2009-08-28	Analyzed By: AG
QC Batch: 63047	Sample Preparation: 2009-08-28	Prepared By: AG
Prep Batch: 53815		

²8270 Only - One basic surrogate is out of control limits. The other two basic surrogates show extraction was performed properly.

Report Date: September 2, 2009
700376.015.01

Work Order: 9082626
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Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		0.0302	mg/L	1	0.00100
Toluene		0.0129	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		0.0258	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0949	mg/L	1	0.100	95	87 - 105.2
4-Bromofluorobenzene (4-BFB)		0.0678	mg/L	1	0.100	68	49.8 - 130.8

Sample: 207901 - MW-10

Laboratory: Lubbock
Analysis: PAH
QC Batch: 63169
Prep Batch: 53918

Analytical Method: S 8270C
Date Analyzed: 2009-09-02
Sample Preparation: 2009-08-27

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

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		<0.000184	mg/L	0.922	0.000200
2-Methylnaphthalene		<0.000184	mg/L	0.922	0.000200
1-Methylnaphthalene		<0.000184	mg/L	0.922	0.000200
Acenaphthylene		<0.000184	mg/L	0.922	0.000200
Acenaphthene		<0.000184	mg/L	0.922	0.000200
Dibenzofuran		<0.000184	mg/L	0.922	0.000200
Fluorene		<0.000184	mg/L	0.922	0.000200
Anthracene		<0.000184	mg/L	0.922	0.000200
Phenanthrene		<0.000184	mg/L	0.922	0.000200
Fluoranthene		<0.000184	mg/L	0.922	0.000200
Pyrene		<0.000184	mg/L	0.922	0.000200
Benzo(a)anthracene		<0.000184	mg/L	0.922	0.000200
Chrysene		<0.000184	mg/L	0.922	0.000200
Benzo(b)fluoranthene		<0.000184	mg/L	0.922	0.000200
Benzo(k)fluoranthene		<0.000184	mg/L	0.922	0.000200
Benzo(a)pyrene		<0.000184	mg/L	0.922	0.000200
Indeno(1,2,3-cd)pyrene		<0.000184	mg/L	0.922	0.000200
Dibenzo(a,h)anthracene		<0.000184	mg/L	0.922	0.000200
Benzo(g,h,i)perylene		<0.000184	mg/L	0.922	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5	3	0.0181	mg/L	0.922	0.0800	23	25.9 - 97.5
2-Fluorobiphenyl		0.0207	mg/L	0.922	0.0800	26	13.9 - 100

continued ...

³8270 Only - Two basic surrogates are out of control limits. The other basic surrogate shows extraction was performed properly.

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Terphenyl-d14	⁴	0.0294	mg/L	0.922	0.0800	37	37.7 - 114

Sample: 207901 - MW-10

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 62945
Prep Batch: 53718

Analytical Method: Mod. 8015B
Date Analyzed: 2009-08-27
Sample Preparation: 2009-08-27

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

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		9.81	mg/L	1	10.0	98	70 - 130

Sample: 207901 - MW-10

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 63048
Prep Batch: 53815

Analytical Method: S 8015B
Date Analyzed: 2009-08-29
Sample Preparation: 2009-08-28

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

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		0.234	mg/L	1	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0937	mg/L	1	0.100	94	70 - 130
4-Bromofluorobenzene (4-BFB)		0.0762	mg/L	1	0.100	76	70 - 130

Sample: 207902 - MW-11

Laboratory: Midland
Analysis: BTEX
QC Batch: 63047
Prep Batch: 53815

Analytical Method: S 8021B
Date Analyzed: 2009-08-28
Sample Preparation: 2009-08-28

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

⁴8270 Only - Two basic surrogates are out of control limits. The other basic surrogate shows extraction was performed properly.

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Parameter	Flag	RL 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)		0.0985	mg/L	1	0.100	98	87 - 105.2
4-Bromofluorobenzene (4-BFB)		0.0646	mg/L	1	0.100	65	49.8 - 130.8

Sample: 207902 - MW-11

Laboratory: Lubbock
Analysis: PAH
QC Batch: 63169
Prep Batch: 53918

Analytical Method: S 8270C
Date Analyzed: 2009-09-02
Sample Preparation: 2009-08-27

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

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		<0.000186	mg/L	0.93	0.000200
2-Methylnaphthalene		<0.000186	mg/L	0.93	0.000200
1-Methylnaphthalene		<0.000186	mg/L	0.93	0.000200
Acenaphthylene		<0.000186	mg/L	0.93	0.000200
Acenaphthene		<0.000186	mg/L	0.93	0.000200
Dibenzofuran		<0.000186	mg/L	0.93	0.000200
Fluorene		<0.000186	mg/L	0.93	0.000200
Anthracene		<0.000186	mg/L	0.93	0.000200
Phenanthrene		<0.000186	mg/L	0.93	0.000200
Fluoranthene		<0.000186	mg/L	0.93	0.000200
Pyrene		<0.000186	mg/L	0.93	0.000200
Benzo(a)anthracene		<0.000186	mg/L	0.93	0.000200
Chrysene		<0.000186	mg/L	0.93	0.000200
Benzo(b)fluoranthene		<0.000186	mg/L	0.93	0.000200
Benzo(k)fluoranthene		<0.000186	mg/L	0.93	0.000200
Benzo(a)pyrene		<0.000186	mg/L	0.93	0.000200
Indeno(1,2,3-cd)pyrene		<0.000186	mg/L	0.93	0.000200
Dibenzo(a,h)anthracene		<0.000186	mg/L	0.93	0.000200
Benzo(g,h,i)perylene		<0.000186	mg/L	0.93	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5	5	0.0158	mg/L	0.93	0.0800	20	25.9 - 97.5
2-Fluorobiphenyl		0.0177	mg/L	0.93	0.0800	22	13.9 - 100

continued ...

⁵8270 Only - One basic surrogate is out of control limits. The other two basic surrogates show extraction was performed properly.

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Terphenyl-d14		0.0315	mg/L	0.93	0.0800	39	37.7 - 114

Sample: 207902 - MW-11

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 62945
Prep Batch: 53718

Analytical Method: Mod. 8015B
Date Analyzed: 2009-08-27
Sample Preparation: 2009-08-27

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

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		9.71	mg/L	1	10.0	97	70 - 130

Sample: 207902 - MW-11

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 63048
Prep Batch: 53815

Analytical Method: S 8015B
Date Analyzed: 2009-08-29
Sample Preparation: 2009-08-28

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

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<0.100	mg/L	1	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0951	mg/L	1	0.100	95	70 - 130
4-Bromofluorobenzene (4-BFB)		0.0737	mg/L	1	0.100	74	70 - 130

Sample: 207903 - MW-13

Laboratory: Midland
Analysis: BTEX
QC Batch: 63047
Prep Batch: 53815

Analytical Method: S 8021B
Date Analyzed: 2009-08-28
Sample Preparation: 2009-08-28

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

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Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		0.120	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		0.0528	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0994	mg/L	1	0.100	99	87 - 105.2
4-Bromofluorobenzene (4-BFB)		0.0750	mg/L	1	0.100	75	49.8 - 130.8

Sample: 207903 - MW-13

Laboratory: Lubbock
Analysis: PAH
QC Batch: 63169
Prep Batch: 53918

Analytical Method: S 8270C
Date Analyzed: 2009-09-02
Sample Preparation: 2009-08-27

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

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		<0.000183	mg/L	0.913	0.000200
2-Methylnaphthalene		<0.000183	mg/L	0.913	0.000200
1-Methylnaphthalene		<0.000183	mg/L	0.913	0.000200
Acenaphthylene		<0.000183	mg/L	0.913	0.000200
Acenaphthene		<0.000183	mg/L	0.913	0.000200
Dibenzofuran		<0.000183	mg/L	0.913	0.000200
Fluorene		<0.000183	mg/L	0.913	0.000200
Anthracene		<0.000183	mg/L	0.913	0.000200
Phenanthrene		<0.000183	mg/L	0.913	0.000200
Fluoranthene		<0.000183	mg/L	0.913	0.000200
Pyrene		<0.000183	mg/L	0.913	0.000200
Benzo(a)anthracene		<0.000183	mg/L	0.913	0.000200
Chrysene		<0.000183	mg/L	0.913	0.000200
Benzo(b)fluoranthene		<0.000183	mg/L	0.913	0.000200
Benzo(k)fluoranthene		<0.000183	mg/L	0.913	0.000200
Benzo(a)pyrene		<0.000183	mg/L	0.913	0.000200
Indeno(1,2,3-cd)pyrene		<0.000183	mg/L	0.913	0.000200
Dibenzo(a,h)anthracene		<0.000183	mg/L	0.913	0.000200
Benzo(g,h,i)perylene		<0.000183	mg/L	0.913	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0312	mg/L	0.913	0.0800	39	25.9 - 97.5
2-Fluorobiphenyl		0.0327	mg/L	0.913	0.0800	41	13.9 - 100
Terphenyl-d14		0.0334	mg/L	0.913	0.0800	42	37.7 - 114

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Sample: 207903 - MW-13

Laboratory:	Midland	Analytical Method:	Mod. 8015B	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2009-08-27	Analyzed By:	kg
QC Batch:	62945	Sample Preparation:	2009-08-27	Prepared By:	kg
Prep Batch:	53718				

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		9.55	mg/L	1	10.0	96	70 - 130

Sample: 207903 - MW-13

Laboratory:	Midland	Analytical Method:	S 8015B	Prep Method:	S 5030B
Analysis:	TPH GRO	Date Analyzed:	2009-08-29	Analyzed By:	AG
QC Batch:	63048	Sample Preparation:	2009-08-28	Prepared By:	AG
Prep Batch:	53815				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		0.608	mg/L	1	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0943	mg/L	1	0.100	94	70 - 130
4-Bromofluorobenzene (4-BFB)		0.0955	mg/L	1	0.100	96	70 - 130

Sample: 207904 - MW-14

Laboratory:	Midland	Analytical Method:	S 8021B	Prep Method:	S 5030B
Analysis:	BTEX	Date Analyzed:	2009-08-28	Analyzed By:	AG
QC Batch:	63047	Sample Preparation:	2009-08-28	Prepared By:	AG
Prep Batch:	53815				

Parameter	Flag	RL 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

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0989	mg/L	1	0.100	99	87 - 105.2
4-Bromofluorobenzene (4-BFB)		0.0674	mg/L	1	0.100	67	49.8 - 130.8

Sample: 207904 - MW-14

Laboratory: Lubbock
Analysis: PAH
QC Batch: 63169
Prep Batch: 53918

Analytical Method: S 8270C
Date Analyzed: 2009-09-02
Sample Preparation: 2009-08-27

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

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene	6	<0.000926	mg/L	4.63	0.000200
2-Methylnaphthalene		<0.000926	mg/L	4.63	0.000200
1-Methylnaphthalene		<0.000926	mg/L	4.63	0.000200
Acenaphthylene		<0.000926	mg/L	4.63	0.000200
Acenaphthene		<0.000926	mg/L	4.63	0.000200
Dibenzofuran		<0.000926	mg/L	4.63	0.000200
Fluorene		<0.000926	mg/L	4.63	0.000200
Anthracene		<0.000926	mg/L	4.63	0.000200
Phenanthrene		<0.000926	mg/L	4.63	0.000200
Fluoranthene		<0.000926	mg/L	4.63	0.000200
Pyrene		<0.000926	mg/L	4.63	0.000200
Benzo(a)anthracene		<0.000926	mg/L	4.63	0.000200
Chrysene		<0.000926	mg/L	4.63	0.000200
Benzo(b)fluoranthene		<0.000926	mg/L	4.63	0.000200
Benzo(k)fluoranthene		<0.000926	mg/L	4.63	0.000200
Benzo(a)pyrene		<0.000926	mg/L	4.63	0.000200
Indeno(1,2,3-cd)pyrene		<0.000926	mg/L	4.63	0.000200
Dibenzo(a,h)anthracene		<0.000926	mg/L	4.63	0.000200
Benzo(g,h,i)perylene		<0.000926	mg/L	4.63	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0238	mg/L	4.63	0.0800	30	25.9 - 97.5
2-Fluorobiphenyl		0.0272	mg/L	4.63	0.0800	34	13.9 - 100
Terphenyl-d14		0.0560	mg/L	4.63	0.0800	70	37.7 - 114

Sample: 207904 - MW-14

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 62945
Prep Batch: 53718

Analytical Method: Mod. 8015B
Date Analyzed: 2009-08-27
Sample Preparation: 2009-08-27

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

⁶Dilution due to matrix difficulty. •

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		9.63	mg/L	1	10.0	96	70 - 130

Sample: 207904 - MW-14

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 63048
Prep Batch: 53815

Analytical Method: S 8015B
Date Analyzed: 2009-08-29
Sample Preparation: 2009-08-28

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

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<0.100	mg/L	1	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0948	mg/L	1	0.100	95	70 - 130
4-Bromofluorobenzene (4-BFB)		0.0759	mg/L	1	0.100	76	70 - 130

Sample: 207905 - MW-15

Laboratory: Midland
Analysis: BTEX
QC Batch: 63047
Prep Batch: 53815

Analytical Method: S 8021B
Date Analyzed: 2009-08-28
Sample Preparation: 2009-08-28

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

Parameter	Flag	RL 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)		0.101	mg/L	1	0.100	101	87 - 105.2
4-Bromofluorobenzene (4-BFB)		0.0689	mg/L	1	0.100	69	49.8 - 130.8

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Sample: 207905 - MW-15

Laboratory: Lubbock
Analysis: PAH
QC Batch: 63169
Prep Batch: 53918

Analytical Method: S 8270C
Date Analyzed: 2009-09-02
Sample Preparation: 2009-08-27

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

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		<0.000184	mg/L	0.922	0.000200
2-Methylnaphthalene		<0.000184	mg/L	0.922	0.000200
1-Methylnaphthalene		<0.000184	mg/L	0.922	0.000200
Acenaphthylene		<0.000184	mg/L	0.922	0.000200
Acenaphthene		<0.000184	mg/L	0.922	0.000200
Dibenzofuran		<0.000184	mg/L	0.922	0.000200
Fluorene		<0.000184	mg/L	0.922	0.000200
Anthracene		<0.000184	mg/L	0.922	0.000200
Phenanthrene		<0.000184	mg/L	0.922	0.000200
Fluoranthene		<0.000184	mg/L	0.922	0.000200
Pyrene		<0.000184	mg/L	0.922	0.000200
Benzo(a)anthracene		<0.000184	mg/L	0.922	0.000200
Chrysene		<0.000184	mg/L	0.922	0.000200
Benzo(b)fluoranthene		<0.000184	mg/L	0.922	0.000200
Benzo(k)fluoranthene		<0.000184	mg/L	0.922	0.000200
Benzo(a)pyrene		<0.000184	mg/L	0.922	0.000200
Indeno(1,2,3-cd)pyrene		<0.000184	mg/L	0.922	0.000200
Dibenzo(a,h)anthracene		<0.000184	mg/L	0.922	0.000200
Benzo(g,h,i)perylene		<0.000184	mg/L	0.922	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0255	mg/L	0.922	0.0800	32	25.9 - 97.5
2-Fluorobiphenyl		0.0286	mg/L	0.922	0.0800	36	13.9 - 100
Terphenyl-d14		0.0358	mg/L	0.922	0.0800	45	37.7 - 114

Sample: 207905 - MW-15

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 62945
Prep Batch: 53718

Analytical Method: Mod. 8015B
Date Analyzed: 2009-08-27
Sample Preparation: 2009-08-27

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

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

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		9.70	mg/L	1	10.0	97	70 - 130

Sample: 207905 - MW-15

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 63048
Prep Batch: 53815

Analytical Method: S 8015B
Date Analyzed: 2009-08-29
Sample Preparation: 2009-08-28

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

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<0.100	mg/L	1	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0962	mg/L	1	0.100	96	70 - 130
4-Bromofluorobenzene (4-BFB)		0.0766	mg/L	1	0.100	77	70 - 130

Sample: 207906 - MW-16

Laboratory: Midland
Analysis: BTEX
QC Batch: 63047
Prep Batch: 53815

Analytical Method: S 8021B
Date Analyzed: 2009-08-28
Sample Preparation: 2009-08-28

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

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		0.147	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		0.0235	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0974	mg/L	1	0.100	97	87 - 105.2
4-Bromofluorobenzene (4-BFB)		0.0698	mg/L	1	0.100	70	49.8 - 130.8

Sample: 207906 - MW-16

Laboratory: Lubbock
Analysis: PAH
QC Batch: 63169
Prep Batch: 53918

Analytical Method: S 8270C
Date Analyzed: 2009-09-02
Sample Preparation: 2009-08-27

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

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene	7	<0.000922	mg/L	4.608	0.000200
2-Methylnaphthalene		<0.000922	mg/L	4.608	0.000200
1-Methylnaphthalene		<0.000922	mg/L	4.608	0.000200
Acenaphthylene		<0.000922	mg/L	4.608	0.000200
Acenaphthene		<0.000922	mg/L	4.608	0.000200
Dibenzofuran		<0.000922	mg/L	4.608	0.000200
Fluorene		<0.000922	mg/L	4.608	0.000200
Anthracene		<0.000922	mg/L	4.608	0.000200
Phenanthrene		<0.000922	mg/L	4.608	0.000200
Fluoranthene		<0.000922	mg/L	4.608	0.000200
Pyrene		<0.000922	mg/L	4.608	0.000200
Benzo(a)anthracene		<0.000922	mg/L	4.608	0.000200
Chrysene		<0.000922	mg/L	4.608	0.000200
Benzo(b)fluoranthene		<0.000922	mg/L	4.608	0.000200
Benzo(k)fluoranthene		<0.000922	mg/L	4.608	0.000200
Benzo(a)pyrene		<0.000922	mg/L	4.608	0.000200
Indeno(1,2,3-cd)pyrene		<0.000922	mg/L	4.608	0.000200
Dibenzo(a,h)anthracene		<0.000922	mg/L	4.608	0.000200
Benzo(g,h,i)perylene		<0.000922	mg/L	4.608	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0207	mg/L	4.608	0.0800	26	25.9 - 97.5
2-Fluorobiphenyl		0.0360	mg/L	4.608	0.0800	45	13.9 - 100
Terphenyl-d14		0.0717	mg/L	4.608	0.0800	90	37.7 - 114

Sample: 207906 - MW-16

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 62945
Prep Batch: 53718

Analytical Method: Mod. 8015B
Date Analyzed: 2009-08-27
Sample Preparation: 2009-08-27

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

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

⁷Dilution due to matrix difficulty. •

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		9.72	mg/L	1	10.0	97	70 - 130

Sample: 207906 - MW-16

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 63048
Prep Batch: 53815

Analytical Method: S 8015B
Date Analyzed: 2009-08-29
Sample Preparation: 2009-08-28

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

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		0.428	mg/L	1	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0950	mg/L	1	0.100	95	70 - 130
4-Bromofluorobenzene (4-BFB)		0.0784	mg/L	1	0.100	78	70 - 130

Sample: 207907 - MW-17

Laboratory: Midland
Analysis: BTEX
QC Batch: 63047
Prep Batch: 53815

Analytical Method: S 8021B
Date Analyzed: 2009-08-28
Sample Preparation: 2009-08-28

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

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		0.00790	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)		0.101	mg/L	1	0.100	101	87 - 105.2
4-Bromofluorobenzene (4-BFB)		0.0692	mg/L	1	0.100	69	49.8 - 130.8

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Sample: 207907 - MW-17

Laboratory: Lubbock
Analysis: PAH
QC Batch: 63169
Prep Batch: 53918

Analytical Method: S 8270C
Date Analyzed: 2009-09-02
Sample Preparation: 2009-08-27

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

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		<0.000183	mg/L	0.913	0.000200
2-Methylnaphthalene		<0.000183	mg/L	0.913	0.000200
1-Methylnaphthalene		<0.000183	mg/L	0.913	0.000200
Acenaphthylene		<0.000183	mg/L	0.913	0.000200
Acenaphthene		<0.000183	mg/L	0.913	0.000200
Dibenzofuran		<0.000183	mg/L	0.913	0.000200
Fluorene		<0.000183	mg/L	0.913	0.000200
Anthracene		<0.000183	mg/L	0.913	0.000200
Phenanthrene		<0.000183	mg/L	0.913	0.000200
Fluoranthene		<0.000183	mg/L	0.913	0.000200
Pyrene		<0.000183	mg/L	0.913	0.000200
Benzo(a)anthracene		<0.000183	mg/L	0.913	0.000200
Chrysene		<0.000183	mg/L	0.913	0.000200
Benzo(b)fluoranthene		<0.000183	mg/L	0.913	0.000200
Benzo(k)fluoranthene		<0.000183	mg/L	0.913	0.000200
Benzo(a)pyrene		<0.000183	mg/L	0.913	0.000200
Indeno(1,2,3-cd)pyrene		<0.000183	mg/L	0.913	0.000200
Dibenzo(a,h)anthracene		<0.000183	mg/L	0.913	0.000200
Benzo(g,h,i)perylene		<0.000183	mg/L	0.913	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5	⁸	0.0121	mg/L	0.913	0.0800	15	25.9 - 97.5
2-Fluorobiphenyl		0.0174	mg/L	0.913	0.0800	22	13.9 - 100
Terphenyl-d14		0.0359	mg/L	0.913	0.0800	45	37.7 - 114

Sample: 207907 - MW-17

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 62945
Prep Batch: 53718

Analytical Method: Mod. 8015B
Date Analyzed: 2009-08-27
Sample Preparation: 2009-08-27

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

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

⁸8270 Only - One basic surrogate is out of control limits. The other two basic surrogates show extraction was performed properly.

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		9.52	mg/L	1	10.0	95	70 - 130

Sample: 207907 - MW-17

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 63048
Prep Batch: 53815

Analytical Method: S 8015B
Date Analyzed: 2009-08-29
Sample Preparation: 2009-08-28

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

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<0.100	mg/L	1	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0949	mg/L	1	0.100	95	70 - 130
4-Bromofluorobenzene (4-BFB)		0.0770	mg/L	1	0.100	77	70 - 130

Sample: 207908 - MW-18

Laboratory: Midland
Analysis: BTEX
QC Batch: 63047
Prep Batch: 53815

Analytical Method: S 8021B
Date Analyzed: 2009-08-28
Sample Preparation: 2009-08-28

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

Parameter	Flag	RL 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)		0.0986	mg/L	1	0.100	99	87 - 105.2
4-Bromofluorobenzene (4-BFB)		0.0691	mg/L	1	0.100	69	49.8 - 130.8

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Sample: 207908 - MW-18

Laboratory: Lubbock
Analysis: PAH
QC Batch: 63169
Prep Batch: 53918

Analytical Method: S 8270C
Date Analyzed: 2009-09-02
Sample Preparation: 2009-08-27

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

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		0.000212	mg/L	0.922	0.000200
2-Methylnaphthalene		<0.000184	mg/L	0.922	0.000200
1-Methylnaphthalene		<0.000184	mg/L	0.922	0.000200
Acenaphthylene		<0.000184	mg/L	0.922	0.000200
Acenaphthene		<0.000184	mg/L	0.922	0.000200
Dibenzofuran		<0.000184	mg/L	0.922	0.000200
Fluorene		<0.000184	mg/L	0.922	0.000200
Anthracene		<0.000184	mg/L	0.922	0.000200
Phenanthrene		<0.000184	mg/L	0.922	0.000200
Fluoranthene		<0.000184	mg/L	0.922	0.000200
Pyrene		<0.000184	mg/L	0.922	0.000200
Benzo(a)anthracene		<0.000184	mg/L	0.922	0.000200
Chrysene		<0.000184	mg/L	0.922	0.000200
Benzo(b)fluoranthene		<0.000184	mg/L	0.922	0.000200
Benzo(k)fluoranthene		<0.000184	mg/L	0.922	0.000200
Benzo(a)pyrene		<0.000184	mg/L	0.922	0.000200
Indeno(1,2,3-cd)pyrene		<0.000184	mg/L	0.922	0.000200
Dibenzo(a,h)anthracene		<0.000184	mg/L	0.922	0.000200
Benzo(g,h,i)perylene		<0.000184	mg/L	0.922	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5	9	0.0152	mg/L	0.922	0.0800	19	25.9 - 97.5
2-Fluorobiphenyl		0.0156	mg/L	0.922	0.0800	20	13.9 - 100
Terphenyl-d14	10	0.0239	mg/L	0.922	0.0800	30	37.7 - 114

Sample: 207908 - MW-18

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 62945
Prep Batch: 53718

Analytical Method: Mod. 8015B
Date Analyzed: 2009-08-27
Sample Preparation: 2009-08-27

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

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

⁹8270 Only - Two basic surrogates are out of control limits. The other basic surrogate shows extraction was performed properly.

¹⁰8270 Only - Two basic surrogates are out of control limits. The other basic surrogate shows extraction was performed properly.

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		9.07	mg/L	1	10.0	91	70 - 130

Sample: 207908 - MW-18

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 63048
Prep Batch: 53815

Analytical Method: S 8015B
Date Analyzed: 2009-08-29
Sample Preparation: 2009-08-28

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

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<0.100	mg/L	1	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0938	mg/L	1	0.100	94	70 - 130
4-Bromofluorobenzene (4-BFB)		0.0787	mg/L	1	0.100	79	70 - 130

Method Blank (1) QC Batch: 62945

QC Batch: 62945
Prep Batch: 53718

Date Analyzed: 2009-08-27
QC Preparation: 2009-08-27

Analyzed By: kg
Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<0.801	mg/L	5

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		10.5	mg/L	1	10.0	105	70 - 160

Method Blank (1) QC Batch: 63047

QC Batch: 63047
Prep Batch: 53815

Date Analyzed: 2009-08-28
QC Preparation: 2009-08-28

Analyzed By: AG
Prepared By: ME

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.000300	mg/L	0.001
Toluene		<0.000200	mg/L	0.001
Ethylbenzene		<0.000500	mg/L	0.001

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Parameter	Flag	MDL Result	Units	RL
Xylene		<0.000400	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0979	mg/L	1	0.100	98	85.4 - 105.2
4-Bromofluorobenzene (4-BFB)		0.0698	mg/L	1	0.100	70	52.8 - 124.2

Method Blank (1) QC Batch: 63048

QC Batch: 63048
Prep Batch: 53815

Date Analyzed: 2009-08-29
QC Preparation: 2009-08-28

Analyzed By: AG
Prepared By: ME

Parameter	Flag	MDL Result	Units	RL
GRO		<0.0351	mg/L	0.1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0946	mg/L	1	0.100	95	70 - 130
4-Bromofluorobenzene (4-BFB)		0.0785	mg/L	1	0.100	78	70 - 130

Method Blank (1) QC Batch: 63169

QC Batch: 63169
Prep Batch: 53918

Date Analyzed: 2009-09-02
QC Preparation: 2009-08-27

Analyzed By: MN
Prepared By: MN

Parameter	Flag	MDL Result	Units	RL
Naphthalene		<0.0000784	mg/L	0.0002
2-Methylnaphthalene		<0.0000747	mg/L	0.0002
1-Methylnaphthalene		<0.0000575	mg/L	0.0002
Acenaphthylene		<0.0000963	mg/L	0.0002
Acenaphthene		<0.0000617	mg/L	0.0002
Dibenzofuran		<0.0000952	mg/L	0.0002
Fluorene		<0.000134	mg/L	0.0002
Anthracene		<0.000441	mg/L	0.0002
Phenanthrene		<0.000435	mg/L	0.0002
Fluoranthene		<0.000476	mg/L	0.0002
Pyrene		<0.000590	mg/L	0.0002
Benzo(a)anthracene		<0.000118	mg/L	0.0002
Chrysene		<0.0000766	mg/L	0.0002

continued ...

method blank continued ...

Parameter	Flag	MDL Result	Units	RL
Benzo(b)fluoranthene		<0.000146	mg/L	0.0002
Benzo(k)fluoranthene		<0.000141	mg/L	0.0002
Benzo(a)pyrene		<0.000132	mg/L	0.0002
Indeno(1,2,3-cd)pyrene		<0.0000702	mg/L	0.0002
Dibenzo(a,h)anthracene		<0.0000534	mg/L	0.0002
Benzo(g,h,i)perylene		<0.0000473	mg/L	0.0002

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0225	mg/L	1	0.0800	28	25.9 - 97.5
2-Fluorobiphenyl		0.0234	mg/L	1	0.0800	29	13.9 - 100
Terphenyl-d14		0.0392	mg/L	1	0.0800	49	37.7 - 114

Laboratory Control Spike (LCS-1)

QC Batch: 62945
Prep Batch: 53718

Date Analyzed: 2009-08-27
QC Preparation: 2009-08-27

Analyzed By: kg
Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	21.0	mg/L	1	25.0	<0.801	84	70 - 130

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
DRO	21.1	mg/L	1	25.0	<0.801	84	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
n-Triacontane	9.36	9.63	mg/L	1	10.0	94	96	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 63047
Prep Batch: 53815

Date Analyzed: 2009-08-28
QC Preparation: 2009-08-28

Analyzed By: AG
Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.0859	mg/L	1	0.100	<0.00110	86	74.3 - 123.4

continued ...

control spikes continued ...

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Toluene	0.0856	mg/L	1	0.100	<0.00100	86	70.1 - 126.2
Ethylbenzene	0.0848	mg/L	1	0.100	<0.00100	85	68.6 - 124.7
Xylene	0.244	mg/L	1	0.300	<0.00290	81	64.8 - 127.2

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
Benzene	0.0883	mg/L	1	0.100	<0.00110	88	74.3 - 123.4	3	20
Toluene	0.0884	mg/L	1	0.100	<0.00100	88	70.1 - 126.2	3	20
Ethylbenzene	0.0885	mg/L	1	0.100	<0.00100	88	68.6 - 124.7	4	20
Xylene	0.255	mg/L	1	0.300	<0.00290	85	64.8 - 127.2	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)	0.0985	0.0983	mg/L	1	0.100	98	98	84.8 - 110.8
4-Bromofluorobenzene (4-BFB)	0.0723	0.0694	mg/L	1	0.100	72	69	51.7 - 134.7

Laboratory Control Spike (LCS-1)

QC Batch: 63048
Prep Batch: 53815

Date Analyzed: 2009-08-29
QC Preparation: 2009-08-28

Analyzed By: AG
Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	0.799	mg/L	1	1.00	<0.0351	80	70 - 130

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
GRO	0.727	mg/L	1	1.00	<0.0351	73	70 - 130	9	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)	0.0983	0.0969	mg/L	1	0.100	98	97	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0818	0.0786	mg/L	1	0.100	82	79	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 63169
Prep Batch: 53918

Date Analyzed: 2009-09-02
QC Preparation: 2009-08-27

Analyzed By: MN
Prepared By: MN

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Naphthalene	0.0271	mg/L	1	0.0800	<0.0000784	34	22.2 - 87.9
2-Methylnaphthalene	0.0333	mg/L	1	0.0800	<0.0000747	42	23.3 - 86.1
1-Methylnaphthalene	0.0348	mg/L	1	0.0800	<0.0000575	44	24.6 - 87.8
Acenaphthylene	0.0403	mg/L	1	0.0800	<0.0000963	50	27.4 - 114
Acenaphthene	0.0409	mg/L	1	0.0800	<0.0000617	51	27.2 - 111
Dibenzofuran	0.0389	mg/L	1	0.0800	<0.0000952	49	27.3 - 100
Fluorene	0.0488	mg/L	1	0.0800	<0.000134	61	31.5 - 122
Anthracene	0.0513	mg/L	1	0.0800	<0.000441	64	32.4 - 115
Phenanthrene	0.0493	mg/L	1	0.0800	<0.000435	62	34.2 - 111
Fluoranthene	0.0558	mg/L	1	0.0800	<0.000476	70	40.1 - 114
Pyrene	0.0485	mg/L	1	0.0800	<0.000590	61	39.2 - 124
Benzo(a)anthracene	0.0481	mg/L	1	0.0800	<0.000118	60	39.4 - 114
Chrysene	0.0514	mg/L	1	0.0800	<0.0000766	64	38.2 - 116
Benzo(b)fluoranthene	0.0506	mg/L	1	0.0800	<0.000146	63	34.5 - 118
Benzo(k)fluoranthene	0.0629	mg/L	1	0.0800	<0.000141	79	38.7 - 133
Benzo(a)pyrene	0.0659	mg/L	1	0.0800	<0.000132	82	38 - 134
Indeno(1,2,3-cd)pyrene	0.0579	mg/L	1	0.0800	<0.0000702	72	34.6 - 124
Dibenzo(a,h)anthracene	0.0590	mg/L	1	0.0800	<0.0000534	74	33.9 - 120
Benzo(g,h,i)perylene	0.0572	mg/L	1	0.0800	<0.0000473	72	33.8 - 138

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	0.0265	mg/L	1	0.0800	<0.0000784	33	22.2 - 87.9	2	20
2-Methylnaphthalene	0.0332	mg/L	1	0.0800	<0.0000747	42	23.3 - 86.1	0	20
1-Methylnaphthalene	0.0344	mg/L	1	0.0800	<0.0000575	43	24.6 - 87.8	1	20
Acenaphthylene	0.0392	mg/L	1	0.0800	<0.0000963	49	27.4 - 114	3	20
Acenaphthene	0.0397	mg/L	1	0.0800	<0.0000617	50	27.2 - 111	3	20
Dibenzofuran	0.0375	mg/L	1	0.0800	<0.0000952	47	27.3 - 100	4	20
Fluorene	0.0468	mg/L	1	0.0800	<0.000134	58	31.5 - 122	4	20
Anthracene	0.0504	mg/L	1	0.0800	<0.000441	63	32.4 - 115	2	20
Phenanthrene	0.0487	mg/L	1	0.0800	<0.000435	61	34.2 - 111	1	20
Fluoranthene	0.0552	mg/L	1	0.0800	<0.000476	69	40.1 - 114	1	20
Pyrene	0.0482	mg/L	1	0.0800	<0.000590	60	39.2 - 124	1	20
Benzo(a)anthracene	0.0482	mg/L	1	0.0800	<0.000118	60	39.4 - 114	0	20
Chrysene	0.0508	mg/L	1	0.0800	<0.0000766	64	38.2 - 116	1	20
Benzo(b)fluoranthene	0.0531	mg/L	1	0.0800	<0.000146	66	34.5 - 118	5	20
Benzo(k)fluoranthene	0.0678	mg/L	1	0.0800	<0.000141	85	38.7 - 133	8	20
Benzo(a)pyrene	0.0646	mg/L	1	0.0800	<0.000132	81	38 - 134	2	20
Indeno(1,2,3-cd)pyrene	0.0556	mg/L	1	0.0800	<0.0000702	70	34.6 - 124	4	20
Dibenzo(a,h)anthracene	0.0563	mg/L	1	0.0800	<0.0000534	70	33.9 - 120	5	20
Benzo(g,h,i)perylene	0.0552	mg/L	1	0.0800	<0.0000473	69	33.8 - 138	4	20

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

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Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Nitrobenzene-d5	0.0273	0.0286	mg/L	1	0.0800	34	36	25.9 - 97.5
2-Fluorobiphenyl	0.0319	0.0307	mg/L	1	0.0800	40	38	13.9 - 100
Terphenyl-d14	0.0489	0.0485	mg/L	1	0.0800	61	61	37.7 - 114

Matrix Spike (MS-1) Spiked Sample: 207908

QC Batch: 62945
Prep Batch: 53718

Date Analyzed: 2009-08-27
QC Preparation: 2009-08-27

Analyzed By: kg
Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	20.3	mg/L	1	25.0	<0.801	81	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
DRO	20.2	mg/L	1	25.0	<0.801	81	70 - 130	0	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	9.37	9.67	mg/L	1	10	94	97	70 - 130

Matrix Spike (MS-1) Spiked Sample: 208309

QC Batch: 63047
Prep Batch: 53815

Date Analyzed: 2009-08-28
QC Preparation: 2009-08-28

Analyzed By: AG
Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	24.9	mg/L	100	10.0	15.876	90	61 - 130
Toluene	18.0	mg/L	100	10.0	9.1749	88	69.2 - 121.4
Ethylbenzene	10.6	mg/L	100	10.0	2.0528	85	56.3 - 124.9
Xylene	29.1	mg/L	100	30.0	4.8721	81	60.2 - 122.9

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	24.4	mg/L	100	10.0	15.876	85	61 - 130	2	20
Toluene	19.0	mg/L	100	10.0	9.1749	98	69.2 - 121.4	5	20
Ethylbenzene	11.1	mg/L	100	10.0	2.0528	90	56.3 - 124.9	5	20
Xylene	30.4	mg/L	100	30.0	4.8721	85	60.2 - 122.9	4	20

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

Report Date: September 2, 2009
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Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	9.98	9.84	mg/L	100	10	100	98	85.6 - 108.1
4-Bromofluorobenzene (4-BFB)	7.39	7.57	mg/L	100	10	74	76	53.7 - 127.3

Standard (CCV-1)

QC Batch: 62945

Date Analyzed: 2009-08-27

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	207	83	80 - 120	2009-08-27

Standard (CCV-2)

QC Batch: 62945

Date Analyzed: 2009-08-27

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	219	88	80 - 120	2009-08-27

Standard (CCV-3)

QC Batch: 62945

Date Analyzed: 2009-08-27

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	209	84	80 - 120	2009-08-27

Standard (CCV-1)

QC Batch: 63047

Date Analyzed: 2009-08-28

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0891	89	80 - 120	2009-08-28
Toluene		mg/L	0.100	0.0891	89	80 - 120	2009-08-28
Ethylbenzene		mg/L	0.100	0.0891	89	80 - 120	2009-08-28
Xylene		mg/L	0.300	0.252	84	80 - 120	2009-08-28

Standard (CCV-2)

QC Batch: 63047

Date Analyzed: 2009-08-28

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0894	89	80 - 120	2009-08-28
Toluene		mg/L	0.100	0.0888	89	80 - 120	2009-08-28
Ethylbenzene		mg/L	0.100	0.0875	88	80 - 120	2009-08-28
Xylene		mg/L	0.300	0.249	83	80 - 120	2009-08-28

Standard (CCV-3)

QC Batch: 63047

Date Analyzed: 2009-08-28

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0927	93	80 - 120	2009-08-28
Toluene		mg/L	0.100	0.0942	94	80 - 120	2009-08-28
Ethylbenzene		mg/L	0.100	0.0939	94	80 - 120	2009-08-28
Xylene		mg/L	0.300	0.269	90	80 - 120	2009-08-28

Standard (CCV-1)

QC Batch: 63048

Date Analyzed: 2009-08-29

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.865	86	80 - 120	2009-08-29

Standard (CCV-2)

QC Batch: 63048

Date Analyzed: 2009-08-29

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.962	96	80 - 120	2009-08-29

Standard (CCV-3)

QC Batch: 63048

Date Analyzed: 2009-08-29

Analyzed By: AG

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.971	97	80 - 120	2009-08-29

Standard (CCV-1)

QC Batch: 63169

Date Analyzed: 2009-09-02

Analyzed By: MN

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		mg/L	60.0	57.6	96	80 - 120	2009-09-02
2-Methylnaphthalene		mg/L	60.0	64.4	107	80 - 120	2009-09-02
1-Methylnaphthalene		mg/L	60.0	64.4	107	80 - 120	2009-09-02
Acenaphthylene		mg/L	60.0	58.8	98	80 - 120	2009-09-02
Acenaphthene		mg/L	60.0	59.1	98	80 - 120	2009-09-02
Dibenzofuran		mg/L	60.0	61.7	103	80 - 120	2009-09-02
Fluorene		mg/L	60.0	64.2	107	80 - 120	2009-09-02
Anthracene		mg/L	60.0	59.4	99	80 - 120	2009-09-02
Phenanthrene		mg/L	60.0	57.2	95	80 - 120	2009-09-02
Fluoranthene		mg/L	60.0	57.0	95	80 - 120	2009-09-02
Pyrene		mg/L	60.0	56.8	95	80 - 120	2009-09-02
Benzo(a)anthracene		mg/L	60.0	55.5	92	80 - 120	2009-09-02
Chrysene		mg/L	60.0	56.0	93	80 - 120	2009-09-02
Benzo(b)fluoranthene		mg/L	60.0	53.8	90	80 - 120	2009-09-02
Benzo(k)fluoranthene		mg/L	60.0	61.5	102	80 - 120	2009-09-02
Benzo(a)pyrene		mg/L	60.0	69.0	115	80 - 120	2009-09-02
Indeno(1,2,3-cd)pyrene		mg/L	60.0	57.6	96	80 - 120	2009-09-02
Dibenzo(a,h)anthracene		mg/L	60.0	58.3	97	80 - 120	2009-09-02
Benzo(g,h,i)perylene		mg/L	60.0	56.0	93	80 - 120	2009-09-02

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5		60.9	mg/L	1	60.0	102	80 - 120
2-Fluorobiphenyl		56.4	mg/L	1	60.0	94	80 - 120
Terphenyl-d14		53.7	mg/L	1	60.0	90	80 - 120

Standard (CCV-2)

QC Batch: 63169

Date Analyzed: 2009-09-02

Analyzed By: MN

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		mg/L	60.0	57.7	96	80 - 120	2009-09-02

continued ...

standard continued . . .

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
2-Methylnaphthalene		mg/L	60.0	64.9	108	80 - 120	2009-09-02
1-Methylnaphthalene		mg/L	60.0	64.8	108	80 - 120	2009-09-02
Acenaphthylene		mg/L	60.0	58.5	98	80 - 120	2009-09-02
Acenaphthene		mg/L	60.0	58.8	98	80 - 120	2009-09-02
Dibenzofuran		mg/L	60.0	61.8	103	80 - 120	2009-09-02
Fluorene		mg/L	60.0	63.6	106	80 - 120	2009-09-02
Anthracene		mg/L	60.0	59.4	99	80 - 120	2009-09-02
Phenanthrene		mg/L	60.0	57.2	95	80 - 120	2009-09-02
Fluoranthene		mg/L	60.0	58.0	97	80 - 120	2009-09-02
Pyrene		mg/L	60.0	57.0	95	80 - 120	2009-09-02
Benzo(a)anthracene		mg/L	60.0	55.8	93	80 - 120	2009-09-02
Chrysene		mg/L	60.0	56.4	94	80 - 120	2009-09-02
Benzo(b)fluoranthene		mg/L	60.0	63.4	106	80 - 120	2009-09-02
Benzo(k)fluoranthene		mg/L	60.0	59.4	99	80 - 120	2009-09-02
Benzo(a)pyrene		mg/L	60.0	67.9	113	80 - 120	2009-09-02
Indeno(1,2,3-cd)pyrene		mg/L	60.0	57.9	96	80 - 120	2009-09-02
Dibenzo(a,h)anthracene		mg/L	60.0	59.4	99	80 - 120	2009-09-02
Benzo(g,h,i)perylene		mg/L	60.0	56.7	94	80 - 120	2009-09-02

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5		60.9	mg/L	1	60.0	102	80 - 120
2-Fluorobiphenyl		56.4	mg/L	1	60.0	94	80 - 120
Terphenyl-d14		54.4	mg/L	1	60.0	91	80 - 120

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Company Name:

TA/OnLife

Address: (Street, City, Zip)

Rankin, Hwy 190/Ames TX

Contact Person:

SLANNA Smith

Invoice to:

PLAINS Jason Henry

Project #:

760376.015.01

Project Location (Including state):

Cowling, NM

Project Name:

SASTA 2002-10250

Sampler Signature:

[Signature]

Phone #:

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E-mail:

Sanna@TALonLife.com

C.S. Caylor

ANALYSIS REQUEST

(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX				PRESERVATIVE METHOD					SAMPLING		TIME	DATE	Turn Around Time if different from standard
				WATER	SOIL	AIR	SLUDGE	HCl	HNO ₃	H ₂ SO ₄	NaOH	ICE	NONE	METHOD			
207899	MW-6	7		X				X				X			8/15/08	1450	
900	MW-9	1													1315		
901	MW-10	1													1335		
902	MW-11	1													1400		
903	MW-13	1													1435		
904	MW-14	1													1240		
905	MW-15	1													1140		
906	MW-16	1													1235		
907	MW-17	6													1255		
908	MW-18	7													1410		

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST	OBS	COR	LAB USE ONLY	REMARKS:
[Signature]	TA/OnLife	8/15/08	8:00	[Signature]	TA/OnLife	8/15/08	12:45					BTX, TPH - Midland PAH - Lubbock
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST	OBS	COR		
Clinton Canale Talorke	TA/OnLife	8/15/08	12:45	[Signature]	TA/OnLife	8/15/08	12:45					
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST	OBS	COR		

Carrier #	Remarks
WALKER	1 Broken VOA - MW11

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.
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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-Midland
2901 State Highway 349
Midland, TX, 79706

Report Date: September 2, 2009

Work Order: 9082735



Project Location: Lovington, NM
Project Name: C.S. Cayler
Project Number: 700376.015.01
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
208307	MW-3	water	2009-08-26	12:20	2009-08-27
208308	MW-2	water	2009-08-26	12:40	2009-08-27
208309	MW-5	water	2009-08-26	11:10	2009-08-27
208310	MW-12	water	2009-08-26	13:00	2009-08-27

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 19 pages and shall not be reproduced except in its entirety, without written approval of

TraceAnalysis, Inc.



Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

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 2009-08-27 and assigned to work order 9082735. Samples for work order 9082735 were received intact without headspace and at a temperature of 4.4 deg. C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	53815	2009-08-28 at 10:00	63047	2009-08-28 at 23:54
PAH	S 8270C	53918	2009-08-27 at 15:00	63169	2009-09-02 at 11:32
TPH DRO	Mod. 8015B	53766	2009-08-28 at 11:05	63005	2009-08-28 at 11:05
TPH GRO	S 8015B	53815	2009-08-28 at 10:00	63048	2009-08-29 at 00:21

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 9082735 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: 208307 - MW-3

Laboratory: Midland
Analysis: BTEX
QC Batch: 63047
Prep Batch: 53815

Analytical Method: S 8021B
Date Analyzed: 2009-08-28
Sample Preparation: 2009-08-28

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

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		26.7	mg/L	100	0.00100
Toluene		26.4	mg/L	100	0.00100
Ethylbenzene		7.80	mg/L	100	0.00100
Xylene		18.0	mg/L	100	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		9.88	mg/L	100	10.0	99	87 - 105.2
4-Bromofluorobenzene (4-BFB)		8.23	mg/L	100	10.0	82	49.8 - 130.8

Sample: 208307 - MW-3

Laboratory: Lubbock
Analysis: PAH
QC Batch: 63169
Prep Batch: 53918

Analytical Method: S 8270C
Date Analyzed: 2009-09-02
Sample Preparation: 2009-08-27

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

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene	1	14.1	mg/L	22.936	0.000200
2-Methylnaphthalene	2	31.7	mg/L	22.936	0.000200
1-Methylnaphthalene	3	27.1	mg/L	22.936	0.000200
Acenaphthylene		<0.00459	mg/L	22.936	0.000200
Acenaphthene		<0.00459	mg/L	22.936	0.000200
Dibenzofuran		1.51	mg/L	22.936	0.000200
Fluorene		2.04	mg/L	22.936	0.000200
Anthracene		<0.00459	mg/L	22.936	0.000200
Phenanthrene	4	3.01	mg/L	22.936	0.000200
Fluoranthene		<0.00459	mg/L	22.936	0.000200
Pyrene		0.184	mg/L	22.936	0.000200
Benzo(a)anthracene		<0.00459	mg/L	22.936	0.000200

continued ...

¹Estimated concentration value greater than standard range.

²Estimated concentration value greater than standard range.

³Estimated concentration value greater than standard range.

⁴Estimated concentration value greater than standard range.

sample 208307 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Chrysene		0.338	mg/L	22.936	0.000200
Benzo(b)fluoranthene		<0.00459	mg/L	22.936	0.000200
Benzo(k)fluoranthene		<0.00459	mg/L	22.936	0.000200
Benzo(a)pyrene		<0.00459	mg/L	22.936	0.000200
Indeno(1,2,3-cd)pyrene		<0.00459	mg/L	22.936	0.000200
Dibenzo(a,h)anthracene		<0.00459	mg/L	22.936	0.000200
Benzo(g,h,i)perylene		<0.00459	mg/L	22.936	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5	⁵	0.345	mg/L	22.936	0.0800	431	25.9 - 97.5
2-Fluorobiphenyl		0.0706	mg/L	22.936	0.0800	88	13.9 - 100
Terphenyl-d14		0.0843	mg/L	22.936	0.0800	105	37.7 - 114

Sample: 208307 - MW-3

Laboratory: Midland
 Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
 QC Batch: 63005 Date Analyzed: 2009-08-28 Analyzed By: kg
 Prep Batch: 53766 Sample Preparation: 2009-08-28 Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		735	mg/L	5	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	⁶	40.4	mg/L	5	10.0	404	70 - 130

Sample: 208307 - MW-3

Laboratory: Midland
 Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5030B
 QC Batch: 63048 Date Analyzed: 2009-08-29 Analyzed By: AG
 Prep Batch: 53815 Sample Preparation: 2009-08-28 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		338	mg/L	100	0.100

⁵8270 Only - One basic surrogate is out of control limits. The other two basic surrogates show extraction was performed properly.

⁶High surrogate recovery due to peak interference.

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		9.52	mg/L	100	10.0	95	70 - 130
4-Bromofluorobenzene (4-BFB)		10.9	mg/L	100	10.0	109	70 - 130

Sample: 208308 - MW-2

Laboratory: Midland
Analysis: BTEX
QC Batch: 63047
Prep Batch: 53815

Analytical Method: S 8021B
Date Analyzed: 2009-08-28
Sample Preparation: 2009-08-28

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

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		29.2	mg/L	200	0.00100
Toluene		15.0	mg/L	200	0.00100
Ethylbenzene		3.49	mg/L	200	0.00100
Xylene		9.26	mg/L	200	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		19.8	mg/L	200	20.0	99	87 - 105.2
4-Bromofluorobenzene (4-BFB)		15.0	mg/L	200	20.0	75	49.8 - 130.8

Sample: 208308 - MW-2

Laboratory: Lubbock
Analysis: PAH
QC Batch: 63169
Prep Batch: 53918

Analytical Method: S 8270C
Date Analyzed: 2009-09-02
Sample Preparation: 2009-08-27

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

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene	⁷	5.77	mg/L	9.217	0.000200
2-Methylnaphthalene	⁸	13.3	mg/L	9.217	0.000200
1-Methylnaphthalene	⁹	11.1	mg/L	9.217	0.000200
Acenaphthylene		<0.00184	mg/L	9.217	0.000200
Acenaphthene		<0.00184	mg/L	9.217	0.000200
Dibenzofuran		0.882	mg/L	9.217	0.000200
Fluorene	¹⁰	1.24	mg/L	9.217	0.000200
Anthracene		<0.00184	mg/L	9.217	0.000200

continued ...

⁷Estimated concentration value greater than standard range.

⁸Estimated concentration value greater than standard range.

⁹Estimated concentration value greater than standard range.

¹⁰Estimated concentration value greater than standard range.

sample 208308 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Phenanthrene	¹¹	1.27	mg/L	9.217	0.000200
Fluoranthene		<0.00184	mg/L	9.217	0.000200
Pyrene		0.0743	mg/L	9.217	0.000200
Benzo(a)anthracene		<0.00184	mg/L	9.217	0.000200
Chrysene		0.143	mg/L	9.217	0.000200
Benzo(b)fluoranthene		<0.00184	mg/L	9.217	0.000200
Benzo(k)fluoranthene		<0.00184	mg/L	9.217	0.000200
Benzo(a)pyrene		<0.00184	mg/L	9.217	0.000200
Indeno(1,2,3-cd)pyrene		<0.00184	mg/L	9.217	0.000200
Dibenzo(a,h)anthracene		<0.00184	mg/L	9.217	0.000200
Benzo(g,h,i)perylene		<0.00184	mg/L	9.217	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5	¹²	0.191	mg/L	9.217	0.0800	239	25.9 - 97.5
2-Fluorobiphenyl		0.0461	mg/L	9.217	0.0800	58	13.9 - 100
Terphenyl-d14		0.0426	mg/L	9.217	0.0800	53	37.7 - 114

Sample: 208308 - MW-2

Laboratory: Midland	Analytical Method: Mod. 8015B	Prep Method: N/A
Analysis: TPH DRO	Date Analyzed: 2009-08-28	Analyzed By: kg
QC Batch: 63005	Sample Preparation: 2009-08-28	Prepared By: kg
Prep Batch: 53766		

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		123	mg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	¹³	14.2	mg/L	1	10.0	142	70 - 130

Sample: 208308 - MW-2

Laboratory: Midland	Analytical Method: S 8015B	Prep Method: S 5030B
Analysis: TPH GRO	Date Analyzed: 2009-08-29	Analyzed By: AG
QC Batch: 63048	Sample Preparation: 2009-08-28	Prepared By: AG
Prep Batch: 53815		

¹¹Estimated concentration value greater than standard range.

¹²8270 Only - One basic surrogate is out of control limits. The other two basic surrogates show extraction was performed properly.

¹³High surrogate recovery due to peak interference.

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Parameter	Flag	RL Result	Units	Dilution	RL
GRO		163	mg/L	200	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		18.7	mg/L	200	20.0	94	70 - 130
4-Bromofluorobenzene (4-BFB)		17.7	mg/L	200	20.0	88	70 - 130

Sample: 208309 - MW-5

Laboratory: Midland
Analysis: BTEX
QC Batch: 63047
Prep Batch: 53815

Analytical Method: S 8021B
Date Analyzed: 2009-08-28
Sample Preparation: 2009-08-28

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

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		15.9	mg/L	100	0.00100
Toluene		9.17	mg/L	100	0.00100
Ethylbenzene		2.05	mg/L	100	0.00100
Xylene		4.87	mg/L	100	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		9.91	mg/L	100	10.0	99	87 - 105.2
4-Bromofluorobenzene (4-BFB)		7.26	mg/L	100	10.0	73	49.8 - 130.8

Sample: 208309 - MW-5

Laboratory: Lubbock
Analysis: PAH
QC Batch: 63169
Prep Batch: 53918

Analytical Method: S 8270C
Date Analyzed: 2009-09-02
Sample Preparation: 2009-08-27

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

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene	¹⁴	2.30	mg/L	9.217	0.000200
2-Methylnaphthalene	¹⁵	5.28	mg/L	9.217	0.000200
1-Methylnaphthalene	¹⁶	4.38	mg/L	9.217	0.000200
Acenaphthylene		<0.00184	mg/L	9.217	0.000200
Acenaphthene		<0.00184	mg/L	9.217	0.000200

continued ...

¹⁴Estimated concentration value greater than standard range.

¹⁵Estimated concentration value greater than standard range.

¹⁶Estimated concentration value greater than standard range.

sample 208309 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Dibenzofuran		0.318	mg/L	9.217	0.000200
Fluorene		0.420	mg/L	9.217	0.000200
Anthracene		<0.00184	mg/L	9.217	0.000200
Phenanthrene		0.576	mg/L	9.217	0.000200
Fluoranthene		<0.00184	mg/L	9.217	0.000200
Pyrene		0.0406	mg/L	9.217	0.000200
Benzo(a)anthracene		<0.00184	mg/L	9.217	0.000200
Chrysene		0.0703	mg/L	9.217	0.000200
Benzo(b)fluoranthene		<0.00184	mg/L	9.217	0.000200
Benzo(k)fluoranthene		<0.00184	mg/L	9.217	0.000200
Benzo(a)pyrene		<0.00184	mg/L	9.217	0.000200
Indeno(1,2,3-cd)pyrene		<0.00184	mg/L	9.217	0.000200
Dibenzo(a,h)anthracene		<0.00184	mg/L	9.217	0.000200
Benzo(g,h,i)perylene		<0.00184	mg/L	9.217	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0765	mg/L	9.217	0.0800	96	25.9 - 97.5
2-Fluorobiphenyl		0.0520	mg/L	9.217	0.0800	65	13.9 - 100
Terphenyl-d14		0.0552	mg/L	9.217	0.0800	69	37.7 - 114

Sample: 208309 - MW-5

Laboratory: Midland	Analytical Method: Mod. 8015B	Prep Method: N/A
Analysis: TPH DRO	Date Analyzed: 2009-08-28	Analyzed By: kg
QC Batch: 63005	Sample Preparation: 2009-08-28	Prepared By: kg
Prep Batch: 53766		

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		162	mg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	¹⁷	18.0	mg/L	1	10.0	180	70 - 130

Sample: 208309 - MW-5

Laboratory: Midland	Analytical Method: S 8015B	Prep Method: S 5030B
Analysis: TPH GRO	Date Analyzed: 2009-08-29	Analyzed By: AG
QC Batch: 63048	Sample Preparation: 2009-08-28	Prepared By: AG
Prep Batch: 53815		

¹⁷High surrogate recovery due to peak interference.

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Parameter	Flag	RL Result	Units	Dilution	RL
GRO		81.6	mg/L	100	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		9.44	mg/L	100	10.0	94	70 - 130
4-Bromofluorobenzene (4-BFB)		8.33	mg/L	100	10.0	83	70 - 130

Sample: 208310 - MW-12

Laboratory: Midland
Analysis: BTEX
QC Batch: 63047
Prep Batch: 53815

Analytical Method: S 8021B
Date Analyzed: 2009-08-28
Sample Preparation: 2009-08-28

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

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		43.0	mg/L	200	0.00100
Toluene		48.4	mg/L	200	0.00100
Ethylbenzene		17.2	mg/L	200	0.00100
Xylene		39.8	mg/L	200	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		19.6	mg/L	200	20.0	98	87 - 105.2
4-Bromofluorobenzene (4-BFB)		16.6	mg/L	200	20.0	83	49.8 - 130.8

Sample: 208310 - MW-12

Laboratory: Lubbock
Analysis: PAH
QC Batch: 63169
Prep Batch: 53918

Analytical Method: S 8270C
Date Analyzed: 2009-09-02
Sample Preparation: 2009-08-27

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

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene	¹⁸	21.6	mg/L	22.936	0.000200
2-Methylnaphthalene	¹⁹	52.8	mg/L	22.936	0.000200
1-Methylnaphthalene	²⁰	46.1	mg/L	22.936	0.000200
Acenaphthylene		<0.00459	mg/L	22.936	0.000200
Acenaphthene		<0.00459	mg/L	22.936	0.000200

continued ...

¹⁸Estimated concentration value greater than standard range.

¹⁹Estimated concentration value greater than standard range.

²⁰Estimated concentration value greater than standard range.

sample 208310 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Dibenzofuran	21	2.88	mg/L	22.936	0.000200
Fluorene	22	3.86	mg/L	22.936	0.000200
Anthracene		<0.00459	mg/L	22.936	0.000200
Phenanthrene	23	4.09	mg/L	22.936	0.000200
Fluoranthene		<0.00459	mg/L	22.936	0.000200
Pyrene		<0.00459	mg/L	22.936	0.000200
Benzo(a)anthracene		<0.00459	mg/L	22.936	0.000200
Chrysene		0.410	mg/L	22.936	0.000200
Benzo(b)fluoranthene		<0.00459	mg/L	22.936	0.000200
Benzo(k)fluoranthene		<0.00459	mg/L	22.936	0.000200
Benzo(a)pyrene		<0.00459	mg/L	22.936	0.000200
Indeno(1,2,3-cd)pyrene		<0.00459	mg/L	22.936	0.000200
Dibenzo(a,h)anthracene		<0.00459	mg/L	22.936	0.000200
Benzo(g,h,i)perylene		<0.00459	mg/L	22.936	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5	24	2.89	mg/L	22.936	0.0800	3612	25.9 - 97.5
2-Fluorobiphenyl		0.0227	mg/L	22.936	0.0800	28	13.9 - 100
Terphenyl-d14		0.0437	mg/L	22.936	0.0800	55	37.7 - 114

Sample: 208310 - MW-12

Laboratory: Midland	Analytical Method: Mod. 8015B	Prep Method: N/A
Analysis: TPH DRO	Date Analyzed: 2009-08-28	Analyzed By: kg
QC Batch: 63005	Sample Preparation: 2009-08-28	Prepared By: kg
Prep Batch: 53766		

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		502	mg/L	5	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	25	25.7	mg/L	5	10.0	257	70 - 130

Sample: 208310 - MW-12

Laboratory: Midland	Analytical Method: S 8015B	Prep Method: S 5030B
Analysis: TPH GRO	Date Analyzed: 2009-08-29	Analyzed By: AG
QC Batch: 63048	Sample Preparation: 2009-08-28	Prepared By: AG
Prep Batch: 53815		

²¹ Estimated concentration value greater than standard range.

²² Estimated concentration value greater than standard range.

²³ Estimated concentration value greater than standard range.

²⁴ 8270 Only - One basic surrogate is out of control limits. The other two basic surrogates show extraction was performed properly.

²⁵ High surrogate recovery due to peak interference.

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Parameter	Flag	RL Result	Units	Dilution	RL
GRO		576	mg/L	200	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		19.0	mg/L	200	20.0	95	70 - 130
4-Bromofluorobenzene (4-BFB)		23.3	mg/L	200	20.0	116	70 - 130

Method Blank (1) QC Batch: 63005

QC Batch: 63005 Date Analyzed: 2009-08-28 Analyzed By: kg
Prep Batch: 53766 QC Preparation: 2009-08-28 Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<0.801	mg/L	5

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		11.6	mg/L	1	10.0	116	70 - 160

Method Blank (1) QC Batch: 63047

QC Batch: 63047 Date Analyzed: 2009-08-28 Analyzed By: AG
Prep Batch: 53815 QC Preparation: 2009-08-28 Prepared By: ME

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.000300	mg/L	0.001
Toluene		<0.000200	mg/L	0.001
Ethylbenzene		<0.000500	mg/L	0.001
Xylene		<0.000400	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0979	mg/L	1	0.100	98	85.4 - 105.2
4-Bromofluorobenzene (4-BFB)		0.0698	mg/L	1	0.100	70	52.8 - 124.2

Method Blank (1) QC Batch: 63048

QC Batch: 63048 Date Analyzed: 2009-08-29 Analyzed By: AG
Prep Batch: 53815 QC Preparation: 2009-08-28 Prepared By: ME

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Parameter	Flag	MDL Result	Units	RL
GRO		<0.0351	mg/L	0.1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0946	mg/L	1	0.100	95	70 - 130
4-Bromofluorobenzene (4-BFB)		0.0785	mg/L	1	0.100	78	70 - 130

Method Blank (1) QC Batch: 63169

QC Batch: 63169
Prep Batch: 53918

Date Analyzed: 2009-09-02
QC Preparation: 2009-08-27

Analyzed By: MN
Prepared By: MN

Parameter	Flag	MDL Result	Units	RL
Naphthalene		<0.0000784	mg/L	0.0002
2-Methylnaphthalene		<0.0000747	mg/L	0.0002
1-Methylnaphthalene		<0.0000575	mg/L	0.0002
Acenaphthylene		<0.0000963	mg/L	0.0002
Acenaphthene		<0.0000617	mg/L	0.0002
Dibenzofuran		<0.0000952	mg/L	0.0002
Fluorene		<0.000134	mg/L	0.0002
Anthracene		<0.000441	mg/L	0.0002
Phenanthrene		<0.000435	mg/L	0.0002
Fluoranthene		<0.000476	mg/L	0.0002
Pyrene		<0.000590	mg/L	0.0002
Benzo(a)anthracene		<0.000118	mg/L	0.0002
Chrysene		<0.0000766	mg/L	0.0002
Benzo(b)fluoranthene		<0.000146	mg/L	0.0002
Benzo(k)fluoranthene		<0.000141	mg/L	0.0002
Benzo(a)pyrene		<0.000132	mg/L	0.0002
Indeno(1,2,3-cd)pyrene		<0.0000702	mg/L	0.0002
Dibenzo(a,h)anthracene		<0.0000534	mg/L	0.0002
Benzo(g,h,i)perylene		<0.0000473	mg/L	0.0002

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0225	mg/L	1	0.0800	28	25.9 - 97.5
2-Fluorobiphenyl		0.0234	mg/L	1	0.0800	29	13.9 - 100
Terphenyl-d14		0.0392	mg/L	1	0.0800	49	37.7 - 114

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Laboratory Control Spike (LCS-1)

QC Batch: 63005
Prep Batch: 53766

Date Analyzed: 2009-08-28
QC Preparation: 2009-08-28

Analyzed By: kg
Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	20.3	mg/L	1	25.0	<0.801	81	70 - 130

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
DRO	21.5	mg/L	1	25.0	<0.801	86	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	11.0	9.71	mg/L	1	10.0	110	97	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 63047
Prep Batch: 53815

Date Analyzed: 2009-08-28
QC Preparation: 2009-08-28

Analyzed By: AG
Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.0859	mg/L	1	0.100	<0.00110	86	74.3 - 123.4
Toluene	0.0856	mg/L	1	0.100	<0.00100	86	70.1 - 126.2
Ethylbenzene	0.0848	mg/L	1	0.100	<0.00100	85	68.6 - 124.7
Xylene	0.244	mg/L	1	0.300	<0.00290	81	64.8 - 127.2

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
Benzene	0.0883	mg/L	1	0.100	<0.00110	88	74.3 - 123.4	3	20
Toluene	0.0884	mg/L	1	0.100	<0.00100	88	70.1 - 126.2	3	20
Ethylbenzene	0.0885	mg/L	1	0.100	<0.00100	88	68.6 - 124.7	4	20
Xylene	0.255	mg/L	1	0.300	<0.00290	85	64.8 - 127.2	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)	0.0985	0.0983	mg/L	1	0.100	98	98	84.8 - 110.8
4-Bromofluorobenzene (4-BFB)	0.0723	0.0694	mg/L	1	0.100	72	69	51.7 - 134.7

Laboratory Control Spike (LCS-1)

QC Batch: 63048
Prep Batch: 53815

Date Analyzed: 2009-08-29
QC Preparation: 2009-08-28

Analyzed By: AG
Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	0.799	mg/L	1	1.00	<0.0351	80	70 - 130

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
GRO	0.727	mg/L	1	1.00	<0.0351	73	70 - 130	9	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)	0.0983	0.0969	mg/L	1	0.100	98	97	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0818	0.0786	mg/L	1	0.100	82	79	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 63169
Prep Batch: 53918

Date Analyzed: 2009-09-02
QC Preparation: 2009-08-27

Analyzed By: MN
Prepared By: MN

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Naphthalene	0.0271	mg/L	1	0.0800	<0.000784	34	22.2 - 87.9
2-Methylnaphthalene	0.0333	mg/L	1	0.0800	<0.000747	42	23.3 - 86.1
1-Methylnaphthalene	0.0348	mg/L	1	0.0800	<0.000575	44	24.6 - 87.8
Acenaphthylene	0.0403	mg/L	1	0.0800	<0.000963	50	27.4 - 114
Acenaphthene	0.0409	mg/L	1	0.0800	<0.000617	51	27.2 - 111
Dibenzofuran	0.0389	mg/L	1	0.0800	<0.000952	49	27.3 - 100
Fluorene	0.0488	mg/L	1	0.0800	<0.000134	61	31.5 - 122
Anthracene	0.0513	mg/L	1	0.0800	<0.000441	64	32.4 - 115
Phenanthrene	0.0493	mg/L	1	0.0800	<0.000435	62	34.2 - 111
Fluoranthene	0.0558	mg/L	1	0.0800	<0.000476	70	40.1 - 114
Pyrene	0.0485	mg/L	1	0.0800	<0.000590	61	39.2 - 124
Benzo(a)anthracene	0.0481	mg/L	1	0.0800	<0.000118	60	39.4 - 114
Chrysene	0.0514	mg/L	1	0.0800	<0.000766	64	38.2 - 116
Benzo(b)fluoranthene	0.0506	mg/L	1	0.0800	<0.000146	63	34.5 - 118
Benzo(k)fluoranthene	0.0629	mg/L	1	0.0800	<0.000141	79	38.7 - 133
Benzo(a)pyrene	0.0659	mg/L	1	0.0800	<0.000132	82	38 - 134
Indeno(1,2,3-cd)pyrene	0.0579	mg/L	1	0.0800	<0.000702	72	34.6 - 124
Dibenzo(a,h)anthracene	0.0590	mg/L	1	0.0800	<0.000534	74	33.9 - 120

continued ...

control spikes continued ...

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzo(g,h,i)perylene	0.0572	mg/L	1	0.0800	<0.0000473	72	33.8 - 138

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

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Naphthalene	0.0265	mg/L	1	0.0800	<0.0000784	33	22.2 - 87.9	2	20
2-Methylnaphthalene	0.0332	mg/L	1	0.0800	<0.0000747	42	23.3 - 86.1	0	20
1-Methylnaphthalene	0.0344	mg/L	1	0.0800	<0.0000575	43	24.6 - 87.8	1	20
Acenaphthylene	0.0392	mg/L	1	0.0800	<0.0000963	49	27.4 - 114	3	20
Acenaphthene	0.0397	mg/L	1	0.0800	<0.0000617	50	27.2 - 111	3	20
Dibenzofuran	0.0375	mg/L	1	0.0800	<0.0000952	47	27.3 - 100	4	20
Fluorene	0.0468	mg/L	1	0.0800	<0.000134	58	31.5 - 122	4	20
Anthracene	0.0504	mg/L	1	0.0800	<0.000441	63	32.4 - 115	2	20
Phenanthrene	0.0487	mg/L	1	0.0800	<0.000435	61	34.2 - 111	1	20
Fluoranthene	0.0552	mg/L	1	0.0800	<0.000476	69	40.1 - 114	1	20
Pyrene	0.0482	mg/L	1	0.0800	<0.000590	60	39.2 - 124	1	20
Benzo(a)anthracene	0.0482	mg/L	1	0.0800	<0.000118	60	39.4 - 114	0	20
Chrysene	0.0508	mg/L	1	0.0800	<0.0000766	64	38.2 - 116	1	20
Benzo(b)fluoranthene	0.0531	mg/L	1	0.0800	<0.000146	66	34.5 - 118	5	20
Benzo(k)fluoranthene	0.0678	mg/L	1	0.0800	<0.000141	85	38.7 - 133	8	20
Benzo(a)pyrene	0.0646	mg/L	1	0.0800	<0.000132	81	38 - 134	2	20
Indeno(1,2,3-cd)pyrene	0.0556	mg/L	1	0.0800	<0.0000702	70	34.6 - 124	4	20
Dibenzo(a,h)anthracene	0.0563	mg/L	1	0.0800	<0.0000534	70	33.9 - 120	5	20
Benzo(g,h,i)perylene	0.0552	mg/L	1	0.0800	<0.0000473	69	33.8 - 138	4	20

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

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Nitrobenzene-d5	0.0273	0.0286	mg/L	1	0.0800	34	36	25.9 - 97.5
2-Fluorobiphenyl	0.0319	0.0307	mg/L	1	0.0800	40	38	13.9 - 100
Terphenyl-d14	0.0489	0.0485	mg/L	1	0.0800	61	61	37.7 - 114

Matrix Spike (MS-1) Spiked Sample: 208309

QC Batch: 63005
Prep Batch: 53766

Date Analyzed: 2009-08-28
QC Preparation: 2009-08-28

Analyzed By: kg
Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	²⁶ 195	mg/L	1	25.0	162	132	70 - 130

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

²⁶Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

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Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	186	mg/L	1	25.0	162	96	70 - 130	5	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 ^{27 28}	17.5	15.0	mg/L	1	10	175	150	70 - 130

Matrix Spike (MS-1) Spiked Sample: 208309

QC Batch: 63047
Prep Batch: 53815

Date Analyzed: 2009-08-28
QC Preparation: 2009-08-28

Analyzed By: AG
Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	24.9	mg/L	100	10.0	15.876	90	61 - 130
Toluene	18.0	mg/L	100	10.0	9.1749	88	69.2 - 121.4
Ethylbenzene	10.6	mg/L	100	10.0	2.0528	85	56.3 - 124.9
Xylene	29.1	mg/L	100	30.0	4.8721	81	60.2 - 122.9

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	24.4	mg/L	100	10.0	15.876	85	61 - 130	2	20
Toluene	19.0	mg/L	100	10.0	9.1749	98	69.2 - 121.4	5	20
Ethylbenzene	11.1	mg/L	100	10.0	2.0528	90	56.3 - 124.9	5	20
Xylene	30.4	mg/L	100	30.0	4.8721	85	60.2 - 122.9	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)	9.98	9.84	mg/L	100	10	100	98	85.6 - 108.1
4-Bromofluorobenzene (4-BFB)	7.39	7.57	mg/L	100	10	74	76	53.7 - 127.3

Standard (CCV-1)

QC Batch: 63005

Date Analyzed: 2009-08-28

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	212	85	80 - 120	2009-08-28

²⁷High surrogate recovery due to peak interference.

²⁸High surrogate recovery due to peak interference.

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Standard (CCV-2)

QC Batch: 63005

Date Analyzed: 2009-08-28

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	209	84	80 - 120	2009-08-28

Standard (CCV-2)

QC Batch: 63047

Date Analyzed: 2009-08-28

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0894	89	80 - 120	2009-08-28
Toluene		mg/L	0.100	0.0888	89	80 - 120	2009-08-28
Ethylbenzene		mg/L	0.100	0.0875	88	80 - 120	2009-08-28
Xylene		mg/L	0.300	0.249	83	80 - 120	2009-08-28

Standard (CCV-3)

QC Batch: 63047

Date Analyzed: 2009-08-28

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0927	93	80 - 120	2009-08-28
Toluene		mg/L	0.100	0.0942	94	80 - 120	2009-08-28
Ethylbenzene		mg/L	0.100	0.0939	94	80 - 120	2009-08-28
Xylene		mg/L	0.300	0.269	90	80 - 120	2009-08-28

Standard (CCV-2)

QC Batch: 63048

Date Analyzed: 2009-08-29

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.962	96	80 - 120	2009-08-29

Standard (CCV-3)

QC Batch: 63048

Date Analyzed: 2009-08-29

Analyzed By: AG

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.971	97	80 - 120	2009-08-29

Standard (CCV-2)

QC Batch: 63169

Date Analyzed: 2009-09-02

Analyzed By: MN

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		mg/L	60.0	57.7	96	80 - 120	2009-09-02
2-Methylnaphthalene		mg/L	60.0	64.9	108	80 - 120	2009-09-02
1-Methylnaphthalene		mg/L	60.0	64.8	108	80 - 120	2009-09-02
Acenaphthylene		mg/L	60.0	58.5	98	80 - 120	2009-09-02
Acenaphthene		mg/L	60.0	58.8	98	80 - 120	2009-09-02
Dibenzofuran		mg/L	60.0	61.8	103	80 - 120	2009-09-02
Fluorene		mg/L	60.0	63.6	106	80 - 120	2009-09-02
Anthracene		mg/L	60.0	59.4	99	80 - 120	2009-09-02
Phenanthrene		mg/L	60.0	57.2	95	80 - 120	2009-09-02
Fluoranthene		mg/L	60.0	58.0	97	80 - 120	2009-09-02
Pyrene		mg/L	60.0	57.0	95	80 - 120	2009-09-02
Benzo(a)anthracene		mg/L	60.0	55.8	93	80 - 120	2009-09-02
Chrysene		mg/L	60.0	56.4	94	80 - 120	2009-09-02
Benzo(b)fluoranthene		mg/L	60.0	63.4	106	80 - 120	2009-09-02
Benzo(k)fluoranthene		mg/L	60.0	59.4	99	80 - 120	2009-09-02
Benzo(a)pyrene		mg/L	60.0	67.9	113	80 - 120	2009-09-02
Indeno(1,2,3-cd)pyrene		mg/L	60.0	57.9	96	80 - 120	2009-09-02
Dibenzo(a,h)anthracene		mg/L	60.0	59.4	99	80 - 120	2009-09-02
Benzo(g,h,i)perylene		mg/L	60.0	56.7	94	80 - 120	2009-09-02

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5		60.9	mg/L	1	60.0	102	80 - 120
2-Fluorobiphenyl		56.4	mg/L	1	60.0	94	80 - 120
Terphenyl-d14		54.4	mg/L	1	60.0	91	80 - 120

